

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:000000010519272

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 "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

**WARNING:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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:**

Always observe the following items for preventing accidental activation.

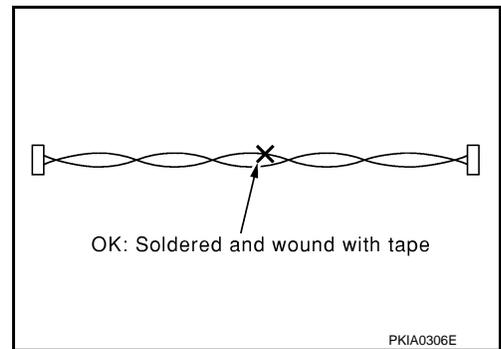
- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

### Precaution for Harness Repair

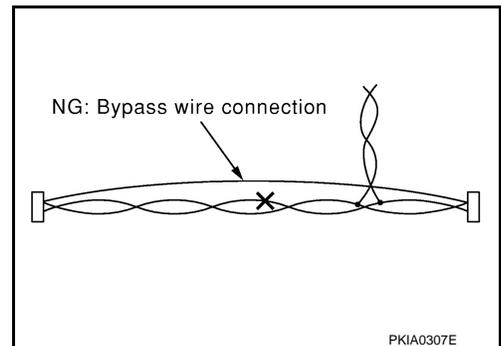
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#### AV COMMUNICATION SYSTEM

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



- 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.)



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

< PRECAUTION >

### Precaution for Work

INFOID:000000010502016

- 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 >

[AUDIO SYSTEM]

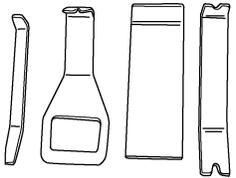
## PREPARATION

### PREPARATION

#### Special Service Tool

INFOID:0000000010502017

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:0000000010502018

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

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

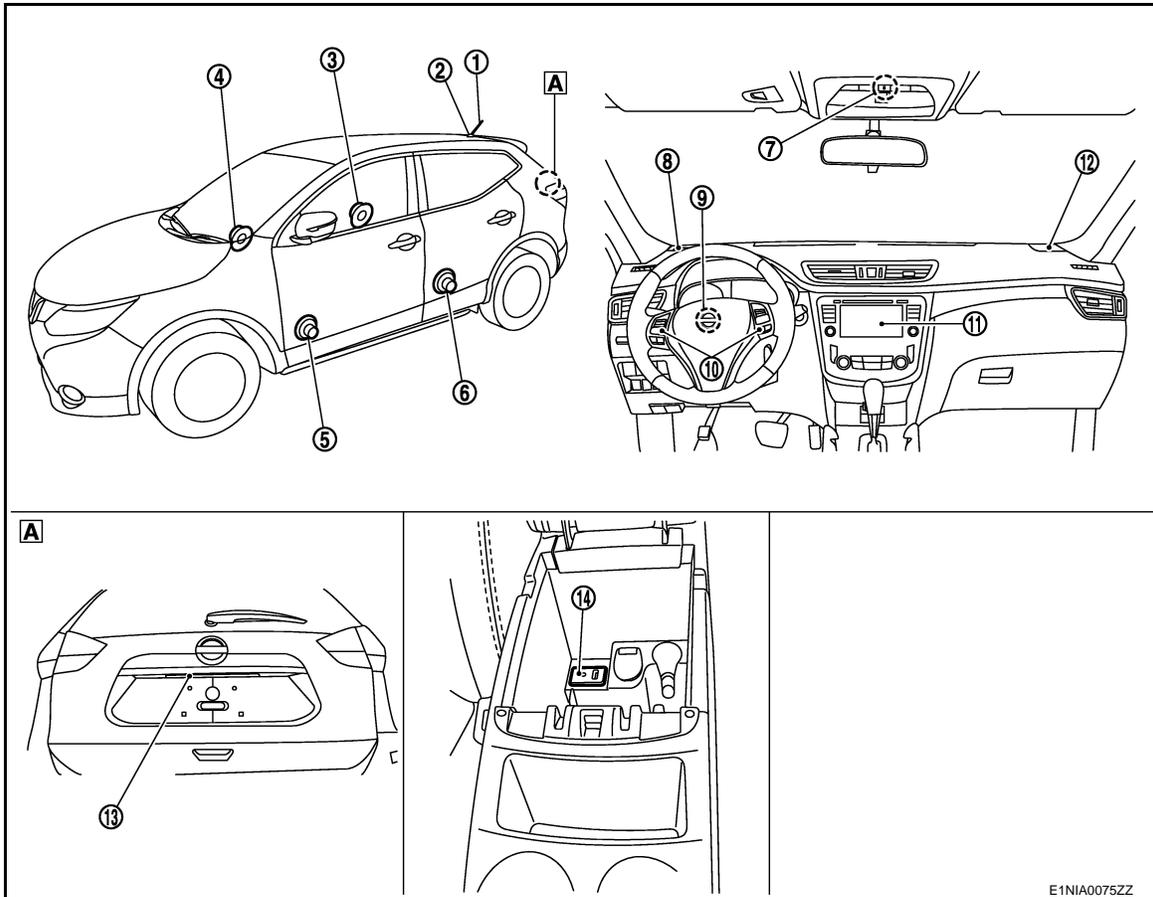
AV

## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:0000000010502019



A. Center of back door

No.	Component	Function
1.	Rod antenna	Refer to <a href="#">AV-68, "Rod Antenna, Antenna Amp., Satellite Antenna and Antenna Feeder"</a> .
2.	Antenna base (antenna amp. and satellite antenna)	
3.	Rear door speaker RH	Refer to <a href="#">AV-66, "Speakers"</a> .
4.	Front door speaker RH	
5.	Front door speaker LH	
6.	Rear door speaker LH	
7.	Microphone	Refer to <a href="#">AV-67, "Microphone"</a> .
8.	Front tweeter LH	Refer to <a href="#">AV-66, "Speakers"</a> .
9.	Steering angle sensor	Refer to <a href="#">AV-68, "Steering Angle Sensor"</a> .
10.	Steering switches	Refer to <a href="#">AV-67, "Steering Switches"</a> .
11.	Audio unit	Refer to <a href="#">AV-66, "Audio Unit"</a> .
12.	Front tweeter RH	Refer to <a href="#">AV-66, "Speakers"</a> .
13.	Rear view camera (if equipped)	Refer to <a href="#">AV-67, "Rear View Camera"</a> .
14.	USB interface and AUX in jack	Refer to <a href="#">AV-67, "USB Interface and AUX in Jack"</a> .

## Audio Unit

INFOID:000000010502020

### Description

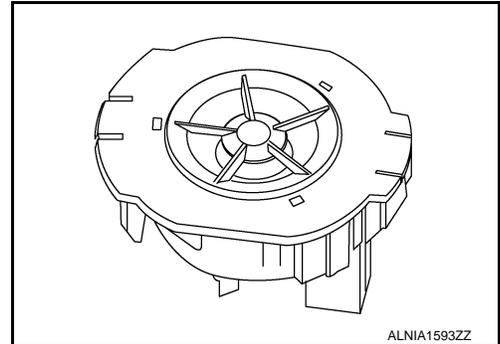
- AM/FM electronic tuner radio, CD drive.
- The display can show audio status.
- Music files stored in iPod®/USB memory can be played using the separate USB connector.
- Music files stored in an external audio device can be played using the separate AUX in jack.

## Speakers

INFOID:000000010502021

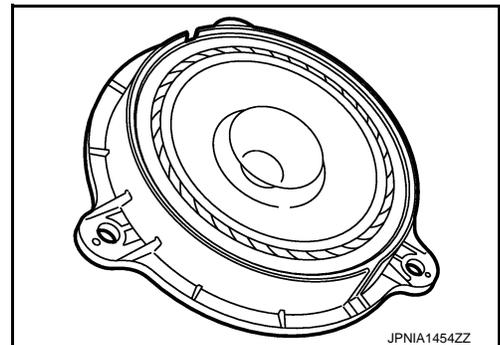
### FRONT TWEETER

- 2.5 cm (1 in) tweeters are installed in the top front corners of the instrument panel.
- Sound signals are input from the audio unit to output high range sounds.



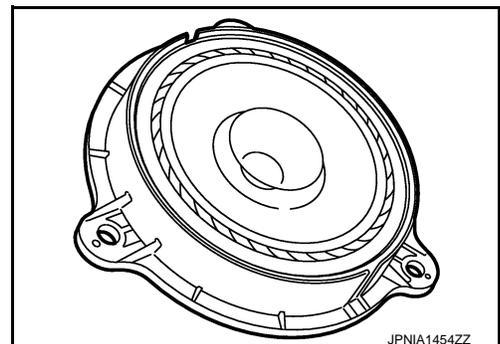
### FRONT DOOR SPEAKER

- 16.5 cm (6.5 in) speakers are installed in the bottom of the front doors.
- Sound signals are input from the audio unit to output high, mid and low range sounds.



### REAR DOOR SPEAKER

- 16.5 cm (6.5 in) speakers are installed in the bottom of the rear doors.
- Sound signals are input from the audio unit to output high, mid and low range sounds.



## USB Interface and AUX in Jack

INFOID:000000010502022

- USB Interface and AUX in jack is installed in the console.
- iPod® and USB memory can be connected to the audio unit through the USB interface.
- An external audio device can be connected to the audio unit through the AUX in jack.

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# COMPONENT PARTS

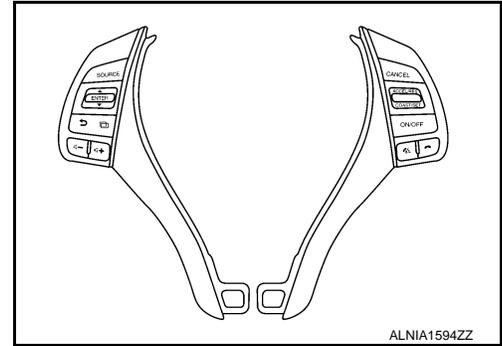
< SYSTEM DESCRIPTION >

[AUDIO SYSTEM]

## Steering Switches

INFOID:000000010502023

- Steering switches are installed in the steering wheel.
- Operations for audio and hands-free phone are possible.
- Switches are connected to the combination meter.
- Combination meter is connected to the audio unit via AV communication.



## Microphone

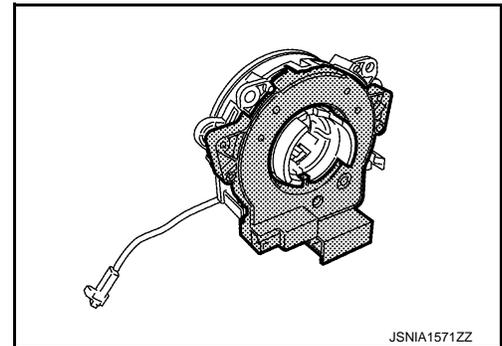
INFOID:000000010502024

- The microphone is installed in the roof in the map lamp assembly.
- Power is supplied from the audio unit.

## Steering Angle Sensor

INFOID:000000010502026

- Steering sensor is installed to the spiral cable.
- Steering angle sends the steering signal necessary for predictive course line via CAN communication.

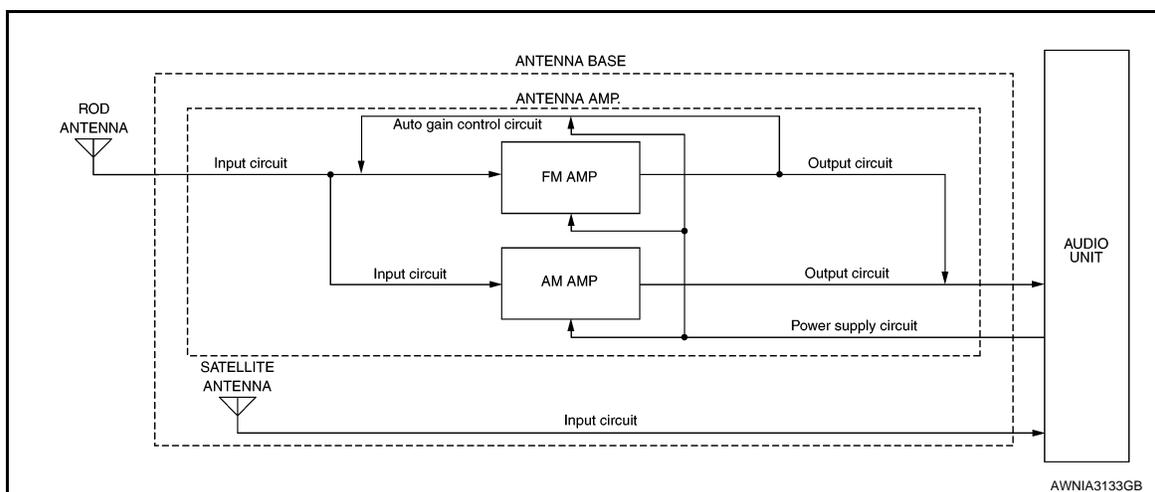


## Rod Antenna, Antenna Amp., Satellite Antenna and Antenna Feeder

INFOID:000000010502027

### RADIO ANTENNA AND SATELLITE ANTENNA

AM/FM radio rod antenna, antenna base and satellite antenna are located on the rear of the roof. The antenna amp. and satellite antenna are built into the antenna base.

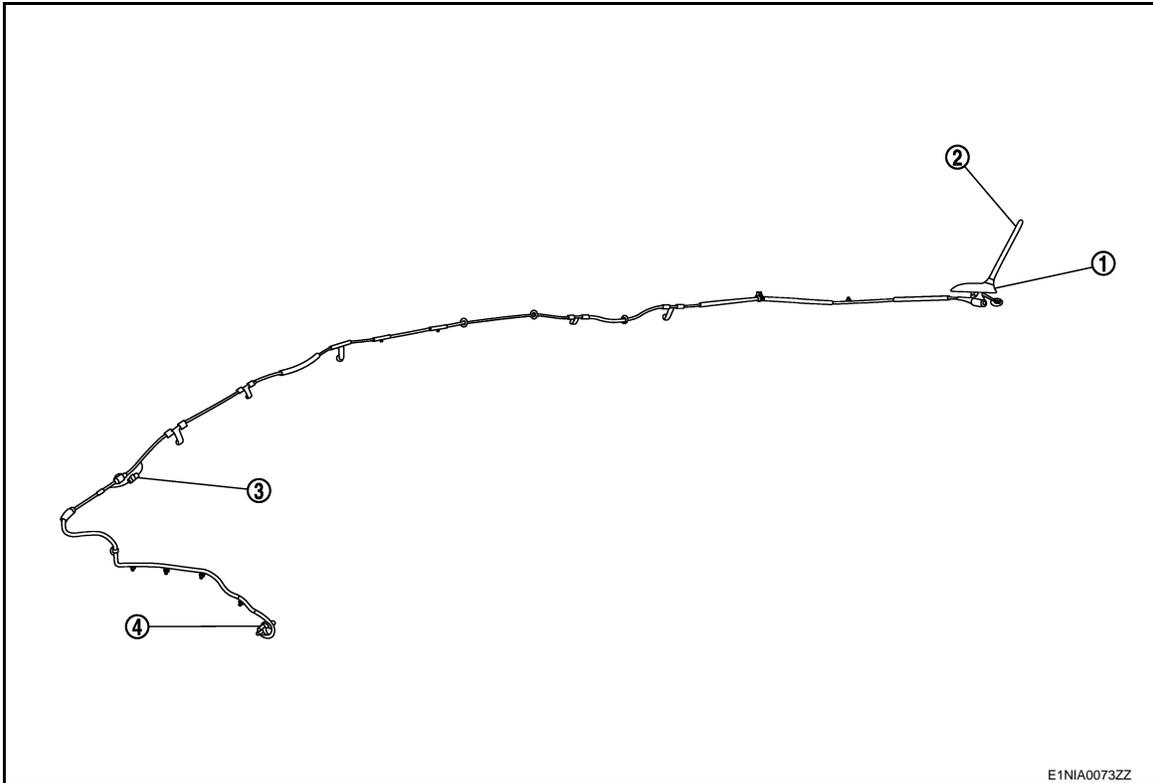


### ANTENNA FEEDER LAYOUT

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[AUDIO SYSTEM]



- 1. Antenna base (antenna amp. and satellite antenna)
- 2. Rod Antenna
- 3. M394
- 4. M385

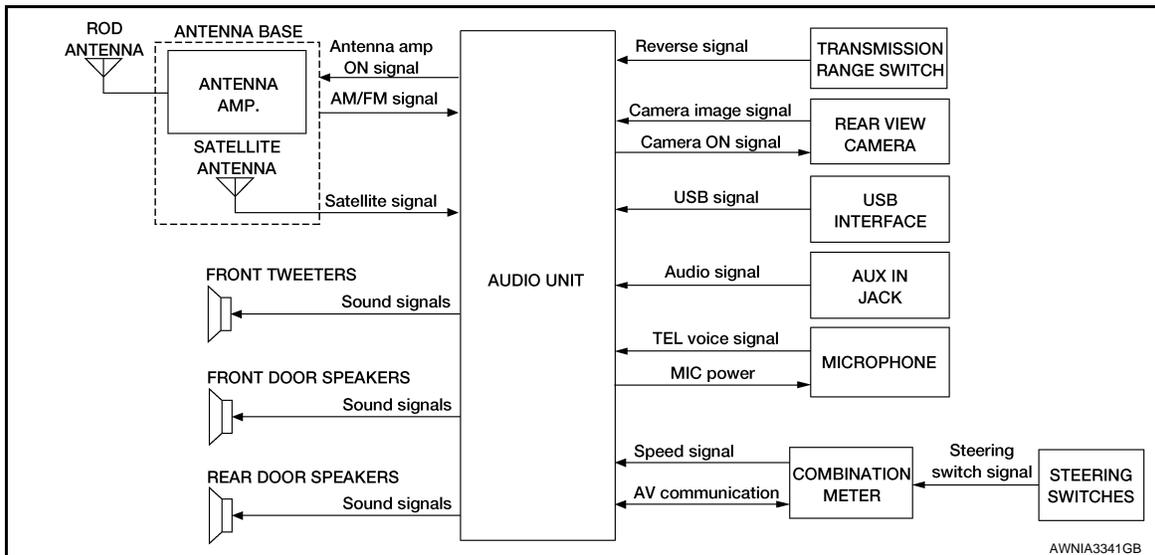
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## SYSTEM

### System Description

INFOID:000000010502028

### SYSTEM DIAGRAM



**NOTE:**

- There is no satellite Antenna connected to AUDIO SYSTEM.
- There is no Rear view camera connected to AUDIO SYSTEM.

### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Front tweeters
- Front door speakers
- Rear door speakers
- USB interface
- AUX in jack
- Steering switches
- Antenna base (rod antenna, antenna amp. and satellite antenna)

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

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

### HANDS-FREE PHONE SYSTEM

- Bluetooth® control is built into audio unit.
- The connection between cellular phone and audio unit is performed with Bluetooth® communication.
- The voice guidance signal is input from the audio 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 audio unit.
- Audio 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 audio unit by establishing Bluetooth® communication from cellular phone, and the signal is output to front speakers.

### SPEED SENSITIVE VOLUME SYSTEM

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

# DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[AUDIO SYSTEM]

## DIAGNOSIS SYSTEM (AUDIO UNIT)

### Description

INFOID:000000010502029

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

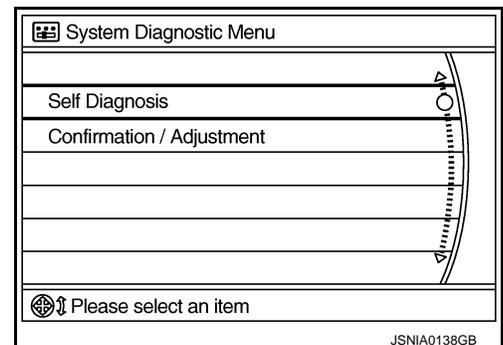
Mode		Description
Self Diagnosis		<ul style="list-style-type: none"> <li>• Audio unit diagnosis.</li> <li>• Diagnoses the connections across system components.</li> </ul>
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display and 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	Displayed but not used.
	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.
	Version Information	Audio unit software and hardware versions are displayed.
	Initialize Setting	Initializes the audio unit memory.

### On Board Diagnosis Function

INFOID:000000010502030

#### METHOD OF STARTING

1. Turn the ignition ON.
2. Turn the audio system OFF.
3. While pressing setup button, turn the tune encoder 3 clicks counterclockwise, then 3 clicks clockwise and 4 clicks counterclockwise. 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

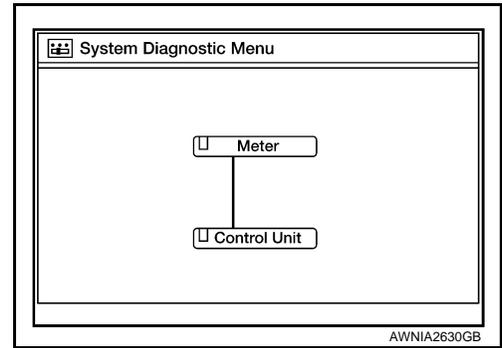
1. Select Self Diagnosis.
2. Self diagnosis screen is displayed. The bar graph visible in center of screen indicates progress of self diagnosis.

# DIAGNOSIS SYSTEM (AUDIO UNIT)

[AUDIO SYSTEM]

< SYSTEM DESCRIPTION >

3. 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.

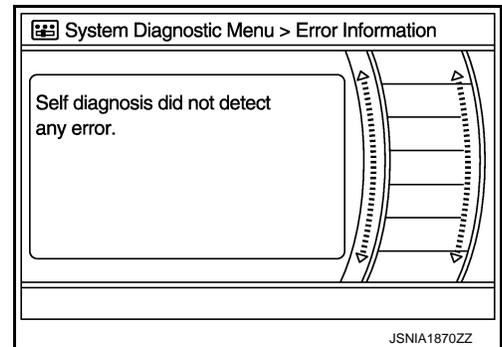


Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction <sup>1</sup>	Red	Green

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-53, "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.

4. 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"> <li>• Audio unit power supply or ground circuits. Refer to <a href="#">AV-37, "AUDIO UNIT : Diagnosis Procedure"</a>.</li> <li>• If no malfunction is detected in audio unit power supply and ground circuits, replace audio unit. Refer to <a href="#">AV-53, "Removal and Installation"</a>.</li> </ul>

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"> <li>• malfunction is detected in combination meter power supply and ground circuits.</li> <li>• malfunction is detected in AV communication circuits between audio unit and combination meter.</li> </ul>	<ul style="list-style-type: none"> <li>• Combination meter power supply or ground circuits. Refer to <a href="#">MWI-61, "COMBINATION METER : Diagnosis Procedure"</a>.</li> <li>• AV communication circuits between audio unit and combination meter.</li> </ul>

## Audio Unit Confirmation/Adjustment

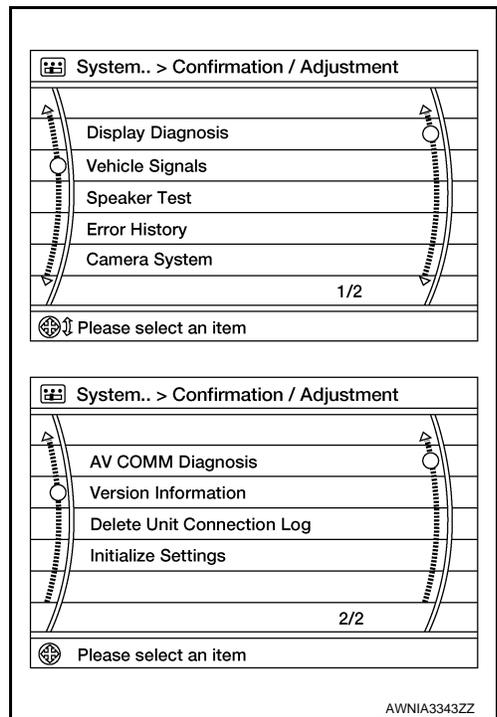
1. Select Confirmation/Adjustment.

# DIAGNOSIS SYSTEM (AUDIO UNIT)

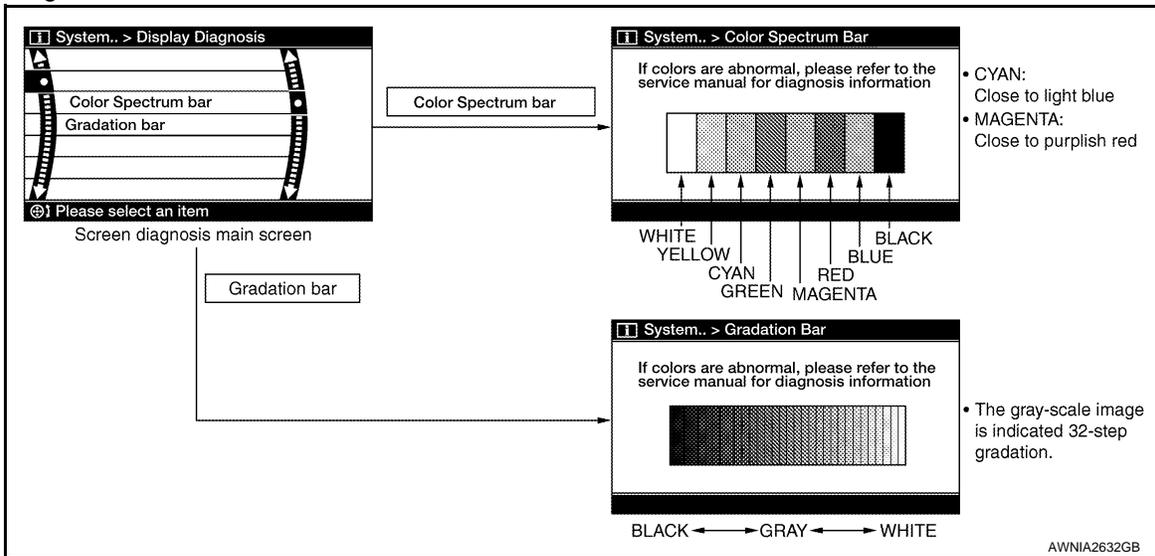
[AUDIO SYSTEM]

< SYSTEM DESCRIPTION >

- 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.

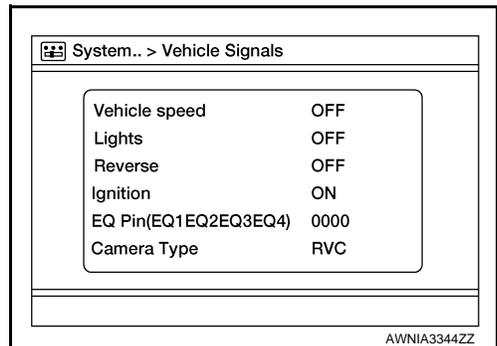


## Display Diagnosis



## Vehicle Signals

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



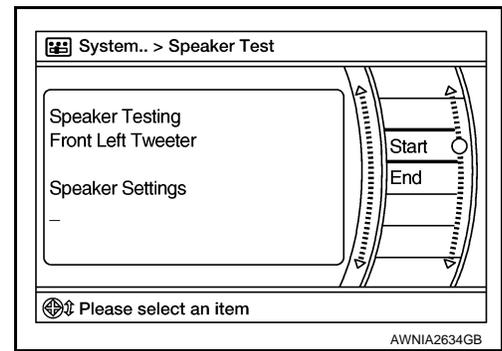
## Speaker Test

# DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[AUDIO SYSTEM]

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

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 <a href="#">AV-53, "Removal and Installation"</a>
AV COMM CIRCUIT	When one of the following is detected: <ul style="list-style-type: none"> <li>• malfunction is detected in combination meter power supply and ground circuits.</li> <li>• malfunction is detected in AV communication circuits between audio unit and combination meter.</li> </ul>	<ul style="list-style-type: none"> <li>• Combination meter power supply or ground circuits. Refer to <a href="#">AV-37, "AUDIO UNIT : Diagnosis Procedure"</a>.</li> <li>• AV communication circuits between audio unit and combination meter.</li> </ul>

## AV COMM Diagnosis

# DIAGNOSIS SYSTEM (AUDIO UNIT)

[AUDIO SYSTEM]

## < SYSTEM DESCRIPTION >

- 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

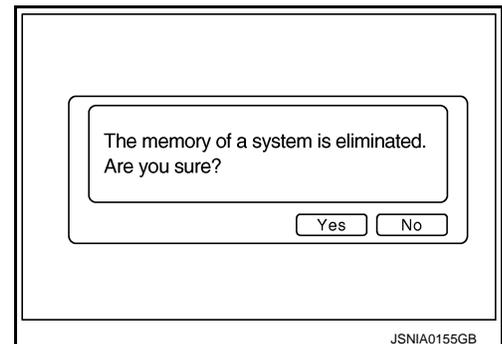
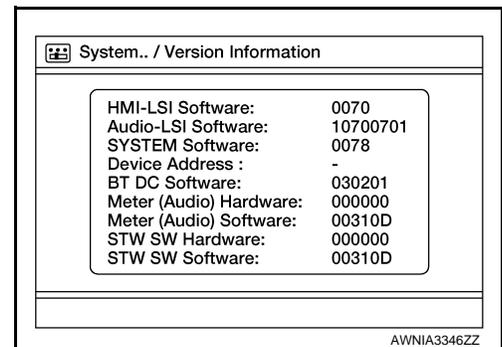
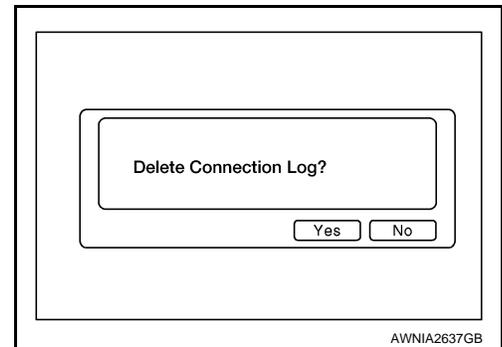
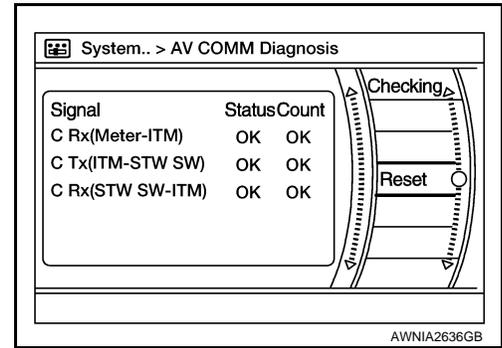
Deletes any unit connection records and error records from the audio unit memory (clears the records of the unit that has been removed).

### Version Information

Displays audio unit software and hardware version numbers.

### Initialize Settings

Deletes data stored from the audio unit.



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# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[AUDIO SYSTEM]

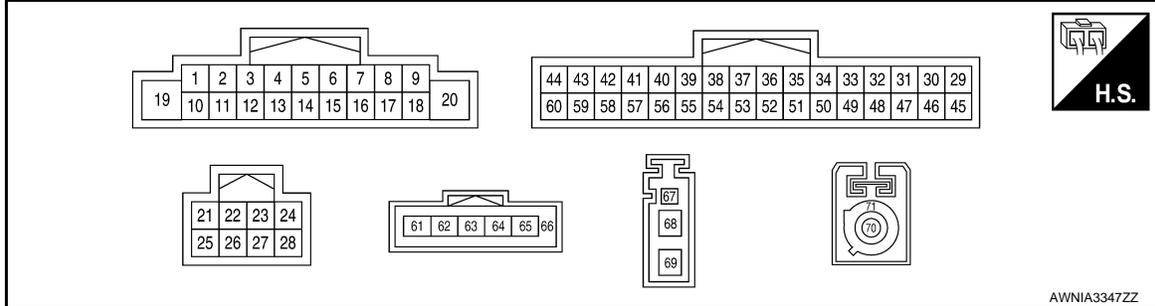
## ECU DIAGNOSIS INFORMATION

### AUDIO UNIT

Reference Value

INFOID:0000000010505193

#### TERMINAL LAYOUT



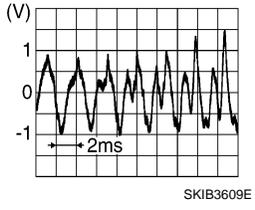
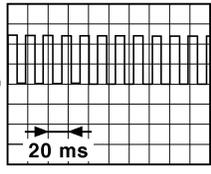
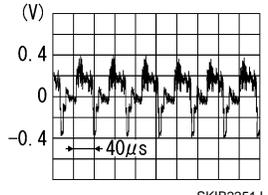
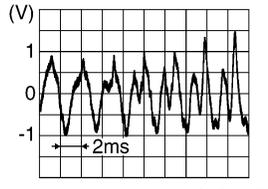
#### PHYSICAL VALUES

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

# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[AUDIO SYSTEM]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
13 (LG)	14 (GR)	Sound signal rear door speaker RH	Output	ON	Sound output	
17 (P)	Ground	Dongle / AUDIO LINK	—	—	—	—
18 (P)	Ground	Vehicle speed signal	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	
19 (L)	Ground	Battery power supply	Input	OFF	—	Battery voltage
20 (B)	Ground	Ground	—	ON	—	0 V
27 (W)	Ground	ACC power supply	Input	ON	—	Battery voltage
31 (SB)	—	CAN H	—	—	—	—
32 (LG)	—	CAN L	—	—	—	—
33 (B)	Ground	Camera ground	—	ON	—	0 V
34 (R)	Ground	Camera power supply	Output	ON	Camera image displayed	6.0 V
					Except for above	0 V
34 (R)	44 (GR)	Camera image signal	Input	ON	Camera image displayed	
35 (W)	Ground	Camera detection	—	ON	—	0 V
37 (W)	39 (Shield)	Microphone signal	Input	ON	While speaking into microphone.	
38 (BG)	—	MIC VCC	Input	ON	—	—

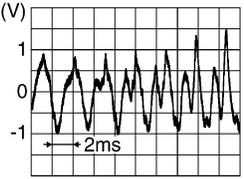
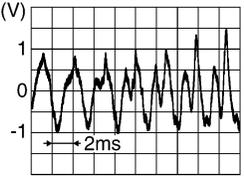
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AV

# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[AUDIO SYSTEM]

Terminal (Wire color)		Description	Condition			Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
40 (LG)	—	AV communication (L)	Input/ Output	—	—	—
41 (SB)	—	AV communication (H)	Input/ Output	—	—	—
42 (LG)	—	AV communication (L)	Input/ Output	—	—	—
43 (SB)	—	AV communication (H)	Input/ Output	—	—	—
45 (B)	—	EQ1	—	—	—	—
50 (G)	Ground	Reverse signal	Input	ON	Selector lever in R (re-verse)	Battery voltage
					Selector lever in any posi-tion other than R (reverse)	0 V
53 (B)	Ground	AUX jack audio signal LH	Input	ON	Received audio signal (AUX input)	 SKIB3609E
54 (R)	Ground	AUX jack audio signal RH	Input	ON	Received audio signal (AUX input)	 SKIB3609E
55 (W)	Ground	AUX ground	—	ON	—	0V
56 (Shield)	—	AUX signal shield	—	—	—	—
129 (G)	—	USB ground	—	—	—	—
130 (R)	—	USB D- signal	—	—	—	—
131 (W)	—	V BUS signal	—	—	—	—
133 (Shield)	—	USB shield	—	—	—	—
132 (L)	—	USB D+ signal	—	—	—	—
150 —	Ground	FN sub signal	Input	ON	Audio unit ON, XM select-ed.	5.0 V
152 —	Ground	Antenna amp. ON signal	Output	ON	Audio unit ON, FM-AM se-lected.	Battery voltage
151 —	Ground	AM/FM antenna signal	Input	ON	Audio unit ON, FM-AM se-lected.	5.0 V

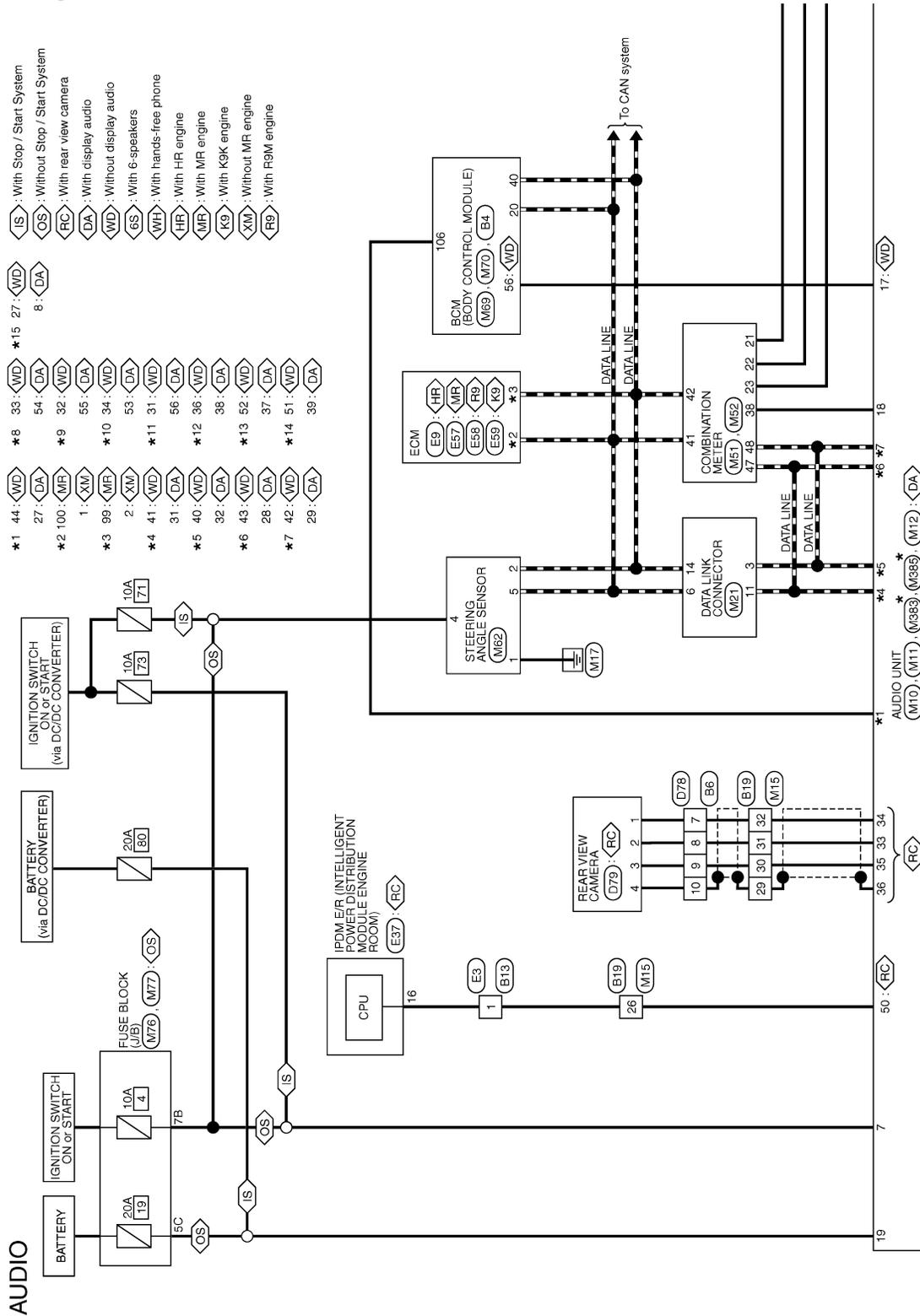
< WIRING DIAGRAM >

# WIRING DIAGRAM

## AUDIO SYSTEM

### Wiring Diagram

INFOID:0000000010502032



2013/1/20

JRNWD1346GB

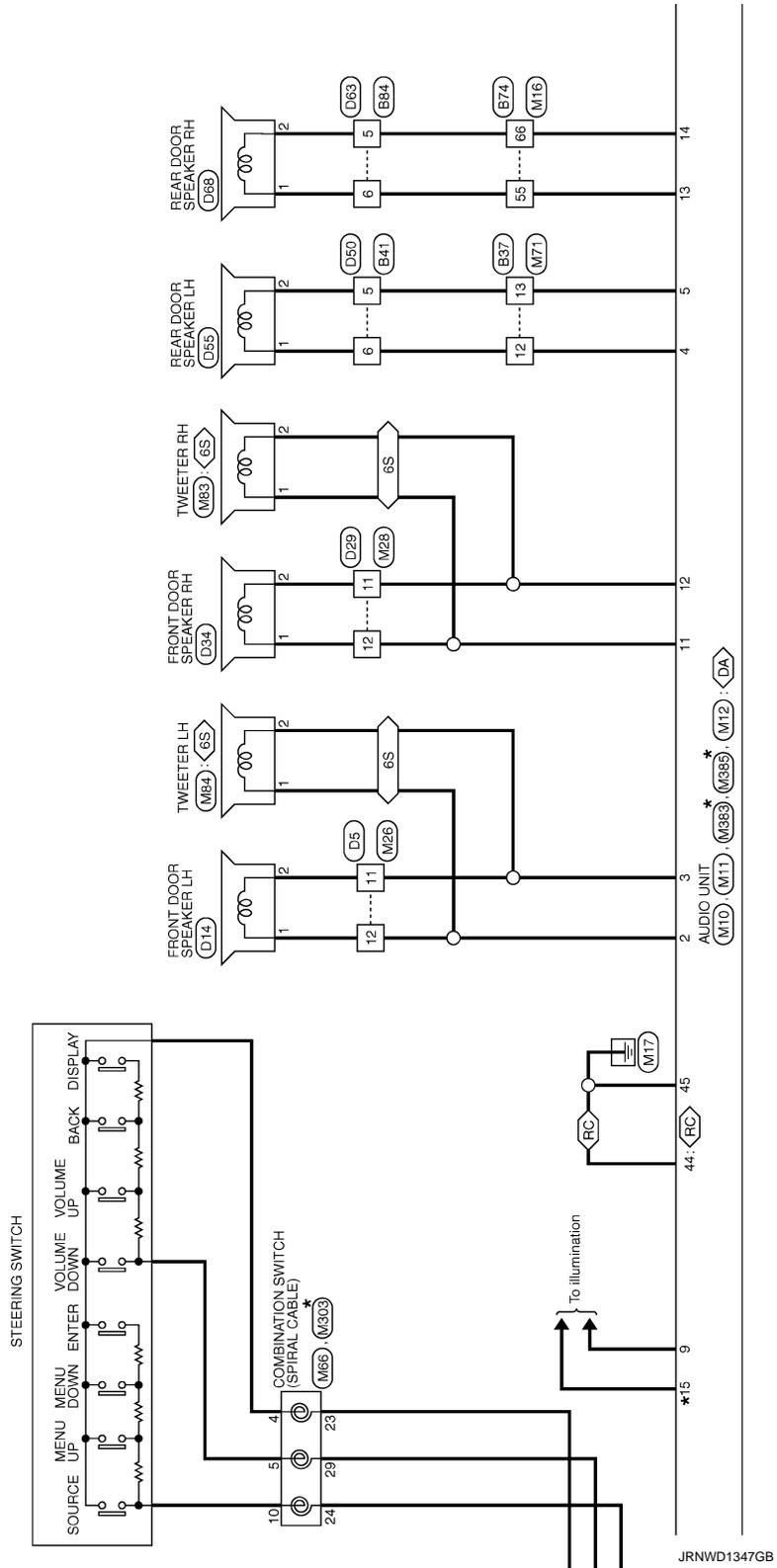
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# AUDIO SYSTEM

< WIRING DIAGRAM >

[AUDIO SYSTEM]

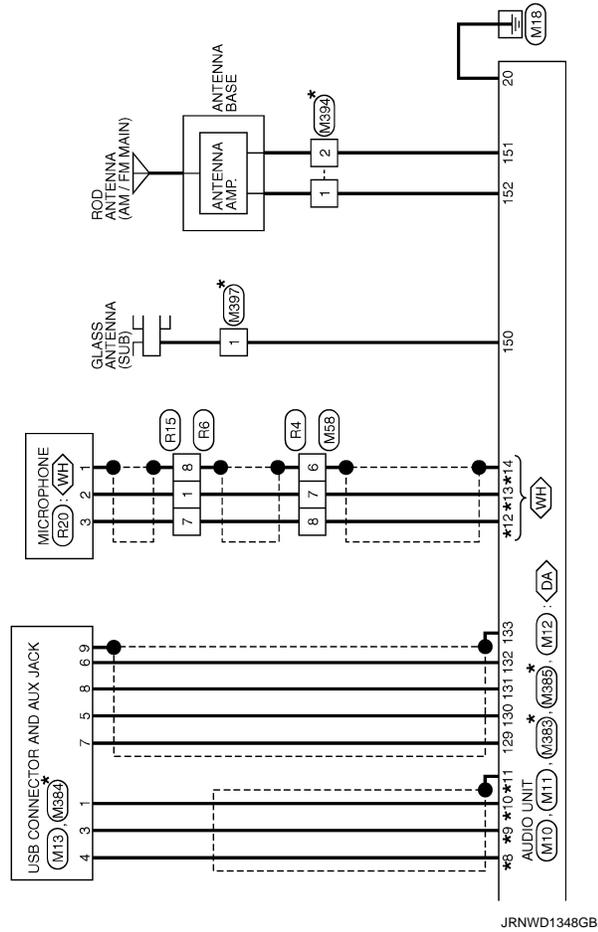


JRNWD1347GB

# AUDIO SYSTEM

< WIRING DIAGRAM >

[AUDIO SYSTEM]



JRNWD1348GB

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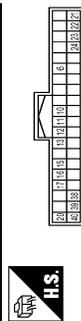
# AUDIO SYSTEM

< WIRING DIAGRAM >

[AUDIO SYSTEM]

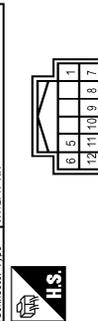
## AUDIO

Connector No.	B4
Connector Name	BOM (BODY CONTROL MODULE)
Connector Type	TH48FC-NH



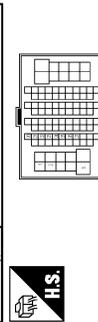
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	BACK DOOR OPENER REQUEST SW (For RHD models)
2	Y	BACK DOOR OPENER REQUEST SW (For LHD models)
3	R	REAR RH DOOR SW
4	B	BACK DOOR SW
5	W	REAR LH DOOR SW
6	R	PASSENGER DOOR SW
7	G/W	REAR WIPER AUTO STOP
8	B	BACK DOOR OPENER SW
9	SB	DRIVER DOOR SW
10	L	CAN-H
11	BR	REAR BMPR ANT -
12	Y	ROOM ANT 2 -
13	L	ROOM ANT 1 +
14	G	REAR BMPR ANT +
15	G	SEAT BELT SW
16	V	HIGH-MOUNTED STOP LAMP
17	P	CAN-L

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Type	TH18FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	G	-
3	G/W	-
4	R	-
5	B	-
6	W	-
7	SHIELD	-
8	Y	-
9	G	-
10	-	-
11	-	-
12	-	-

Connector No.	B13
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



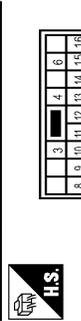
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	P	-
3	G	-
4	G	-
5	G	-
6	G	-
7	BR	-
8	SB	-
9	BC	-
10	SB	-
11	G	-
12	B	-
13	P	-
14	B	-
15	P	-
16	P	-
17	G	-
18	SHIELD	-
19	W	-
20	B	-
21	R	-
22	V	-
23	BR	-
24	P	-
25	G	-
26	B	-
27	P	-

Connector No.	B19
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	V	-
3	G	-
4	GR	-
5	Y	-
6	W	-
7	W	-
8	W	-
9	Y	-
10	W	-
11	Y	-
12	G	-
13	G	-
14	V	-
15	V	-
16	LG	-
17	G	-
18	G	-
19	SHIELD	-
20	W	-
21	G	-
22	V	-
23	BR	-
24	P	-
25	G	-
26	G	-
27	SHIELD	-
28	W	-
29	B	-
30	R	-
31	B	-
32	R	-

Connector No.	B37
Connector Name	WIRE TO WIRE
Connector Type	NIS10MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	V	-
3	G	-
4	G	-
5	P	-
6	P	-
7	P	-
8	P	-
9	P	-
10	R	-
11	L	-
12	W	-
13	R	-
14	L	-
15	BR	-
16	G	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Type	NIS10MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	U	-
4	V	-
5	R	-
6	W	-
7	G	-

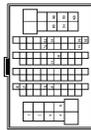
# AUDIO SYSTEM

< WIRING DIAGRAM >

[AUDIO SYSTEM]

## AUDIO

10	P	-
Connector No.	B74	
Connector Name	WIRE TO WIRE	
Connector Type	TH80MP-C816-TM4	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	L	-
3	LG	-
4	P	-
9	SB	-
20	G	- [With gasoline engine]
21	B	-
24	G	-
25	BR	-
35	LG	-
96	GR	-
76	Y	-
84	L	-
85	W	-
89	BG	-
90	BR	-
93	Y	-
94	P	-
98	L	-
99	LG	-
100	GR	- [With diesel engine]
100	R	- [With gasoline engine]

Connector No.	B84	
Connector Name	WIRE TO WIRE	
Connector Type	NS10MW-CS	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	G	-
3	G	-
4	L	- [RHD models without super lock]
4	V	- [RHD models with super lock or LHD models]
5	GR	-
6	LG	-
9	G	-
10	Y	-

Connector No.	D5	
Connector Name	WIRE TO WIRE	
Connector Type	TH82PW-NH	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	R	-
3	V	- [For RHD models]
3	W	- [For LHD models]
4	B	-
5	G	-
6	Y	-
7	R	-
8	V	-
9	L	-

10	W	-
12	W	-
13	LG	-
14	B	-
15	R	-
16	B	-
17	B	-
18	R	-
19	G	-
20	SB	-
21	GR	-
22	BR	-
23	B	-
24	G	-
28	V	- [For LHD models]
28	V	- [For RHD models]
30	GR	-
30	L	- [For RHD models]
31	GR	-
32	BR	-

Connector No.	D14	
Connector Name	FRONT DOOR SPEAKER LH	
Connector Type	NS22PW-CS	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	P	-

Connector No.	D29	
Connector Name	WIRE TO WIRE	
Connector Type	TH82PW-NH	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	Y	- [For LHD models]
2	Y	- [For RHD models]
3	P	- [For LHD models]
3	P	- [For RHD models]
4	B	-
5	Y	-
6	Y	-
7	R	-
8	V	-
9	L	-
10	W	-
11	R	-
12	G	-
13	GR	-
14	B	-
15	G	-
16	B	-
17	B	-
18	R	-
19	B	- [With super lock]
19	B	- [Without super lock]
20	SB	-
21	GR	-
22	BR	-
25	B	-
27	B	-
28	Y	-
29	G	- [For RHD models]
29	Y	- [For LHD models]
31	GR	-
32	BR	-

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### AUDIO

Connector No.	D34
Connector Name	FRONTDOOR SPEAKER RH
Connector Type	NS12PW-CS



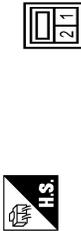
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	D50
Connector Name	WIRE TO WIRE
Connector Type	NS12PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	G	-
4	GR	- [RHD models without super lock] - [RHD models with super lock or LHD models]
5	R	-
6	W	-
8	G	-
9	P	-
10	P	-

Connector No.	D35
Connector Name	REAR DOOR SPEAKER LH
Connector Type	NS12PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	R	-

Connector No.	D63
Connector Name	WIRE TO WIRE
Connector Type	NS12PW-CS



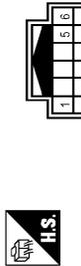
Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	L	-
3	G	-
4	GR	- [RHD models without super lock] - [RHD models with super lock or LHD models]
5	GR	-
6	LG	-
8	G	-
10	Y	-

Connector No.	D68
Connector Name	REAR DOOR SPEAKER RH
Connector Type	NS12PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	GR	-

Connector No.	D78
Connector Name	WIRE TO WIRE
Connector Type	TH12MM-NH



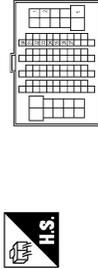
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
5	G	-
6	G/W	-
7	R	-
8	B	-
9	W	-
10	V	-
11	Y	-
12	L	-

Connector No.	D79
Connector Name	REAR CAMERA
Connector Type	TH18MM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	CAMERA_ON
2	R	CAMERA_+
3	W	CAMERA_+
4	V	CAMERA_-

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	TH18PW-CS18-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	W	-
5	EG	-
20	G	-
21	BR	-
22	SB	-
23	EG	-
24	SB	-
25	G	-
26	B	-
27	P	-

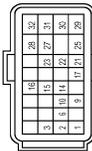
# AUDIO SYSTEM

< WIRING DIAGRAM >

[AUDIO SYSTEM]

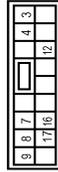
## AUDIO

Connector No.	E9
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



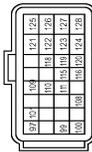
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
3	SB	ASCD MAIN SWITCH
6	V	CLUTCH INTERLOCK SWITCH
9	R	CLUTCH PEDAL POSITION SWITCH
10	V	SPEED LIMITER MAIN SWITCH
14	BR	SENSOR GROUND
15	G	ASCD STEERING SWITCH
16	LG	IGNITION SWITCH
17	BG	STOP LAMP SWITCH
21	Y	SENSOR GROUND
22	W	ACCELERATOR PEDAL POSITION SENSOR 2
23	BG	SENSOR POWER SUPPLY
25	B	ECM GROUND
27	V	SENSOR POWER SUPPLY
28	G	POWER SUPPLY FOR ECM
30	B	ECM GROUND
31	GR	SENSOR GROUND
32	B	ACCELERATOR PEDAL POSITION SENSOR 1
		ECM GROUND

Connector No.	E57
Connector Name	POWER INTELLIGENT POWER LOCK (PIB) DISTRIBUTION MODULE ENGINE
Connector Type	NS16FY-GS



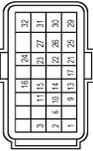
Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	-
4	GR	-
7	L	-
8	L	- [For grille shutter]
8	W	- [Except for grille shutter]
9	GR	-
12	GR	-
16	G	-
17	G	-
17	W	-

Connector No.	E57
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH

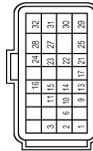


Terminal No.	Color Of Wire	Signal Name [Specification]
97	W	ATMOSPHERIC PRESSURE SENSOR
99	P	CAN-L
100	L	CAN-H
101	Y	SENSOR POWER SUPPLY (ATMOSPHERIC PRESSURE SENSOR)
108	R	CLUTCH PEDAL POSITION SENSOR
109	LG	IGNITION SWITCH
110	G	ASCD STEERING SWITCH
111	BR	SENSOR GROUND
115	V	STOP LAMP SWITCH
116	GR	ASCD BRAKE SWITCH

118	BG	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
119	W	ACCELERATOR PEDAL POSITION SENSOR 2
120	Y	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
121	BR	POWER SUPPLY FOR ECM
122	B	ECM GROUND
123	B	ECM GROUND
124	R	SENSOR GROUND (ATMOSPHERIC PRESSURE SENSOR)
125	B	ECM GROUND
126	R	ACCELERATOR PEDAL POSITION SENSOR 1
127	GR	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
128	B	ECM GROUND



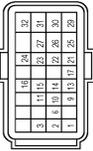
Connector No.	E58
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
3	SB	ASCD MAIN SWITCH
6	V	CLUTCH INTERLOCK SWITCH
9	R	CLUTCH PEDAL POSITION SWITCH
10	V	SPEED LIMITER MAIN SWITCH
11	G	FUEL PUMP CONTROL MODULE (DIAGNOSIS)
13	BR	FUEL PUMP CONTROL MODULE (COMMAND)
14	BR	ASCD STEERING SWITCH GROUND
15	G	ASCD STEERING SWITCH
16	LG	IGNITION SWITCH
17	BG	STOP LAMP SWITCH (W/M, M/T)
17	R	STOP LAMP SWITCH (W/M, CVT)
21	P	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)
22	V	ACCELERATOR PEDAL POSITION SENSOR 2
23	L	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
24	L	WATER IN FUEL LEVEL SENSOR
25	B	ECM GROUND
27	G	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
28	G	POWER SUPPLY FOR ECM
29	B	ECM GROUND
30	Y	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
31	W	ACCELERATOR PEDAL POSITION SENSOR 1

32	B	ECM GROUND
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Connector No.	E59
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
3	SB	ASCD MAIN SWITCH
6	V	CLUTCH INTERLOCK SWITCH
9	R	CLUTCH PEDAL POSITION SWITCH
10	V	SPEED LIMITER MAIN SWITCH
11	G	FUEL PUMP CONTROL MODULE (DIAGNOSIS)
13	BR	FUEL PUMP CONTROL MODULE (COMMAND)
14	BR	ASCD STEERING SWITCH GROUND
15	G	ASCD STEERING SWITCH
16	LG	ECM POWER SUPPLY (IGNITION)
17	BG	STOP LAMP SWITCH
21	Y	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)
22	W	ACCELERATOR PEDAL POSITION SENSOR 2
23	BG	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
24	L	FUEL HEATER AND WATER IN FUEL SENSOR
25	B	ECM GROUND
26	B	ECM GROUND
27	V	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
29	B	ECM GROUND
30	GR	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
31	R	ACCELERATOR PEDAL POSITION SENSOR 1
32	B	ECM GROUND

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### AUDIO

Connector No.	M10
Connector Name	AUDIO UNIT
Connector Type	TH18FW-CS2



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	SOUND SIGNAL FRONT SPEAKER LH (+)
2	V	SOUND SIGNAL FRONT SPEAKER LH (-)
3	W	SOUND SIGNAL REAR SPEAKER LH (+)
4	W	SOUND SIGNAL REAR SPEAKER LH (-)
5	Y	SOUND SIGNAL FRONT SPEAKER RH (+)
6	Y	SOUND SIGNAL FRONT SPEAKER RH (-)
7	LG	SOUND SIGNAL REAR SPEAKER RH (+)
8	R	SOUND SIGNAL REAR SPEAKER RH (-)
9	BR	ILLUMINATION SIGNAL (+)
10	G	ILLUMINATION SIGNAL (-)
11	G	SOUND SIGNAL FRONT SPEAKER LH (+)
12	R	SOUND SIGNAL FRONT SPEAKER LH (-)
13	LG	SOUND SIGNAL REAR SPEAKER RH (+)
14	GR	SOUND SIGNAL REAR SPEAKER RH (-)
15	P	DORNGLE / AUDIO LINK
16	L	VEHICLE SPEED SIGNAL (B-PULSE)
17	P	BATTERY
18	L	BATTERY
19	B	GROUND
20	B	GROUND

Connector No.	M11
Connector Name	AUDIO UNIT
Connector Type	TH32FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
27	R	ILLUMINATION SIGNAL [Without display audio]
28	W	AUTO-ACC [With display audio]
29	SB	CAN-H
30	LG	CAN-L
31	SB	CAN-H [With display audio]

Terminal No.	Color Of Wire	Signal Name [Specification]
31	SHIELD	SHIELD [Without display audio]
32	LG	CAN-L [With display audio]
33	W	AUX SOUND SIGNAL GND [Without display audio]
34	B	CAMERA GND [With rear view camera]
35	R	AUX SOUND SIGNAL RH (+) [Without display audio]
36	R	AUX SOUND SIGNAL LH (-) [Without display audio]
37	R	CAMERA POWER SUPPLY [With rear view camera]
38	W	COMPOSITE IMAGE SIGNAL
39	EG	MICROPHONE VCC [Without display audio]
40	SHIELD	SHIELD [With rear view camera]
41	W	MICROPHONE SIGNAL
42	EG	MICROPHONE VCC
43	SHIELD	MICROPHONE SHIELD
44	LG	CAN-L
45	B	CAN-H
46	SB	CAN-H
47	SB	CAN-L
48	GR	CAMERA IMAGE SIGNAL [With rear view camera]
49	W	AUTO-ACC [Without display audio]
50	B	EG1 [With display audio]
51	B	EG2 [Without display audio]
52	G	REVERSE SIGNAL
53	SHIELD	MICROPHONE SHIELD
54	W	MICROPHONE SIGNAL

Connector No.	M12
Connector Name	AUDIO UNIT
Connector Type	TH82FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
53	B	AUX SOUND SIGNAL LH (+)
54	R	AUX SOUND SIGNAL RH (+)
55	W	AUX SOUND SIGNAL GND
56	SHIELD	SHIELD

Connector No.	M13
Connector Name	USB CONNECTOR AND AUX JACK
Connector Type	TH34FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	Signal Name [Specification]
2	W	Signal Name [Specification]
3	W	Signal Name [Specification]
4	R	Signal Name [Specification]

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

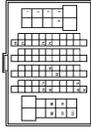


Terminal No.	Color Of Wire	Signal Name [Specification]
2	SB	Signal Name [Specification]
3	V	Signal Name [Specification]
4	GR	Signal Name [Specification]
5	BR	Signal Name [Specification]
6	W	Signal Name [Specification]
10	R	Signal Name [Specification]
11	L	Signal Name [Specification]
13	LG	Signal Name [Specification]
15	W	Signal Name [Specification]
16	W	Signal Name [Specification]
21	EG	Signal Name [Specification]
22	GR	Signal Name [Specification]
23	GR	Signal Name [Specification]
24	P	Signal Name [Specification]
25	L	Signal Name [Specification]
26	G	Signal Name [Specification]
29	SHIELD	Signal Name [Specification]

30	W	Signal Name [Specification]
31	B	Signal Name [Specification]
32	R	Signal Name [Specification]



Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Type	TH88FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	Signal Name [Specification]
2	P	Signal Name [Specification]
3	SB	Signal Name [Specification]
4	P	Signal Name [Specification]
9	SB	Signal Name [Specification]
20	G	Signal Name [Specification]
21	B	Signal Name [Specification]
24	G	Signal Name [Specification]
25	BR	Signal Name [Specification]
69	GR	Signal Name [Specification]
74	GR	Signal Name [Specification]
79	V	Signal Name [Specification]
84	L	Signal Name [Specification]
85	W	Signal Name [Specification]
89	GR	Signal Name [Specification]
90	BR	Signal Name [Specification]
93	Y	Signal Name [Specification]
94	P	Signal Name [Specification]
98	L	Signal Name [Specification]
99	LG	Signal Name [Specification]
100	R	Signal Name [Specification]

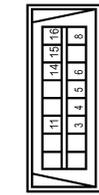
# AUDIO SYSTEM

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[AUDIO SYSTEM]

## AUDIO

Connector No.	M21
Connector Name	DATA LINK CONNECTOR
Connector Type	BD/BEW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	Y	-
8	Y	-
11	SB	-
14	P	-
15	BR	-
16	W	-

Connector No.	M28
Connector Name	WIRE TO WIRE
Connector Type	TH32MP-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	- [For LHD models]
1	LG	- [For RHD models]
2	P	- [For RHD models]
3	GR	- [For RHD models]
4	B	- [For RHD models]
5	G	-
6	Y	-
7	R	-
8	V	-

8	L	-
9	EG	-
10	R	-
11	R	-
12	LG	-
13	LG	-
14	B	-
15	R	-
16	B	-
17	B	-
18	P	-
19	G	-
20	GR	-
21	GR	-
22	BR	-
23	B	-
24	Y	-
25	Y	-
26	L	-
28	Y	- [For LHD models]
29	L	- [For RHD models]
29	Y	- [For LHD models]
30	B	- [For RHD models]
30	L	- [For LHD models]
31	GR	-
32	BR	-

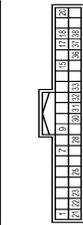
Connector No.	M28
Connector Name	WIRE TO WIRE
Connector Type	TH32MP-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	- [For RHD models]
1	LG	- [For LHD models]
2	Y	- [For RHD models]
3	GR	- [For RHD models]
3	W	- [For LHD models]
4	B	-
5	Y	-
6	Y	-
7	R	-

8	V	-
9	EG	-
10	R	-
11	R	-
12	G	-
13	LG	-
14	B	-
15	P	-
16	B	-
17	B	-
18	R	-
19	G	-
20	SB	-
21	GR	-
22	BR	-
23	Y	-
24	Y	-
25	L	-
26	Y	- [For RHD models]
28	Y	- [For LHD models]
29	L	- [For RHD models]
29	Y	- [For LHD models]
30	B	- [For RHD models]
30	L	- [For LHD models]
31	GR	-
32	BR	-

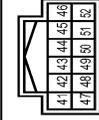
Connector No.	M51
Connector Name	COMBINATION METER
Connector Type	TH48P-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	SECURITY GND1
6	L	ECU INFORMATION
15	EG	OUTSIDE TEMP SENSOR
17	EG	SATELLITE SW GND
18	SB	TRIP RESET SW
20	R	OUTSIDE TEMP GND
21	L	STRG SW GND
22	LG	STRG SW INPUT A

23	GR	STRG SW INPUT B
23	GR	STRG SW
29	W	BR BELT SW
30	Y	M RANGE
31	G	NOT M RANGE
32	R	AT SHIFT UP
33	W	AT SHIFT DOWN
36	BR	ILL UP SW
37	V	ILL DOWN SW
38	P	BP/R OUT

Connector No.	M62
Connector Name	COMBINATION METER
Connector Type	TH12P-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	V-CAN L
42	P	V-CAN H
43	R	ILL CORT (OUTP-SIDE)
44	W	FUEL SENSOR GND
45	W	IGN
46	EG	IGN
47	SB	M-CAN H
48	LG	M-CAN L
49	V	OIL LEVEL
50	P	OIL LEVEL GND
51	G	FUEL SENSOR
52	B	GND2

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### AUDIO

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



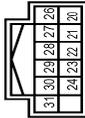
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	—
2	B	—
3	B	—
4	V	—
6	SHIELD	—
7	W	—
8	O	—
13	L	—
14	R	—
16	L	—
17	R	—
18	SB	—
19	LG	—
20	BG	—
21	P	—
22	W	—
23	Y	—
24	B	—

Connector No.	M82
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FY-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	—
2	P	—
4	G	—
5	L	—

Connector No.	M68
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH



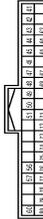
Terminal No.	Color Of Wire	Signal Name [Specification]
20	SB	—
21	V	—
22	W	—
23	L	—
24	GR	—
25	P	—
26	BR	—
28	LG	—
30	B	—
31	R	—

Connector No.	M69
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
81	L	KEY SWITCH
82	L	KEY SW (ST) [Without Intelligent key]
83	L	KEY SW (ST) [With Intelligent key]
84	BR	PASS DOOR REQ SW [With Intelligent key]
85	BR	COMBI SW OUTPUT 2
86	R	COMBI SW OUTPUT 3
87	BG	COMBI SW OUTPUT 4
88	L	PUSH-BTN IGN SW ILL CONT
89	L	STEERING LOCK UNIT SENSOR LINE
94	BR	DIFFERENT KEY SW INPUT
95	V	EXTENDED STORAGE FUSE SW
96	R	STOP / START OFF SWITCH
97	R	DRIVER DOOR ANT *
98	R	FRONT PASSENGER SW
100	R	FRONT PASSENGER SW
104	G	DR DOOR UNLK SENS
105	GR	KEY SW (IP/NL E/R)
106	GR	DR DOOR REQ SW [With Intelligent key]
107	W	ACC OUTPUT
109	Y	ALARARM CANCEL SW
110	SB	NATS ANTENNA AMP
111	R	DIMMER SIGNAL
112	R	DOOR LK STAT IND OUTPUT
113	SB	STOP / START OFF SWITCH IND OUTPUT
114	LG	NATS ANTENNA AMP
115	Y	NATS ANTENNA AMP
116	W	NATS ANTENNA AMP
117	GR	ROOM ANT 1 *
118	LG	ROOM ANT 1 *
119	P	PASSENGER DOOR ANT -
120	BR	FRONT DOOR ANT *

Connector No.	M70
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FY-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	V	STEERING LK UNIT PWR SWLY OUT
42	G	TURN SIG LH (SIDE) [For LHD models]
43	Y	TURN SIG LH (SIDE) [For RHD models]
44	BR	INTERIOR ROOM LAMP RELAY CONT
45	R	CAN-H
46	L	CAN-H
47	BG	LIGHT & RAIN SENSOR
48	L	CAN-L
49	R	CAN-L
50	GR	DOOR LOCK SW
51	Y	HAZARD SW
52	P	DOUBLE
53	EG	CVT SHIFT SELECTION SW PWR
54	EG	REAR WINDOW WASHER SW
55	G	REAR WINDOW WASHER SW
63	G	POWER WINDOW DEFOGGER RELAY CONT
64	SB	REAR WINDOW DEFOGGER RELAY CONT
65	P	ACC RELAY
67	LG	IGN RELAY (F/B) CONT
68	L	BLOWER RELAY CONT
71	BR	ROOM LAMP (OPTION CONNECTOR)
72	R	CONSOLE LED CONT
73	LG	COMBI SW INPUT 5
74	Y	COMBI SW OUTPUT 5
75	BG	SECURITY IND LAMP CONT
76	G	COMBI SW INPUT 3
77	GR	COMBI SW INPUT 4
78	SP	COMBI SW INPUT 2
80	BR	DOOR UNLOCK SW

Connector No.	MT1
Connector Name	WIRE TO WIRE
Connector Type	NS18FW-GS

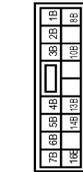


Terminal No.	Color Of Wire	Signal Name [Specification]
3	V	—
4	G	—
6	W	—

**AUDIO**

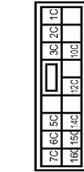
8	P	-
9	G	-
10	B	- [Fz RHU mod4]
11	R	- [Fz LUD mod4]
12	W	-
13	Y	-
14	SB	-
15	BR	-
16	GR	-

Connector No.	M76
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FTV-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10B	V	-
13B	W	-
14B	GR	-
15B	B	-
2B	G	-
3B	LG	-
4B	LG	-
5B	LG	-
6B	SB	-
7B	Y	-
8B	BG	-

Connector No.	M77
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FBZ-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	GR	-
14C	GR	-
15C	W	-
16C	GR	-
1C	R	-
2C	R	-
3C	V	-
5C	L	-
6C	GR	-
7C	V	-

Connector No.	M83
Connector Name	TWEETER RH
Connector Type	FHA02FW



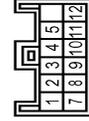
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	M84
Connector Name	TWEETER LH
Connector Type	FHA02FW



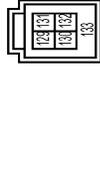
Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	GR	-

Connector No.	M833
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH



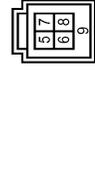
Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-

Connector No.	M83
Connector Name	AUDIO UNIT
Connector Type	HAA04FL



Terminal No.	Color Of Wire	Signal Name [Specification]
12B	G	USB GND
13B	W	USB SIGNAL
132	Y	USB D+ SIGNAL
133	SHIELD	SHIELD

Connector No.	M834
Connector Name	USB CONNECTOR AND AUX JACK
Connector Type	HAA04FL



Terminal No.	Color Of Wire	Signal Name [Specification]
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-

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# AUDIO SYSTEM

< WIRING DIAGRAM >

[AUDIO SYSTEM]

## AUDIO

Connector No.	M835
Connector Name	AUDIO UNIT
Connector Type	GT13SH-2.1S-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
131	-	FM SUB
132	-	AM-FM MAIN
132	-	ANTENNA AMP. ON SIGNAL

Connector No.	M834
Connector Name	ANTENNA BASE (ANTENNA AMP.)
Connector Type	GT13SSH-1.1PP-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	ANTENNA AMP. ON SIGNAL
2	-	AM-FM MAIN

Connector No.	M837
Connector Name	GLASS ANTENNA (SUB)
Connector Type	FUIEB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	-

Connector No.	R4
Connector Name	WIRE TO WIRE
Connector Type	TH2AMW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	B	-
3	R	-
4	V	-
6	SHIELD	-
7	W	-
8	O	-
13	L	-
14	R	-
16	L	-
17	R	-
18	SB	-
20	R	-
21	Y	-
22	V	-
23	Y	-
24	B	-

Connector No.	R8
Connector Name	WIRE TO WIRE
Connector Type	TH12EW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
4	Y	-
5	B	-
6	G	-
7	O	-
8	SHIELD	-
10	R	-
11	B	-
12	V	-

Connector No.	R9
Connector Name	PERSONAL LAMP LH
Connector Type	TK63FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	V	-
3	G	-

Connector No.	R15
Connector Name	WIRE TO WIRE
Connector Type	TH12AM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
5	B	-
6	G	-
7	O	-
8	SHIELD	-
10	R	-
11	B	-
12	V	-

Connector No.	R20
Connector Name	MICROPHONE
Connector Type	TK64FY



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	-
2	W	-
3	O	-

JRNWD1432GB

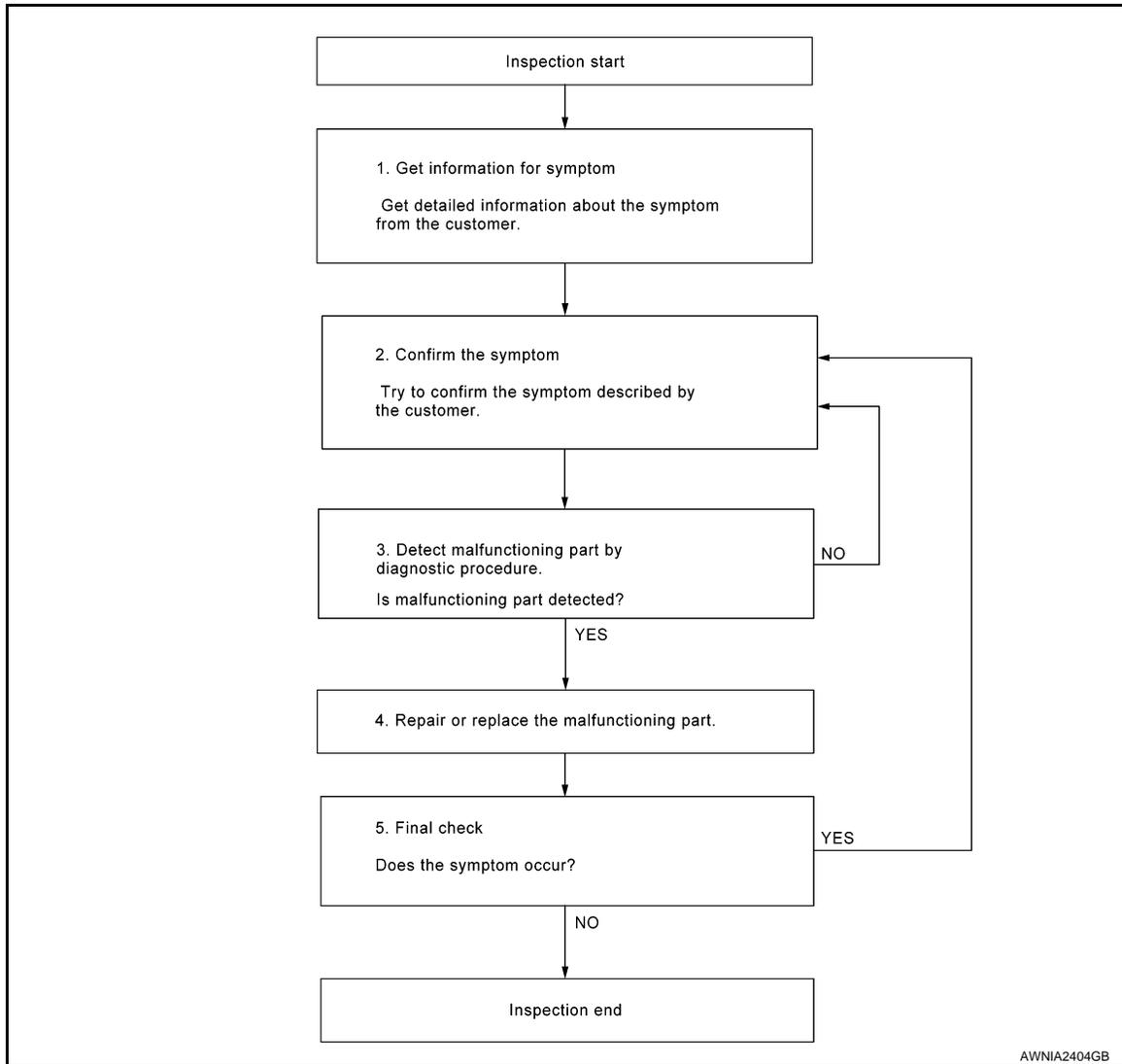
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:0000000010502033

#### 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-48, "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

[AUDIO SYSTEM]

< BASIC INSPECTION >

---

Is malfunctioning part detected?

YES >> GO TO 4.

NO >> GO TO 2.

### 4.REPAIR OR REPLACE THE MALFUNCTIONING PART

---

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

>> GO TO 5.

### 5.FINAL CHECK

---

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

Was the repair confirmed?

YES >> Inspection End.

NO >> GO TO 2.

# DTC/CIRCUIT DIAGNOSIS

## POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

### AUDIO UNIT : Diagnosis Procedure

INFOID:000000010502034

Regarding Wiring Diagram information, refer to [AV-23, "Wiring Diagram"](#).

### 1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
7	Ignition power supply	4 (10A)
19	Battery power supply	19 (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 M10.
3. Check voltage between audio unit connector M10 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M10	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 M10.
3. Check continuity between audio unit connectors and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M10	20	—	Yes

**Is the inspection result normal?**

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

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**AV**

FRONT TWEETER

Diagnosis Procedure

INFOID:000000010502035

Regarding Wiring Diagram information, refer to [AV-23. "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 TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M10 and suspect front tweeter connector.
2. Check continuity between audio unit connector M10 and suspect front tweeter connector.

Audio unit		Front tweeter		Continuity
Connector	Terminal	Connector	Terminal	
M10	2	M84 (LH)	1	Yes
	3		2	
	11	M83 (RH)	1	
	12		2	

3. Check continuity between audio unit connector M10 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M10	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT TWEETER SIGNAL

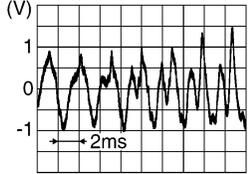
1. Connect audio unit connector M10 and suspect front tweeter connector.
2. Turn ignition switch to ON.
3. Push audio unit POWER switch.
4. Check signal between the terminals of audio unit connector M10.

Audio unit connector M10		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

# FRONT TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

2	3	Audio signal output	
11	12		

Is the inspection result normal?

- YES >> Replace front tweeter. Refer to [AV-55. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-53. "Removal and Installation"](#).

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# FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

## FRONT DOOR SPEAKER

### Diagnosis Procedure

INFOID:000000010502036

Regarding Wiring Diagram information, refer to [AV-23. "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 M10 and suspect front door speaker connector.
2. Check continuity between audio unit connector M10 and suspect front door speaker connector.

Audio unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M10	2	D14 (LH)	1	Yes
	3		2	
	11	D34 (RH)	1	
	12		2	

3. Check continuity between audio unit connector M10 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M10	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

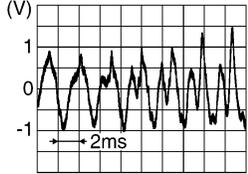
1. Connect audio unit connector M10 and suspect front door speaker connector.
2. Turn ignition switch to ON.
3. Push audio unit POWER switch.
4. Check signal between the terminals of audio unit connector M10.

Audio unit connector M10		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

# FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

2	3	Audio signal output	
11	12		

SKIB3609E

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-56. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-53. "Removal and Installation"](#).

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## REAR DOOR SPEAKER

### Diagnosis Procedure

INFOID:000000010502037

Regarding Wiring Diagram information, refer to [AV-23. "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 DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M10 and suspect rear door speaker connector.
2. Check continuity between audio unit connector M10 and suspect rear door speaker connector.

Audio unit		Rear speaker		Continuity
Connector	Terminal	Connector	Terminal	
M10	4	D55 (LH)	1	Yes
	5		2	
	13	D68 (RH)	1	
	14		2	

3. Check continuity between audio unit connector M10 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M10	4	—	No
	5		
	13		
	14		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

### 3. CHECK REAR DOOR SPEAKER SIGNAL

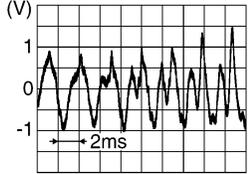
1. Connect audio unit connector M10 and suspect rear door speaker connector.
2. Turn ignition switch to ON.
3. Push audio unit POWER switch.
4. Check signal between the terminals of audio unit connector M10.

Audio unit connector M10		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

# REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

4	5	Audio signal output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
13	14		

Is the inspection result normal?

- YES >> Replace rear door speaker. Refer to [AV-57. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-53. "Removal and Installation"](#).

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# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

## MICROPHONE SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:000000010502039

Regarding Wiring Diagram information, refer to [AV-23. "Wiring Diagram"](#).

### 1. CHECK HARNESS BETWEEN AUDIO UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect audio unit connector and microphone connector R20.
3. Check continuity between audio unit connector and microphone connector R20.

Audio unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M11	36	R20	3	Yes
M12	52		2	
	51		1	

4. Check continuity between audio unit connector and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M11	36	—	No
M12	52		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connectors.

### 2. CHECK MICROPHONE POWER SUPPLY

1. Connect audio unit connector M11 and microphone connector R20.
2. Turn ignition switch ON.
3. Check voltage between microphone connector R20 and ground.

Microphone (+)		Ground (-)	Voltage (Approx.)
Connector	Terminal		
R20	3	—	5V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace audio unit. Refer to [AV-53. "Removal and Installation"](#).

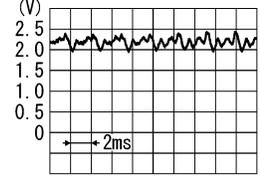
### 3. CHECK MICROPHONE SIGNAL

Check signal between terminals of audio unit connector.

# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

Audio unit connector M11 and M12		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
36	52	Speak into microphone.	 <p style="text-align: right; font-size: small;">PKIB5037J</p>

Is the inspection result normal?

- YES >> Replace audio unit. Refer to [AV-53. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-59. "Removal and Installation"](#).

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## USB CONNECTOR

### Diagnosis Procedure

INFOID:000000010502041

Regarding Wiring Diagram information, refer to [AV-23. "Wiring Diagram"](#).

#### 1. CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M383 and USB interface connector M384.
3. Check continuity between audio unit connector M383 and USB interface connector M384.

Audio unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M383	129	M384	7	Yes
	130		5	
	131		8	
	132		6	
	133		9	

4. Check continuity between audio unit connector M383 and ground.

Audio unit		—	Continuity
Connector	Terminal		
M383	129	Ground	No
	131		

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-58. "Removal and Installation"](#).  
 NO >> Repair or replace harness or connectors.

# AUXILIARY INPUT JACK

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

## AUXILIARY INPUT JACK

### Diagnosis Procedure

INFOID:000000010502042

Regarding Wiring Diagram information, refer to [AV-23. "Wiring Diagram"](#).

#### 1. CHECK AUX JACK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio control unit connector M11 and AUX in jack connector M13.
3. Check continuity between audio control unit connector M11 and AUX in jack connector M13.

Audio control unit		AUX in jack		Continuity
Connector	Terminal	Connector	Terminal	
M11	34	M13	1	Yes
	33		4	
	32		3	

4. Check continuity between audio control unit connector M88 and ground.

Audio control unit		—	Continuity
Connector	Terminal		
M11	33	Ground	No
	34		

Is the inspection result normal?

- YES >> Replace the AUX in jack. Refer to [AV-58. "Removal and Installation"](#).  
NO >> Repair or replace harness or connectors.

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## SYMPTOM DIAGNOSIS

### AUDIO SYSTEM

#### Symptom Table

INFOID:0000000010502043

#### RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	Audio unit	Malfunction in audio unit. Refer to <a href="#">AV-15, "On Board Diagnosis Function"</a> .
No sound comes out or the level of the sound is low.	No sound from all speakers.	<ul style="list-style-type: none"> <li>• Speaker circuit shorted to ground. Refer to <a href="#">AV-23, "Wiring Diagram"</a>.</li> <li>• Audio unit power supply and ground circuits malfunction. Refer to <a href="#">AV-37, "AUDIO UNIT : Diagnosis Procedure"</a>.</li> </ul>
	Only a certain speaker (front tweeter LH, front tweeter RH, front door speaker LH, front door speaker RH, rear door speaker LH, rear door speaker RH) does not output sound.	<ul style="list-style-type: none"> <li>• Poor connector connection of speaker.</li> <li>• Sound signal circuit malfunction between audio unit and speaker. Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-38, "Diagnosis Procedure"</a> (front tweeter).</li> <li>- <a href="#">AV-40, "Diagnosis Procedure"</a> (front door speaker).</li> <li>- <a href="#">AV-42, "Diagnosis Procedure"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in speaker. Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-55, "Removal and Installation"</a> (front tweeter).</li> <li>- <a href="#">AV-56, "Removal and Installation"</a> (front door speaker).</li> <li>- <a href="#">AV-57, "Removal and Installation"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in audio unit. Refer to <a href="#">AV-15, "On Board Diagnosis Function"</a>.</li> </ul>

# AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[AUDIO SYSTEM]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Malfunction in audio unit. Refer to <a href="#">AV-15, "On Board Diagnosis Function"</a> .
	Noise comes out only from a certain speaker (front tweeter LH, front tweeter RH, front door speaker LH, front door speaker RH, rear door speaker LH, rear door speaker RH).	<ul style="list-style-type: none"> <li>• Poor connector connection of speaker.</li> <li>• Sound signal circuit malfunction between audio unit and speaker. Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-38, "Diagnosis Procedure"</a> (front tweeter).</li> <li>- <a href="#">AV-40, "Diagnosis Procedure"</a> (front door speaker).</li> <li>- <a href="#">AV-42, "Diagnosis Procedure"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in speaker.</li> <li>• Poor Installation of speaker (e.g. backlash and looseness). Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-55, "Removal and Installation"</a> (front tweeter).</li> <li>- <a href="#">AV-56, "Removal and Installation"</a> (front door speaker).</li> <li>- <a href="#">AV-57, "Removal and Installation"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in audio unit. Refer to <a href="#">AV-15, "On Board Diagnosis Function"</a>.</li> </ul>
	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 <a href="#">AV-12, "Rod Antenna, Antenna Amp., Satellite Antenna and Antenna Feeder"</a> .
No radio reception or poor reception.	<ul style="list-style-type: none"> <li>• Other audio sounds are normal.</li> <li>• 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).</li> </ul>	<ul style="list-style-type: none"> <li>• Antenna amp. ON signal circuit malfunction. Refer to <a href="#">AV-20, "Reference Value"</a>.</li> <li>• Poor connector connection of antenna or antenna feeder. Refer to <a href="#">AV-12, "Rod Antenna, Antenna Amp., Satellite Antenna and Antenna Feeder"</a>.</li> </ul>
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAGNOSIS" in the appropriate interior trim section.

## 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.

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# AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[AUDIO SYSTEM]

4. 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 <a href="#">AV-53. "Removal and Installation"</a> .
Hands-free phone cannot be established.	<ul style="list-style-type: none"> <li>Hands-free phone operation can be made, but the communication cannot be established.</li> <li>Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.</li> </ul>	
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.	<p>Sound operation function is normal.</p> <p>Sound operation function does not work.</p>	
The system cannot be operated.	<ul style="list-style-type: none"> <li>The voice recognition can be controlled.</li> <li>Steering switch's , , and  switch works, but  does not work.</li> </ul>	Steering switch malfunction. Replace steering switch. Refer to <a href="#">AV-54. "Removal and Installation"</a> .
	Steering switch's  ,  ,  , and  switches do not work.	Steering switch signal circuit malfunction. Refer to <a href="#">MWI-71. "Diagnosis Procedure"</a> .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to <a href="#">MWI-71. "Diagnosis Procedure"</a> .

# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[AUDIO SYSTEM]

## NORMAL OPERATING CONDITION

### Description

INFOID:000000010502044

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

#### 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 <a href="#">AV-48, "Symptom Table"</a>.</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"> <li>• The vehicle is outside of the telephone service area.</li> <li>• 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.</li> <li>• The cellular phone is locked to prevent it from being dialed.</li> </ul> <p><b>NOTE:</b></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 >

[AUDIO SYSTEM]

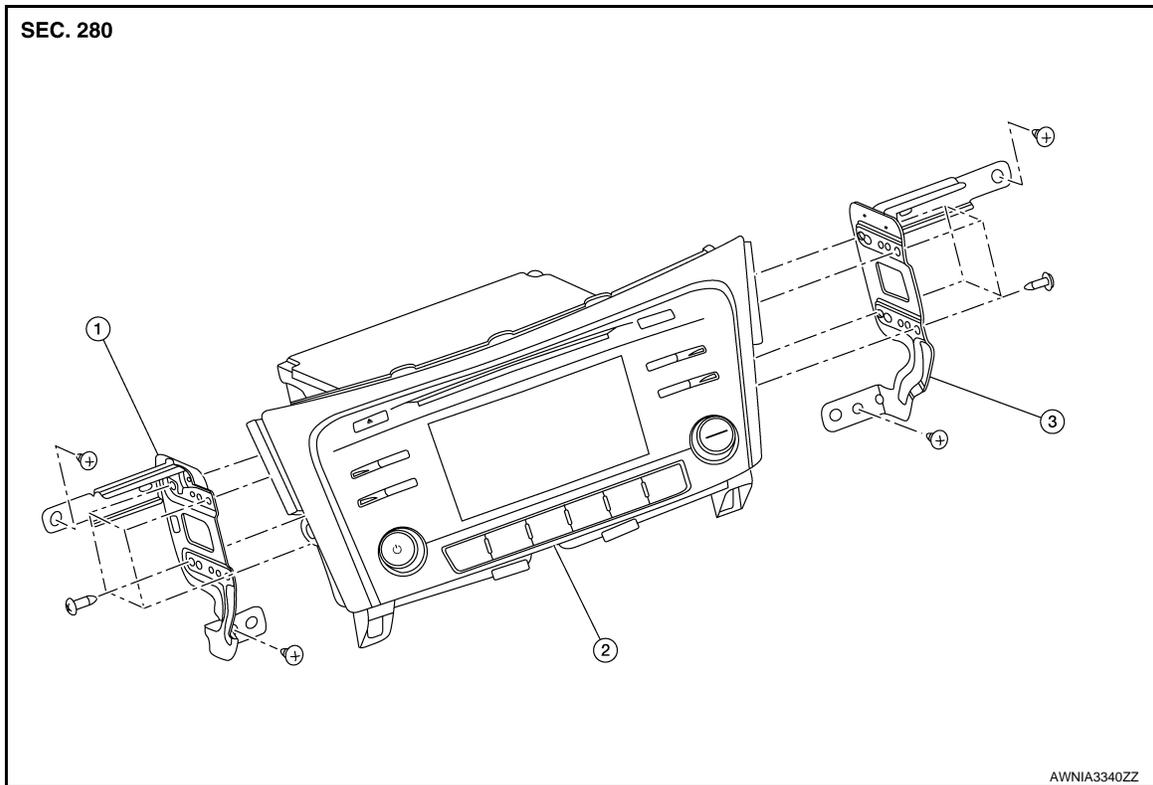
Symptom	Cause and Counter measure
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality.	Do not place the cellular phone in an area surrounded 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:0000000010502045



1. Audio unit bracket (LH)

2. Audio unit

3. Audio unit bracket (RH)

**NOTE:**

The following figures show the image of the inspection procedure. (Existing parts are not the same shape as the parts in the figure.)

## Removal and Installation

INFOID:0000000010502046

## REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-154, "Exploded View"](#).
2. Remove A/C switch (AUTOMATIC AIR CONDITIONING) or front air control (MANUAL AIR CONDITIONING).
3. Remove instrument finisher B. Refer to [IP-12, "Exploded View"](#).
4. Remove instrument finisher E. Refer to [IP-12, "Exploded View"](#).
5. Remove the audio unit screws, then pull out the audio unit.
6. Disconnect the harness connectors from the audio unit and remove.
7. Remove the audio unit bracket (LH/RH) screws and the audio unit brackets (LH/RH) (if necessary).

## INSTALLATION

Installation is in the reverse order of removal.

# STEERING SWITCHES

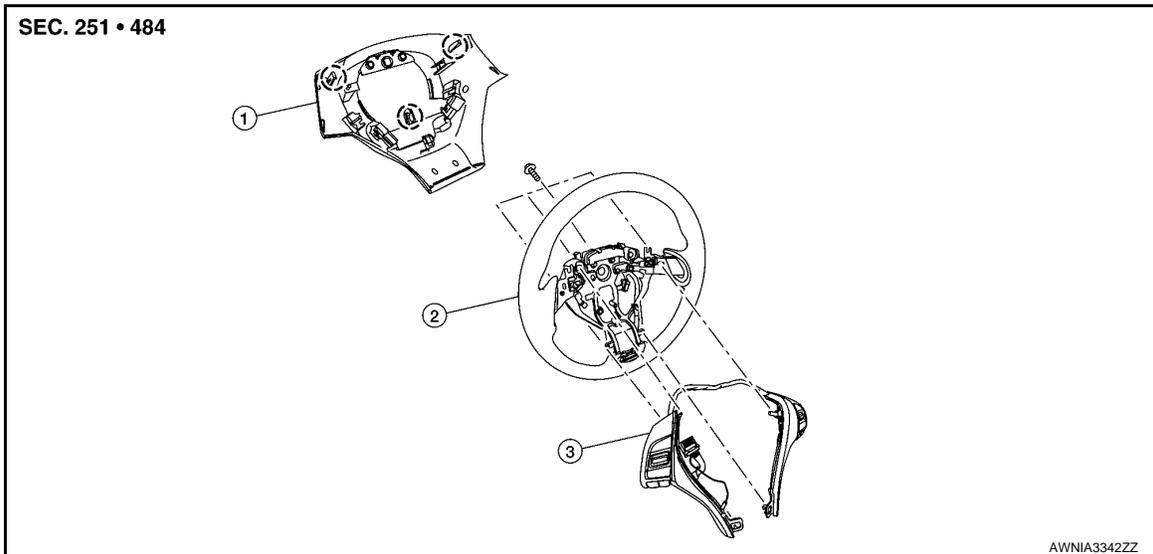
< REMOVAL AND INSTALLATION >

[AUDIO SYSTEM]

## STEERING SWITCHES

Exploded View

INFOID:000000010502047



1. Steering wheel rear finisher
2. Steering wheel
3. Steering switches

○ Pawl

## Removal and Installation

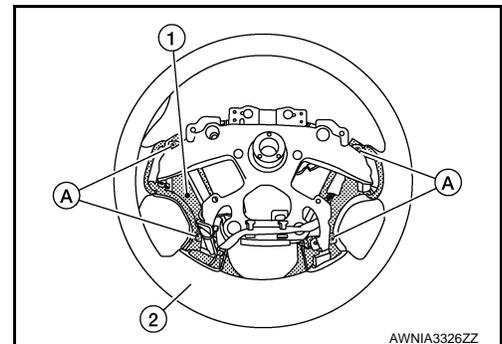
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### REMOVAL

#### NOTE:

The steering switches are serviced as an assembly.

1. Remove steering wheel. Refer to [ST-8, "Exploded View"](#).
2. Release pawls on the steering wheel rear finisher and remove.
3. Remove screws (A) and steering switches (1) from steering wheel (2).



### INSTALLATION

Installation is in the reverse order of removal.

## FRONT TWEETER

### Removal and Installation

INFOID:000000010502049

#### REMOVAL

1. Remove defroster grille. Refer to [IP-12. "Exploded View"](#).
2. Remove bolts and pull out the front tweeter.
3. Disconnect the harness connector from the front tweeter and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

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# FRONT DOOR SPEAKER

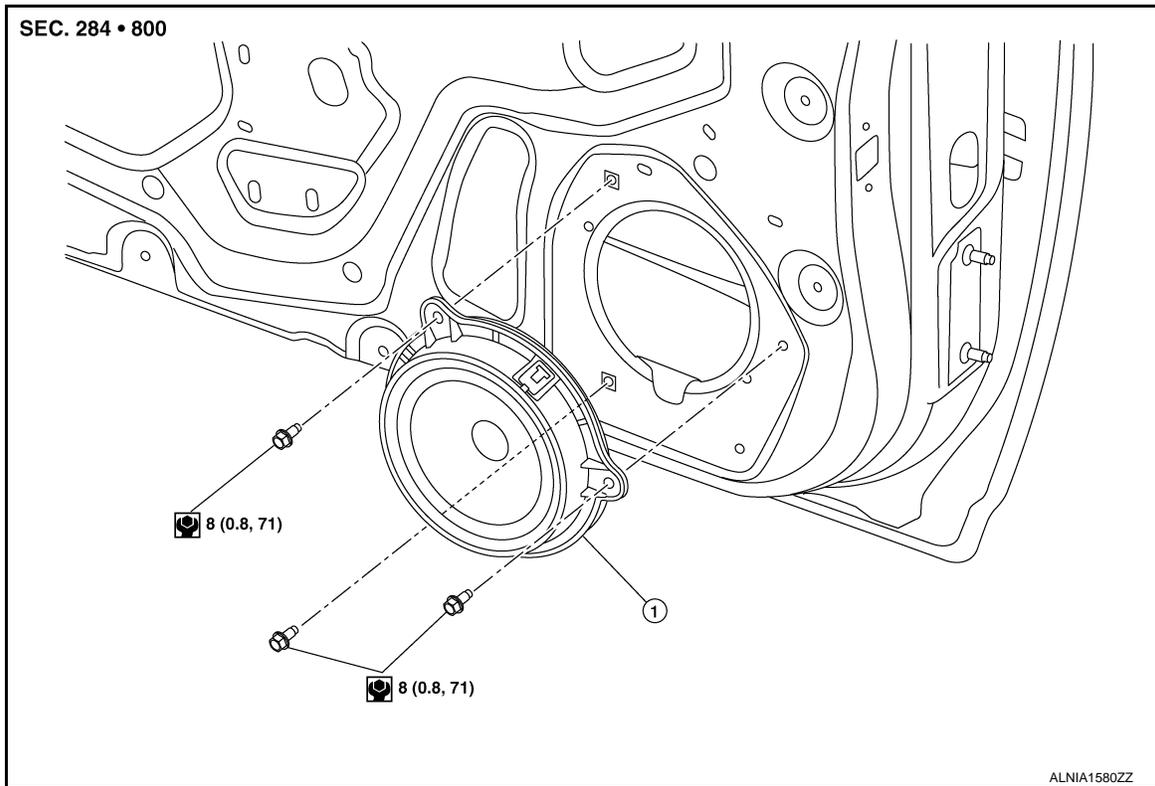
< REMOVAL AND INSTALLATION >

[AUDIO SYSTEM]

## FRONT DOOR SPEAKER

### Exploded View

INFOID:000000010502050



1. Front door speaker

### Removal and Installation

INFOID:000000010502051

#### REMOVAL

1. Remove front door finisher. Refer to [INT-12. "FRONT DOOR FINISHER : Exploded View"](#).
2. Remove front door speaker bolts, then pull out front door speaker.
3. Disconnect the harness connector from front door speaker and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# REAR DOOR SPEAKER

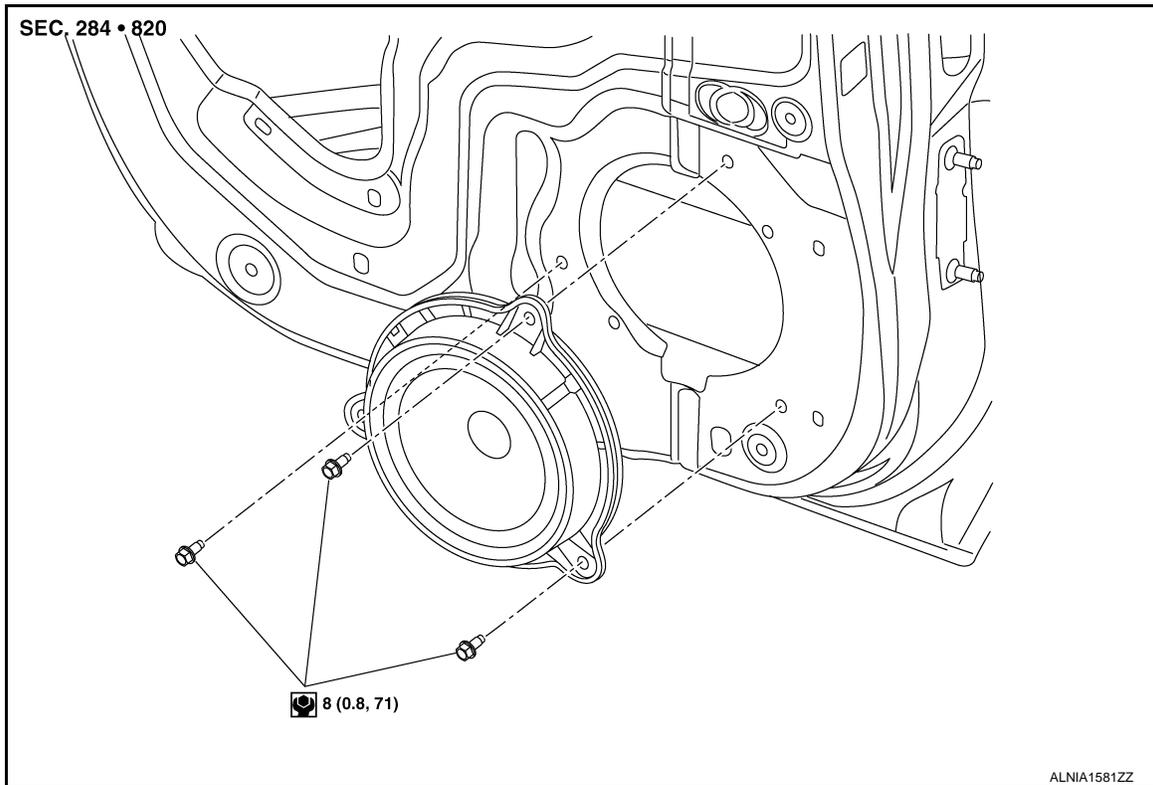
< REMOVAL AND INSTALLATION >

[AUDIO SYSTEM]

## REAR DOOR SPEAKER

Exploded View

INFOID:000000010502052



1. Rear door speaker

## Removal and Installation

INFOID:000000010502053

### REMOVAL

1. Remove rear door finisher. Refer to [INT-15. "REAR DOOR FINISHER : Exploded View"](#).
2. Remove rear door speaker bolts, then pull out rear door speaker.
3. Disconnect the harness connector from the rear door speaker and remove.

### INSTALLATION

Installation is in the reverse order of removal.

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# USB INTERFACE AND AUX IN JACK

< REMOVAL AND INSTALLATION >

[AUDIO SYSTEM]

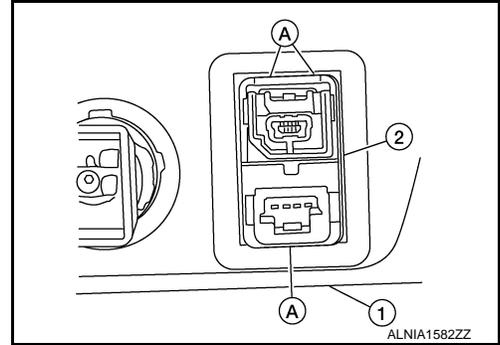
## USB INTERFACE AND AUX IN JACK

### Removal and Installation

INFOID:000000010502054

#### REMOVAL

1. Remove center console. Refer to [IP-18. "Exploded View"](#).
2. Release the pawls (A) on the back of USB interface and AUX in jack (2).



#### INSTALLATION

Installation is in the reverse order of removal.

## MICROPHONE

### Removal and Installation

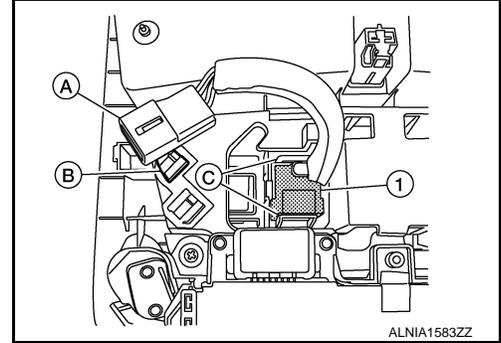
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#### REMOVAL

1. Remove the map lamp assembly. Refer to [INT-24, "Exploded View"](#).
2. Release harness connector (A) by sliding rearward to remove from the pawl (B).
3. Release pawls (C) and remove the microphone (1) from the front room/map lamp assembly.

**NOTE:**

The following figures show the image of the inspection procedure. (Existing parts are not the same shape as the parts in the figure.)



#### INSTALLATION

Installation is in the reverse order of removal.

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## AUDIO ANTENNA

### Removal and Installation

INFOID:000000010502057

#### REMOVAL

1. Remove the luggage side upper finisher (RH). Refer to [INT-28, "Exploded View"](#).
2. Partially lower headlining (rear). Refer to [INT-24, "Exploded View"](#).
3. Disconnect harness connectors from antenna feeder.
4. Remove nut from audio antenna and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

**Audio antenna nut : 6.5 N·m (0.66 kg·m, 58 in-lb)**

#### **CAUTION:**

If the audio antenna nut is not properly tightened, lower sensitivity of the antenna may be experienced. If the nut is over tightened, this will deform the roof panel.

# ANTENNA FEEDER

< REMOVAL AND INSTALLATION >

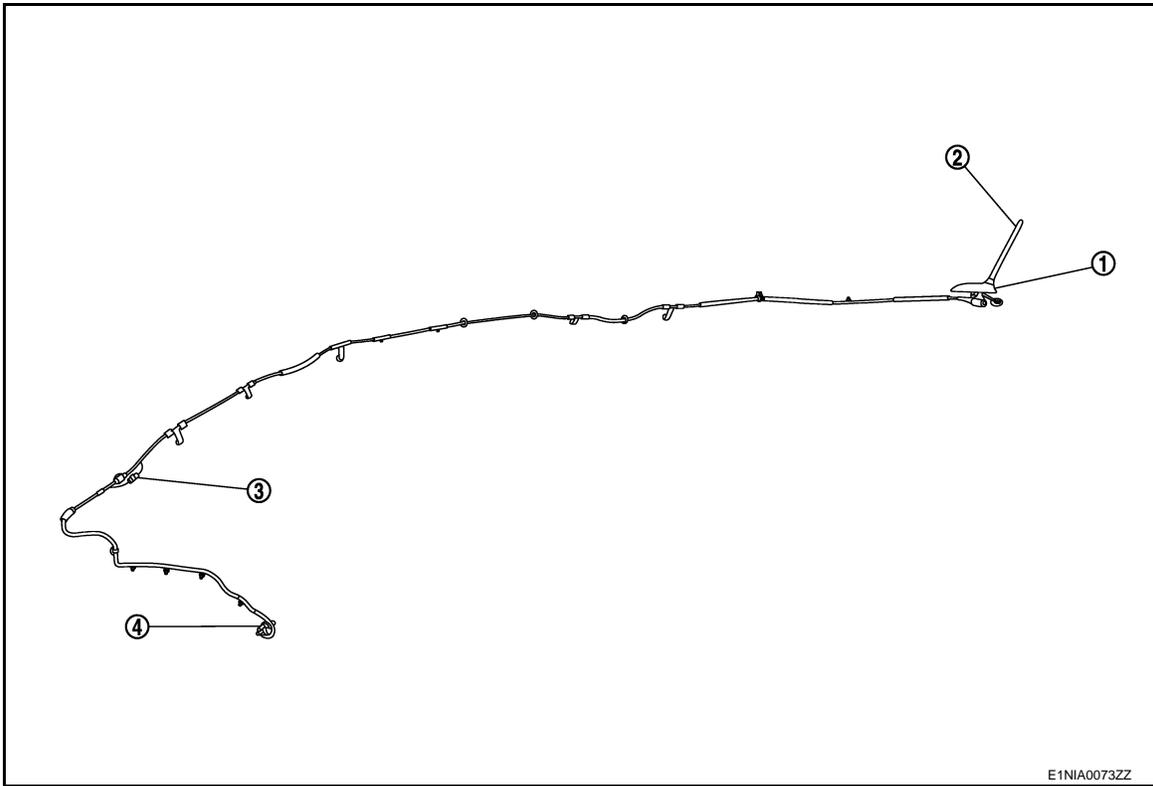
[AUDIO SYSTEM]

## ANTENNA FEEDER

### Feeder Layout

INFOID:000000010502285

### ANTENNA FEEDER LAYOUT



1. Antenna base (antenna amp. and satellite antenna)
2. Rod Antenna
3. M394
4. M385

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# PRECAUTION

## PRECAUTIONS

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

INFOID:000000010519310

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 "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

**WARNING:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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:**

Always observe the following items for preventing accidental activation.

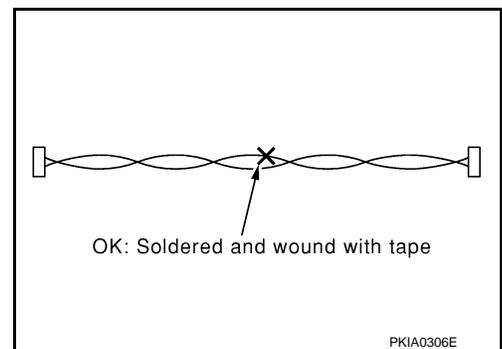
- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

### Precaution for Harness Repair

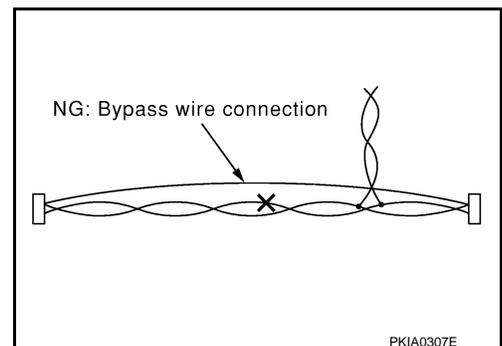
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#### AV COMMUNICATION SYSTEM

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



- 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.)



# PRECAUTIONS

< PRECAUTION >

[DISPLAY AUDIO]

## Precaution for Work

INFOID:000000010435590

- 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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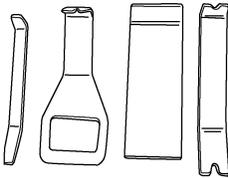
## PREPARATION

### PREPARATION

#### Special Service Tool

INFOID:000000010435591

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:000000010435592

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

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

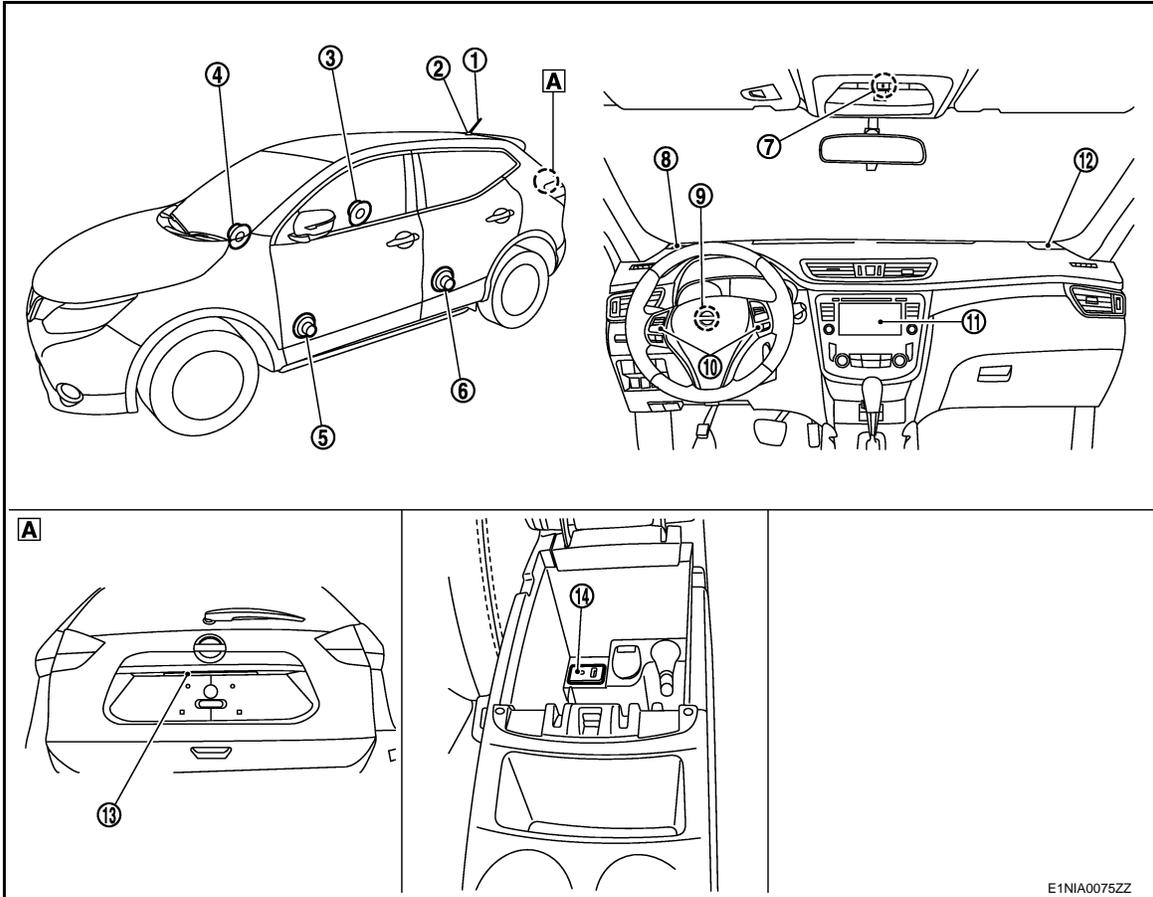
[DISPLAY AUDIO]

## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:0000000010435593



A. Center of back door

No.	Component	Function
1.	Rod antenna	Refer to <a href="#">AV-68, "Rod Antenna, Antenna Amp., Satellite Antenna and Antenna Feeder"</a> .
2.	Antenna base (antenna amp. and satellite antenna)	
3.	Rear door speaker RH	Refer to <a href="#">AV-66, "Speakers"</a> .
4.	Front door speaker RH	
5.	Front door speaker LH	
6.	Rear door speaker LH	
7.	Microphone	Refer to <a href="#">AV-67, "Microphone"</a> .
8.	Front tweeter LH	Refer to <a href="#">AV-66, "Speakers"</a> .
9.	Steering angle sensor	Refer to <a href="#">AV-68, "Steering Angle Sensor"</a> .
10.	Steering switches	Refer to <a href="#">AV-67, "Steering Switches"</a> .
11.	Audio unit	Refer to <a href="#">AV-66, "Audio Unit"</a> .
12.	Front tweeter RH	Refer to <a href="#">AV-66, "Speakers"</a> .
13.	Rear view camera	Refer to <a href="#">AV-67, "Rear View Camera"</a> .
14.	USB interface and AUX in jack	Refer to <a href="#">AV-67, "USB Interface and AUX in Jack"</a> .

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

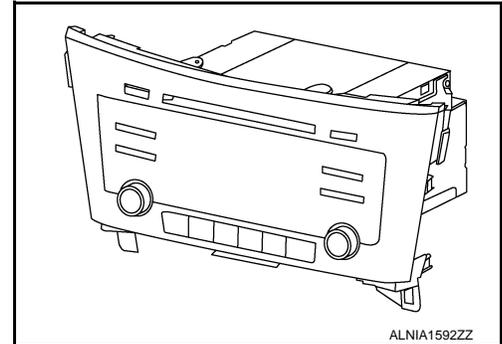
[DISPLAY AUDIO]

## Audio Unit

INFOID:000000010435594

### Description

- AM/FM electronic tuner radio, CD drive and camera controller are integrated into the audio unit.
- The display can show audio status and rear view monitor images.
- Music files stored in iPod®/USB memory can be played using the separate USB connector.
- Music files stored in an external audio device can be played using the separate AUX in jack.

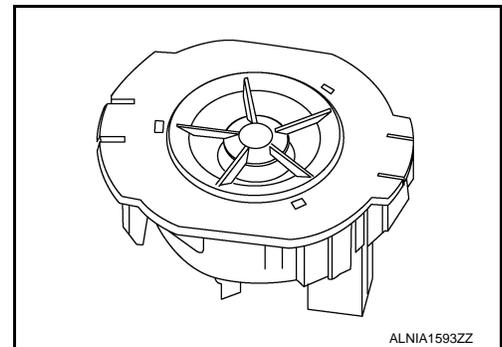


## Speakers

INFOID:000000010435595

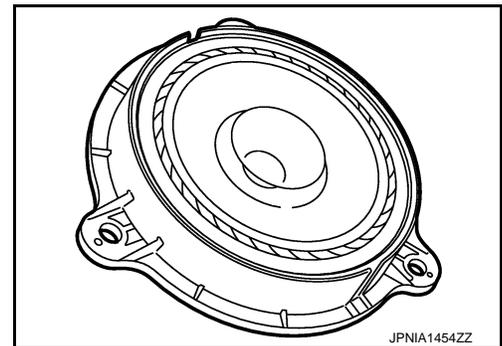
### FRONT TWEETER

- 2.5 cm (1 in) tweeters are installed in the top front corners of the instrument panel.
- Sound signals are input from the audio unit to output high range sounds.



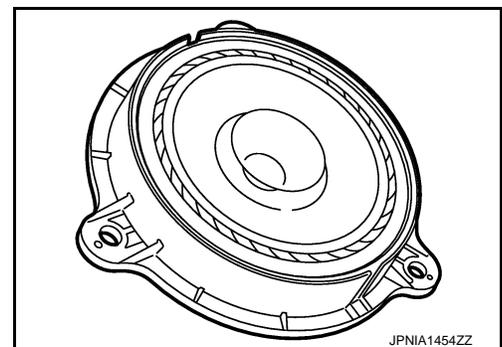
### FRONT DOOR SPEAKER

- 16.5 cm (6.5 in) speakers are installed in the bottom of the front doors.
- Sound signals are input from the audio unit to output high, mid and low range sounds.



### REAR DOOR SPEAKER

- 16.5 cm (6.5 in) speakers are installed in the bottom of the rear doors.
- Sound signals are input from the audio unit to output high, mid and low range sounds.



# COMPONENT PARTS

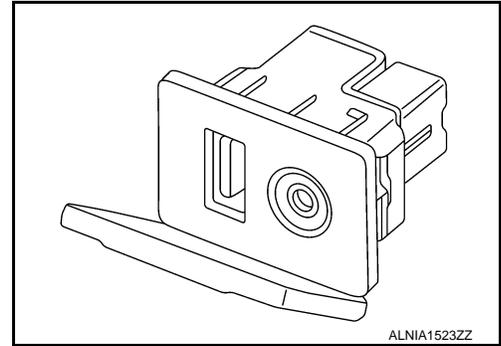
< SYSTEM DESCRIPTION >

[DISPLAY AUDIO]

## USB Interface and AUX in Jack

INFOID:000000010435596

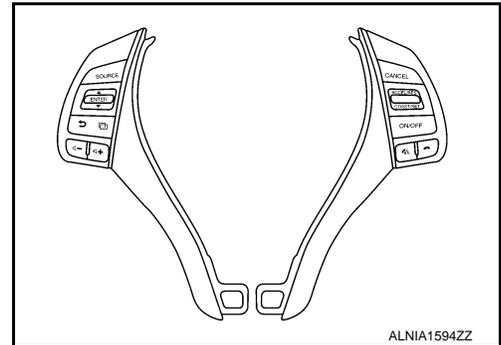
- USB Interface and AUX in jack is installed in the console.
- iPod® and USB memory can be connected to the audio unit through the USB interface.
- An external audio device can be connected to the audio unit through the AUX in jack.



## Steering Switches

INFOID:000000010435597

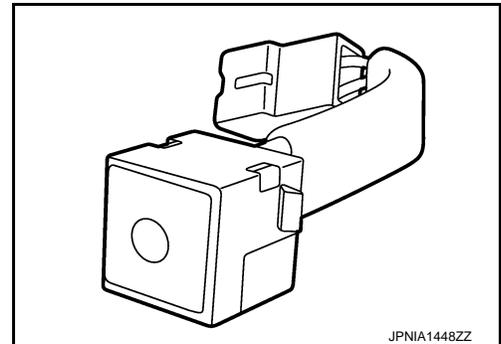
- Steering switches are installed in the steering wheel.
- Operations for audio and hands-free phone are possible.
- Switches are connected to the combination meter.
- Combination meter is connected to the audio unit via AV communication.



## Microphone

INFOID:000000010435598

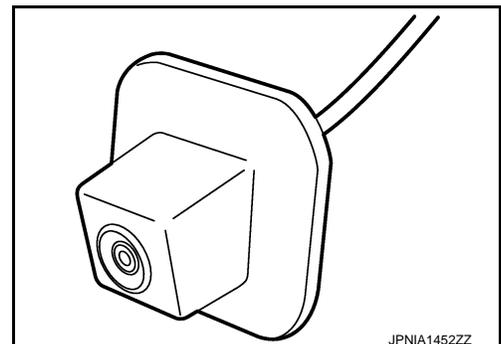
- The microphone is installed in the roof in the map lamp assembly.
- Power is supplied from the audio unit.



## Rear View Camera

INFOID:000000010435599

- The rear view camera is installed to the back door finisher.
- Power is supplied from the audio unit.



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# COMPONENT PARTS

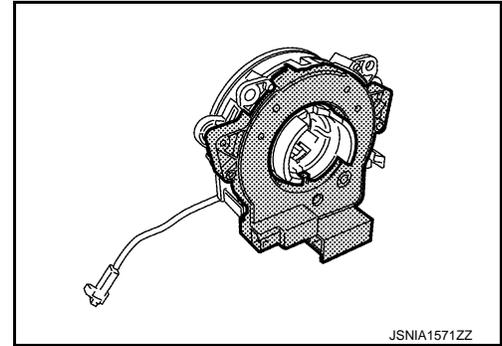
< SYSTEM DESCRIPTION >

[DISPLAY AUDIO]

## Steering Angle Sensor

INFOID:000000010435600

- Steering sensor is installed to the spiral cable.
- Steering angle sends the steering signal necessary for predictive course line via CAN communication.

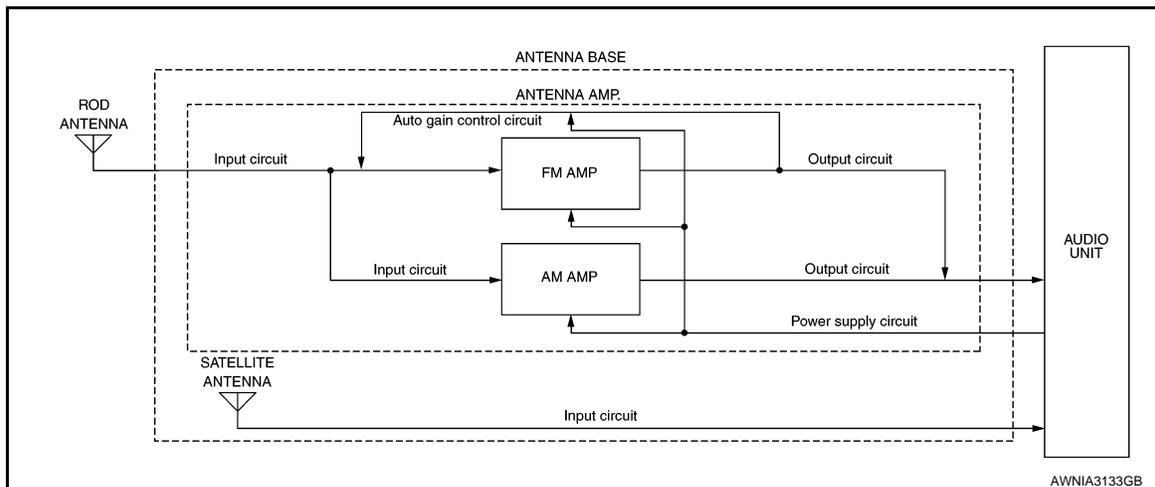


## Rod Antenna, Antenna Amp., Satellite Antenna and Antenna Feeder

INFOID:000000010435601

### RADIO ANTENNA AND SATELLITE ANTENNA

AM/FM radio rod antenna, antenna base and satellite antenna are located on the rear of the roof. The antenna amp. and satellite antenna are built into the antenna base.

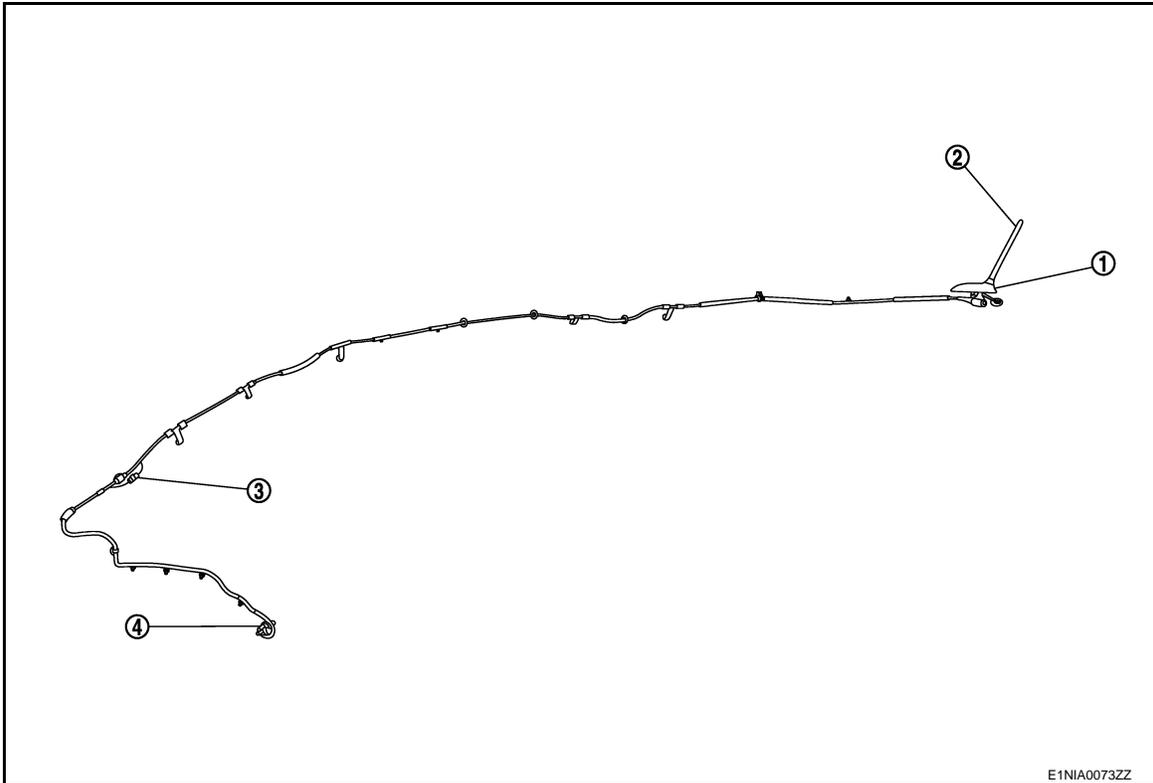


### ANTENNA FEEDER LAYOUT

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO]



- 1. Antenna base (antenna amp. and satellite antenna)
- 2. Rod Antenna
- 3. M394
- 4. M385

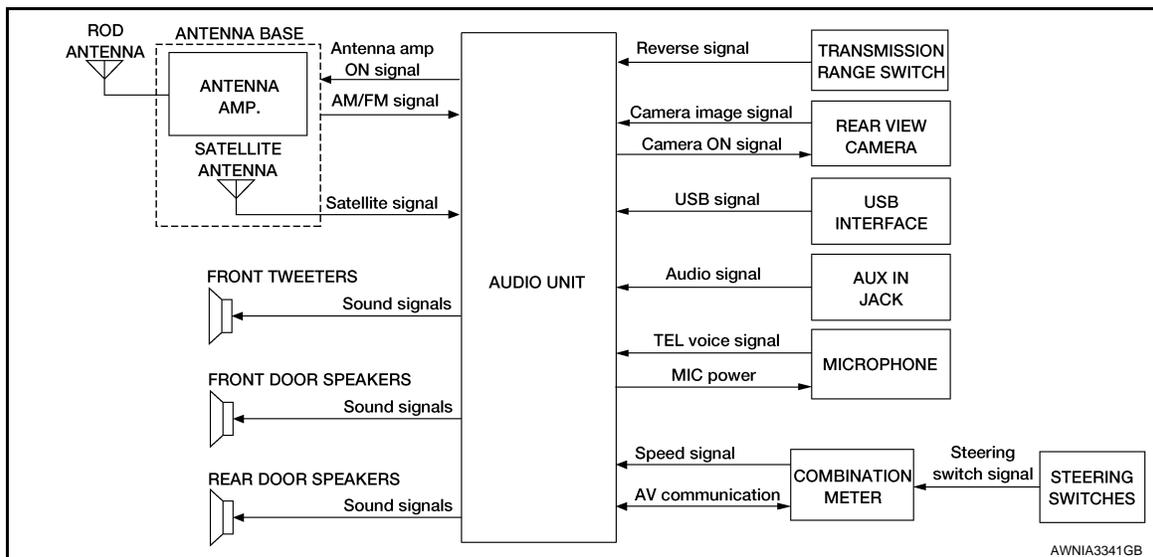
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## SYSTEM

### System Description

INFOID:000000010435602

### SYSTEM DIAGRAM



### AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Front tweeters
- Front door speakers
- Rear door speakers
- USB interface
- AUX in jack
- Steering switches
- Antenna base (rod antenna, antenna amp. and satellite antenna)

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

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

### HANDS-FREE PHONE SYSTEM

- Bluetooth® control is built into audio unit.
- The connection between cellular phone and audio unit is performed with Bluetooth® communication.
- The voice guidance signal is input from the audio 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 audio unit.
- Audio 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 audio unit by establishing Bluetooth® communication from cellular phone, and the signal is output to front speakers.

### SPEED SENSITIVE VOLUME SYSTEM

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

### REAR VIEW MONITOR FUNCTION

Camera Image Operation Principle

# SYSTEM

## < SYSTEM DESCRIPTION >

## [DISPLAY AUDIO]

- The audio unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits 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.

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# DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO]

## DIAGNOSIS SYSTEM (AUDIO UNIT)

### Description

INFOID:000000010435603

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

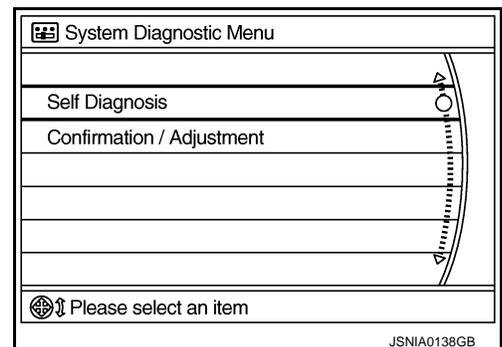
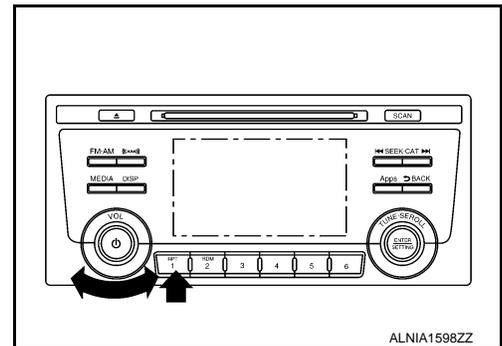
Mode		Description
Self Diagnosis		<ul style="list-style-type: none"> <li>• Audio unit diagnosis.</li> <li>• Diagnoses the connections across system components.</li> </ul>
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display and 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	Displayed but not used.
	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.
	Version Information	Audio unit software and hardware versions are displayed.
	Initialize Setting	Initializes the audio unit memory.

### On Board Diagnosis Function

INFOID:000000010435604

#### 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 or counterclockwise for 40 clicks 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

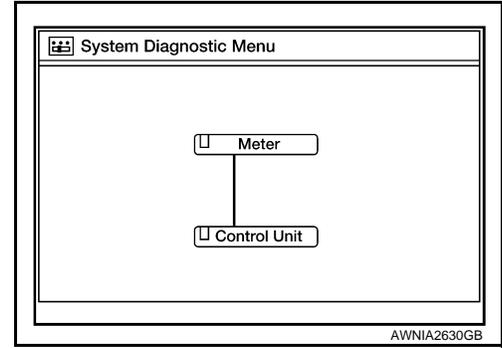
1. Select Self Diagnosis.

# DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO]

- 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.

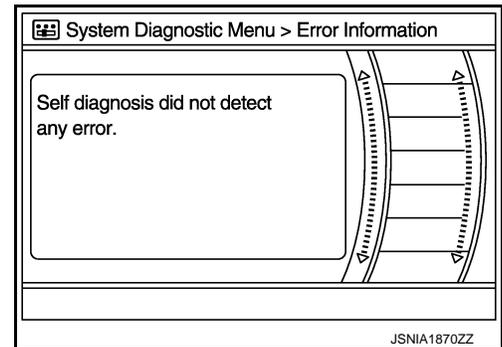


Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction <sup>1</sup>	Red	Green

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-114, "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"> <li>Audio unit power supply or ground circuits. Refer to <a href="#">AV-96, "AUDIO UNIT : Diagnosis Procedure"</a>.</li> <li>If no malfunction is detected in audio unit power supply and ground circuits, replace audio unit. Refer to <a href="#">AV-114, "Removal and Installation"</a>.</li> </ul>

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"> <li>malfunction is detected in combination meter power supply and ground circuits.</li> <li>malfunction is detected in AV communication circuits between audio unit and combination meter.</li> </ul>	<ul style="list-style-type: none"> <li>Combination meter power supply or ground circuits. Refer to <a href="#">MWI-61, "COMBINATION METER : Diagnosis Procedure"</a>.</li> <li>AV communication circuits between audio unit and combination meter.</li> </ul>

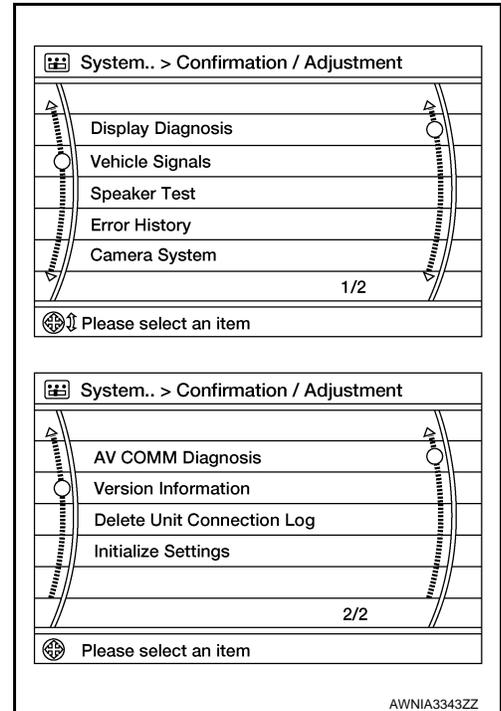
# DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO]

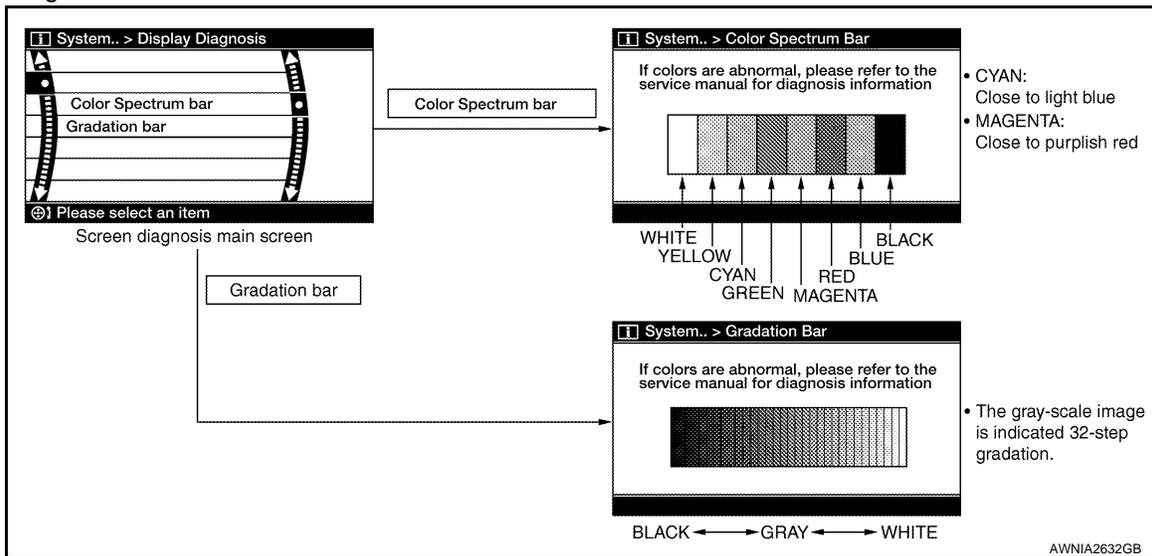
## Audio Unit Confirmation/Adjustment

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.



AWNIA3343ZZ

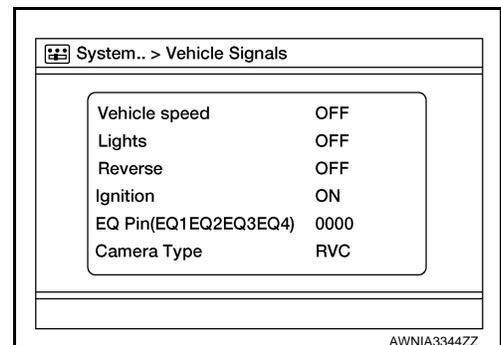
## Display Diagnosis



AWNIA2632GB

## Vehicle Signals

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



AWNIA3344ZZ

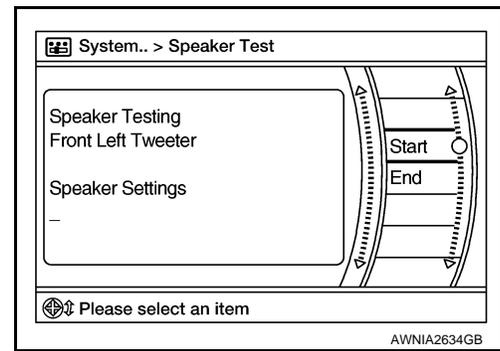
## Speaker Test

# DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO]

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

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 <a href="#">AV-114, "Removal and Installation"</a>
AV COMM CIRCUIT	When one of the following is detected: <ul style="list-style-type: none"> <li>• malfunction is detected in combination meter power supply and ground circuits.</li> <li>• malfunction is detected in AV communication circuits between audio unit and combination meter.</li> </ul>	<ul style="list-style-type: none"> <li>• Combination meter power supply or ground circuits. Refer to <a href="#">MWI-61, "COMBINATION METER : Diagnosis Procedure"</a>.</li> <li>• AV communication circuits between audio unit and combination meter.</li> </ul>

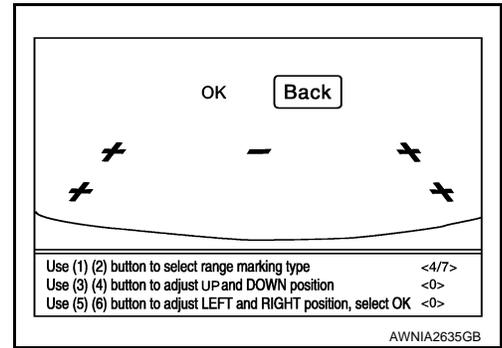
## Camera System

# DIAGNOSIS SYSTEM (AUDIO UNIT)

## < SYSTEM DESCRIPTION >

[DISPLAY AUDIO]

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



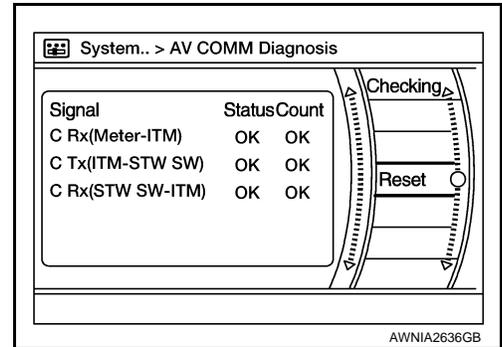
### AV COMM Diagnosis

- 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

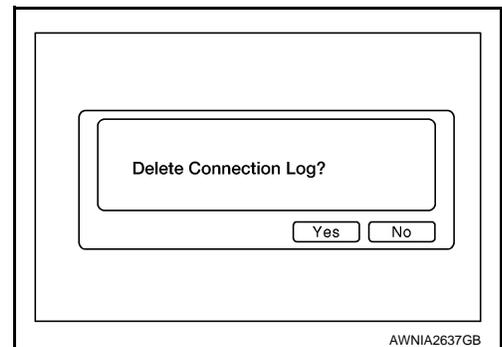
**NOTE:**

“???” indicates UNKWN.



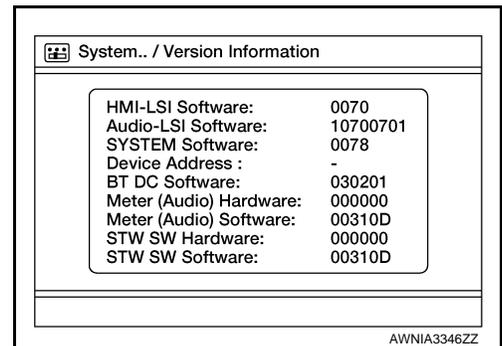
### Delete Unit Connection Log

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



### Version Information

Displays audio unit software and hardware version numbers.



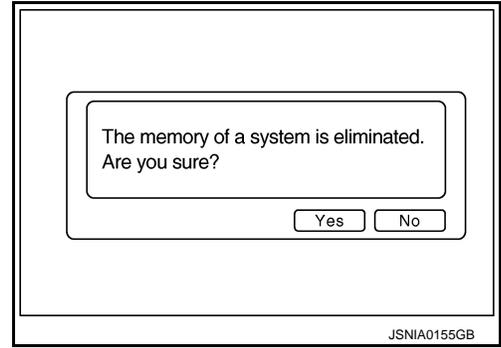
### Initialize Settings

# DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO]

Deletes data stored from the audio unit.



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# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO]

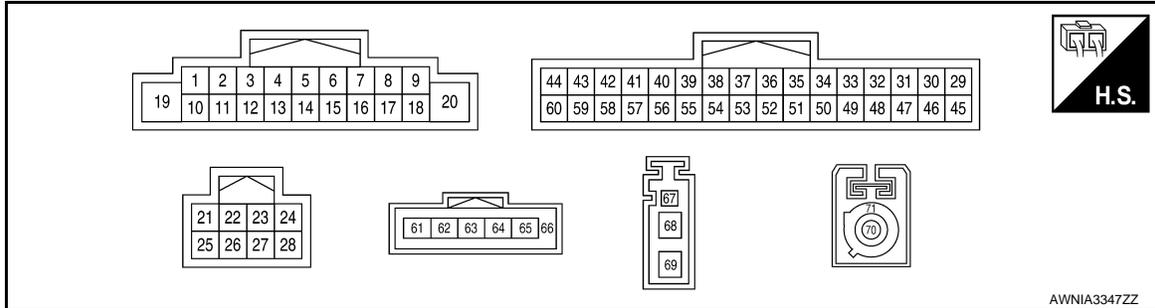
## ECU DIAGNOSIS INFORMATION

### AUDIO UNIT

Reference Value

INFOID:000000010435605

#### TERMINAL LAYOUT



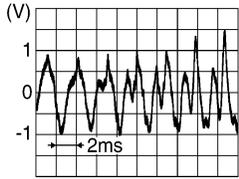
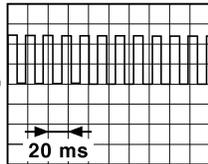
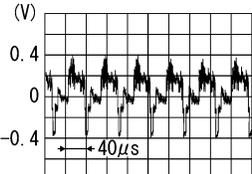
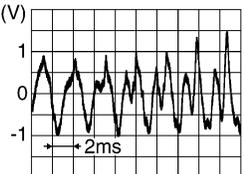
#### PHYSICAL VALUES

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

# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO]

Terminal (Wire color)		Description	Condition			Reference value (Approx.)
+	-		Signal name	Input/ Output	Ignition switch	
13 (LG)	14 (GR)	Sound signal rear door speaker RH	Output	ON	Sound output	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
17 (P)	Ground	Dongle / AUDIO LINK	—	—	—	—
18 (P)	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 (L)	Ground	Battery power supply	Input	OFF	—	Battery voltage
20 (B)	Ground	Ground	—	ON	—	0 V
27 (W)	Ground	ACC power supply	Input	ON	—	Battery voltage
31 (SB)	—	CAN H	—	—	—	—
32 (LG)	—	CAN L	—	—	—	—
33 (B)	Ground	Camera ground	—	ON	—	0 V
34 (R)	Ground	Camera power supply	Output	ON	Camera image displayed	6.0 V
					Except for above	0 V
34 (R)	44 (GR)	Camera image signal	Input	ON	Camera image displayed	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
35 (W)	Ground	Camera detection	—	ON	—	0 V
37 (W)	39 (Shield)	Microphone signal	Input	ON	While speaking into microphone.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
38 (BG)	—	MIC VCC	Input	ON	—	—

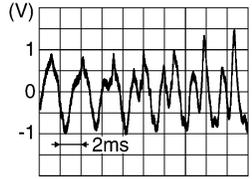
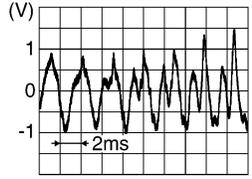
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# AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO]

Terminal (Wire color)		Description	Condition			Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
40 (LG)	—	AV communication (L)	Input/ Output	—	—	—
41 (SB)	—	AV communication (H)	Input/ Output	—	—	—
42 (LG)	—	AV communication (L)	Input/ Output	—	—	—
43 (SB)	—	AV communication (H)	Input/ Output	—	—	—
45 (B)	—	EQ1	—	—	—	—
50 (G)	Ground	Reverse signal	Input	ON	Selector lever in R (re-verse)	Battery voltage
					Selector lever in any posi-tion other than R (reverse)	0 V
53 (B)	Ground	AUX jack audio signal LH	Input	ON	Received audio signal (AUX input)	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
54 (R)	Ground	AUX jack audio signal RH	Input	ON	Received audio signal (AUX input)	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
55 (W)	Ground	AUX ground	—	ON	—	0V
56 (Shield)	—	AUX signal shield	—	—	—	—
129 (G)	—	USB ground	—	—	—	—
130 (R)	—	USB D- signal	—	—	—	—
131 (W)	—	V BUS signal	—	—	—	—
133 (Shield)	—	USB shield	—	—	—	—
132 (L)	—	USB D+ signal	—	—	—	—
150 —	Ground	FN sub signal	Input	ON	Audio unit ON, XM select-ed.	5.0 V
152 —	Ground	Antenna amp. ON signal	Output	ON	Audio unit ON, FM-AM se-lected.	Battery voltage
151 —	Ground	AM/FM antenna signal	Input	ON	Audio unit ON, FM-AM se-lected.	5.0 V

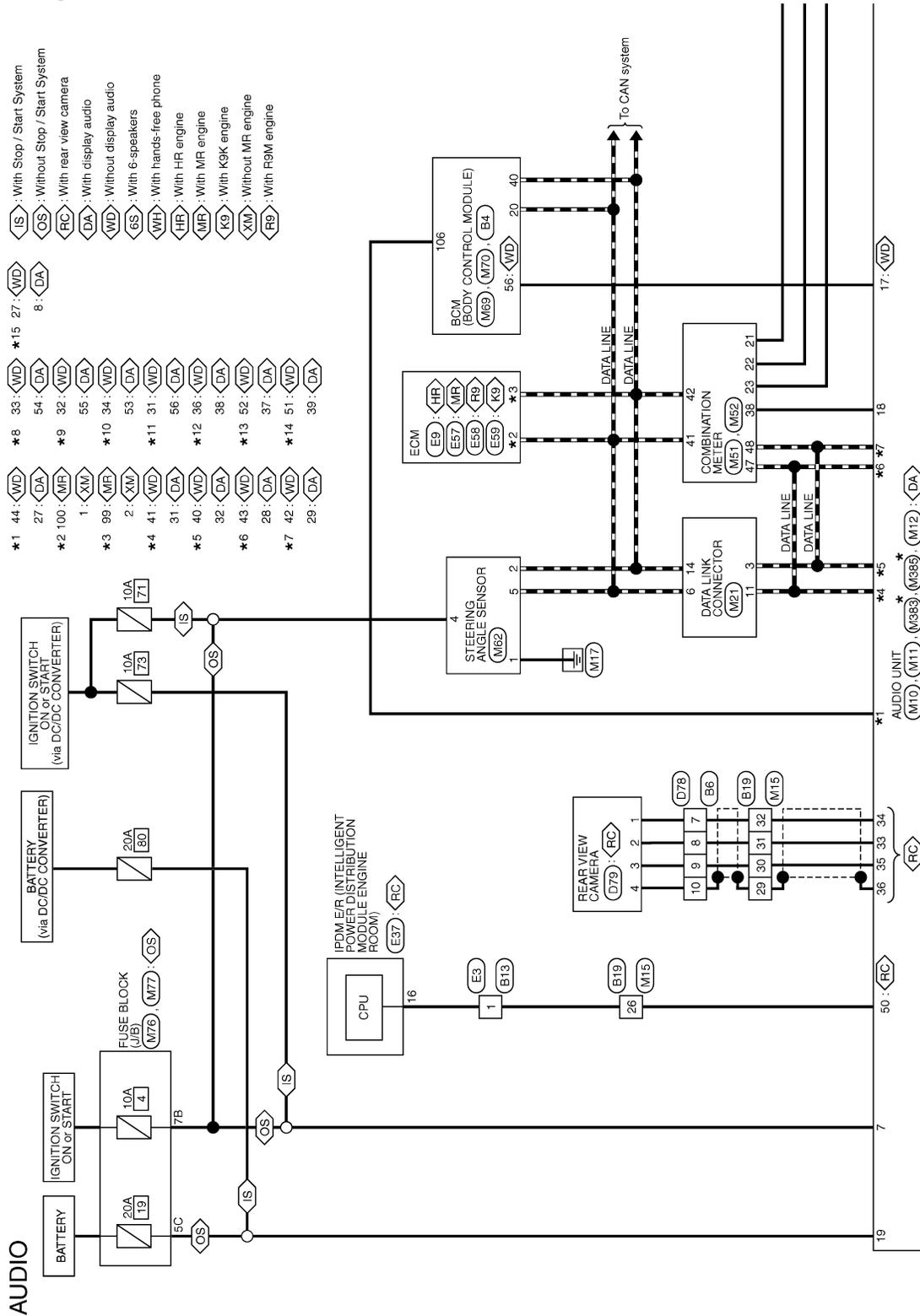
< WIRING DIAGRAM >

# WIRING DIAGRAM

## DISPLAY AUDIO

### Wiring Diagram

INFOID:0000000010505190



\*: This connector is not shown in "Harness Layout".

2013/11/20

JRNWD1346GB

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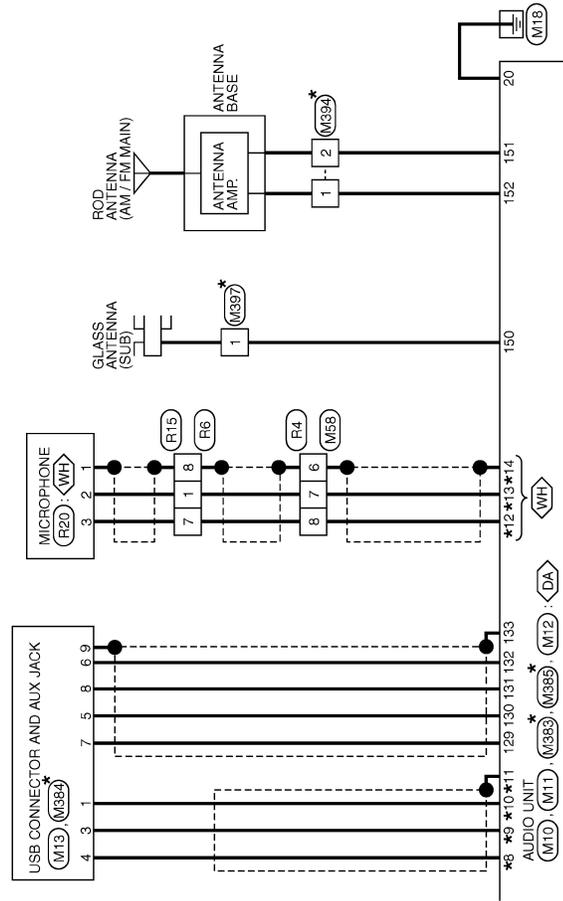
AV



# DISPLAY AUDIO

< WIRING DIAGRAM >

[DISPLAY AUDIO]



JRNWD1348GB

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# DISPLAY AUDIO

< WIRING DIAGRAM >

[DISPLAY AUDIO]

## AUDIO

Connector No.	B4
Connector Name	BOM (BODY CONTROL MODULE)
Connector Type	TH48FC-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	BACK DOOR OPENER REQUEST SW (For B10 models)
2	Y	BACK DOOR OPENER REQUEST SW (For L10 models)
3	R	REAR LH DOOR SW
4	B	BACK DOOR SW
5	W	REAR LH DOOR SW
6	R	PASSENGER DOOR SW
7	G/W	REAR WIPER AUTO STOP
8	B	BACK DOOR OPENER SW
9	SB	DRIVER DOOR SW
10	L	CAN-H
11	BR	REAR BMPR ANT -
12	Y	ROOM ANT 2 -
13	L	ROOM ANT 1 +
14	G	REAR BMPR ANT +
15	G	REAR BMPR ANT -
16	V	HIGH-MOUNTED STOP LAMP
17	P	CAN-L

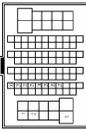
Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Type	TH18FW-NH



6	5	1			
12	11	10	9	8	7

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	G	-
3	G/W	-
4	R	-
5	B	-
6	W	-
7	SHIELD	-
8	Y	-
9	G	-

Connector No.	B13
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	P	-
3	G	-
4	G	-
5	G	-
6	G	-
7	BR	-
8	SB	-
9	BC	-
10	SB	-
11	G	-
12	B	-
13	P	-

Connector No.	B19
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
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Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	V	-
3	G	-
4	GR	-
5	Y	-
6	W	-
7	W	-
8	W	-
9	Y	-
10	W	-
11	Y	-
12	G	-
13	G	-
14	V	-
15	V	-
16	LG	-
17	G	-
18	G	-
19	SHIELD	-
20	W	-
21	G	-
22	V	-
23	BR	-
24	P	-
25	G	-
26	G	-
27	SHIELD	-
28	W	-
29	B	-
30	R	-
31	B	-
32	R	-

Connector No.	B37
Connector Name	WIRE TO WIRE
Connector Type	NIS10MW-CS



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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	V	-
3	G	-
4	G	-
5	G	-
6	P	-
7	P	-
8	R	-
9	L	-
10	L	-
11	W	-
12	W	-
13	R	-
14	L	-
15	BR	-
16	G	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Type	NIS10MW-CS



1	2	3	4		
5	6	7	8	9	10

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	G	-
4	V	-
5	R	-
6	W	-
7	G	-

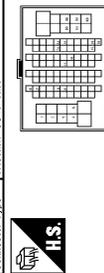
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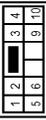
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Connector No.	B74
Connector Name	WIRE TO WIRE
Connector Type	TH80MP-C816-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	L	-
3	LG	-
4	P	-
9	SB	-
20	G	- [With gasoline engine]
21	B	-
24	G	-
25	BR	-
35	LG	-
96	GR	-
76	Y	-
84	L	-
85	W	-
89	BG	-
90	BR	-
93	Y	-
94	P	-
98	L	-
99	LG	-
100	GR	- [With diesel engine]
100	R	- [With gasoline engine]

Connector No.	B84
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	L	-
3	G	-
4	L	- [RHD models without super lock]
4	V	- [RHD models with super lock or LHD models]
5	GR	-
6	LG	-
9	G	-
10	Y	-

Connector No.	D5
Connector Name	WIRE TO WIRE
Connector Type	TH82PW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	R	- [For RHD models]
3	V	- [For LHD models]
3	W	- [For RHD models]
4	B	- [For LHD models]
5	G	-
6	Y	-
7	R	-
8	V	-
9	L	-

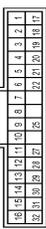
10	W	-
12	W	-
13	LG	-
14	B	-
15	R	-
16	B	-
17	B	-
18	R	-
19	G	-
20	SB	-
21	GR	-
22	BR	-
25	B	-
27	B	-
28	G	-
28	V	- [For LHD models]
28	V	- [For RHD models]
30	GR	- [For LHD models]
30	L	- [For RHD models]
31	GR	-
32	BR	-

Connector No.	D14
Connector Name	FRONT DOOR SPEAKER LH
Connector Type	NS22PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	P	-

Connector No.	D29
Connector Name	WIRE TO WIRE
Connector Type	TH32PW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	Y	- [For LHD models]
2	V	- [For RHD models]
3	P	- [For LHD models]
3	W	- [For RHD models]
4	B	-
5	Y	-
6	Y	-
7	R	-
8	V	-
9	L	-
10	W	-
11	R	-
12	G	-
13	GR	-
14	B	-
15	G	-
16	B	-
17	B	-
18	R	-
19	B	- [With super lock]
19	G	- [Without super lock]
20	SB	-
21	GR	-
22	BR	-
25	B	-
27	B	-
28	Y	-
28	G	- [For RHD models]
28	V	- [For LHD models]
31	GR	-
32	BR	-

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Connector No.	D34
Connector Name	FRONTDOOR SPEAKER RH
Connector Type	NS12PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	D30
Connector Name	WIRE TO WIRE
Connector Type	NS12PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	G	-
4	GR	- [RHD models without super lock]
4	V	- [RHD models with super lock or LHD models]
5	R	-
6	W	-
8	G	-
9	P	-
10	P	-

Connector No.	D35
Connector Name	REAR DOOR SPEAKER LH
Connector Type	NS12PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	R	-

Connector No.	D63
Connector Name	WIRE TO WIRE
Connector Type	NS12PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	L	-
3	G	-
4	GR	- [RHD models without super lock]
4	V	- [RHD models with super lock or LHD models]
5	GR	-
6	LG	-
8	G	-
10	Y	-

Connector No.	D68
Connector Name	REAR DOOR SPEAKER RH
Connector Type	NS12PW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	GR	-

Connector No.	D78
Connector Name	WIRE TO WIRE
Connector Type	TH12MM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
5	G	-
6	G/W	-
7	R	-
8	B	-
9	W	-
10	V	-
11	Y	-
12	L	-

Connector No.	D79
Connector Name	REAR CAMERA
Connector Type	TH18MM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	CAMERA_ON
2	R	GN
3	W	CAMERA_+
4	V	CAMERA_-

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	TH18PW-CS18-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	W	-
5	EG	-
20	G	-
21	BR	-
22	SB	-
23	EG	-
24	SB	-
25	G	-
26	B	-
27	P	-

JRNWD1426GB

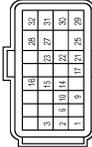
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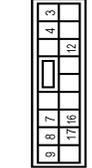
## AUDIO

Connector No.	E9
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



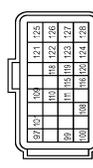
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
3	SB	ASCD MAIN SWITCH
6	V	CLUTCH INTERLOCK SWITCH
9	R	CLUTCH PEDAL POSITION SWITCH
10	V	SPEED LIMITER MAIN SWITCH
14	BR	SENSOR GROUND
15	G	ASCD STEERING SWITCH
16	LG	IGNITION SWITCH
17	BG	STOP LAMP SWITCH
21	Y	SENSOR GROUND
22	W	ACCELERATOR PEDAL POSITION SENSOR 2
23	BG	SENSOR POWER SUPPLY
25	B	ECM GROUND
27	V	SENSOR POWER SUPPLY
28	G	POWER SUPPLY FOR ECM
30	B	ECM GROUND
31	GR	SENSOR GROUND
32	B	ACCELERATOR PEDAL POSITION SENSOR 1
		ECM GROUND

Connector No.	E57
Connector Name	POWER INTELLIGENT POWER LOCK (PIB) DISTRIBUTION MODULE ENGINE
Connector Type	NS16FY-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	-
4	GR	-
7	L	-
8	L	- [For grille shutter]
9	GR	- [Except for grille shutter]
12	GR	-
16	G	-
17	G	-
17	W	-

Connector No.	E57
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
97	W	ATMOSPHERIC PRESSURE SENSOR
99	P	CAN-L
100	L	CAN-H
101	Y	SENSOR POWER SUPPLY (ATMOSPHERIC PRESSURE SENSOR)
108	R	CLUTCH PEDAL POSITION SENSOR
109	LG	IGNITION SWITCH
110	G	ASCD STEERING SWITCH
111	BR	SENSOR GROUND
115	V	STOP LAMP SWITCH
116	GR	ASCD BRAKE SWITCH

118	BG	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
119	W	ACCELERATOR PEDAL POSITION SENSOR 2
120	Y	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
121	BR	POWER SUPPLY FOR ECM
122	B	ECM GROUND
123	B	ECM GROUND
124	R	SENSOR GROUND (ATMOSPHERIC PRESSURE SENSOR)
125	B	ECM GROUND
126	R	ACCELERATOR PEDAL POSITION SENSOR 1
127	GR	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
128	B	ECM GROUND



Connector No.	E59
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



Connector No.	E58
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
3	SB	ASCD MAIN SWITCH
6	V	CLUTCH INTERLOCK SWITCH
9	R	CLUTCH PEDAL POSITION SWITCH
10	V	SPEED LIMITER MAIN SWITCH
11	G	FUEL PUMP CONTROL MODULE (DIAGNOSIS)
13	BR	FUEL PUMP CONTROL MODULE (COMMAND)
14	BR	ASCD STEERING SWITCH GROUND
15	G	ASCD STEERING SWITCH
16	LG	IGNITION SWITCH
17	BG	STOP LAMP SWITCH (W/M, M/T)
17	R	STOP LAMP SWITCH (W/M, C/V)
21	P	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)
22	V	ACCELERATOR PEDAL POSITION SENSOR 2
23	L	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
24	L	WATER IN FUEL LEVEL SENSOR
25	B	ECM GROUND
27	G	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
28	G	POWER SUPPLY FOR ECM
29	B	ECM GROUND
30	Y	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
31	W	ACCELERATOR PEDAL POSITION SENSOR 1

32	B	ECM GROUND
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Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
3	SB	ASCD MAIN SWITCH
6	V	CLUTCH INTERLOCK SWITCH
9	R	CLUTCH PEDAL POSITION SWITCH
10	V	SPEED LIMITER MAIN SWITCH
11	G	FUEL PUMP CONTROL MODULE (DIAGNOSIS)
13	BR	FUEL PUMP CONTROL MODULE (COMMAND)
14	BR	ASCD STEERING SWITCH GROUND
15	G	ASCD STEERING SWITCH
16	LG	ECM POWER SUPPLY (IGNITION)
17	BG	STOP LAMP SWITCH
21	Y	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)
22	W	ACCELERATOR PEDAL POSITION SENSOR 2
23	BG	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
24	L	FUEL HEATER AND WATER IN FUEL SENSOR
25	B	ECM GROUND
26	B	ECM GROUND
27	V	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
29	B	ECM GROUND
30	GR	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
31	R	ACCELERATOR PEDAL POSITION SENSOR 1
32	B	ECM GROUND

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## AUDIO

Connector No.	M10
Connector Name	AUDIO UNIT
Connector Type	TH18FW-CS2



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	SOUND SIGNAL FRONT SPEAKER LH (+)
2	V	SOUND SIGNAL FRONT SPEAKER LH (-)
3	W	SOUND SIGNAL REAR SPEAKER LH (+)
4	W	SOUND SIGNAL REAR SPEAKER LH (-)
5	Y	SOUND SIGNAL FRONT SPEAKER RH (+)
6	Y	SOUND SIGNAL FRONT SPEAKER RH (-)
7	LG	IGNITION SIGNAL
8	R	ILLUMINATION SIGNAL (-)
9	BR	ILLUMINATION SIGNAL (+)
10	G	SOUND SIGNAL FRONT SPEAKER RH (+)
11	G	SOUND SIGNAL FRONT SPEAKER RH (-)
12	R	SOUND SIGNAL REAR SPEAKER RH (+)
13	LG	SOUND SIGNAL REAR SPEAKER RH (-)
14	GR	SOUND SIGNAL FRONT SPEAKER LH (+)
15	GR	SOUND SIGNAL FRONT SPEAKER LH (-)
16	P	DONGLE / AUDIO LINK
17	P	VEHICLE SPEED SIGNAL (B-PULSE)
18	L	BATTERY
19	L	GROUND

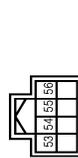
Connector No.	M11
Connector Name	AUDIO UNIT
Connector Type	TH32FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
27	R	ILLUMINATION SIGNAL [Without display audio]
27	W	AUTO-ACC [With display audio]
28	SB	CAN-H
29	LG	CAN-L
31	SB	CAN-H [With display audio]

Terminal No.	Color Of Wire	Signal Name [Specification]
31	SHIELD	SHIELD [Without display audio]
32	LG	CAN-L [With display audio]
32	W	AUX SOUND SIGNAL GND [Without display audio]
33	B	CAMERA GND [With rear view camera]
33	R	AUX SOUND SIGNAL RH (-) [Without display audio]
34	B	AUX SOUND SIGNAL LH (-) [Without display audio]
34	R	CAMERA POWER SUPPLY [With rear view camera]
35	W	COMPOSITE IMAGE SIGNAL
36	EG	MICROPHONE VCC [Without display audio]
36	SHIELD	SHIELD [With rear view camera]
37	W	MICROPHONE SIGNAL
38	EG	MICROPHONE VCC
38	SHIELD	MICROPHONE SHIELD
40	LG	CAN-L
41	B	CAN-H
42	W	CAN-H
43	SB	CAN-H
44	GR	CAMERA IMAGE SIGNAL [With rear view camera]
44	W	AUTO-ACC [Without display audio]
45	B	EG1 [With display audio]
45	B	EG2 [Without display audio]
50	G	REVERSE SIGNAL
51	SHIELD	MICROPHONE SHIELD
52	W	MICROPHONE SIGNAL

Connector No.	M12
Connector Name	AUDIO UNIT
Connector Type	TH82FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
53	B	AUX SOUND SIGNAL LH (+)
54	R	AUX SOUND SIGNAL RH (+)
55	R	AUX SOUND SIGNAL GND
56	SHIELD	SHIELD

Connector No.	M13
Connector Name	USB CONNECTOR AND AUX JACK
Connector Type	TH84FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	Signal Name [Specification]
2	W	Signal Name [Specification]
3	W	Signal Name [Specification]
4	R	Signal Name [Specification]

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	SB	Signal Name [Specification]
3	V	Signal Name [Specification]
4	GR	Signal Name [Specification]
5	BR	Signal Name [Specification]
6	W	Signal Name [Specification]
10	R	Signal Name [Specification]
11	L	Signal Name [Specification]
13	LG	Signal Name [Specification]
15	W	Signal Name [Specification]
21	EG	Signal Name [Specification]
22	GR	Signal Name [Specification]
23	GR	Signal Name [Specification]
24	P	Signal Name [Specification]
25	L	Signal Name [Specification]
26	G	Signal Name [Specification]
29	SHIELD	Signal Name [Specification]

30	W	Signal Name [Specification]
31	B	Signal Name [Specification]
32	R	Signal Name [Specification]



Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Type	TH88FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	Signal Name [Specification]
2	P	Signal Name [Specification]
3	SB	Signal Name [Specification]
4	P	Signal Name [Specification]
9	SB	Signal Name [Specification]
20	G	Signal Name [Specification]
21	B	Signal Name [Specification]
24	G	Signal Name [Specification]
25	BR	Signal Name [Specification]
69	GR	Signal Name [Specification]
69	GR	Signal Name [Specification]
74	R	Signal Name [Specification]
79	V	Signal Name [Specification]
84	L	Signal Name [Specification]
85	W	Signal Name [Specification]
89	GR	Signal Name [Specification]
90	BR	Signal Name [Specification]
93	Y	Signal Name [Specification]
94	P	Signal Name [Specification]
98	L	Signal Name [Specification]
99	LG	Signal Name [Specification]
100	R	Signal Name [Specification]

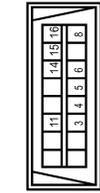
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## AUDIO

Connector No.	M21
Connector Name	DATA LINK CONNECTOR
Connector Type	EDD/BEW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	Y	-
8	Y	-
11	SB	-
14	P	-
15	BR	-
16	W	-

Connector No.	M28
Connector Name	WIRE TO WIRE
Connector Type	TH32MP-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	- [For LHD models]
1	BR	- [For RHD models]
2	P	- [For LHD models]
2	P	- [For RHD models]
3	GR	- [For LHD models]
3	GR	- [For RHD models]
4	B	- [For LHD models]
4	B	- [For RHD models]
5	G	-
6	Y	-
7	R	-
8	V	-

8	L	-
9	EG	-
10	L	-
11	R	-
12	LG	-
13	LG	-
14	B	-
15	R	-
16	B	-
17	B	-
18	P	-
19	G	-
20	GR	-
21	GR	-
22	BR	-
23	B	-
24	Y	-
25	Y	-
26	Y	-
28	L	- [For LHD models]
28	L	- [For RHD models]
29	Y	- [For LHD models]
29	Y	- [For RHD models]
30	B	- [For LHD models]
30	B	- [For RHD models]
31	GR	-
32	BR	-

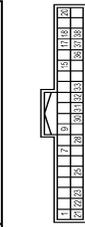
Connector No.	M28
Connector Name	WIRE TO WIRE
Connector Type	TH32MP-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	- [For LHD models]
1	BR	- [For RHD models]
2	LG	- [For LHD models]
2	LG	- [For RHD models]
3	GR	- [For LHD models]
3	GR	- [For RHD models]
4	B	- [For LHD models]
4	B	- [For RHD models]
5	Y	-
6	Y	-
7	R	-

8	V	-
9	EG	-
10	R	-
11	R	-
12	G	-
13	LG	-
14	B	-
15	P	-
16	B	-
17	B	-
18	R	-
19	G	-
20	SB	-
21	GR	-
22	BR	-
23	SHIELD	-
24	G	- [For RHD models]
26	Y	- [For LHD models]
28	Y	- [For LHD models]
29	Y	- [For RHD models]
30	B	- [For LHD models]
30	B	- [For RHD models]
31	GR	-
32	BR	-

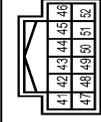
Connector No.	M51
Connector Name	COMBINATION METER
Connector Type	TH48PW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	SECURITY GND1
2	L	ECU OPERATION
6	EG	OUTSIDE TEMP SENSOR
17	EG	SATELLITE SW GND
18	SB	TRIP RESET SW
20	R	OUTSIDE TEMP GND
21	L	STRG SW GND
22	LG	STRG SW INPUT A

23	GR	STRG SW INPUT B
23	GR	STRG SW
29	W	BR BELT SW
30	Y	M RANGE
31	G	NOT M RANGE
32	R	AT SHIFT UP
33	W	AT SHIFT DOWN
36	BR	ILL UP SW
37	V	ILL DOWN SW
38	P	BP/R OUT

Connector No.	M62
Connector Name	COMBINATION METER
Connector Type	TH12PW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	V-CAN L
42	P	V-CAN H
43	R	ILL CORRT (OUTR-SIDE)
44	W	FUEL SENSOR GND
45	W	IGN
46	EG	IGN
47	SB	M-CAN H
48	LG	M-CAN L
49	V	OIL LEVEL
50	P	OIL LEVEL GND
51	G	FUEL SENSOR
52	B	GND2

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AV

# DISPLAY AUDIO

< WIRING DIAGRAM >

[DISPLAY AUDIO]

## AUDIO

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



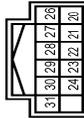
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	
2	B	
3	B	
4	V	
6	SHIELD	
7	W	
8	O	
13	L	
14	R	
16	L	
17	R	
18	SB	
19	LG	
20	BG	
21	P	
22	W	
23	Y	
24	B	

Connector No.	M82
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FY-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	
2	P	
4	G	
5	L	

Connector No.	M68
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
20	SB	
21	V	
22	W	
23	L	
24	GR	
25	P	
26	BR	
28	LG	
30	B	
31	R	

Connector No.	M69
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
81	L	KEY SWITCH
82	L	KEY SW (ST) [Without Intelligent key]
83	L	KEY SW (ST) [With Intelligent key]
84	BR	PASS DOOR REQ SW [With Intelligent key]
85	BR	COMBI SW OUTPUT 2
86	R	COMBI SW OUTPUT 3
87	BG	COMBI SW OUTPUT 4
88	L	PUSH-BTN IGM SW ILL CONT
89	L	STEERING LOCK UNIT SENSOR LINE
90	L	DIFFERENT KEY SW INPUT
91	BR	EXTENDED STORAGE FUSE SW
92	R	STOP / START OFF SWITCH
93	R	DRIVER DOOR ANT *
94	R	FRONT PASSENGER SW
95	R	FRONT PASSENGER SW
104	G	DR DOOR UNLK SENS
105	GR	KEY SW (IP/NL E/R)
106	GR	DR DOOR REQ SW [With Intelligent key]
107	W	ACC OUTPUT
109	Y	ALARM CANCEL SW
110	SB	NATS ANTENNA AMP
111	R	DIMMER SIGNAL
112	R	DOOR LK STAT IND OUTPUT
113	SB	STOP / START OFF SWITCH IND OUTPUT
114	LG	NATS ANTENNA AMP
115	Y	NATS ANTENNA AMP
116	W	NATS ANTENNA AMP
117	GR	ROOM ANT 1 *
118	LG	ROOM ANT 1 *
119	P	PASSENGER DOOR ANT -
120	BR	FRONT DOOR ANT *

Connector No.	M70
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FY-NH



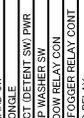
Terminal No.	Color Of Wire	Signal Name [Specification]
51	Y	HAZARD SW
52	P	DOUBLE
53	EG	CVT SHIFT SELECTION SW PWR
54	EG	HEAD LAMP WASH SW
55	G	POWER WINDOW RELAY CON
56	G	REAR WINDOW DEFOGGER RELAY CONT
57	P	ACC RELAY
58	LG	IGN RELAY (F/B) CONT
59	L	BLOWER RELAY CONT
60	L	ROOM LAMP (OPTION CONNECTOR)
61	R	CONSOLE LED CONT
62	R	COMBI SW INPUT 5
63	Y	COMBI SW OUTPUT 5
64	Y	SECURITY IND LAMP CONT
65	G	COMBI SW INPUT 3
66	G	COMBI SW INPUT 4
67	SP	COMBI SW INPUT 2
68	ER	DOOR UNLOCK SW

Connector No.	MTI
Connector Name	WIRE TO WIRE
Connector Type	NS18FW-GS



Terminal No.	Color Of Wire	Signal Name [Specification]
41	V	STEERING LK UNIT PWR SWRY CUT
42	G	TURN SIG LH (SIDE) [For LHD models]
43	Y	TURN SIG LH (SIDE) [For RHD models]
44	BR	INTERIOR ROOM LAMP RELAY CONT
45	R	CAN-H
46	L	CAN-H
47	BG	LIGHT & RAIN SENSOR
48	L	CAN-L
49	R	CAN-L
50	GR	DOOR LOCK SW
51	Y	HAZARD SW
52	P	DOUBLE
53	EG	CVT SHIFT SELECTION SW PWR
54	EG	HEAD LAMP WASH SW
55	G	POWER WINDOW RELAY CON
56	G	REAR WINDOW DEFOGGER RELAY CONT
57	P	ACC RELAY
58	LG	IGN RELAY (F/B) CONT
59	L	BLOWER RELAY CONT
60	L	ROOM LAMP (OPTION CONNECTOR)
61	R	CONSOLE LED CONT
62	R	COMBI SW INPUT 5
63	Y	COMBI SW OUTPUT 5
64	Y	SECURITY IND LAMP CONT
65	G	COMBI SW INPUT 3
66	G	COMBI SW INPUT 4
67	SP	COMBI SW INPUT 2
68	ER	DOOR UNLOCK SW

Connector No.	MTI
Connector Name	WIRE TO WIRE
Connector Type	NS18FW-GS

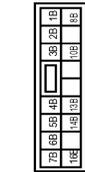


Terminal No.	Color Of Wire	Signal Name [Specification]
3	V	
4	G	
6	W	

**AUDIO**

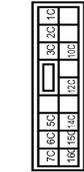
8	P	-
9	G	-
10	B	- [Fz: RHJ, mod4]
10	R	- [Fz: LLD, mod4]
11	LG	-
12	W	-
13	Y	-
14	SB	-
15	BR	-
16	GR	-

Connector No.	M76
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS18FBT-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10B	V	-
13B	W	-
14B	GR	-
15B	B	-
16B	E	-
2B	G	-
3B	LG	-
4B	LG	-
5B	LG	-
6B	SB	-
7B	Y	-
8B	BG	-

Connector No.	M77
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS18FBT-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	GR	-
14C	GR	-
15C	W	-
16C	W	-
1C	R	-
2C	R	-
3C	V	-
5C	L	-
6C	GR	-
7C	V	-

Connector No.	M83
Connector Name	TWEETER RH
Connector Type	FHA02FW



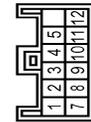
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	M84
Connector Name	TWEETER LH
Connector Type	FHA02FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	GR	-

Connector No.	M833
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-

Connector No.	M83
Connector Name	AUDIO UNIT
Connector Type	HAA04FL



Terminal No.	Color Of Wire	Signal Name [Specification]
12B	G	USB CH1
13B	W	USB SIGNAL
132	Y	USB D+ SIGNAL
133	SHIELD	SHIELD

Connector No.	M834
Connector Name	USB CONNECTOR AND AUX. JACK
Connector Type	HAA04FL



Terminal No.	Color Of Wire	Signal Name [Specification]
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-

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# DISPLAY AUDIO

< WIRING DIAGRAM >

[DISPLAY AUDIO]

## AUDIO

Connector No.	M835
Connector Name	AUDIO UNIT
Connector Type	GT13SH-2.1S-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
131	-	FM SUB
132	-	AM-FM MAIN
132	-	ANTENNA AMP. ON SIGNAL

Connector No.	M834
Connector Name	ANTENNA BASE (ANTENNA AMP.)
Connector Type	GT13SSH-1.1PP-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	ANTENNA AMP. ON SIGNAL
2	-	AM-FM MAIN

Connector No.	M837
Connector Name	GLASS ANTENNA (SUB)
Connector Type	FUIEB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	-

Connector No.	R4
Connector Name	WIRE TO WIRE
Connector Type	TH2AMW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	B	-
3	R	-
4	V	-
6	SHIELD	-
7	W	-
8	O	-
13	L	-
14	R	-
16	L	-
17	R	-
18	SB	-
20	R	-
21	Y	-
22	V	-
23	Y	-
24	B	-

Connector No.	R8
Connector Name	WIRE TO WIRE
Connector Type	TH12EW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
4	Y	-
5	B	-
6	G	-
7	O	-
8	SHIELD	-
10	R	-
11	B	-
12	V	-

Connector No.	R9
Connector Name	PERSONAL LAMP LH
Connector Type	TK63FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	V	-
3	G	-

Connector No.	R15
Connector Name	WIRE TO WIRE
Connector Type	TH12AMW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
5	B	-
6	G	-
7	O	-
8	SHIELD	-
10	R	-
11	B	-
12	V	-

Connector No.	R20
Connector Name	MICROPHONE
Connector Type	TK63FY



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	-
2	W	-
3	O	-

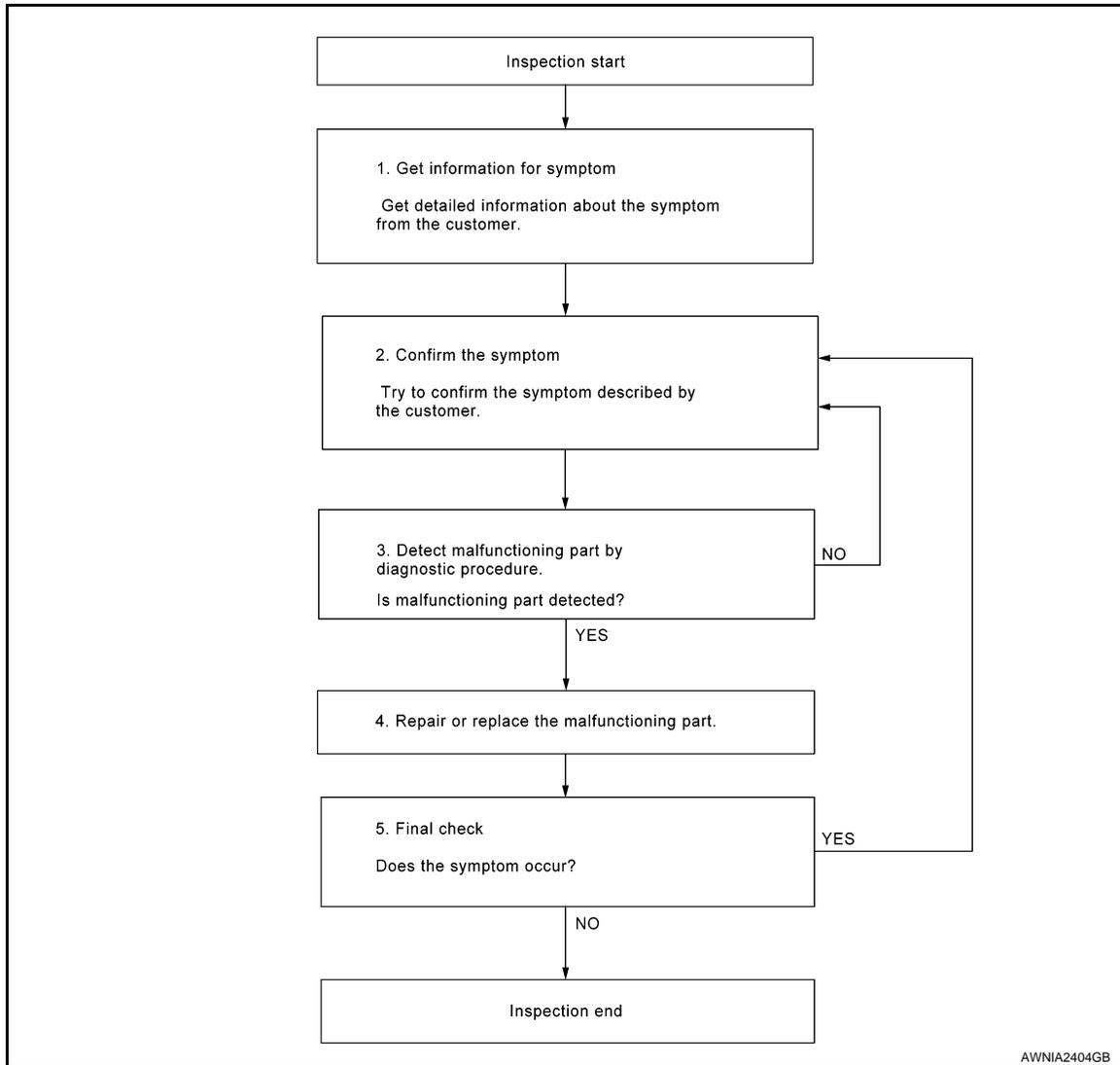
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:000000010435607

#### 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-109. "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 >

[DISPLAY AUDIO]

---

Is malfunctioning part detected?

YES >> GO TO 4.

NO >> GO TO 2.

### 4.REPAIR OR REPLACE THE MALFUNCTIONING PART

---

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

>> GO TO 5.

### 5.FINAL CHECK

---

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

Was the repair confirmed?

YES >> Inspection End.

NO >> GO TO 2.

# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[DISPLAY AUDIO]

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## INSPECTION AND ADJUSTMENT

### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT

A

### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Description

INFOID:000000010500878

B

Adjust the center position of the predictive course line of the rear view monitor if it is shifted.

### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure

INFOID:000000010500879

C

## 1.DRIVING

D

---

Drive the vehicle straight ahead 100 m (328.1 ft) or more at a speed of 30 km/h (18.6 MPH) or more.

>> END

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# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

## DTC/CIRCUIT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT AUDIO UNIT

#### AUDIO UNIT : Diagnosis Procedure

INFOID:000000010435608

Regarding Wiring Diagram information, refer to [AV-81, "Wiring Diagram"](#).

#### 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
7	Ignition power supply	4 (10A)
19	Battery power supply	19 (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 M10.
3. Check voltage between audio unit connector M10 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M10	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 M10.
3. Check continuity between audio unit connectors and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M10	20	—	Yes

##### Is the inspection result normal?

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

# FRONT TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

## FRONT TWEETER

### Diagnosis Procedure

INFOID:000000010435609

Regarding Wiring Diagram information, refer to [AV-81. "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 TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M10 and suspect front tweeter connector.
2. Check continuity between audio unit connector M10 and suspect front tweeter connector.

Audio unit		Front tweeter		Continuity
Connector	Terminal	Connector	Terminal	
M10	2	M84 (LH)	1	Yes
	3		2	
	11	M83 (RH)	1	
	12		2	

3. Check continuity between audio unit connector M10 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M10	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

### 3. CHECK FRONT TWEETER SIGNAL

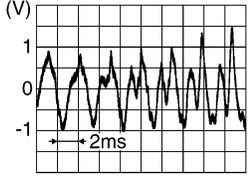
1. Connect audio unit connector M10 and suspect front tweeter connector.
2. Turn ignition switch to ON.
3. Push audio unit POWER switch.
4. Check signal between the terminals of audio unit connector M10.

Audio unit connector M10		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

# FRONT TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

2	3		
11	12	Audio signal output	

Is the inspection result normal?

- YES >> Replace front tweeter. Refer to [AV-116. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-114. "Removal and Installation"](#).

# FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

## FRONT DOOR SPEAKER

### Diagnosis Procedure

INFOID:000000010435610

Regarding Wiring Diagram information, refer to [AV-81. "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 M10 and suspect front door speaker connector.
2. Check continuity between audio unit connector M10 and suspect front door speaker connector.

Audio unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M10	2	D14 (LH)	1	Yes
	3		2	
	11	D34 (RH)	1	
	12		2	

3. Check continuity between audio unit connector M10 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M10	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

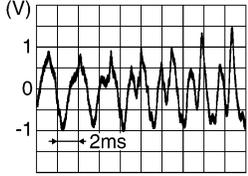
1. Connect audio unit connector M10 and suspect front door speaker connector.
2. Turn ignition switch to ON.
3. Push audio unit POWER switch.
4. Check signal between the terminals of audio unit connector M10.

Audio unit connector M10		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

# FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

2	3		
11	12	Audio signal output	

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-117. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-114. "Removal and Installation"](#).

# REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

## REAR DOOR SPEAKER

### Diagnosis Procedure

INFOID:000000010435611

Regarding Wiring Diagram information, refer to [AV-81. "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 DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M10 and suspect rear door speaker connector.
2. Check continuity between audio unit connector M10 and suspect rear door speaker connector.

Audio unit		Rear speaker		Continuity
Connector	Terminal	Connector	Terminal	
M10	4	D55 (LH)	1	Yes
	5		2	
	13	D68 (RH)	1	
	14		2	

3. Check continuity between audio unit connector M10 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M10	4	—	No
	5		
	13		
	14		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

### 3. CHECK REAR DOOR SPEAKER SIGNAL

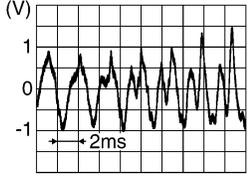
1. Connect audio unit connector M10 and suspect rear door speaker connector.
2. Turn ignition switch to ON.
3. Push audio unit POWER switch.
4. Check signal between the terminals of audio unit connector M10.

Audio unit connector M10		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

# REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

4	5		
13	14	Audio signal output	

Is the inspection result normal?

- YES >> Replace rear door speaker. Refer to [AV-118. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-114. "Removal and Installation"](#).

# REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

## REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:000000010435612

Regarding Wiring Diagram information, refer to [AV-81, "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 M11 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M11	50	—	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 M11 and rear view camera connector.
3. Check continuity between audio unit connector M11 and rear view camera connector D79.

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M11	34	D79	1	Yes

4. Check continuity between audio unit connector M11 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M11	34		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 M11 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 M11 and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M11	34	—	Selector lever is in "R".	6.0 V

Is inspection result normal?

- YES >> GO TO 4.  
NO >> Replace audio unit. Refer to [AV-114, "Removal and Installation"](#).

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# REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

## 4. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M11 and rear view camera connector.
3. Check continuity between audio unit connector M11 and rear view camera connector D79.

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M11	35	D79	3	Yes

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

Audio unit		Ground	Continuity
Connector	Terminal		
M11	35		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 M11 and rear view camera connector D79.

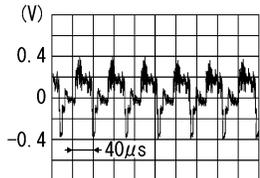
Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M11	33	D79	2	Yes

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 M11 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 M11 and ground.

Audio unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M11	33	—	Camera image displayed.	 <p>(V)</p> <p>0.4</p> <p>0</p> <p>-0.4</p> <p>40µs</p> <p>SKIB2251J</p>

Is inspection result normal?

- YES >> Replace audio unit. Refer to [AV-114, "Removal and Installation"](#).  
 NO >> Replace rear view camera. Refer to [AV-121, "Removal and Installation"](#).

# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

## MICROPHONE SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:000000010435613

Regarding Wiring Diagram information, refer to [AV-81. "Wiring Diagram"](#).

### 1. CHECK HARNESS BETWEEN AUDIO UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M11 and microphone connector R20.
3. Check continuity between audio unit connector M11 and microphone connector R20.

Audio unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M11	37	R20	2	Yes
	38		1	
	39		3	

4. Check continuity between audio unit connector M11 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M11	38	—	No
	37		

Is the inspection result normal?

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

### 2. CHECK MICROPHONE POWER SUPPLY

1. Connect audio unit connector M11 and microphone connector R20.
2. Turn ignition switch ON.
3. Check voltage between microphone connector R20 and ground.

Microphone (+)		Ground (-)	Voltage (Approx.)
Connector	Terminal		
R20	3	—	5V

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Replace audio unit. Refer to [AV-114. "Removal and Installation"](#).

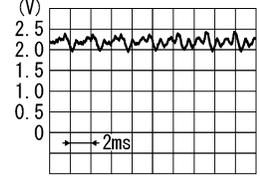
### 3. CHECK MICROPHONE SIGNAL

Check signal between terminals of audio unit connector M11.

# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

Audio unit connector M87		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
45	47	Speak into microphone.	 <p style="text-align: right; font-size: small;">PKIB5037J</p>

Is the inspection result normal?

- YES >> Replace audio unit. Refer to [AV-114. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-120. "Removal and Installation"](#).

## USB CONNECTOR

### Diagnosis Procedure

INFOID:000000010435615

Regarding Wiring Diagram information, refer to [AV-81. "Wiring Diagram"](#).

#### 1. CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio unit connector M383 and USB interface connector M384.
3. Check continuity between audio unit connector M383 and USB interface connector M384.

Audio unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M383	129	M384	7	Yes
	130		5	
	131		8	
	132		6	
	133		9	

4. Check continuity between audio unit connector M383 and ground.

Audio unit		—	Continuity
Connector	Terminal		
M383	130	Ground	No
	132		

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-119. "Removal and Installation"](#).  
 NO >> Repair or replace harness or connectors.

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# AUXILIARY INPUT JACK

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO]

## AUXILIARY INPUT JACK

### Diagnosis Procedure

INFOID:000000010435616

Regarding Wiring Diagram information, refer to [AV-81. "Wiring Diagram"](#).

#### 1. CHECK AUX JACK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect audio control unit connector M12 and AUX in jack connector M13.
3. Check continuity between audio control unit connector M12 and AUX in jack connector M13.

Audio control unit		AUX in jack		Continuity
Connector	Terminal	Connector	Terminal	
M12	53	M13	1	Yes
	55		3	
	54		4	

4. Check continuity between audio control unit connector M12 and ground.

Audio control unit		—	Continuity
Connector	Terminal		
M12	53	Ground	No
	54		

Is the inspection result normal?

- YES >> Replace the AUX in jack. Refer to [AV-119. "Removal and Installation"](#).  
NO >> Repair or replace harness or connectors.

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:000000010435617

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	Audio unit	Malfunction in audio unit. Refer to <a href="#">AV-72, "On Board Diagnosis Function"</a> .
No sound comes out or the level of the sound is low.	No sound from all speakers.	<ul style="list-style-type: none"> <li>• Speaker circuit shorted to ground. Refer to <a href="#">AV-81, "Wiring Diagram"</a>.</li> <li>• Audio unit power supply and ground circuits malfunction. Refer to <a href="#">AV-96, "AUDIO UNIT : Diagnosis Procedure"</a>.</li> </ul>
	Only a certain speaker (front tweeter LH, front tweeter RH, front door speaker LH, front door speaker RH, rear door speaker LH, rear door speaker RH) does not output sound.	<ul style="list-style-type: none"> <li>• Poor connector connection of speaker.</li> <li>• Sound signal circuit malfunction between audio unit and speaker. Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-97, "Diagnosis Procedure"</a> (front tweeter).</li> <li>- <a href="#">AV-99, "Diagnosis Procedure"</a> (front door speaker).</li> <li>- <a href="#">AV-101, "Diagnosis Procedure"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in speaker. Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-116, "Removal and Installation"</a> (front tweeter).</li> <li>- <a href="#">AV-117, "Removal and Installation"</a> (front door speaker).</li> <li>- <a href="#">AV-118, "Removal and Installation"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in audio unit. Refer to <a href="#">AV-72, "On Board Diagnosis Function"</a>.</li> </ul>

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# AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Malfunction in audio unit. Refer to <a href="#">AV-72, "On Board Diagnosis Function"</a> .
	Noise comes out only from a certain speaker (front tweeter LH, front tweeter RH, front door speaker LH, front door speaker RH, rear door speaker LH, rear door speaker RH).	<ul style="list-style-type: none"> <li>• Poor connector connection of speaker.</li> <li>• Sound signal circuit malfunction between audio unit and speaker. Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-97, "Diagnosis Procedure"</a> (front tweeter).</li> <li>- <a href="#">AV-99, "Diagnosis Procedure"</a> (front door speaker).</li> <li>- <a href="#">AV-101, "Diagnosis Procedure"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in speaker.</li> <li>• Poor Installation of speaker (e.g. backlash and looseness). Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-116, "Removal and Installation"</a> (front tweeter).</li> <li>- <a href="#">AV-117, "Removal and Installation"</a> (front door speaker).</li> <li>- <a href="#">AV-118, "Removal and Installation"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in audio unit. Refer to <a href="#">AV-72, "On Board Diagnosis Function"</a>.</li> </ul>
	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 <a href="#">AV-123, "Feeder Layout"</a> .
No radio reception or poor reception.	<ul style="list-style-type: none"> <li>• Other audio sounds are normal.</li> <li>• 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).</li> </ul>	<ul style="list-style-type: none"> <li>• Antenna amp. ON signal circuit malfunction. Refer to <a href="#">AV-78, "Reference Value"</a>.</li> <li>• Poor connector connection of antenna or antenna feeder. Refer to <a href="#">AV-123, "Feeder Layout"</a>.</li> </ul>
No satellite radio reception.	Satellite radio antenna malfunction.	<ul style="list-style-type: none"> <li>• Poor continuity in antenna feeder.</li> <li>• Poor connector connection of antenna or antenna feeder.</li> <li>• Loose satellite radio antenna mounting nut. Refer to <a href="#">AV-123, "Feeder Layout"</a>.</li> </ul>
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAGNOSIS" in the appropriate interior trim section.

## 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<sup>®</sup> 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:**

# AUDIO SYSTEM

## < SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO]

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"> <li>• Hands-free phone operation can be made, but the communication cannot be established.</li> <li>• Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.</li> </ul>	Malfunction in audio unit. Replace audio unit. Refer to <a href="#">AV-114, "Removal and Installation"</a> .
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 <a href="#">AV-105, "Diagnosis Procedure"</a> .
The system cannot be operated.	<ul style="list-style-type: none"> <li>• The voice recognition can be controlled.</li> <li>• Steering switch's  ,  , and  switch works, but  does not work.</li> </ul>	Steering switch malfunction. Replace steering switch. Refer to <a href="#">AV-115, "Removal and Installation"</a> .
	Steering switch's  ,  ,  , and  switches do not work.	Steering switch signal circuit malfunction. Refer to <a href="#">MWI-71, "Diagnosis Procedure"</a> .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to <a href="#">MWI-71, "Diagnosis Procedure"</a> .

## 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 <a href="#">AV-103, "Diagnosis Procedure"</a> .
	Camera image signal circuit malfunction.	Camera image signal circuit malfunction between rear view camera and audio unit. Refer to <a href="#">AV-103, "Diagnosis Procedure"</a> .
	Rear view camera malfunction.	Replace rear view camera. Refer to <a href="#">AV-121, "Removal and Installation"</a> .

# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO]

## NORMAL OPERATING CONDITION

### Description

INFOID:000000010435618

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

#### 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).	Some Bluetooth <sup>®</sup> enabled cellular phones may not be recognized by the in-vehicle phone module. Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in <a href="#">AV-109. "Symptom Table"</a> .
Cannot use hands-free phone.	Customer will not be able to use a hands-free phone under the following conditions: <ul style="list-style-type: none"><li>• The vehicle is outside of the telephone service area.</li><li>• 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.</li><li>• The cellular phone is locked to prevent it from being dialed.</li></ul> <b>NOTE:</b> While a cellular phone is connected through the Bluetooth <sup>®</sup> wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth <sup>®</sup> Hands-Free Phone System cannot charge cellular phones.

# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DISPLAY 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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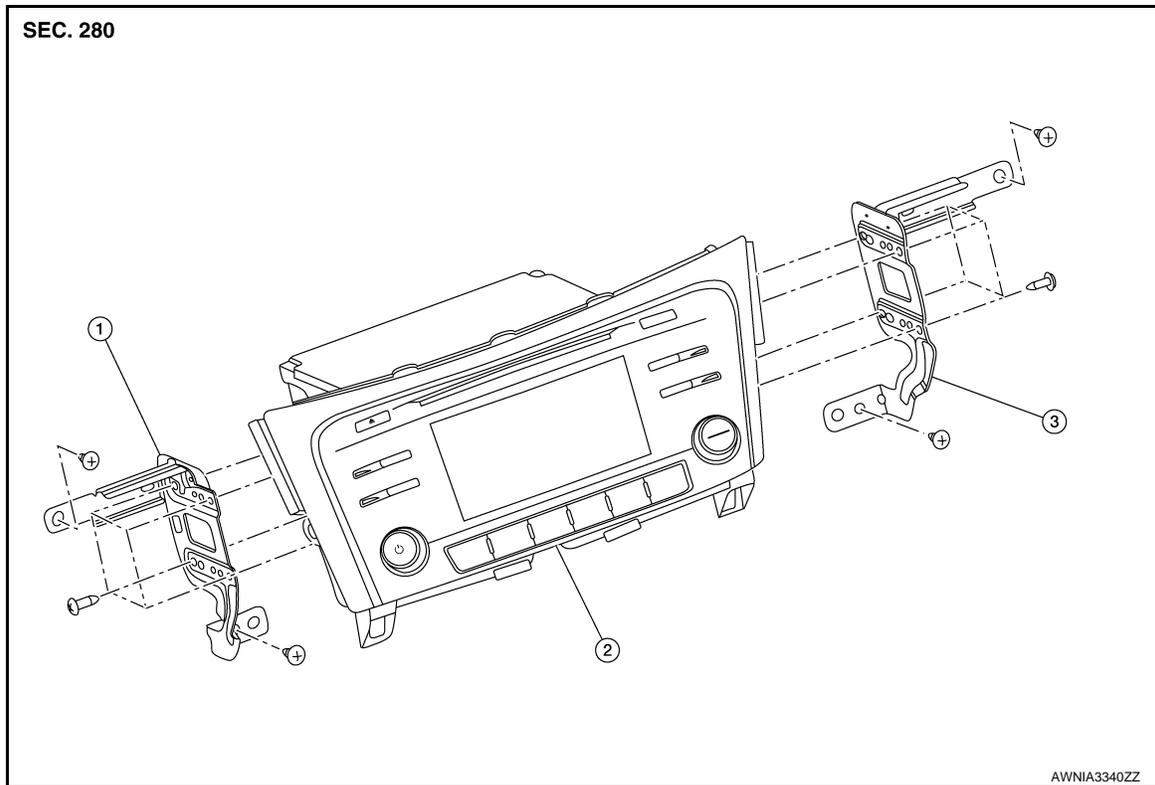
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## REMOVAL AND INSTALLATION

### AUDIO UNIT

#### Exploded View

INFOID:000000010435619



1. Audio unit bracket (LH)

2. Audio unit

3. Audio unit bracket (RH)

### Removal and Installation

INFOID:000000010435620

#### REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-155, "Removal and Installation"](#).
2. Remove A/C switch (AUTOMATIC AIR CONDITIONING) or front air control (MANUAL AIR CONDITIONING).
3. Remove instrument finisher B. Refer to [IP-12, "Exploded View"](#).
4. Remove instrument finisher E. Refer to [IP-12, "Exploded View"](#).
5. Remove the audio unit screws, then pull out the audio unit.
6. Disconnect the harness connectors from the audio unit and remove.
7. Remove the audio unit bracket (LH/RH) screws and the audio unit brackets (LH/RH) (if necessary).

#### INSTALLATION

Installation is in the reverse order of removal.

# STEERING SWITCHES

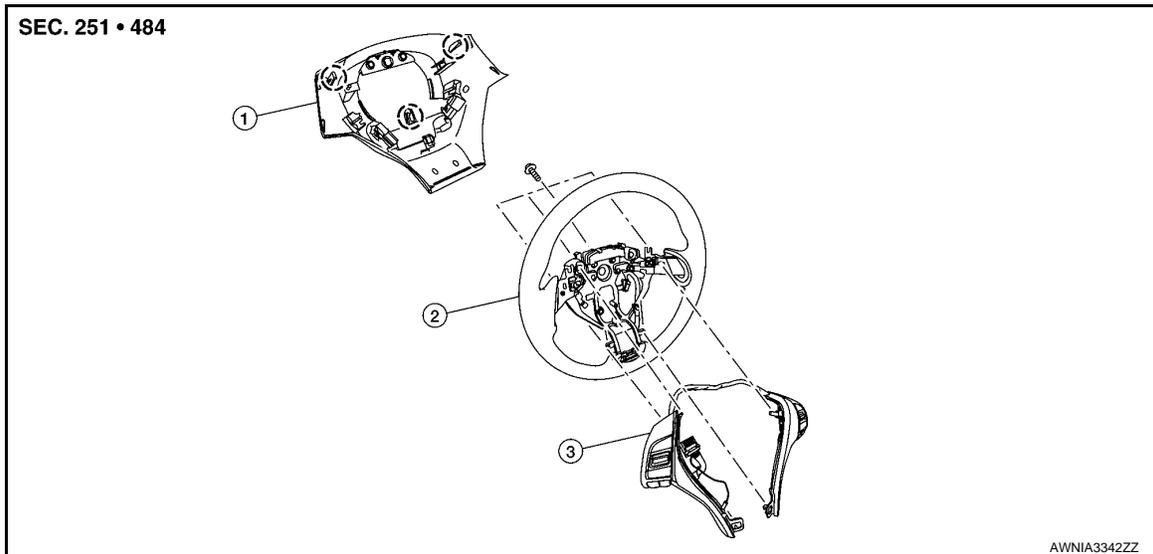
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO]

## STEERING SWITCHES

Exploded View

INFOID:000000010435621



1. Steering wheel rear finisher      2. Steering wheel      3. Steering switches
- Pawl

## Removal and Installation

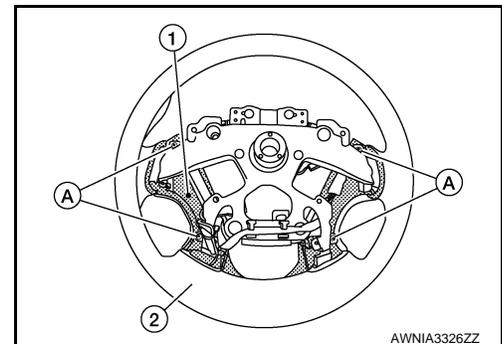
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### REMOVAL

#### NOTE:

The steering switches are serviced as an assembly.

1. Remove steering wheel. Refer to [ST-8, "Exploded View"](#).
2. Release pawls on the steering wheel rear finisher and remove.
3. Remove screws (A) and steering switches (1) from steering wheel (2).



### INSTALLATION

Installation is in the reverse order of removal.

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## FRONT TWEETER

### Removal and Installation

INFOID:000000010435623

#### REMOVAL

1. Remove defroster grille. Refer to [IP-12. "Exploded View"](#).
2. Remove bolts and pull out the front tweeter.
3. Disconnect the harness connector from the front tweeter and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# FRONT DOOR SPEAKER

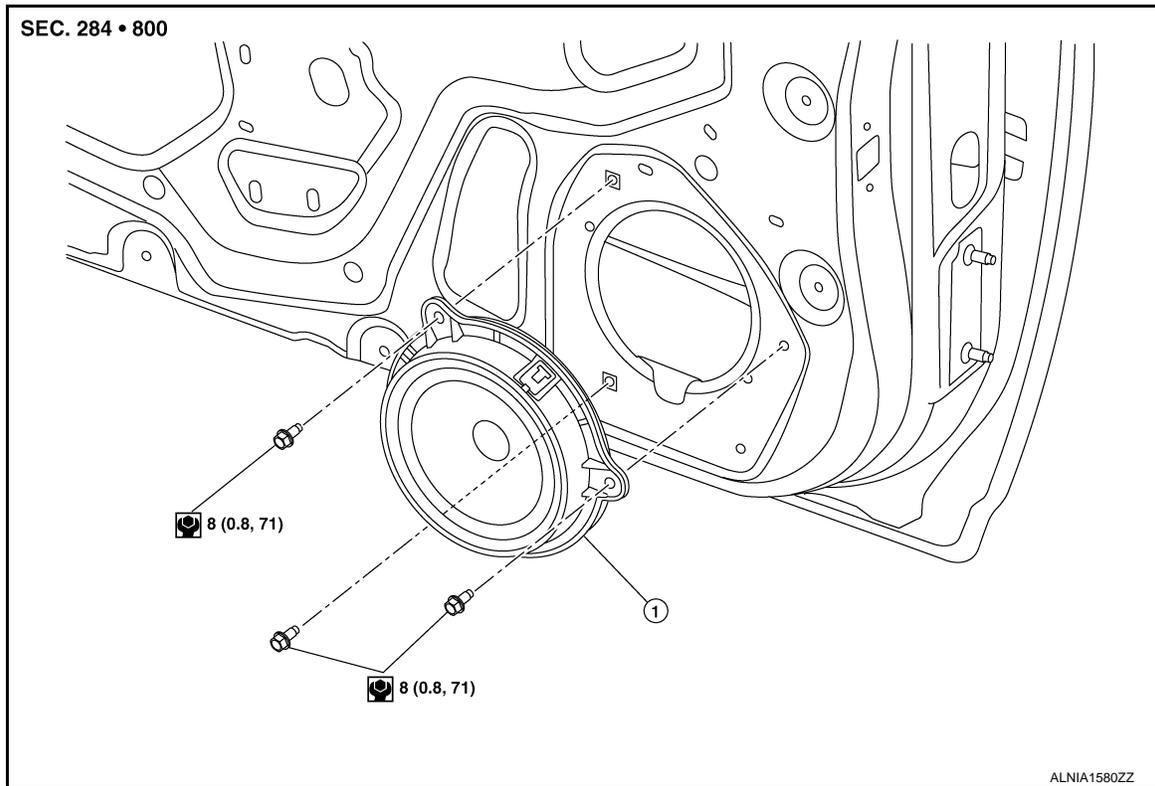
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO]

## FRONT DOOR SPEAKER

### Exploded View

INFOID:000000010435624



1. Front door speaker

### Removal and Installation

INFOID:000000010435625

#### REMOVAL

1. Remove front door finisher. Refer to [INT-12. "FRONT DOOR FINISHER : Exploded View"](#).
2. Remove front door speaker bolts, then pull out front door speaker.
3. Disconnect the harness connector from front door speaker and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

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# REAR DOOR SPEAKER

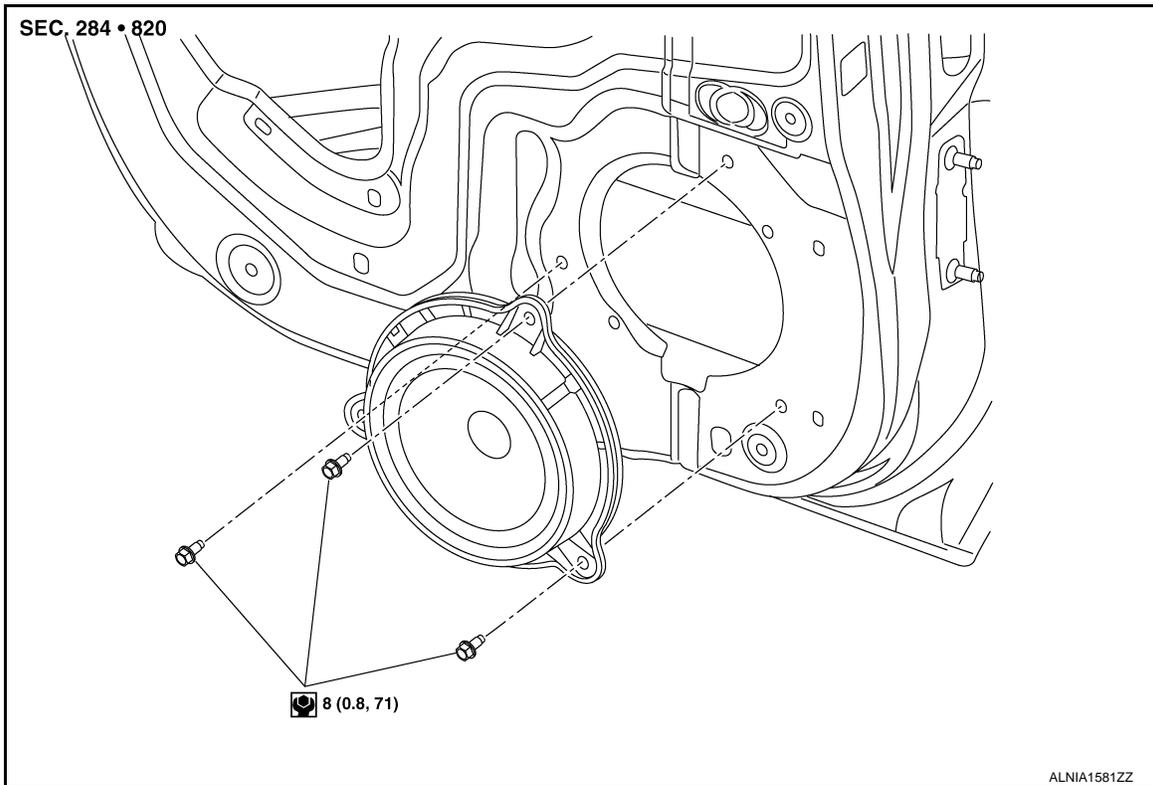
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO]

## REAR DOOR SPEAKER

Exploded View

INFOID:000000010435626



1. Rear door speaker

## Removal and Installation

INFOID:000000010435627

### REMOVAL

1. Remove rear door finisher. Refer to [INT-15. "REAR DOOR FINISHER : Exploded View"](#).
2. Remove rear door speaker bolts, then pull out rear door speaker.
3. Disconnect the harness connector from the rear door speaker and remove.

### INSTALLATION

Installation is in the reverse order of removal.

# USB INTERFACE AND AUX IN JACK

< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO]

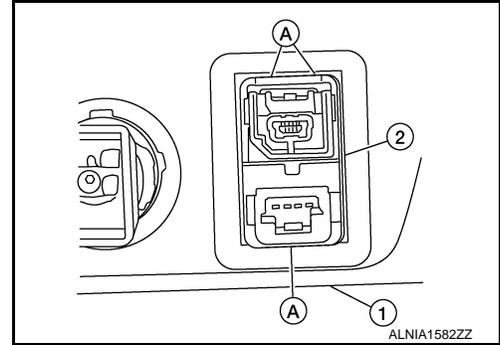
## USB INTERFACE AND AUX IN JACK

### Removal and Installation

INFOID:000000010435628

#### REMOVAL

1. Remove center console. Refer to [IP-18, "Exploded View"](#).
2. Release the pawls (A) on the back of USB interface and AUX in jack (2).



#### INSTALLATION

Installation is in the reverse order of removal.

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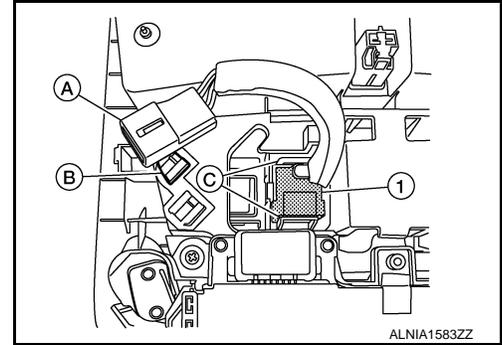
## MICROPHONE

### Removal and Installation

INFOID:000000010435629

#### REMOVAL

1. Remove the map lamp assembly. Refer to [INT-24, "Exploded View"](#).
2. Release harness connector (A) by sliding rearward to remove from the pawl (B).
3. Release pawls (C) and remove the microphone (1) from the front room/map lamp assembly.



#### INSTALLATION

Installation is in the reverse order of removal.

## REAR VIEW CAMERA

### Removal and Installation

INFOID:000000010435630

#### REMOVAL

1. Remove the back door outer finisher. Refer to [EXT-45. "Exploded View"](#).
2. Release pawl, disconnect harness connector from rear view camera and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

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## AUDIO ANTENNA

### Removal and Installation

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#### REMOVAL

1. Remove the luggage side upper finisher (RH). Refer to [INT-28, "Exploded View"](#).
2. Partially lower headlining (rear). Refer to [INT-24, "Exploded View"](#).
3. Disconnect harness connectors from antenna feeder.
4. Remove nut from audio antenna and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

**Audio antenna nut : 6.5 N·m (0.66 kg·m, 58 in-lb)**

#### **CAUTION:**

If the audio antenna nut is not properly tightened, lower sensitivity of the antenna may be experienced. If the nut is over tightened, this will deform the roof panel.



## PRECAUTION

### PRECAUTIONS

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

INFOID:000000010519312

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 "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

**WARNING:**

**Always observe the following items for preventing accidental activation.**

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".**
- **Never 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:**

**Always observe the following items for preventing accidental activation.**

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

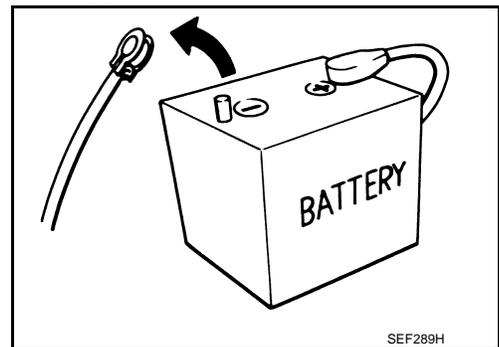
#### Precautions for Removing Battery Terminal

INFOID:000000010519319

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing "How to disconnect 12V battery terminal" described below.

**NOTE:**

Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.



#### HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.  
For vehicles parked by ignition switch OFF, refer to Instruction 2.

##### INSTRUCTION 1

1. Open the hood.
2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

# PRECAUTIONS

< PRECAUTION >

[NAVIGATION]

- D4D engine : 20 minutes
- K9K engine : 4 minutes
- M9R engine : 4 minutes
- R9M engine : 4 minutes
- V9X engine : 4 minutes

**CAUTION:**

**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

5. Remove 12V battery terminal.

**CAUTION:**

**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.

**NOTE:**

At this moment, ACC power is supplied.

2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

**CAUTION:**

**While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.**

6. Remove 12V battery terminal.

**CAUTION:**

**After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.**

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

**NOTE:**

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

**NOTE:**

The removal of 12V battery may cause a DTC detection error.

## Precaution for Trouble Diagnosis

INFOID:000000010435635

### AV COMMUNICATION SYSTEM

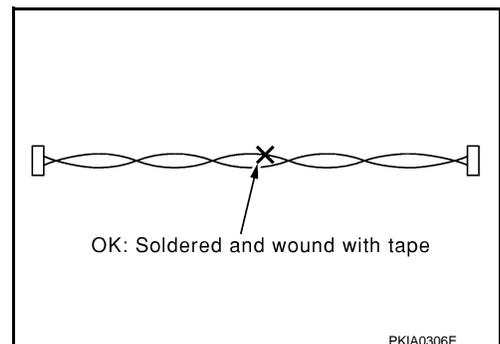
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

## Precaution for Harness Repair

INFOID:000000010435636

### AV COMMUNICATION SYSTEM

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



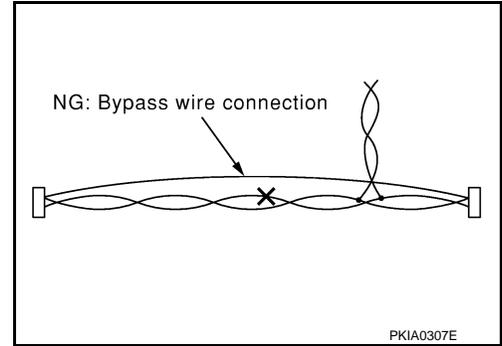
PKIA0306E

# PRECAUTIONS

< PRECAUTION >

[NAVIGATION]

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



## Precaution for Work

INFOID:000000010435637

- 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.

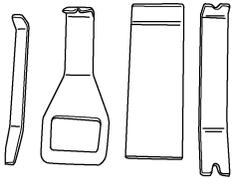
# PREPARATION

## PREPARATION

### Special Service Tool

INFOID:000000010435638

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

Tool number (TechMate No.) Tool name	Description
<p>— (J-46534) Trim Tool Set</p>  <p>AWJIA0483ZZ</p>	<p>Removing trim components</p>

### Commercial Service Tools

INFOID:000000010435639

Tool name	Description
<p>Power tool</p>  <p>PIIB1407E</p>	<p>Loosening nuts, screws and bolts</p>

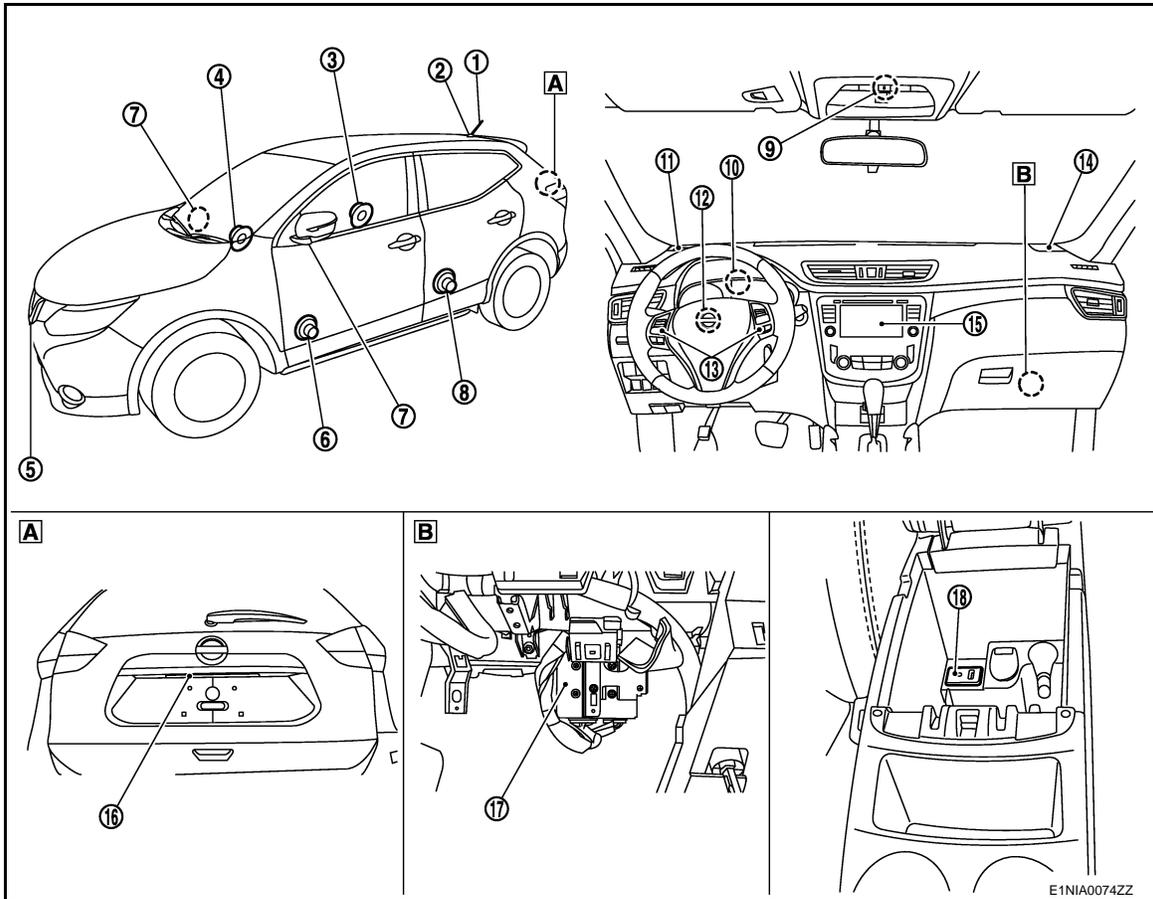
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## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:000000010435640



A. Center of back door

B. View with glove box removed

No.	Component	Function
1.	Rod antenna	Refer to <a href="#">AV-131, "Rod Antenna, Antenna Amp., Satellite Antenna and Antenna Feeder"</a> .
2.	Antenna base (antenna amp. and satellite antenna)	
3.	Rear door speaker RH	Refer to <a href="#">AV-129, "Speakers"</a> .
4.	Front door speaker RH	
5.	Front camera	Refer to <a href="#">AV-131, "Front Camera"</a> .
6.	Front door speaker LH	Refer to <a href="#">AV-129, "Speakers"</a> .
7.	Side camera	Refer to <a href="#">AV-131, "Side Cameras"</a> .
8.	Rear door speaker LH	Refer to <a href="#">AV-129, "Speakers"</a> .
9.	Microphone	Refer to <a href="#">AV-130, "Microphone"</a> .
10.	GPS antenna	Refer to <a href="#">AV-133, "GPS Antenna"</a> .
11.	Front tweeter LH	Refer to <a href="#">AV-129, "Speakers"</a> .
12.	Steering angle sensor	Refer to <a href="#">AV-131, "Steering Angle Sensor"</a> .
13.	Steering switches	Refer to <a href="#">AV-130, "Steering Switches"</a> .
14.	Front tweeter RH	Refer to <a href="#">AV-129, "Speakers"</a> .

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[NAVIGATION]

No.	Component	Function
15.	AV control unit	Refer to <a href="#">AV-129, "AV Control Unit"</a> .
16.	Rear view camera	Refer to <a href="#">AV-131, "Rear View Camera"</a> .
17.	Around View <sup>®</sup> Monitor control unit	Refer to <a href="#">AV-130, "Around View Monitor Control Unit"</a> .
18.	USB interface and AUX in jack	Refer to <a href="#">AV-130, "USB Interface and AUX In Jack"</a> .

\*: Around View Monitor is a parking aid/convenience feature. Around View Monitor cannot completely eliminate blind spots. Around View Monitor may not detect every object and does not warn of moving objects. Always check surroundings before moving vehicle. Around View Monitor is not a substitute for proper backing procedures. Always turn to check what is behind you before backing up.

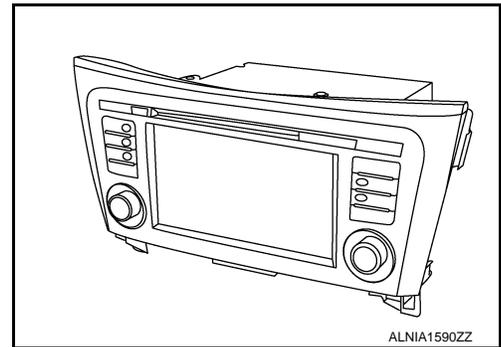
## AV Control Unit

INFOID:000000010435641

### Description

- A 7-inch WVGA display, an AM/FM electronic tuner radio, CD drive, audio amplifier are integrated into the AV control unit.
- The 7-inch display is a high resolution monitor that includes touch panel functions.
- Music files stored in iPod<sup>®</sup>/USB memory can be played using the separate USB interface.
- Music files stored in an external audio device can be played using the separate AUX in jack.

\*: iPod<sup>®</sup> is a registered trademark of Apple, Inc. All rights reserved.

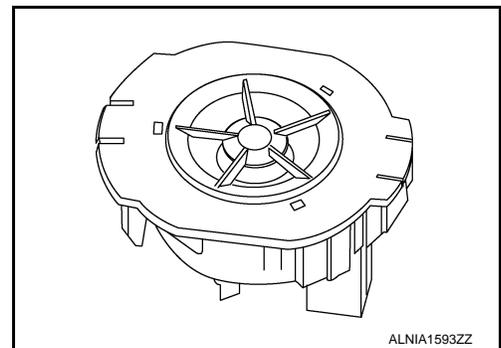


## Speakers

INFOID:000000010435642

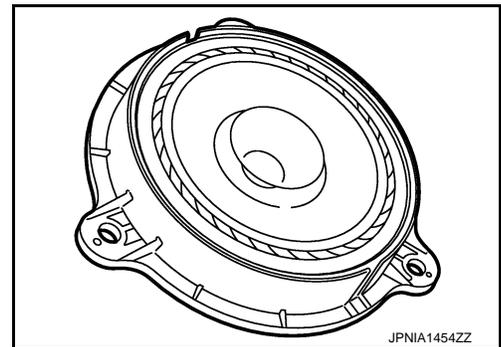
### FRONT TWEETER

- 2.5 cm (1 in) tweeters are installed in the top front corners of the instrument panel.
- Sound signals are input from the AV control unit to output high range sounds.



### FRONT DOOR SPEAKER

- 16.5 cm (6.5 in) speakers are installed in the bottom of the front doors.
- Sound signals are input from the AV control unit to output high, mid and low range sounds.



### REAR DOOR SPEAKER

- 16.5 cm (6.5 in) speakers are installed in the bottom of the rear doors.

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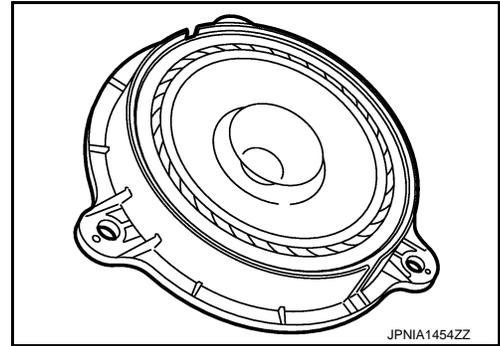
AV

# COMPONENT PARTS

## < SYSTEM DESCRIPTION >

## [NAVIGATION]

- Sound signals are input from the AV control unit to output high, mid and low range sounds.



INFOID:000000010435643

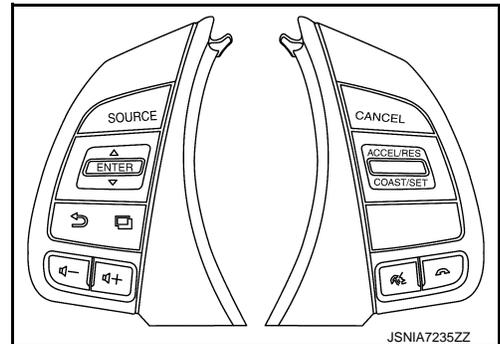
## USB Interface and AUX In Jack

- USB Interface and AUX in jack is installed in the console.
- iPod® and USB memory can be connected to the AV control unit through the USB interface.
- An external audio device can be connected to the AV control unit through the AUX in jack.

## Steering Switches

INFOID:000000010435644

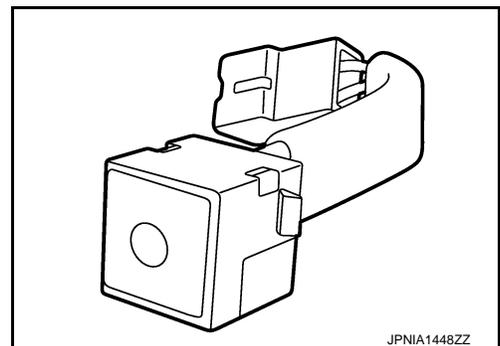
- Steering switches are installed in the steering wheel.
- Operations for audio and hands-free phone are possible.
- Switches are connected to the combination meter.
- Combination meter is connected to the AV control unit via AV communication.



INFOID:000000010435645

## Microphone

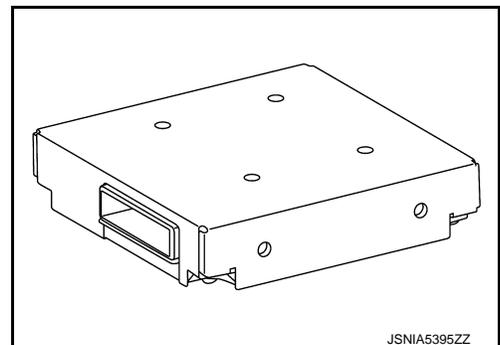
- The microphone is installed in the roof in the map lamp assembly.
- Power is supplied from the AV control unit.



INFOID:000000010435646

## Around View Monitor Control Unit

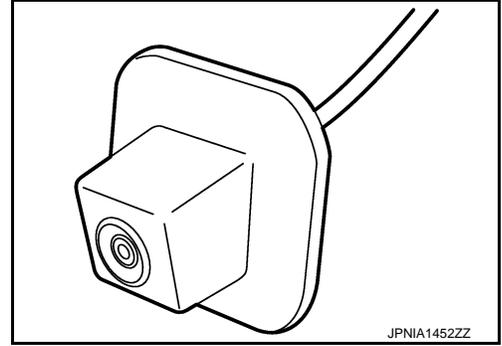
- The around view monitor control unit is installed behind the glove box.
- Vehicle width guide lines, predicted course line, vehicle front guiding line and vehicle side line, and vehicle icon are displayed and combined with camera images.



## Rear View Camera

INFOID:000000010435647

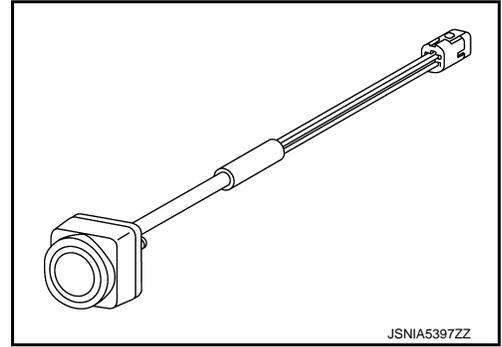
- The rear view camera is installed in the back door finisher.
- Power is supplied from the around view monitor control unit.



## Side Cameras

INFOID:000000010435648

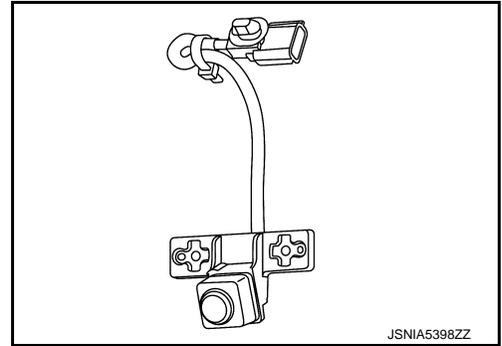
- The side cameras are installed in the door mirrors.
- Power is supplied from the around view monitor control unit.



## Front Camera

INFOID:000000010435649

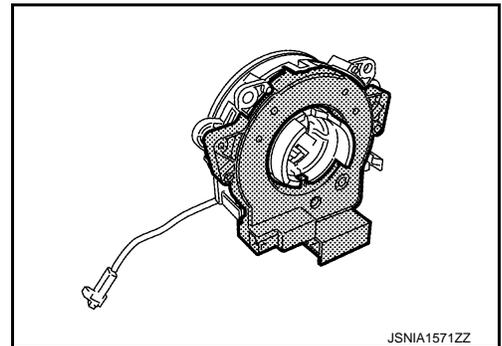
- The front camera is installed in the front grille.
- Power is supplied from the around view monitor control unit.



## Steering Angle Sensor

INFOID:000000010435650

- Steering sensor is installed to the spiral cable.
- Steering angle sends the steering signal necessary for predictive course line via CAN communication.



## Rod Antenna, Antenna Amp., Satellite Antenna and Antenna Feeder

INFOID:000000010435651

## RADIO ANTENNA AND SATELLITE ANTENNA

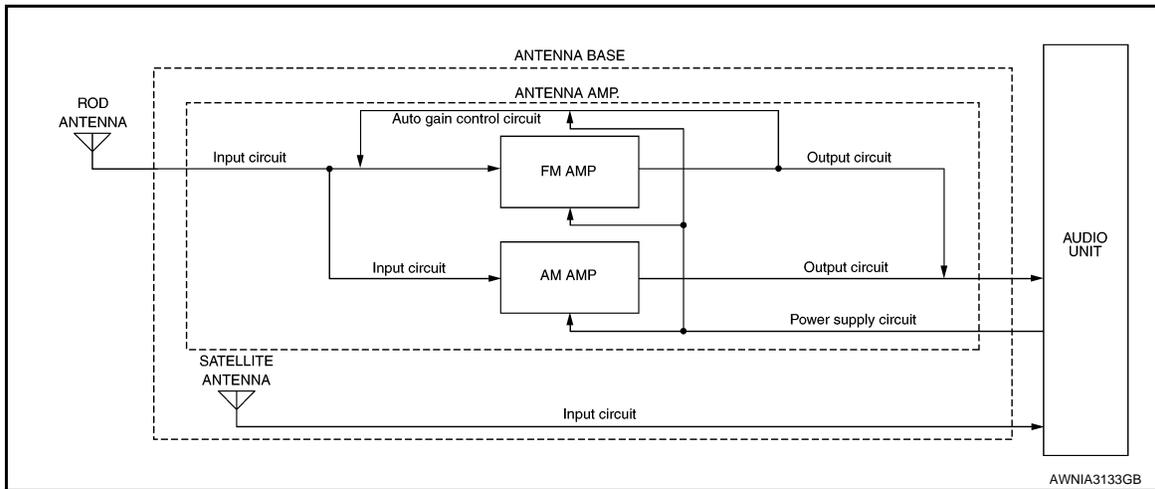
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# COMPONENT PARTS

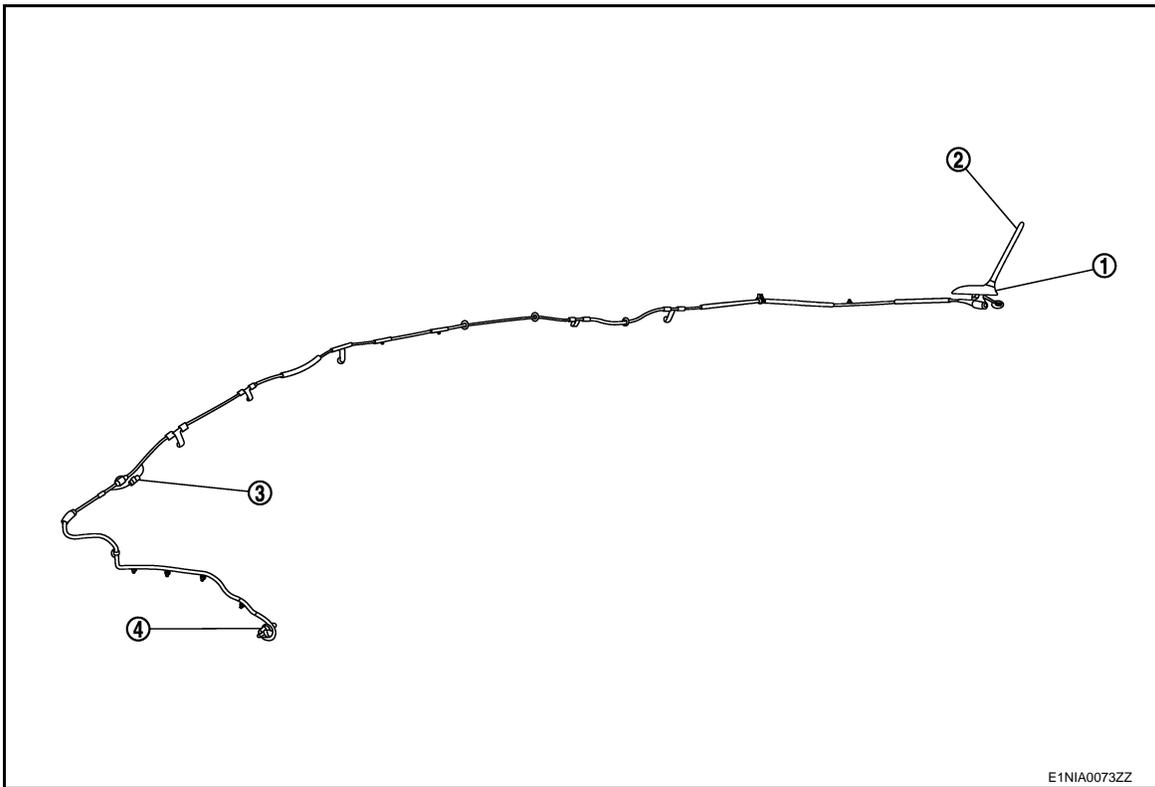
< SYSTEM DESCRIPTION >

[NAVIGATION]

AM/FM radio rod antenna and antenna base are located on the rear of the roof. The antenna amp. and satellite antenna are built into the antenna base.



## ANTENNA FEEDER LAYOUT

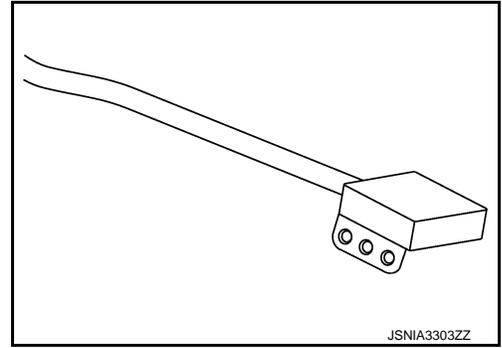


1. Antenna base (antenna amp. and satellite antenna)
2. Rod Antenna
3. M394
4. M399

## GPS Antenna

INFOID:000000010435652

- GPS antenna is installed in the instrument panel, behind the combination meter.
- Power is supplied from the AV control unit.



## SD Card

INFOID:000000010435653

- Map data is memorized in the SD card.
- Map data is sent to the AV control unit from the SD slot.

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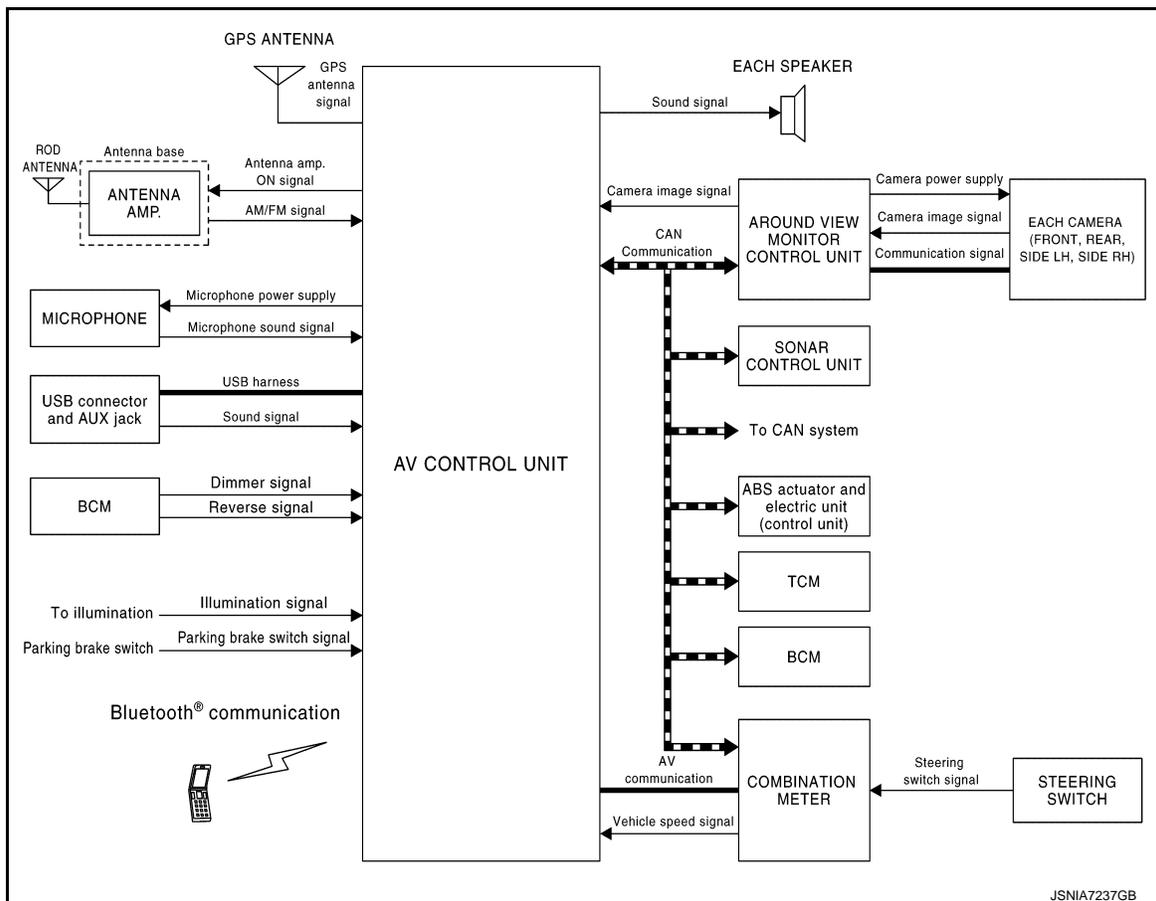
AV

## SYSTEM

### System Description

INFOID:000000010435654

### SYSTEM DIAGRAM



### AUDIO SYSTEM

The audio system consists of the following component:

- AV control unit
- Front tweeters
- Front door speakers
- Rear door speakers
- USB interface
- AUX in jack
- Steering switches
- Antenna base (rod antenna, antenna amp.)

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

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

### NAVIGATION SYSTEM

#### 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 tweeters.
- 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

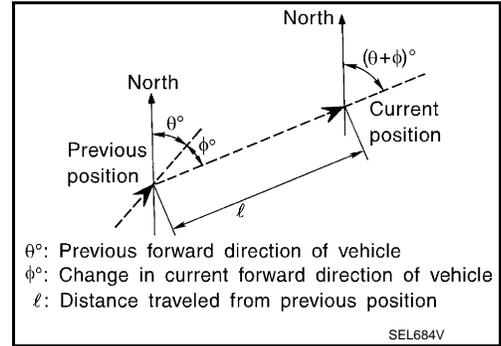
The navigation system periodically calculates the vehicle's current position according to the following three signals:

- 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)

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.

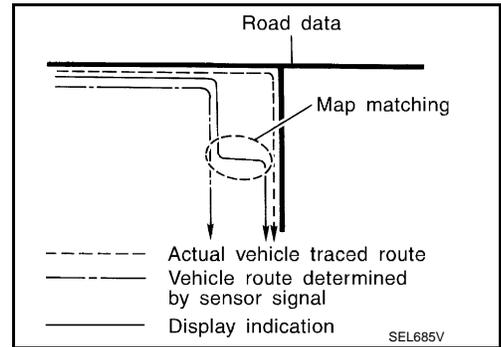
More accurate traveling direction is detected because priorities are set for the signals from these two devices according to the situation.

### 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.

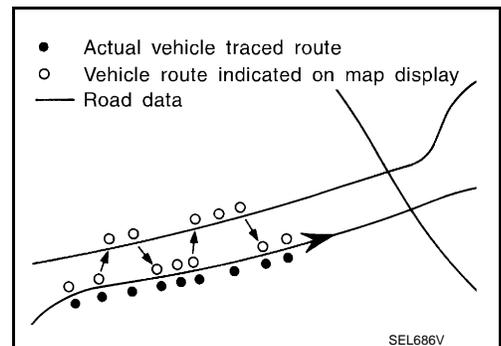
**NOTE:**

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.

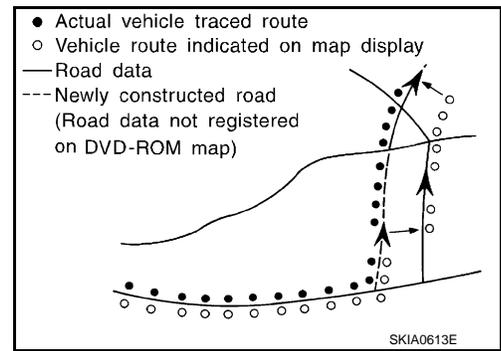


# SYSTEM

## < SYSTEM DESCRIPTION >

## [NAVIGATION]

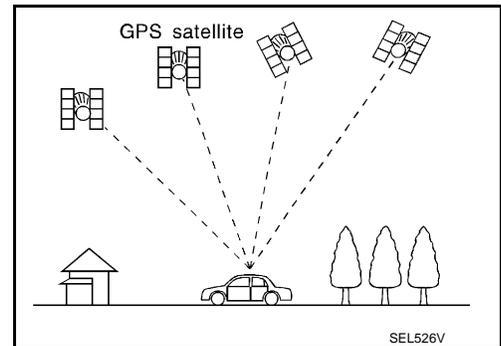
- Map-matching does not function correctly when a road on which the vehicle is driving is new and not recorded in the map SD-card, or when road pattern stored in the map data and the actual road pattern are different due to repair. The map-matching function may find another road and position the vehicle 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)

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.

### USB INTERFACE

- iPod® or music files in USB memory can be played.
- Sound signals are transmitted from USB interface to the AV control unit and output to each speaker.
- iPod® is recharged when connected to USB interface.

### AUX IN JACK

- Sound can be output from an external device by connecting a device to the AUX in jack.
- AUX sound signals are transmitted to each speaker via AV control unit.

### 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

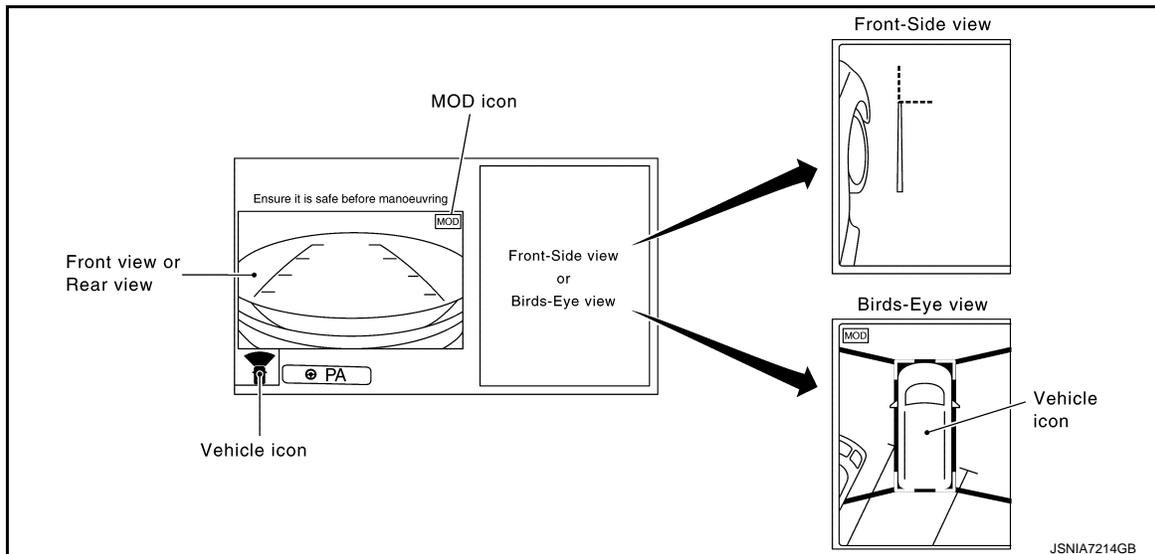
- Voice sound is input to own cellular phone from the other party.
- TEL voice signal is input to AV control unit by establishing Bluetooth® communication from cellular phone, and the signal is output to front speakers.

### AROUND VIEW MONITOR FUNCTION

- This system is equipped with wide-angle cameras on the front, rear and right and left door mirrors.
- Images from front view, rear view, front-side view (RH side), and birds-eye view are displayed to monitor the vehicle surroundings.
- Around view monitor control unit expands the image received from each camera to create each view.
- In front view and rear view, the vehicle width, distance lines and predictive course lines are displayed.
- In front-side view, the vehicle distance guiding line and vehicle width guiding line are displayed.
- Birds-eye view converts the images from the cameras into an overhead view and displays the status of the vehicle on the display. The vehicle icon that is displayed in the birds-eye view is depicted by the around view monitor control unit.

### Display

The around view monitor combines and displays travel direction view (front or rear), front-side view and birds-eye view.



### Operation

- The around view monitor operates by pressing the CAMERA switch on the AV control unit or by shifting the selector lever to the R (reverse) position.
- When the selector lever is in any position other than R (reverse) and the CAMERA switch is pressed, the screen displays front travel direction view and birds-eye view. Pressing the CAMERA switch again changes birds-eye view to front-side view
- When the selector lever is placed in R (reverse), the screen displays rear travel direction view and birds-eye view. Pressing the CAMERA switch changes birds-eye view to front-side view
- In birds-eye view, the blind spot area is displayed in black to show the border of the camera images. In addition, red fixed lines are displayed in the 4 corners of the vehicle icon. After pressing the CAMERA switch for the first time or placing the selector lever in R (reverse) for the first time, the blind spot area is highlighted in yellow for 3 seconds and the red fixed lines blink five times.
- With the selector lever in any position other than R (reverse), the around view monitor screen display is cancelled 3 minutes after pressing the CAMERA switch. The screen returns to the AV control unit display.
- With the selector lever in R (reverse) position, the around view monitor screen display remains on constantly. To return to the AV control unit display, place the selector lever is in any position other than R (reverse).
- If camera image calibration is incomplete, the applicable camera position is indicated as an error on the birds-eye view display.

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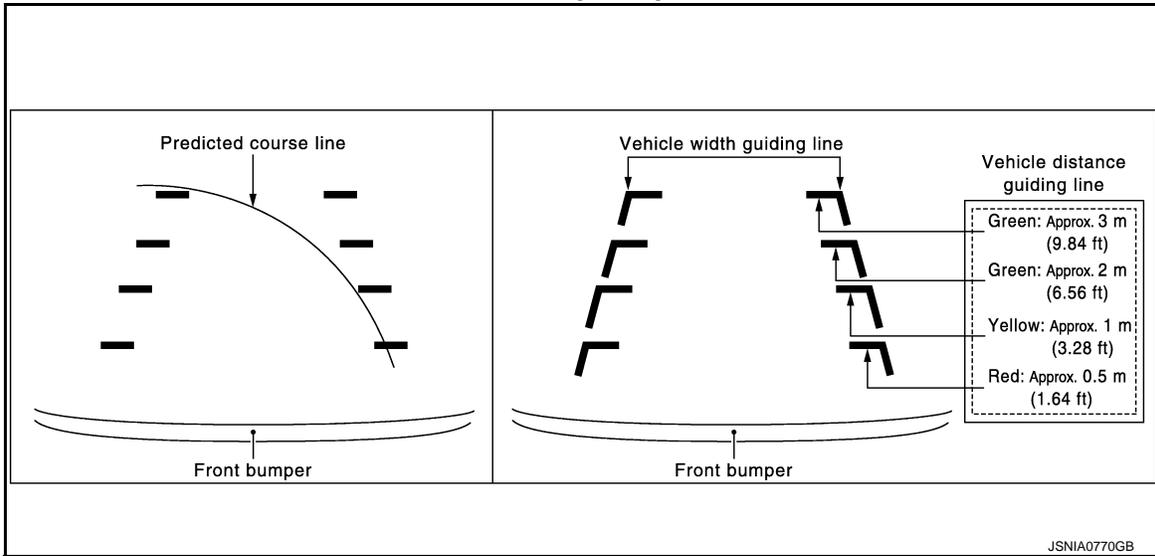
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Front view guiding lines



Rear View

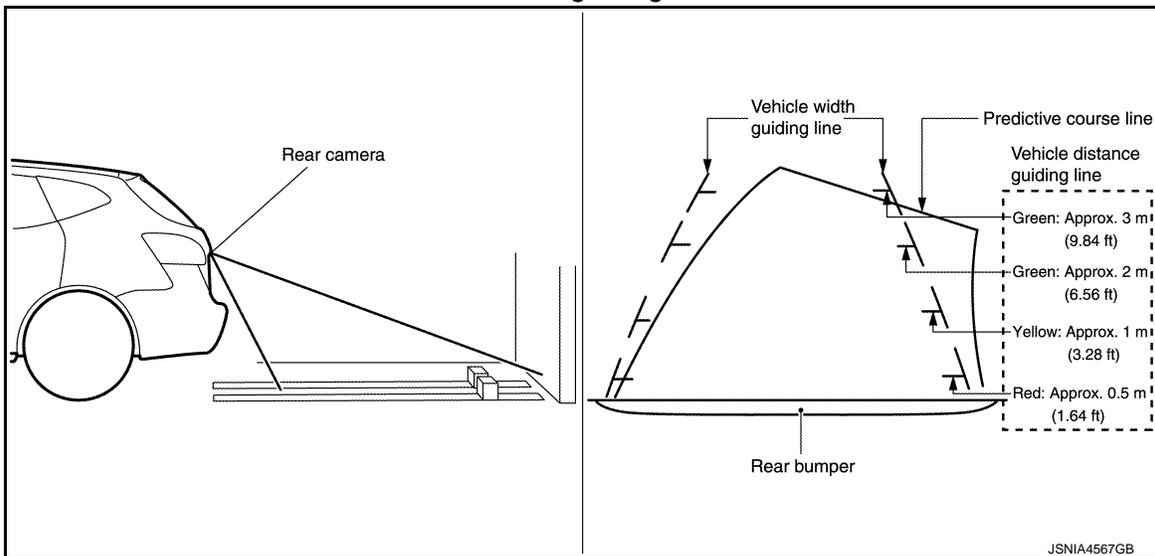
- The rear view image improves the visibility of obstacles in the rear of the vehicle and assists backing and parking by displaying images from birds-eye view and front side view.
- The rear view image displays the vehicle width guiding line and vehicle distance guiding line, in addition to the predictive course line according to the steering angle.

**NOTE:**

The predictive course line is not displayed at the steering neutral position.

- The around view monitor control unit receives the steering angle signal from steering angle sensor via CAN communication, and controls the direction and distance of the predictive course line.
- ON/OFF setting of predictive course line can be performed using CONSULT.

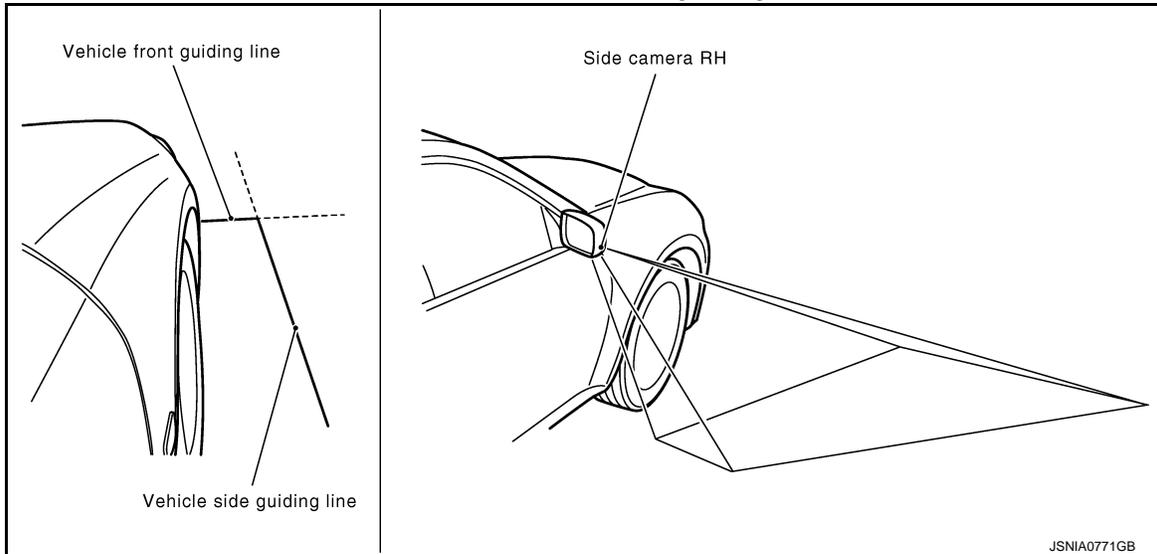
Rear view guiding lines



Front-Side View

- The front-side view image improves the visibility of obstacles in the front RH side of the vehicle and assists backing and parking.
- The front-side view image displays the vehicle distance guiding line and vehicle width guiding line.

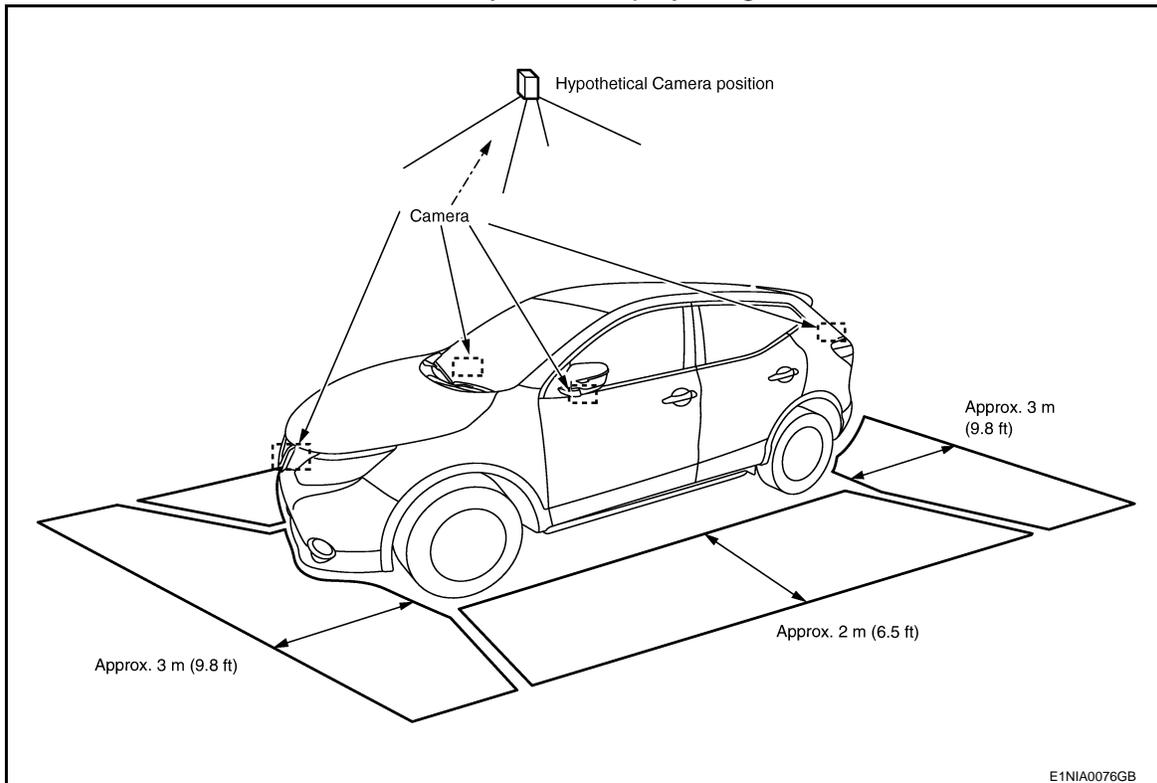
Front-side view area and guiding line



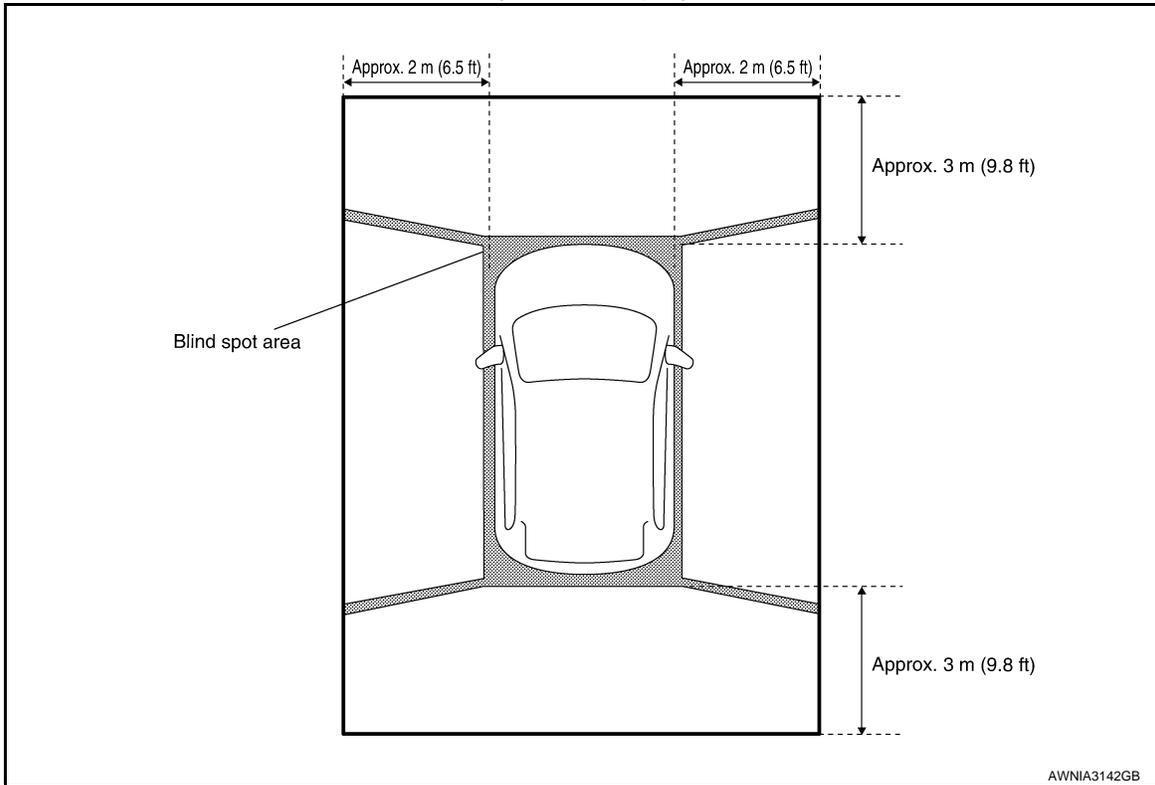
### Birds-Eye View

- The birds-eye view image improves the visibility of obstacles all around the vehicle and assists backing and parking.
- The images from the four cameras are converted into an overhead view, and the surroundings of the vehicle are displayed.
- The blind spot area is displayed on the image to specify the boundary of the four cameras.

Birds-Eye view display image



Birds-Eye view display area



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- AV**
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# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION]

## DIAGNOSIS SYSTEM (AV CONTROL UNIT)

### Description

INFOID:000000010435655

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

Mode	Item	Content	
Version	—	Version data of the AV control unit is displayed.	
User Configuration	Touch Display Calibration	Allows correction of the position detection accuracy of the touch panel.	
Radio	FM monitor	Monitors the dynamic values of the current tuner	
	AM monitor		
	SXM monitor	Version data is displayed.	
System State	Running System Status	<ul style="list-style-type: none"> <li>• SD card slot Access</li> <li>• Power Supply</li> <li>• Speed Signal</li> <li>• Direction Signal</li> <li>• Illumination Signal</li> <li>• GPS Antenna</li> <li>• GPS Tracking</li> <li>• Satellites Visible</li> <li>• Satellites Tracked</li> <li>• Microphone Current</li> <li>• Steering wheel key</li> <li>• Radio Antenna</li> <li>• SXM Antenna</li> <li>• USB Device</li> <li>• iPod® firmware version</li> <li>• BT Status</li> </ul>	The current system status is displayed.
	Speaker Test 4kHz	—	This activates a sequence of test tone outputs to the audio circuits one after the other for 1 second.
	Speaker Test 100Hz		
	Display-Test	—	This provides a test sequence where test displays (plain colored display: e.g. white, black, red, blue, green) are shown one after the other. The respective color is shown for an indicated period of time (parameter). After the display test, the design of the display previously available is stored. While the screen shows a plain colored display, a pixel malfunction may be detected.
Self Test	<ul style="list-style-type: none"> <li>• SD Card Access</li> <li>• BT Module Access</li> <li>• Radio Antenna</li> <li>• GPS Antenna</li> <li>• SXM Antenna</li> </ul>	A system self test is executed and the results are stored into the error memory.	

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:000000010435656

#### METHOD OF STARTING

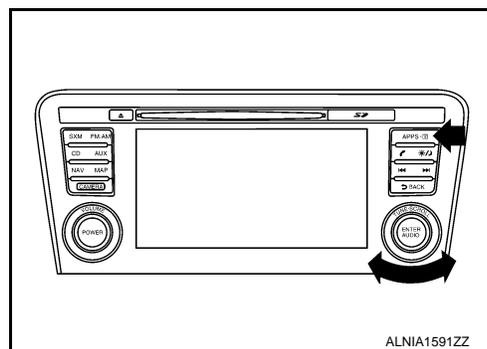
1. Turn the ignition ON.

# DIAGNOSIS SYSTEM (AV CONTROL UNIT)

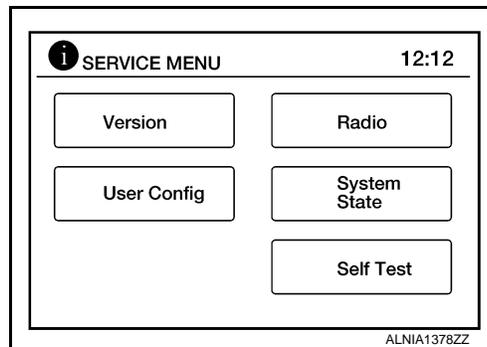
< SYSTEM DESCRIPTION >

[NAVIGATION]

- While pressing the APPS button, turn the TUNE-SCROLL dial counterclockwise 3 or more clicks, then clockwise 3 or more clicks, then counterclockwise 3 or more clicks. Shifting from current screen to previous screen is performed by pressing BACK button.



- The trouble diagnosis initial screen is displayed, and Version, User Config, Radio, System State or Self Test can be selected.



## CONSULT Function

INFOID:000000010435657

### 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"> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing AV control unit.</li> </ul>
CAN Diag Support Mntr	<ul style="list-style-type: none"> <li>The result of transmit/receive diagnosis of AV communication is displayed.</li> <li>The result of transmit/receive diagnosis of CAN communication is displayed.</li> </ul>

### ECU IDENTIFICATION

The part number of AV control unit is displayed.

### SELF DIAGNOSTIC RESULT

Refer to [AV-151, "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.

### CONFIGURATION

Refer to [AV-178, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

### CAN DIAG SUPPORT MNTR

Refer to [LAN-21, "CAN Diagnostic Support Monitor"](#).

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# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION]

## DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT) WITHOUT DRIVER ASSISTANCE SYSTEM

### WITHOUT DRIVER ASSISTANCE SYSTEM : CONSULT Function

INFOID:000000010435658

#### CONSULT FUNCTIONS

CONSULT performs the following functions via communication with the around view monitor control unit.

Direct Diagnostic Mode	Description
Ecu Identification	The around view monitor control unit part number is displayed.
Self Diagnostic Result	The around view monitor control unit self diagnostic results are displayed.
Data Monitor	The around view monitor control unit input/output data is displayed in real time.
Work support	The settings for around view monitor control unit functions can be changed.
Configuration	<ul style="list-style-type: none"><li>The vehicle specification can be read and saved.</li><li>The vehicle specification can be written when replacing around view monitor control unit.</li></ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

#### ECU IDENTIFICATION

The part number of around view monitor control unit is displayed.

#### SELF DIAGNOSTIC RESULT

Refer to [AV-154. "WITHOUT DRIVER ASSISTANCE SYSTEM : DTC Index"](#).

#### DATA MONITOR

Monitor Item	Description
ST ANGLE SENSOR SIGNAL [On/Off]	Indicates condition of steering angle sensor signal.
REVERSE SIGNAL [On/Off]	Indicates selector lever position.
VEHICLE SPEED SIGNAL [mph/km/h]	Indicates condition of vehicle speed signal.
CAMERA SWITCH SIGNAL [On/Off]	Indicates condition of camera switch signal.
CAMERA OFF SIGNAL [On/Off]	Indicates condition of camera OFF signal.
ST ANGLE SENSOR TYPE [Absolute]	Indicates steering angle sensor type.
ST GEAR RATIO TYPE [Type O]	Indicates steering gear ratio type.
STEERING POSITION [LHD/RHD]	Indicates LH or RH drive type.
SHIFT LEVER POSITION	Indicates Shift Lever Position.
WHEEL SPEED	<ul style="list-style-type: none"><li>Recieve the Wheel Speed signal → ON.</li><li>Not recieve the Wheel Speed signal → OFF</li></ul>
REAR CAMERA IMAGE SIGNAL [OK/NG]	Indicates condition of camera image signal.
F-CAMERA IMAGE SIGNAL [OK/NG]	Indicates condition of camera image signal.
DR-SIDE CAMERA IMAGE SIG [OK/NG]	Indicates condition of camera image signal.
PA-SIDE CAMERA IMAGE SIG [OK/NG]	Indicates condition of camera image signal.

#### WORK SUPPORT

Support Item	Setting	Description
NON-VIEWABLE AREA REMINDER	ON	ON/OFF setting of non-viewable area can be performed.
	OFF	
PREDICTIVE COURSE LINE DISPLAY	ON	ON/OFF setting of predictive course line display can be performed.
	OFF	

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION]

Support Item	Setting	Description
INITIALIZE CAMERA IMAGE CALIBRATION	—	Factory image calibration restoration can be performed.
STEERING ANGLE SENSOR ADJUSTMENT	—	Steering angle sensor neutral position adjustment can be performed.
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	STATUS	Performs calibration of front camera.
	AXIS X	
	AXIS Y	
	ROTATE	
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	STATUS	Performs calibration of passenger side camera.
	AXIS X	
	AXIS Y	
	ROTATE	
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	STATUS	Performs calibration of driver side camera.
	AXIS X	
	AXIS Y	
	ROTATE	
CALIBRATING CAMERA IMAGE (REAR CAMERA)	STATUS	Performs calibration of rear camera.
	AXIS X	
	AXIS Y	
	ROTATE	
FINE TUNING OF BIRDS-EYE VIEW	STATUS	Confirmation and adjustment of difference between each camera can be performed.
	SELECT	
	AXIS X	
	AXIS Y	
	ROTATE	

## CONFIGURATION

Refer to [AV-179, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Description"](#).

## CAN DIAG SUPPORT MNTR

Refer to [LAN-21, "CAN Diagnostic Support Monitor"](#).

## WITH DRIVER ASSISTANCE SYSTEM

## WITH DRIVER ASSISTANCE SYSTEM : CONSULT Function

INFOID:000000010435659

## CONSULT FUNCTIONS

CONSULT performs the following functions via communication with the around view monitor control unit.

Direct Diagnostic Mode	Description
Ecu Identification	The around view monitor control unit part number is displayed.
Self Diagnostic Result	The around view monitor control unit self diagnostic results are displayed.
Data Monitor	The around view monitor control unit input/output data is displayed in real time.
Work support	The settings for around view monitor control unit functions can be changed.
Configuration	<ul style="list-style-type: none"> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing around view monitor control unit.</li> </ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

## ECU IDENTIFICATION

The part number of around view monitor control unit is displayed.

## SELF DIAGNOSTIC RESULT

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION]

Refer to [AV-154. "WITHOUT DRIVER ASSISTANCE SYSTEM : DTC Index"](#).

## DATA MONITOR

Monitor Item	Description
ST ANGLE SENSOR SIGNAL [On/Off]	Indicates condition of steering angle sensor signal.
REVERSE SIGNAL [On/Off]	Indicates selector lever position.
VEHICLE SPEED SIGNAL [mph/km/h]	Indicates condition of vehicle speed signal.
CAMERA SWITCH SIGNAL [On/Off]	Indicates condition of camera switch signal.
CAMERA OFF SIGNAL [On/Off]	Indicates condition of camera OFF signal.
ST ANGLE SENSOR TYPE [Absolute]	Indicates steering angle sensor type.
ST GEAR RATIO TYPE [Type O]	Indicates steering gear ratio type.
STEERING POSITION [LHD/RHD]	Indicates LH or RH drive type.
REAR CAMERA IMAGE SIGNAL [OK/NG]	Indicates condition of camera image signal.
WASH SW [On/Off]	Indicates state of wash switch indicator output.
R-CAMERA COMM STATUS [OK/Not]	Indicates status of rear camera communication.
R-CAMERA COMM LINE [OK/Not]	Indicates condition of rear camera communication line.
F-CAMERA IMAGE SIGNAL [OK/NG]	Indicates condition of camera image signal.
DR-SIDE CAMERA IMAGE SIG [OK/NG]	Indicates condition of camera image signal.
PA-SIDE CAMERA IMAGE SIG [OK/NG]	Indicates condition of camera image signal.
PUMP COMM STATUS [OK/Not]	Indicates state of communication signal from pump control unit.
ILL [On/Off]	Indicates status of illumination signal.
ITS SW 1 [On/Off]	Indicates state of warning system switch.
ITS SW 1 IND [On/Off]	Indicates state of warning system switch indicator output.
TURN SIGNAL [Left/N/Right]	Indicates status of turn signal output.
ITS SW 2 [ON/OFF/No setting]	Indicates state of warning system secondary switch.
ITS SW 2 IND [ON/OFF/No setting]	Indicates state of warning system secondary switch indicator output.

## ACTIVE TEST

Test item	Description
LED RH INDICATOR	This test is able to check RH LED indicator operation [LED Off/LED On].
LED LH INDICATOR	This test is able to check LH LED indicator operation [LED Off/LED On].
WASH ACTIVE	This test is able to check rear camera wash operation [WASH Off/WASH On].
AIR ACTIVE	This test is able to check rear camera air operation [AIR Off/AIR On].
AIR & WASH ACTIVE	This test is able to check rear camera air and wash operation [Off/On].
AVM BUZZER CONTROL	This test is able to check AVM buzzer operation [Off/On].

## WORK SUPPORT

Support Item	Setting	Description
REAR CAMERA ITS	—	Displays and sets camera image calibration values.
CAUSE OF LDW CANCEL	—	Displays the information about reason of LDW cancellation.
CAUSE OF BSW CANCEL	—	Displays the information about reason of BSW cancellation.

# DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[NAVIGATION]

Support Item	Setting	Description	
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	STATUS	Performs calibration of front camera.	A
	AXIS X		
	AXIS Y		B
	ROTATE		
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	STATUS	Performs calibration of passenger side camera.	C
	AXIS X		
	AXIS Y		D
	ROTATE		
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	STATUS	Performs calibration of driver side camera.	E
	AXIS X		
	AXIS Y		F
	ROTATE		
CALIBRATING CAMERA IMAGE (REAR CAMERA)	STATUS	Performs calibration of rear camera.	G
	AXIS X		
	AXIS Y		H
	ROTATE		
FINE TUNING OF BIRDS-EYE VIEW	STATUS	Confirmation and adjustment of difference between each camera can be performed.	I
	SELECT		
	AXIS X		J
	AXIS Y		
	ROTATE		K
REAR WIDE-VIEW FIXED GUIDE LINE CORRECTION	STATUS	Adjusts position of fixed guide line on rear wide view	L
	AXIS X		
	AXIS Y		M
	Pattern		
FRONT WIDE-VIEW FIXED GUIDE LINE CORRECTION	STATUS	Adjusts position of fixed guide line on front wide view	N
	AXIS X		
	AXIS Y		O
	Pattern		
NON-VIEWABLE AREA REMINDER	ON	ON/OFF setting of non-viewable area can be performed.	P
	OFF		
PREDICTIVE COURSE LINE DISPLAY	ON	ON/OFF setting of predictive course line display can be performed.	Q
	OFF		
INITIALIZE CAMERA IMAGE CALIBRATION	—	Factory image calibration restoration can be performed.	R
STEERING ANGLE SENSOR ADJUSTMENT	—	Steering angle sensor neutral position adjustment can be performed.	S

## CONFIGURATION

Refer to [AV-179, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Description"](#).

## CAN DIAG SUPPORT MNTR

Refer to [LAN-21, "CAN Diagnostic Support Monitor"](#).

# AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

## ECU DIAGNOSIS INFORMATION

### AV CONTROL UNIT

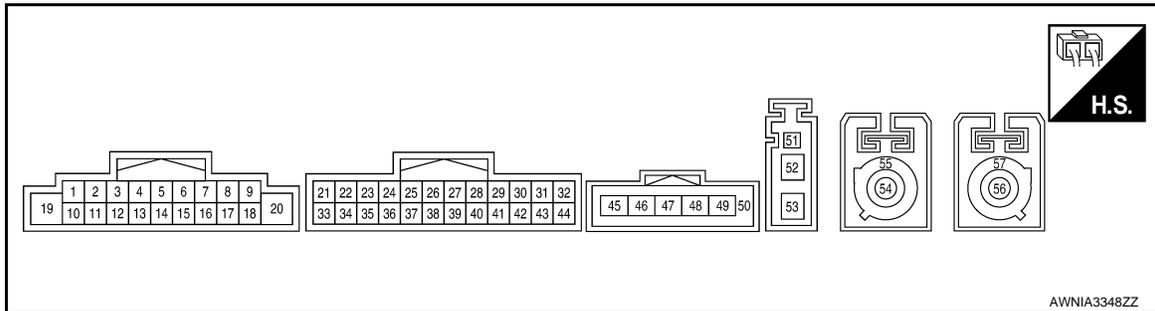
Reference Value

INFOID:000000010435660

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
VHCL SPD SIG	Vehicle speed = 0 km/h (0 MPH).	Off
	Vehicle speed > 0 km/h (0 MPH).	On
ILLUM SIG	Illumination signal is not received.	Off
	Illumination signal is received.	On
IGN SIG	Ignition switch OFF.	Off
	Ignition switch ON.	On
REV SIG	Selector lever in any position other than R.	Off
	Selector lever in R position.	On

#### TERMINAL LAYOUT



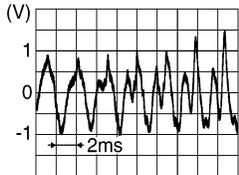
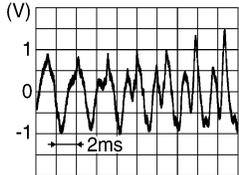
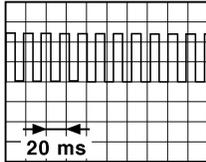
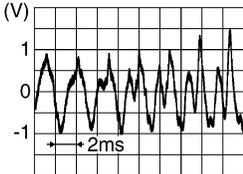
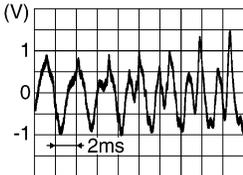
#### PHYSICAL VALUES

Terminal (Wire color)		Description	Input/Output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
2 (L)	3 (V)	Sound signal front speaker and tweeter LH	Output	ON	Sound output	 <small>SKIB3609E</small>
4 (W)	5 (Y)	Sound signal rear speaker LH	Output	ON	Sound output	 <small>SKIB3609E</small>
7 (W)	Ground	ACC power supply	Input	ON	—	Battery voltage
8 (L)	—	AV communication (H)	Input/Output	—	—	—

# AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
9 (BG)	Ground	Illumination control signal	Input	ON	Headlamps ON	Battery voltage
11 (G)	12 (R)	Sound signal front speaker and tweeter RH	Output	ON	Sound output	 SKIB3609E
13 (LG)	14 (GR)	Sound signal rear speaker RH	Output	ON	Sound output	 SKIB3609E
17 (R)	—	AV communication (L)	Input/ Output	—	—	—
18 (P)	Ground	Vehicle speed signal (8 pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	 JSNIA0012GB
19 (L)	Ground	Battery power supply	Input	OFF	—	Battery voltage
20 (B)	Ground	Ground	—	ON	—	0 V
21 (R)	Ground	AUX jack audio signal RH	Input	ON	Received audio signal (AUX input)	 SKIB3609E
22 (W)	Ground	AUX ground	—	ON	—	0V
23 (B)	Ground	AUX jack audio signal LH	Input	ON	Received audio signal (AUX input)	 SKIB3609E
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

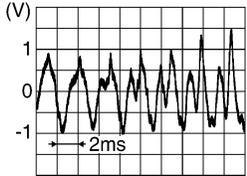
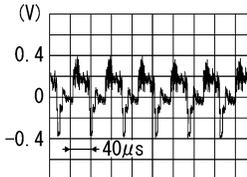
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# AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

Terminal (Wire color)		Description	Input/ Output	Condition		Reference value (Approx.)
+	-			Signal name	Ignition switch	
30 (SB)	—	MR output	Output	—	—	—
31 (SB)	—	CAN (H)	Input/ Output	—	—	—
32 (LG)	—	CAN (L)	Input/ Output	—	—	—
34 (W)	36 (Shield)	Microphone signal	Input	ON	While speaking into microphone.	 <p style="text-align: right; font-size: small;">SKIB3609E</p>
35 (O)	—	MIC VCC	Input	ON	—	—
37 (Shield)	—	AUX signal shield	—	—	—	—
38 (SB)	—	CAN (H)	Input/ Output	—	—	—
39 (LG)	—	CAN (L)	Input/ Output	—	—	—
40 (LG)	Ground	Ignition power supply	Input	ON	—	Battery voltage
41 (W) <sup>*1</sup> (G) <sup>*2</sup>	Ground	Camera image signal	Input	ON	When camera image is displayed	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
42 (Shield)	—	Camera image signal shield	—	—	—	—
43 (R)	Ground	Camera power supply	Input	ON	—	Battery voltage
44 (B)	Ground	Camera ground	Input	ON	—	0 V
56 —	Ground	GPS antenna signal	Input	ON	AV control unit ON, NAV selected.	5.0 V
57 (Shield)	—	GPS antenna shield	—	—	—	—
58 (R)	—	USB D- signal	—	—	—	—
59 (W)	—	V BUS signal	—	—	—	—
60 (G)	—	USB ground	—	—	—	—
61 (L)	—	USB + signal	—	—	—	—

# AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
62 —	—	USB shield	—	—	—	—
150 —	Ground	FM sub signal	Output	ON	AV control unit ON, FM-AM selected.	Battery voltage
151 —	Ground	AM-FM main antenna	Input	ON	AV control unit ON, FM-AM selected.	5.0 V
152 —	Ground	Antenna amp. ON signal	Output	ON	AV control unit ON, FM-AM selected.	Battery voltage

\*1:WITHOUT AROUND VIEW MONITOR

\*2:WITH AROUND VIEW MONITOR

## DTC Index

INFOID:000000010435661

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	<a href="#">AV-189. "AV CONTROL UNIT : DTC Logic"</a>
U1010: CONTROL UNIT (CAN)	<a href="#">AV-190. "AV CONTROL UNIT : DTC Logic"</a>
U1217: BLUETOOTH MODULE	<a href="#">AV-208. "DTC Logic"</a>
U1229: iPod CERTIFICATION	<a href="#">AV-209. "DTC Logic"</a>
U122F: Digital broadcasting connection error	<a href="#">AV-210. "DTC Logic"</a>
U1244: GPS ANTENNA CONN	<a href="#">AV-212. "DTC Logic"</a>
U1258: SXM ANTENNA CONN	<a href="#">AV-213. "DTC Logic"</a>
U1263: USB OVERCURRENT	<a href="#">AV-214. "DTC Logic"</a>
U12AA: Configuration Error	<a href="#">AV-215. "DTC Logic"</a>
U12AB: FM Antenna error	<a href="#">AV-216. "DTC Logic"</a>
U12AC: Display Temperature too High	<a href="#">AV-217. "DTC Logic"</a>
U12AD: ECU Temperature too High	<a href="#">AV-218. "DTC Logic"</a>
U12AE: Internal Amplifier temperature Warning	<a href="#">AV-219. "DTC Logic"</a>
U12AF: CD Mechanism Temperature Warning	<a href="#">AV-220. "DTC Logic"</a>
U1300: AV COMM CIRCUIT	<a href="#">AV-221. "DTC Logic"</a>
U1310: CONTROL UNIT(AV)	<a href="#">AV-225. "DTC Logic"</a>

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# AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

## AROUND VIEW MONITOR CONTROL UNIT WITHOUT DRIVER ASSISTANCE SYSTEM

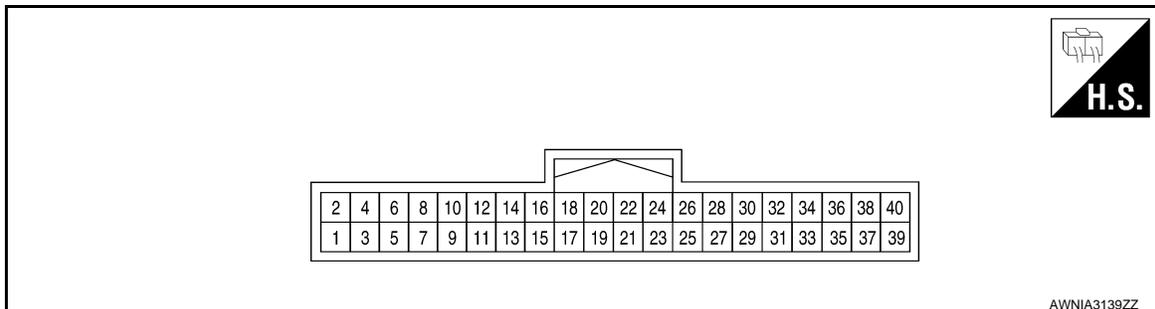
WITHOUT DRIVER ASSISTANCE SYSTEM : Reference Value

INFOID:0000000010435662

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
CAMERA OFF SIGNAL	CAMERA switch ON.	Off
	CAMERA switch OFF.	On
CAMERA SWITCH SIGNAL	CAMERA switch OFF.	Off
	CAMERA switch ON.	On
DR-SIDE CAMERA IMAGE SIG	Side camera LH inoperative.	NG
	Side camera LH operative.	OK
F-CAMERA IMAGE SIG	Front camera inoperative.	NG
	Front camera operative.	OK
PA-SIDE CAMERA IMAGE SIG	Side camera RH inoperative.	NG
	Side camera RH operative.	OK
REAR CAMERA IMAGE SIGNAL	Rear camera LH inoperative.	NG
	Rear camera LH operative.	OK
REVERSE SIGNAL	When selector lever is in any position other than R (reverse).	Off
	When selector lever in R (reverse).	On
ST ANGLE SENSOR SIGNAL	Around view monitor control unit is not receiving steering angle sensor signal.	Off
	Around view monitor control unit is receiving steering angle sensor signal.	On
ST ANGLE SENSOR TYPE	Steering angle sensor type.	Absolute
ST GEAR RATIO TYPE	Steering gear ratio type.	Type O
STEERING POSITION	Left hand drive vehicle.	LHD
	Right hand drive vehicle.	RHD
VEHICLE SPEED SIGNAL	While driving, equivalent to speedometer reading	mph, km/h

### TERMINAL LAYOUT

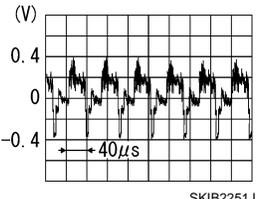
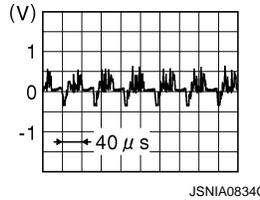
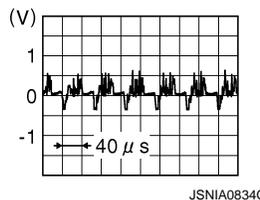


### PHYSICAL VALUES

# AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

Terminal (Wire color)		Description	Condition			Reference value (Approx.)
+	-		Signal name	Input/ Output	Ignition switch	
1 (B)	Ground	Ground	—	ON	—	0 V
2 (Y)	Ground	Battery power supply	Input	OFF	—	Battery voltage
4 (SB)	Ground	Ignition signal	Input	ON	—	Battery voltage
10 (R)	—	CAN (L)	Input/ Output	—	—	—
12 (L)	—	CAN (H)	Input/ Output	—	—	—
23 (Shield)	—	Camera image signal shield	—	—	—	—
24 (G)	Ground	Camera image signal	Output	ON	When camera image display	 <p style="text-align: right; font-size: small;">SKIB2251J</p>
25 (B)	Ground	Rear camera ground	—	ON	—	0 V
26 (R)	Ground	Rear camera power supply	Output	ON	CAMERA selected or Shift selector in R (reverse) position.	6.0 V
28 (W)	27 (Shield)	Rear camera image signal	Input	ON	CAMERA selected or Shift selector in R (reverse) position.	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>
29 (Y)	Ground	Side camera LH ground	—	ON	—	0 V
30 (L)	Ground	Side camera LH power supply	Output	ON	CAMERA selected or Shift selector in R (reverse) position.	6.0 V
32 (G)	31 (Shield)	Side camera LH image signal	Input	ON	CAMERA selected or Shift selector in R (reverse) position.	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>
33 (L)	Ground	Side camera RH ground	—	ON	—	0 V

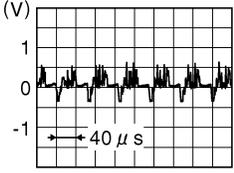
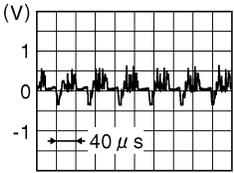
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# AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
34 (B)	Ground	Side camera RH power supply	Output	ON	CAMERA selected or Shift selector in R (reverse) position.	6.0 V
36 (Y)	35 (Shield)	Side camera RH image signal	Input	ON	CAMERA selected or Shift selector in R (reverse) position.	
37 (V)	Ground	Front camera ground	—	ON	—	0 V
38 (L)	Ground	Front camera power supply	Output	ON	CAMERA selected or Shift selector in R (reverse) position.	6.0 V
40 (LG)	39 (Shield)	Front camera image signal	Input	ON	CAMERA selected or Shift selector in R (reverse) position.	

## WITHOUT DRIVER ASSISTANCE SYSTEM : DTC Index

INFOID:000000010435663

CONSULT Display	Reference Page
C1A00: CONTROL UNIT	<a href="#">AV-186, "DTC Logic"</a>
C1B56: SONAR	<a href="#">AV-187, "DTC Logic"</a>
U0428: ST ANG SEN CALIB	<a href="#">AV-188, "DTC Logic"</a>
U1000: CAN COMM CIRCUIT	<a href="#">AV-189, "AROUND VIEW MONITOR CONTROL UNIT : DTC Logic"</a>
U1010: CONTROL UNIT (CAN)	<a href="#">AV-190, "AROUND VIEW MONITOR CONTROL UNIT : DTC Logic"</a>
U111A: Rear display output signal diagnosis (Harness disconnection)	<a href="#">AV-191, "DTC Logic"</a>
U111B: Right side display output signal diagnosis (Harness disconnection)	<a href="#">AV-195, "DTC Logic"</a>
U111C: Front display output signal diagnosis (Harness disconnection)	<a href="#">AV-199, "DTC Logic"</a>
U111D: Left side display output signal diagnosis (Harness disconnection)	<a href="#">AV-203, "DTC Logic"</a>
U112F: EPS circuit	<a href="#">AV-207, "DTC Logic"</a>
U1232: ST ANG SEN CALIB	<a href="#">AV-211, "DTC Logic"</a>
U1304: Non-completion of the calibration	<a href="#">AV-223, "DTC Logic"</a>
U1305: Non-completion of the configuration	<a href="#">AV-224, "DTC Logic"</a>
U1320: Reprogramming	<a href="#">AV-226, "DTC Logic"</a>
U150E: BCM CIRCUIT	<a href="#">AV-227, "DTC Logic"</a>
U1971: SONAR	<a href="#">AV-228, "DTC Logic"</a>
U1972: EPS	<a href="#">AV-229, "DTC Logic"</a>

# AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

## WITH DRIVER ASSISTANCE SYSTEM

### WITH DRIVER ASSISTANCE SYSTEM : Reference Value

INFOID:0000000010435664

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
CAMERA OFF SIGNAL	CAMERA switch ON.	Off
	CAMERA switch OFF.	On
CAMERA SWITCH SIGNAL	CAMERA switch OFF.	Off
	CAMERA switch ON.	On
DR-SIDE CAMERA IMAGE SIG	Side camera LH inoperative.	NG
	Side camera LH operative.	OK
ILL	Illumination is ON	On
	Illumination is OFF	Off
ITS SW 1	ITS switch is pressed	On
	ITS switch is not pressed	Off
ITS SW 1 IND	Indicator of ITS switch 1 is lighting	On
	Indicator of ITS switch 1 is not lighting	Off
ITS SW 2	For this vehicle, the displaying is fixed	No SET
ITS SW 2 IND	For this vehicle, the displaying is fixed	No SET
F-CAMERA IMAGE SIG	Front camera inoperative.	NG
	Front camera operative.	OK
PA-SIDE CAMERA IMAGE SIG	Side camera RH inoperative.	NG
	Side camera RH operative.	OK
PUMP COMM STATUS	Pump communication signal is received	On
	Pump communication signal is not received	Off
R-CAMERA COMM STATUS	Rear camera serial status is OK	OK
	Rear camera serial status is not OK	NG
R-CAMERA COMM LINE	Rear camera serial communication signal is received	OK
	Rear camera serial communication signal is not received	NG
REAR CAMERA IMAGE SIGNAL	Rear camera LH inoperative.	NG
	Rear camera LH operative.	OK
REVERSE SIGNAL	When selector lever is in any position other than R (reverse).	Off
	When selector lever in R (reverse).	On
ST ANGLE SENSOR SIGNAL	Around view monitor control unit is not receiving steering angle sensor signal.	Off
	Around view monitor control unit is receiving steering angle sensor signal.	On
ST ANGLE SENSOR TYPE	Steering angle sensor type.	Absolute
ST GEAR RATIO TYPE	Steering gear ratio type.	Type O
STEERING POSITION	Left hand drive vehicle.	LHD
	Right hand drive vehicle.	RHD
TURN SIGNAL	Turn signal left is received	Left
	Turn signal neutral is received	N
	Turn signal right is received	Right
VEHICLE SPEED SIGNAL	While driving, equivalent to speedometer reading	mph, km/h

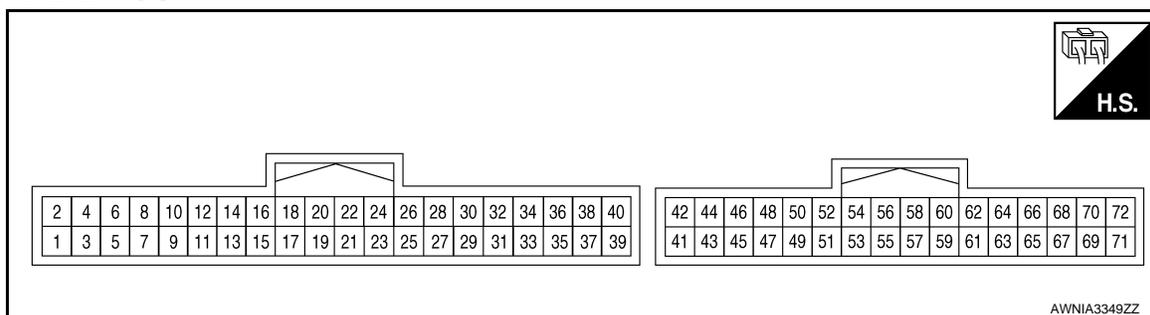
# AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

Monitor Item	Condition	Value/Status
WASH SW	Wash switch signal is pressed	On
	Wash switch signal is not pressed	Off

## TERMINAL LAYOUT



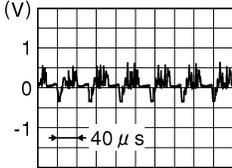
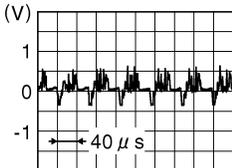
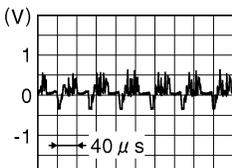
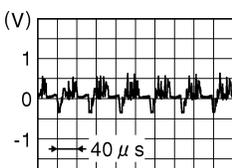
## PHYSICAL VALUES

Terminal (Wire color)		Description	Input/Output	Condition		Reference value (Approx.)
+	-			Ignition switch	Operation	
1 (B)	Ground	Ground	—	ON	—	0 V
2 (Y)	Ground	Battery power supply	Input	OFF	—	Battery voltage
3 (SB)	Ground	Ignition signal	Input	ON	—	Battery voltage
7 (R)	Ground	SOW LED signal L	Output	—	LDW/BSW detected (while driving)	12 V
					LDW/BSW is not detected (while driving)	0 V
8 (P)	Ground	SOW LED signal R	Output	—	LDW/BSW detected (while driving)	12 V
					LDW/BSW is not detected (while driving)	0 V
27 (L)	—	CAN (H)	Input/Output	—	—	—
28 (R)	—	CAN (L)	Input/Output	—	—	—
36 (BR)	Ground	Washer signal AVM to pump	Output	ON	Rear view camera washer motor operated	5 V
37 (V)	Ground	Pump signal ground	Input	ON	—	0 V
38 (GR)	Ground	Washer signal pump to AVM	Input	ON	Rear view camera washer motor operated	5 V
47 (G)	Ground	COMP OUT (+) Signal	—	—	—	—
48 (Shield)	—	COMP OUT (-) signal shield	—	—	—	—
49 (LG)	—	Rear view serial signal	Input/Output	—	—	—
50 (R)	Ground	Rear camera power supply	Output	ON	CAMERA selected or Shift selector in R (reverse) position.	6.0 V

# AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
52 (B)	Ground	Rear camera ground	—	ON	—	0 V
53 (W)	54 (Shield)	Rear camera image signal	Input	ON	CAMERA selected or Shift selector in R (reverse) position.	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>
56 (L)	Ground	Side camera LH power supply	Output	ON	CAMERA selected or Shift selector in R (reverse) position.	6.0 V
58 (Y)	Ground	Side camera LH ground	—	ON	—	0 V
59 (G)	60 (Shield)	Side camera LH image signal	Input	ON	CAMERA selected or Shift selector in R (reverse) position.	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>
62 (B)	Ground	Side camera RH power supply	Output	ON	CAMERA selected or Shift selector in R (reverse) position.	6.0 V
64 (L)	Ground	Side camera RH ground	—	ON	—	0 V
65 (Y)	66 (Shield)	Side camera RH image signal	Input	ON	CAMERA selected or Shift selector in R (reverse) position.	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>
68 (L)	Ground	Front camera power supply	Output	ON	CAMERA selected or Shift selector in R (reverse) position.	6.0 V
70 (V)	Ground	Front camera ground	—	ON	—	0 V
71 (LG)	72 (Shield)	Front camera image signal	Input	ON	CAMERA selected or Shift selector in R (reverse) position.	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

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# AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[NAVIGATION]

## WITH DRIVER ASSISTANCE SYSTEM : DTC Index

INFOID:000000010944779

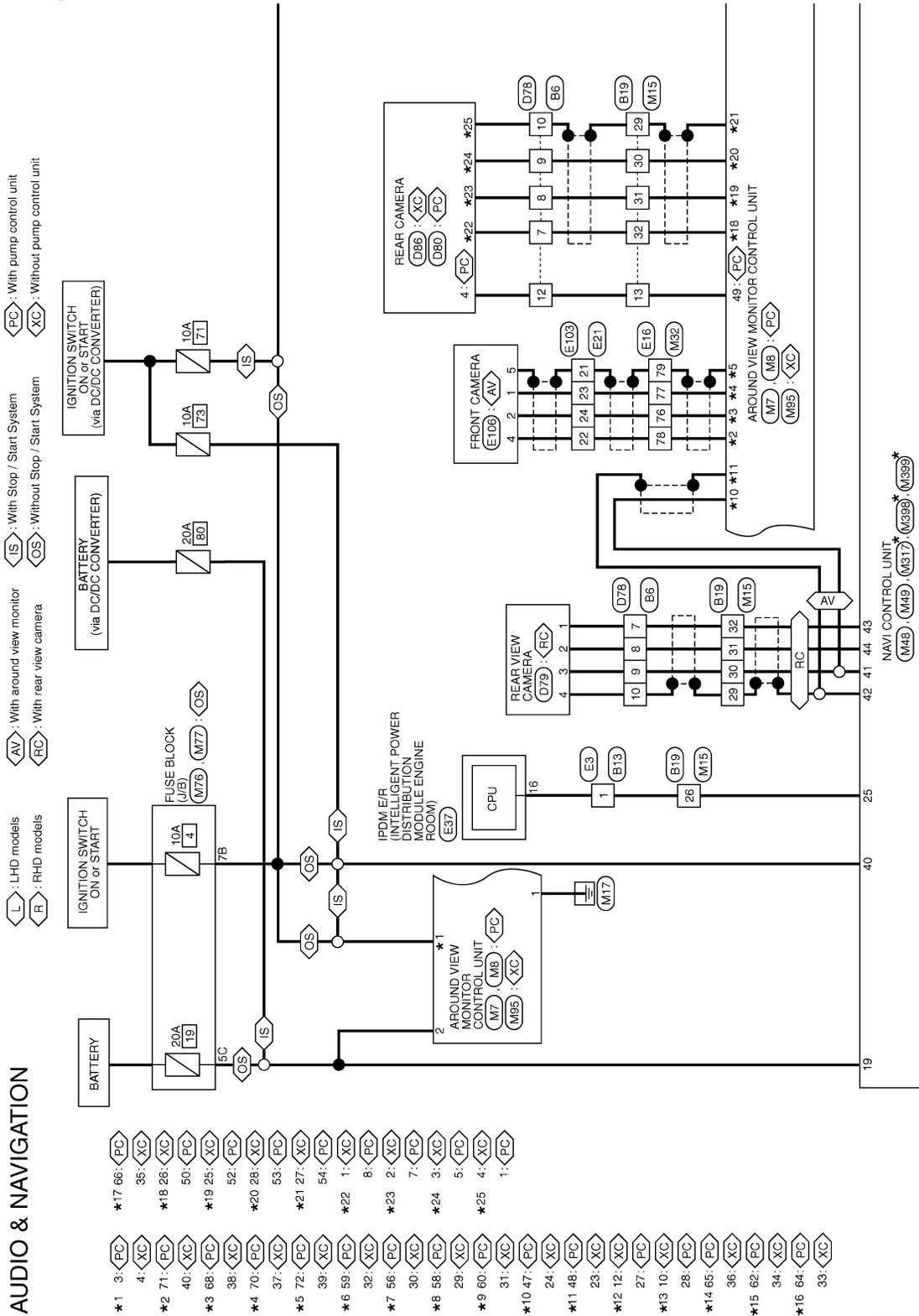
CONSULT Display	Reference Page
C1A00: CONTROL UNIT	<a href="#">AV-186, "DTC Logic"</a>
C1B56: SONAR	<a href="#">AV-187, "DTC Logic"</a>
U0428: ST ANG SEN CALIB	<a href="#">AV-188, "DTC Logic"</a>
U1000: CAN COMM CIRCUIT	<a href="#">AV-189, "AROUND VIEW MONITOR CONTROL UNIT : DTC Logic"</a>
U1010: CONTROL UNIT (CAN)	<a href="#">AV-190, "AROUND VIEW MONITOR CONTROL UNIT : DTC Logic"</a>
U111A: Rear display output signal diagnosis (Harness disconnection)	<a href="#">AV-191, "DTC Logic"</a>
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U1304: Non-completion of the calibration	<a href="#">AV-223, "DTC Logic"</a>
U1305: Non-completion of the configuration	<a href="#">AV-224, "DTC Logic"</a>
U1320: Reprogramming	<a href="#">AV-226, "DTC Logic"</a>
U150E: BCM CIRCUIT	<a href="#">AV-227, "DTC Logic"</a>
U1971: SONAR	<a href="#">AV-228, "DTC Logic"</a>
U1972: EPS	<a href="#">AV-229, "DTC Logic"</a>

# WIRING DIAGRAM

## NAVIGATION SYSTEM

### Wiring Diagram

INFOID:000000010435666



\*: This connector is not shown in "Harness Layout".

### AUDIO & NAVIGATION

- \*1 3: <PC>
- 4: <XC>
- \*2 71: <PC>
- 40: <XC>
- \*3 68: <PC>
- 38: <XC>
- \*4 70: <PC>
- 37: <XC>
- \*5 72: <PC>
- 39: <XC>
- \*6 59: <PC>
- 32: <XC>
- \*7 58: <PC>
- 29: <XC>
- \*8 58: <PC>
- 28: <XC>
- \*9 60: <PC>
- 31: <XC>
- \*10 47: <PC>
- 24: <XC>
- \*11 48: <PC>
- 23: <XC>
- \*12 12: <XC>
- 27: <PC>
- \*13 10: <XC>
- 28: <PC>
- \*14 65: <PC>
- 36: <XC>
- \*15 62: <PC>
- 34: <XC>
- \*16 64: <PC>
- 33: <XC>
- \*17 66: <PC>
- 35: <XC>
- \*18 26: <XC>
- 50: <PC>
- \*19 25: <XC>
- 52: <PC>
- \*20 28: <XC>
- 53: <PC>
- \*21 27: <XC>
- 54: <PC>
- \*22 1: <XC>
- 8: <PC>
- \*23 2: <XC>
- 30: <PC>
- \*24 3: <XC>
- 5: <PC>
- \*25 4: <XC>
- 1: <PC>

2013/11/20

JRNWD1349GB

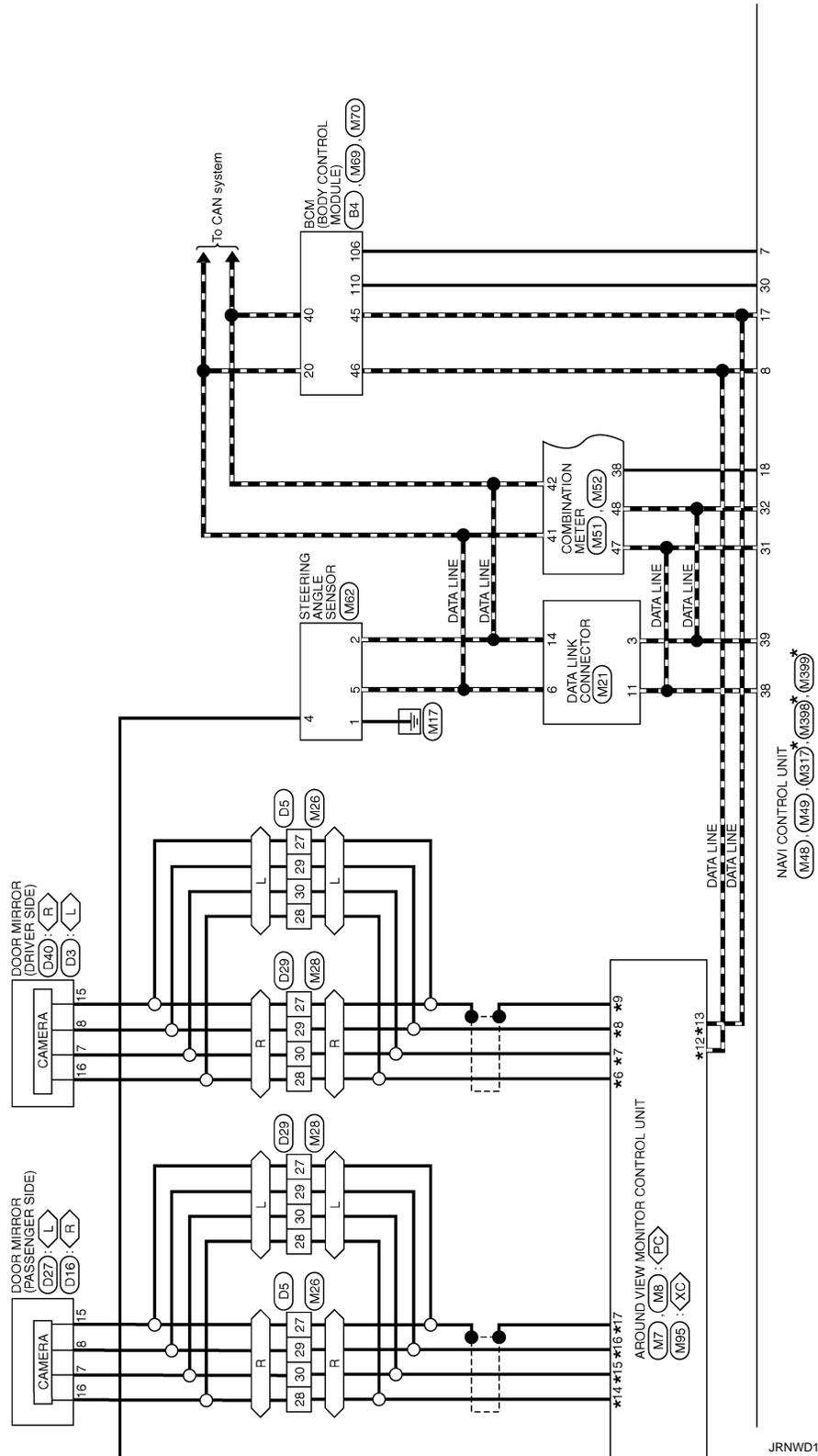
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# NAVIGATION SYSTEM

< WIRING DIAGRAM >

[NAVIGATION]

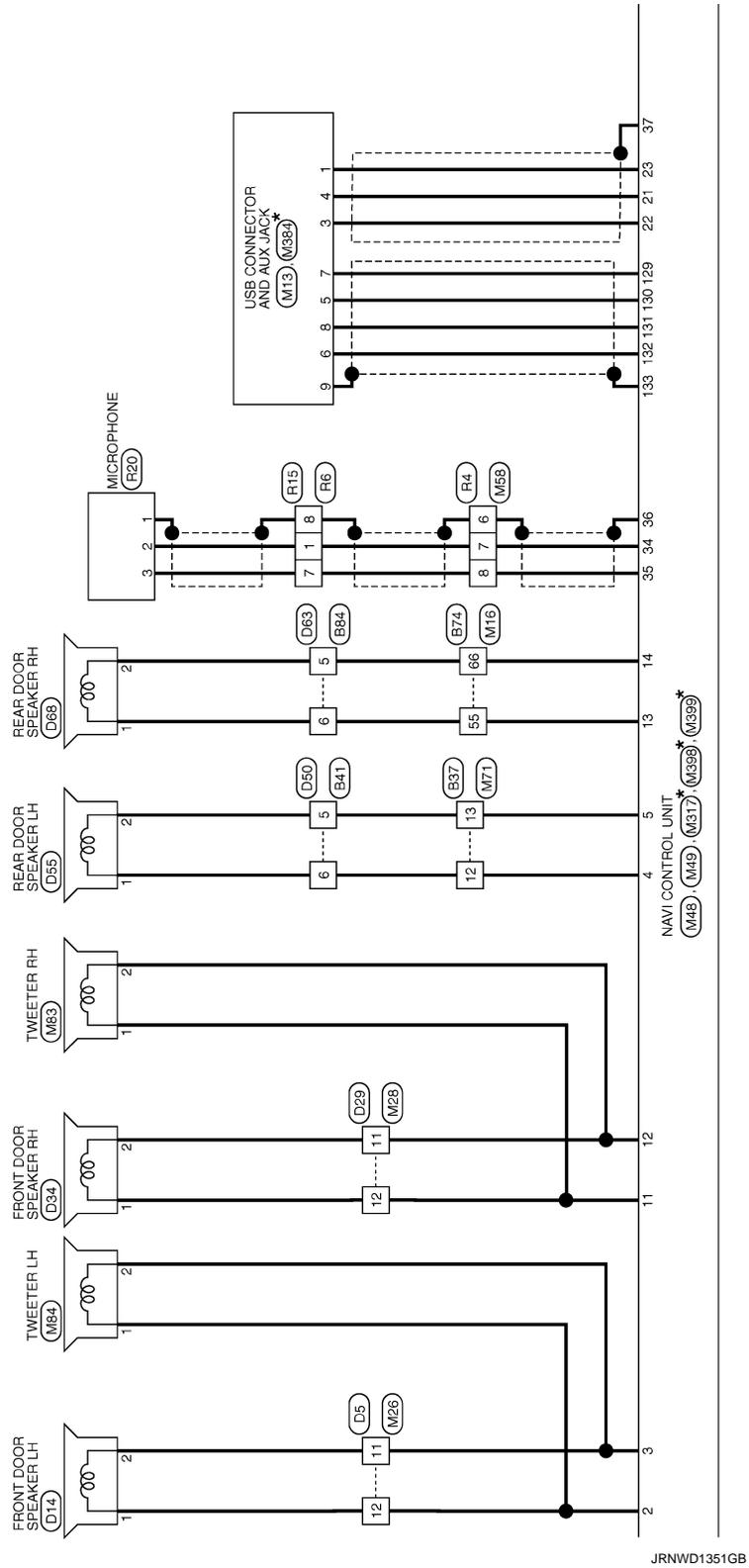


JRNWD1350GB

# NAVIGATION SYSTEM

< WIRING DIAGRAM >

[NAVIGATION]



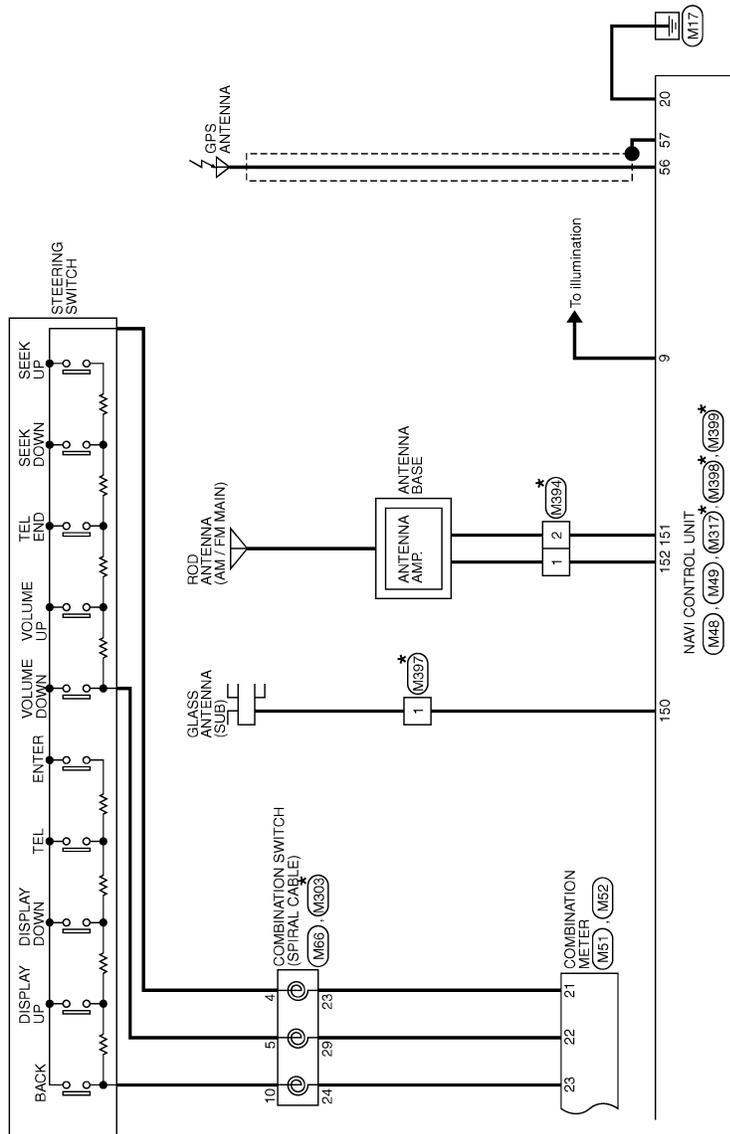
JRNWD1351GB

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# NAVIGATION SYSTEM

< WIRING DIAGRAM >

[NAVIGATION]



JRNWD1352GB

### AUDIO & NAVIGATION

Connector No.	B4
Connector Name	BDM (BODY CONTROL MODULE)
Connector Type	TH46EG-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	
2	R	
3	G	
4	G/W	
5	R	
6	B	
7	W	
8	SHIELD	
9	Y	
10	Y	
11	G	
12	G	



Connector No.	B19
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



Connector No.	B37
Connector Name	WIRE TO WIRE
Connector Type	NIS10MH-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
6	B	BACK DOOR OPENER REQUEST SW (For B6B models)
7	B	BACK DOOR OPENER REQUEST SW (For LFD models)
8	R	REAR L/D DOOR SW
9	B	BACK DOOR SW
10	W	REAR LH DOOR SW
11	R	PASSENGER DOOR SW
12	G/W	REAR WIPER AUTO STOP
13	B	BACK DOOR OPENER SW
14	SB	DRIVER DOOR SW
15	L	CAN-H
16	BR	REAR BMPR ANT -
17	Y	ROOM ANT 2 -
18	L	REAR BMPR ANT +
19	G	REAR BMPR ANT +
20	G	REAR BMPR ANT +
21	W	REAR BMPR ANT +
22	P	HIGH-MOUNTED STOP LAMP CAN-L

Connector No.	B13
Connector Name	WIRE TO WIRE
Connector Type	TH80MH-CS18-TM4

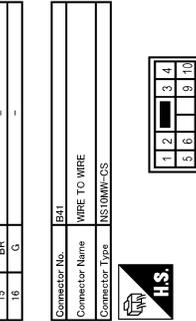


Terminal No.	Color Of Wire	Signal Name [Specification]
2	R	
3	R	
4	G	
5	Y	
6	W	
7	W	
8	W	
9	Y	
10	Y	
11	G	
12	G	
13	W	
14	R	
15	V	
16	L	
17	L	
18	L	
19	L	
20	LG	
21	G	
22	V	
23	BR	
24	P	
25	P	
26	C	
27	SHIELD	
28	W	
29	W	
30	B	
31	R	
32	R	

Terminal No.	Color Of Wire	Signal Name [Specification]
3	V	
4	G	
5	G	
6	P	
7	P	
8	P	
9	P	
10	R	
11	L	
12	W	
13	R	
14	L	
15	BR	
16	G	

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	
2	G	
3	G	
4	G	
5	G	
6	G	
7	G	
8	G	
9	G	
10	G	
11	G	
12	G	
13	G	
14	G	
15	G	
16	G	
17	G	
18	G	
19	G	
20	G	
21	BR	
22	SB	
23	BC	
24	SB	
25	G	
26	B	
27	P	

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Type	NIS10MH-CS



Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Type	TH18PW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	
2	G	
3	G	
4	V	
5	R	
6	W	
7	G	
8	G	
9	G	
10	G	

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## AUDIO & NAVIGATION

Terminal No.	10	P	-	-
Connector No.	B14			
Connector Name	WIRE TO WIRE			
Connector Type	NS10MW-CS			

Terminal No.	1	P	-	-
Connector No.	B14			
Connector Name	WIRE TO WIRE			
Connector Type	TH86MW-CS16-TM4			



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	L	-
3	LG	-
4	P	-
9	SB	-
20	G	- [With gasoline engine]
21	B	-
24	G	-
25	BR	-
85	LG	-
89	GR	-
79	V	-
84	L	-
85	W	-
89	BG	-
90	BR	-
93	Y	-
94	P	-
98	L	-
99	LG	-
100	GR	- [With diesel engine]
100	R	- [With gasoline engine]

Terminal No.	15	B	-	-
Connector No.	B54			
Connector Name	WIRE TO WIRE			
Connector Type	NS10MW-CS			

Terminal No.	1	2	3	4
Connector No.	NS10MW-CS			



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LG	-
3	G	-
4	L	-
5	GR	- [RHD models without super lock]
6	LG	- [RHD models with super lock or LHD models]
9	G	-
10	Y	-

Terminal No.	18	Y	-	-
Connector No.	D5			
Connector Name	WIRE TO WIRE			
Connector Type	TH82FW-NH			

Terminal No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Connector No.	TH82FW-NH																														



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	R	- [For RHD models]
3	P	- [For LHD models]
4	B	- [For LHD models]
5	G	-
6	Y	-
7	R	-
8	V	-
9	W	-
10	W	-
11	P	-
12	W	-
13	LG	-
14	B	-
15	R	-
16	B	-
17	B	-
18	R	-
19	G	-
20	SB	-
21	GR	-
22	BR	-
23	G	-
24	B	-
25	Y	-
26	G	-
29	V	- [For LHD models]
30	GR	- [For RHD models]
31	GR	- [For RHD models]

Terminal No.	32	BR	-	-
Connector No.	D14			
Connector Name	FRONT DOOR SPEAKER LH			
Connector Type	NS20FW-CS			

Terminal No.	1	2	3	4
Connector No.	NS20FW-CS			



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	P	-

Terminal No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Connector No.	TH18MW-NH															



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LG	-
3	L	-
4	R	-
5	Y	-
7	L	-
8	V	-
10	B	-
11	W	-
12	W	-
13	G	-
14	B	-
15	B	-
16	Y	-

### AUDIO & NAVIGATION

Connector No.	D27
Connector Name	DOOR MIRROR (PASSENGER SIDE)
Connector Type	TH16MFW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	GR	-
3	B	-
4	B	-
5	Y	-
6	Y	-
7	L	-
8	V	-
9	V	-
10	B	-
11	W	-
12	V	-
13	Y	-
14	B	-
15	B	-
16	Y	-

Connector No.	D29
Connector Name	WIRE TO WIRE
Connector Type	TH132FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	V	- [For LHD models]
3	P	- [For LHD models]
3	W	- [For RHD models]
4	B	-
5	Y	-

Terminal No.	Color Of Wire	Signal Name [Specification]
8	V	-
9	R	-
8	V	-
8	L	-
10	W	-
11	R	-
12	G	-
13	GR	-
14	B	-
15	G	-
16	B	-
17	B	-
18	R	-
19	B	-
20	GR	- [With super lock]
21	GR	- [Without super lock]
22	CB	-
22	BR	-
23	B	-
24	B	-
25	B	-
26	B	-
27	B	-
28	Y	-
29	G	-
29	G	- [For RHD models]
29	V	- [For LHD models]
30	L	-
31	GR	-
32	BR	-

Connector No.	D24
Connector Name	FRONTDOOR SPEAKER RH
Connector Type	NS302FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	D40
Connector Name	DOOR MIRROR (DRIVER SIDE)
Connector Type	TH16MFW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	-
3	C	-
4	C	-
5	W	-
7	L	-
8	G	-
10	B	-
11	SB	-
12	GR	-
13	Y	-
14	B	-
15	B	-
16	Y	-

Connector No.	D39
Connector Name	WIRE TO WIRE
Connector Type	NS102FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	R	-
3	G	-
4	GR	-
4	V	- [RHD models without super lock]
5	R	- [RHD models with super lock or LHD models]
6	W	-

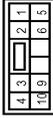
Terminal No.	9	G	-
Terminal No.	10	P	-

Connector No.	D35
Connector Name	REAR DOOR SPEAKER LH
Connector Type	NS302FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	R	-

Connector No.	D03
Connector Name	WIRE TO WIRE
Connector Type	NS102FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	L	-
3	G	-
4	GR	-
4	V	- [RHD models without super lock]
5	GR	- [RHD models with super lock or LHD models]
6	CG	-
8	O	-
10	Y	-

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

AV

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<p><b>Connector No.</b> D78 <b>Connector Name</b> WIRE TO WIRE <b>Connector Type</b> TH12RMV-NH</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Terminal No.</th> <th>Color Of Wire</th> <th>Signal Name [Specification]</th> </tr> </thead> <tbody> <tr><td>1</td><td>LG</td><td>GR</td></tr> <tr><td>2</td><td>GR</td><td>--</td></tr> </tbody> </table>	Terminal No.	Color Of Wire	Signal Name [Specification]	1	LG	GR	2	GR	--	<p><b>Connector No.</b> D79 <b>Connector Name</b> REAR CAMERA <b>Connector Type</b> TH104MW-NH</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Terminal No.</th> <th>Color Of Wire</th> <th>Signal Name [Specification]</th> </tr> </thead> <tbody> <tr><td>1</td><td>R</td><td>--</td></tr> <tr><td>5</td><td>G</td><td>--</td></tr> <tr><td>6</td><td>G/W</td><td>--</td></tr> <tr><td>7</td><td>R</td><td>--</td></tr> <tr><td>8</td><td>B</td><td>--</td></tr> <tr><td>9</td><td>W</td><td>--</td></tr> <tr><td>10</td><td>V</td><td>--</td></tr> <tr><td>11</td><td>Y</td><td>--</td></tr> <tr><td>12</td><td>L</td><td>--</td></tr> </tbody> </table>	Terminal No.	Color Of Wire	Signal Name [Specification]	1	R	--	5	G	--	6	G/W	--	7	R	--	8	B	--	9	W	--	10	V	--	11	Y	--	12	L	--																																																																			
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<p><b>Connector No.</b> D86 <b>Connector Name</b> REAR CAMERA <b>Connector Type</b> TH104MW-NH</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Terminal No.</th> <th>Color Of Wire</th> <th>Signal Name [Specification]</th> </tr> </thead> <tbody> <tr><td>1</td><td>R</td><td>POWER</td></tr> <tr><td>2</td><td>S</td><td>CUS</td></tr> <tr><td>3</td><td>W</td><td>VIDEO +</td></tr> <tr><td>4</td><td>V</td><td>VIDEO -</td></tr> </tbody> </table>	Terminal No.	Color Of Wire	Signal Name [Specification]	1	R	POWER	2	S	CUS	3	W	VIDEO +	4	V	VIDEO -	<p><b>Connector No.</b> D80 <b>Connector Name</b> REAR CAMERA <b>Connector Type</b> TH108MW-NH</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Terminal No.</th> <th>Color Of Wire</th> <th>Signal Name [Specification]</th> </tr> </thead> <tbody> <tr><td>1</td><td>V</td><td>VIDEO-</td></tr> <tr><td>4</td><td>L</td><td>SERIAL-SIGNAL</td></tr> <tr><td>5</td><td>W</td><td>VIDEO+</td></tr> <tr><td>7</td><td>B</td><td>GND</td></tr> <tr><td>8</td><td>R</td><td>POWER</td></tr> </tbody> </table>	Terminal No.	Color Of Wire	Signal Name [Specification]	1	V	VIDEO-	4	L	SERIAL-SIGNAL	5	W	VIDEO+	7	B	GND	8	R	POWER																																																																									
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<p><b>Connector No.</b> E16 <b>Connector Name</b> WIRE TO WIRE <b>Connector Type</b> TH188FW-CS16-TM4</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Terminal No.</th> <th>Color Of Wire</th> <th>Signal Name [Specification]</th> </tr> </thead> <tbody> <tr><td>2</td><td>W</td><td>--</td></tr> <tr><td>3</td><td>W</td><td>--</td></tr> <tr><td>7</td><td>EG</td><td>--</td></tr> <tr><td>8</td><td>L</td><td>--</td></tr> <tr><td>9</td><td>LG</td><td>--</td></tr> <tr><td>10</td><td>W</td><td>--</td></tr> <tr><td>14</td><td>EG</td><td>--</td></tr> <tr><td>20</td><td>L</td><td>--</td></tr> <tr><td>21</td><td>P</td><td>--</td></tr> <tr><td>22</td><td>SHIELD</td><td>--</td></tr> <tr><td>24</td><td>W</td><td>--</td></tr> <tr><td>31</td><td>V</td><td>--</td></tr> <tr><td>32</td><td>W</td><td>--</td></tr> <tr><td>33</td><td>SB</td><td>--</td></tr> <tr><td>34</td><td>EG</td><td>--</td></tr> <tr><td>35</td><td>EG</td><td>--</td></tr> <tr><td>36</td><td>LG</td><td>--</td></tr> <tr><td>37</td><td>V</td><td>--</td></tr> <tr><td>38</td><td>G</td><td>--</td></tr> <tr><td>39</td><td>BR</td><td>--</td></tr> <tr><td>40</td><td>L</td><td>--</td></tr> <tr><td>41</td><td>P</td><td>--</td></tr> <tr><td>42</td><td>G</td><td>--</td></tr> <tr><td>43</td><td>R</td><td>--</td></tr> <tr><td>44</td><td>Y</td><td>--</td></tr> <tr><td>45</td><td>BR</td><td>--</td></tr> <tr><td>46</td><td>L</td><td>--</td></tr> <tr><td>47</td><td>GR</td><td>--</td></tr> <tr><td>48</td><td>P</td><td>--</td></tr> <tr><td>51</td><td>P</td><td>--</td></tr> <tr><td>52</td><td>W</td><td>--</td></tr> <tr><td>53</td><td>R</td><td>--</td></tr> <tr><td>55</td><td>BR</td><td>--</td></tr> <tr><td>56</td><td>P</td><td>--</td></tr> <tr><td>57</td><td>B</td><td>--</td></tr> </tbody> </table>	Terminal No.	Color Of Wire	Signal Name [Specification]	2	W	--	3	W	--	7	EG	--	8	L	--	9	LG	--	10	W	--	14	EG	--	20	L	--	21	P	--	22	SHIELD	--	24	W	--	31	V	--	32	W	--	33	SB	--	34	EG	--	35	EG	--	36	LG	--	37	V	--	38	G	--	39	BR	--	40	L	--	41	P	--	42	G	--	43	R	--	44	Y	--	45	BR	--	46	L	--	47	GR	--	48	P	--	51	P	--	52	W	--	53	R	--	55	BR	--	56	P	--	57	B	--
Terminal No.	Color Of Wire	Signal Name [Specification]																																																																																																											
2	W	--																																																																																																											
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56	P	--																																																																																																											
57	B	--																																																																																																											

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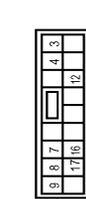
38	L	--
39	Y	--
40	G	--
41	SB	--
42	BR	--
43	SP	--
44	LG	--
45	Y	--
46	BG	--
47	R	--
48	W	--
49	G	--
50	Y	--
51	L	--
52	R	--
53	L	--
54	L	--
55	Y	--
56	B	--
57	B	--
58	B	--
59	R	--
60	Y	--
61	GR	--
62	W	--
63	Y	--
64	GR	--
65	W	--
66	Y	--
67	GR	--

Connector No.	E21
Connector Name	WIRE TO WIRE
Connector Type	TH24MN-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	G	--	--
2	R	--	--
3	Y	--	--
4	BR	--	--
5	L	--	--
6	GR	--	--
12	V	--	--
16	BG	--	--
17	W	--	--
21	SHIELD	--	--
22	LG	--	--
23	V	--	--
24	L	--	--

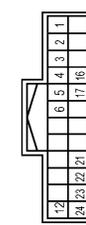
Connector No.	E27
Connector Name	INTELLIGHT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	NS16FCY-CS



Terminal No.	Color	Wire	Signal Name [Specification]
3	P	--	--
4	GR	--	--
7	L	--	--
8	L	--	-- [For grille shutter]
8	W	--	-- [Except for grille shutter]
9	GR	--	--
12	GR	--	--

16	G	--
17	G	--
17	W	--

Connector No.	E103
Connector Name	WIRE TO WIRE
Connector Type	TH24FN-NH



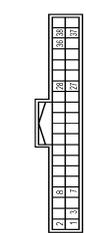
Terminal No.	Color	Wire	Signal Name [Specification]
1	G	--	--
2	R	--	--
3	Y	--	--
4	BR	--	--
5	L	--	--
6	GR	--	--
12	V	--	--
16	BG	--	--
17	W	--	--
21	SHIELD	--	--
22	LG	--	--
23	V	--	--
24	L	--	--

Connector No.	E106
Connector Name	FRONT CAMERA
Connector Type	RH06FB-1V



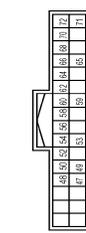
Terminal No.	Color	Wire	Signal Name [Specification]
1	V	--	--
2	L	--	--
4	LG	--	--
5	SHIELD	--	--

Connector No.	N17
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FM-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	B	--	GND
2	Y	--	BATTERY
3	SB	--	IGN
7	R	--	INDICATOR L
8	P	--	INDICATOR R
27	L	--	V-CAN-H
28	R	--	V-CAN-L
36	BR	--	FROM C.O.U. TO PUMP
37	V	--	SIGNAL GND
38	GR	--	FROM PUMP TO C.U

Connector No.	N18
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH32EW-NH



A  
B  
C  
D  
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AV

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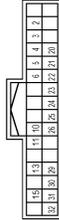
Terminal No.	Color Of Wire	Signal Name [Specification]
47	G	COMP OUT+
48	SHIELD	COMP OUT-
49	LG	RV-SERIAL-SIGNAL
50	R	RV-POWER
52	B	RV-GND
53	W	RV-VIDEO+
54	SHIELD	RV-VIDEO-
56	L	SIDE-DR POWER
58	Y	SIDE-DR GND
59	G	SIDE-DR GND
60	SHIELD	SIDE-DR VIDEO-
62	B	SIDE-AS POWER
63	Y	SIDE-AS VIDEO+
65	Y	SIDE-AS VIDEO-
66	SHIELD	SIDE-AS VIDEO-
68	SHIELD	FV-POWER
70	V	FV-GND
71	LG	FV-VIDEO+
72	SHIELD	FV-VIDEO-

Connector No.	Color Of Wire	Signal Name [Specification]
M13		USB CONNECTOR AND AUX JACK
TH8PFW-NH		



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	
3	W	
4	R	

Connector No.	Color Of Wire	Signal Name [Specification]
M15		WIRE TO WIRE
TH13PFW-NH		



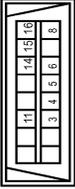
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	
2	Y	
3	GR	
4	BR	
5	W	
6	W	
10	R	
11	L	
13	LG	
15	V	
20	BG	
21	BG	
22	GR	
23	GR	
24	P	
25	C	
26	C	
28	SHIELD	
30	W	
31	B	
32	R	

Connector No.	Color Of Wire	Signal Name [Specification]
M16		WIRE TO WIRE
TH8PFW-GS16-TM4		



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	
2	Y	
3	SR	
4	P	
9	SR	
20	G	
21	B	
24	G	
25	BR	
55	LG	
66	GR	
74	R	
79	V	
84	L	
85	GR	
86	GR	
89	Y	
94	P	
95	L	
89	LG	
100	R	

Connector No.	Color Of Wire	Signal Name [Specification]
M21		DATA LINK CONNECTOR
BD1BFW		



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	
4	B	
5	B	
6	D	
8	Y	
11	SB	
14	P	
15	BR	
16	W	

Connector No.	Color Of Wire	Signal Name [Specification]
M26		WIRE TO WIRE
TH82MP-NH		



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	- [For LHD models]
1	LG	- [For RHD models]
2	P	- [For RHD models]
3	GR	- [For LHD models]
3	W	- [For RHD models]
4	B	-
5	G	-
6	Y	-
7	R	-
8	V	-

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9	L	--	
10	RG	--	
11	Y	--	
12	LG	--	
13	L	--	
14	B	--	
15	R	--	
16	B	--	
17	B	--	
18	P	--	
19	G	--	
20	GR	--	
21	GR	--	
22	BR	--	
23	B	--	
24	SHIELD	--	
25	Y	--	
26	G	--	
27	SHIELD	--	
28	Y	--	
29	Y	--	
30	B	--	
31	GR	--	
32	BR	--	

Connector No. **M23**  
 Connector Name **WIRE TO WIRE**  
 Connector Type **T132MP-M4**



Terminal No.	Wire	Signal Name [Specification]
1	BR	--
2	Y	--
3	GR	--
4	B	--
5	Y	--
6	Y	--
7	R	--

8	V	--	
9	Y	--	
10	RG	--	
11	GR	--	
12	R	--	
13	LG	--	
14	B	--	
15	P	--	
16	B	--	
17	B	--	
18	R	--	
19	G	--	
20	SB	--	
21	GR	--	
22	BR	--	
23	SHIELD	--	
24	G	--	
25	Y	--	
26	Y	--	
27	Y	--	
28	L	--	
29	Y	--	
30	B	--	
31	GR	--	
32	BR	--	

Connector No. **M22**  
 Connector Name **WIRE TO WIRE**  
 Connector Type **T108MM-C316-TM4**

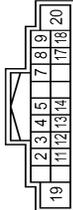


Terminal No.	Wire	Signal Name [Specification]
2	R	--
3	GR	--
4	GR	--
5	SB	--
6	SB	--
7	SB	--
8	SB	--
9	SB	--
10	L	--
11	W	--
12	L	--
13	W	--
14	W	--
15	L	--
16	P	--

22	SHIELD	--	
23	Y	--	
24	Y	--	
25	GR	--	
26	GR	--	
27	LG	--	
28	B	--	
29	LG	--	
30	Y	--	
31	BR	--	
32	SB	--	
33	LG	--	
34	W	--	
35	BR	--	
36	LG	--	
37	Y	--	
38	G	--	
39	BR	--	
40	L	--	
41	P	--	
42	W	--	
43	R	--	
44	R	--	
45	LG	--	
46	V	--	
47	RG	--	
48	V	--	
49	P	--	
50	BR	--	
51	BR	--	
52	SB	--	
53	LG	--	
54	W	--	
55	BR	--	
56	P	--	
57	B	--	
58	GR	--	
59	GR	--	
60	SB	--	
61	SB	--	
62	V	--	
63	BR	--	
64	Y	--	
65	GR	--	
66	P	--	
67	L	--	
68	R	--	
69	W	--	
70	G	--	
71	Y	--	
72	RG	--	
73	R	--	
74	R	--	
75	V	--	
76	LG	--	
77	SHIELD	--	
78	GR	--	
79	Y	--	
80	GR	--	
81	Y	--	

53	LG	--	
54	SB	--	
55	G	--	
56	G	--	
57	B	--	
58	B	--	
59	Y	--	
60	L	--	
61	W	--	
62	LG	--	
63	BR	--	
64	V	--	
65	R	--	
66	R	--	

Connector No. **M48**  
 Connector Name **NAVI CONTROL UNIT**  
 Connector Type **T118FM-CS2**



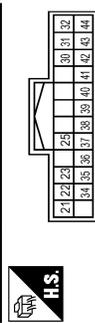
Terminal No.	Wire	Signal Name [Specification]
1	Y	--
2	V	--
3	V	--
4	W	--
5	Y	--
6	W	--
7	L	--
8	L	--
9	BG	--
10	G	--
11	G	--
12	R	--
13	LG	--
14	GR	--
15	GR	--
16	P	--
17	R	--
18	L	--
19	L	--
20	B	--

A  
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L  
M  
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P



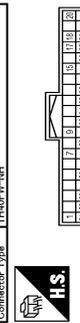
## AUDIO & NAVIGATION

Connector No.	M89
Connector Name	NAVY CONTROL UNIT
Connector Type	TH24FW-NH

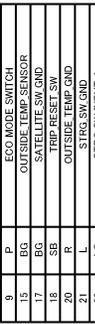


Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	SECURITY
2	W	ECO MODE SWITCH
3	B	OUTSIDE TEMP SENSOR
4	G	SATELLITE SW GND
5	L	TRIP RESET SW
6	L	OUTSIDE TEMP GND
7	P	STRG SW GND
8	L	STRG SW INPUT A
9	P	STRG SW INPUT B
10	B	BRAKE OIL SW
11	B	Y
12	B	DP BELL SW
13	B	B
14	G	NOT IN RANGE
15	G	AT SHIF UP
16	L	AT SHIF DOWN
17	P	BR
18	W	W
19	L	ILL UP SW
20	L	ILL DOWN SW
21	P	8P/R OUT
22	P	V
23	P	P

Connector No.	M81
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

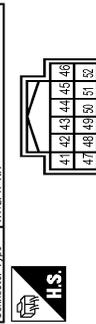


Connector No.	M88
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	SECURITY
2	W	ECO MODE SWITCH
3	B	OUTSIDE TEMP SENSOR
4	G	SATELLITE SW GND
5	L	TRIP RESET SW
6	L	OUTSIDE TEMP GND
7	P	STRG SW GND
8	L	STRG SW INPUT A
9	P	STRG SW INPUT B
10	B	BRAKE OIL SW

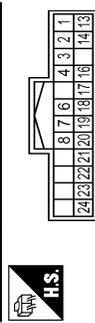
Connector No.	M82
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH



Connector No.	M82
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FG-NH

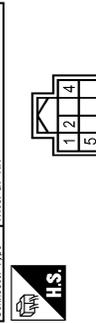


Connector No.	M85
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



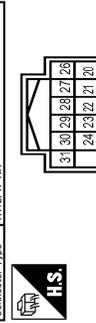
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	SECURITY
2	W	ECO MODE SWITCH
3	B	OUTSIDE TEMP SENSOR
4	G	SATELLITE SW GND
5	L	TRIP RESET SW
6	L	OUTSIDE TEMP GND
7	P	STRG SW GND
8	L	STRG SW INPUT A
9	P	STRG SW INPUT B
10	B	BRAKE OIL SW
11	B	Y
12	B	DP BELL SW
13	B	B
14	G	NOT IN RANGE
15	G	AT SHIF UP
16	L	AT SHIF DOWN
17	P	BR
18	W	W
19	L	ILL UP SW
20	L	ILL DOWN SW
21	P	8P/R OUT
22	P	V
23	P	P
24	P	P

Connector No.	M89
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FE-NH



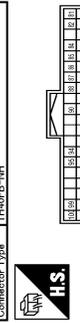
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	
2	P	
4	G	
5	L	

Connector No.	M88
Connector Name	COMBINATION SWITCH (SPRALL CABLE)
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
20	SB	
21	V	
22	W	
23	L	
24	GR	
26	P	
27	L	
28	BP	
29	LG	
30	B	
31	R	

Connector No.	M89
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FE-NH



### AUDIO & NAVIGATION

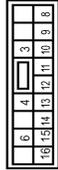
Terminal No.	Color Of Wire	Signal Name [Specification]
80	R	KEY SWITCH
81	R	KEY SW ST [Without Intelligent key]
82	W	KEY SW ST [With Intelligent key]
83	R	PASS DOOR REQ SW [With Intelligent key]
84	BR	COMBI SW OUTPUT 2
85	L	COMBI SW OUTPUT 1
86	R	COMBI SW OUTPUT 3
87	EG	COMBI SW OUTPUT 4
88	L	PUSH-BTN IGN SW ILL CONT
90	L	STEERING LOCK UNIT SENSOR LINE
94	BR	DIHENT KEY SW INPUT
95	V	EXTENDED STORAGE FUSE SW
99	R	STOP / START OFF SWITCH
100	V	DRIVER DOOR ANT +
101	R	DRIVER DOOR ANT -
104	G	DE DOOR LK SW SENS
105	G	KEY SW (UPDM / E)
106	GR	DR DOOR REQ SW [With Intelligent key]
107	W	ACC OUTPUT
109	P	ALARM CANCEL SW
110	SB	MATS ANTENNA AMP
111	R	DIMMER SIGNAL
112	SB	DOOR LK STAT IND OUTPUT
113	LG	STOP / START OFF SWITCH IND OUTPUT
114	Y	MATS ANTENNA AMP
115	W	MATS ANTENNA AMP
116	GG	ROOM ANT 1 -
117	GG	ROOM ANT 2 -
118	LG	PASSENGER DOOR ANT -
119	LG	PASSENGER DOOR ANT +
120	BR	REVERSE DOOR ANT +

Connector No.	M70
Connector Name	ECM (BODY CONTROL MODULE)
Connector Type	TH40F0Y-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	V	STEERING LK UNIT SNS SW Y OUT
42	G	TURN SIG LH (SIDE) [For RHD models]
43	Y	TURN SIG LH (SIDE) [For LHD models]
44	BR	INTERIOR ROOM LAMP RELAY CONT
45	R	CAN-H
46	L	CAN-H
47	EG	LIGHT & RAIN SENSOR
48	L	CAN-H
49	R	CAN-L
50	GR	DOOR LOCK SW
51	Y	HAZARD SW
56	P	DODGLE
57	EG	CVT SHIFT SELECT (OPEN) SW PWR
58	G	POWER WINDOW RELAY CON
64	G	REAR WINDOW DEFROSTER RELAY CONT
65	P	ACC RELAY
67	LG	IGN RELAY (F/B) CONT
68	L	BLOWER RELAY CONT
71	BR	ROOM LAMP (OPTION CONNECTOR)
72	R	CONSOLE LED CONT
73	LG	COMBI SW INPUT 5
74	Y	COMBI SW OUTPUT 5
75	EG	SECURITY IND LAMP CONT
76	G	COMBI SW INPUT 3
77	GR	COMBI SW INPUT 4
78	SB	COMBI SW INPUT 2
79	BR	COMBI SW INPUT 1
80	BR	DOOR UNLOCK SW

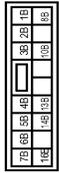
Connector No.	M71
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
3	V	-
4	G	-
6	W	-

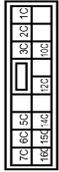
Terminal No.	Color Of Wire	Signal Name [Specification]
8	P	-
9	EG	- [For RHD models]
10	R	- [For LHD models]
11	LG	-
12	W	-
13	Y	-
14	SB	-
15	BR	-
16	GR	-

Connector No.	M7B
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10B	V	-
10B	W	-
10B	GR	-
10B	B	-
2R	G	-
3R	LG	-
4B	LG	-
5R	LG	-
6B	SB	-
7B	Y	-
8B	EG	-

Connector No.	M77
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16BR-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	GR	-
10C	GR	-
10C	GR	-
10C	W	-
10C	W	-
10C	W	-
10C	GR	-
2C	R	-
3C	V	-
5C	L	-
6C	GR	-
7C	V	-

Connector No.	M83
Connector Name	TWEETER RH
Connector Type	TH40F0Y



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-

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

AV

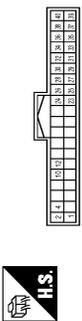
### AUDIO & NAVIGATION

Connector No.	M84
Connector Name	TWEETER LH
Connector Type	FHA02FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	
2	GR	

Connector No.	M85
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GND
2	Y	BATTERY
4	SB	IGN
10	R	V-CANL
12	L	V-CANH
23	SHIELD	VIDEO OUTPUT+
24	G	VIDEO OUTPUT-
25	B	RV-GND
26	R	RV-POWER
27	SHIELD	RV-VIDEO GND
28	W	RV-VIDEO
29	Y	SVZ-GND(OP)
30	I	SVZ-POWER(OP)
31	SHIELD	SVZ-VIDEO GND(OP)
32	G	SVZ-VIDEO +DR
33	L	SVI-GND(AS)
34	B	SVI-POWER(AS)
35	SHIELD	SVI-VIDEO GND(AS)

38	Y	SVI-VIDEO-(AS)
37	Y	FV-GND
36	L	FV-POWER
35	SHIELD	FV-VIDEO GND
40	LG	FV-VIDEO +

Connector No.	M303
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
7	-	-
8	-	-
10	-	-
11	-	-
12	-	-

Connector No.	M317
Connector Name	NAVI CONTROL UNIT
Connector Type	FAKRA



Terminal No.	Color Of Wire	Signal Name [Specification]
56	-	
57	-	

Connector No.	M334
Connector Name	USB CONNECTOR AND AUX JACK
Connector Type	HAA06FL



Terminal No.	Color Of Wire	Signal Name [Specification]
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-

Connector No.	M334
Connector Name	ANTENNA BASE (ANTENNA AMP)
Connector Type	GT1SSN-1 1PP-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	ANTENNA AMP ON SIGNAL
2	-	ANTENNA AMP

Connector No.	M337
Connector Name	GLASS ANTENNA (SUB)
Connector Type	FR1FB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	

Connector No.	M338
Connector Name	NAVI CONTROL UNIT
Connector Type	HAA06FL



Terminal No.	Color Of Wire	Signal Name [Specification]
129	G	USB GND
130	R	USB D- SIGNAL
131	W	V BUS SIGNAL
132	L	USB D+ SIGNAL
133	SHIELD	SHIELD

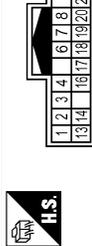
### AUDIO & NAVIGATION

Connector No.	R399
Connector Name	NAVY CONTROL UNIT
Connector Type	GT13SH-2 (S-H)



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	FM SUB
2	-	ANTENNA
3	-	ANTENNA AMP. ON SIGNAL

Connector No.	R4
Connector Name	WIRE TO WIRE
Connector Type	TH2AMV-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	B	-
3	R	-
4	V	-
6	SHIELD	-
7	W	-
8	O	-
13	L	-
14	R	-
16	L	-
17	B	-
18	G	-
19	SB	-
20	R	-
21	Y	-
22	V	-
23	Y	-

24	B	-
----	---	---

Connector No.	R6
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
4	Y	-
5	B	-
6	G	-
7	O	-
8	SHIELD	-
10	R	-
11	B	-
12	V	-

Connector No.	RT5
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
4	W	-
5	B	-
6	G	-
7	O	-
8	SHIELD	-
10	R	-
11	B	-

12	V	-
----	---	---

Connector No.	R20
Connector Name	MICROPHONE
Connector Type	TK6FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	-
2	W	-
3	O	-

A  
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I  
J  
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L  
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O  
P

AV

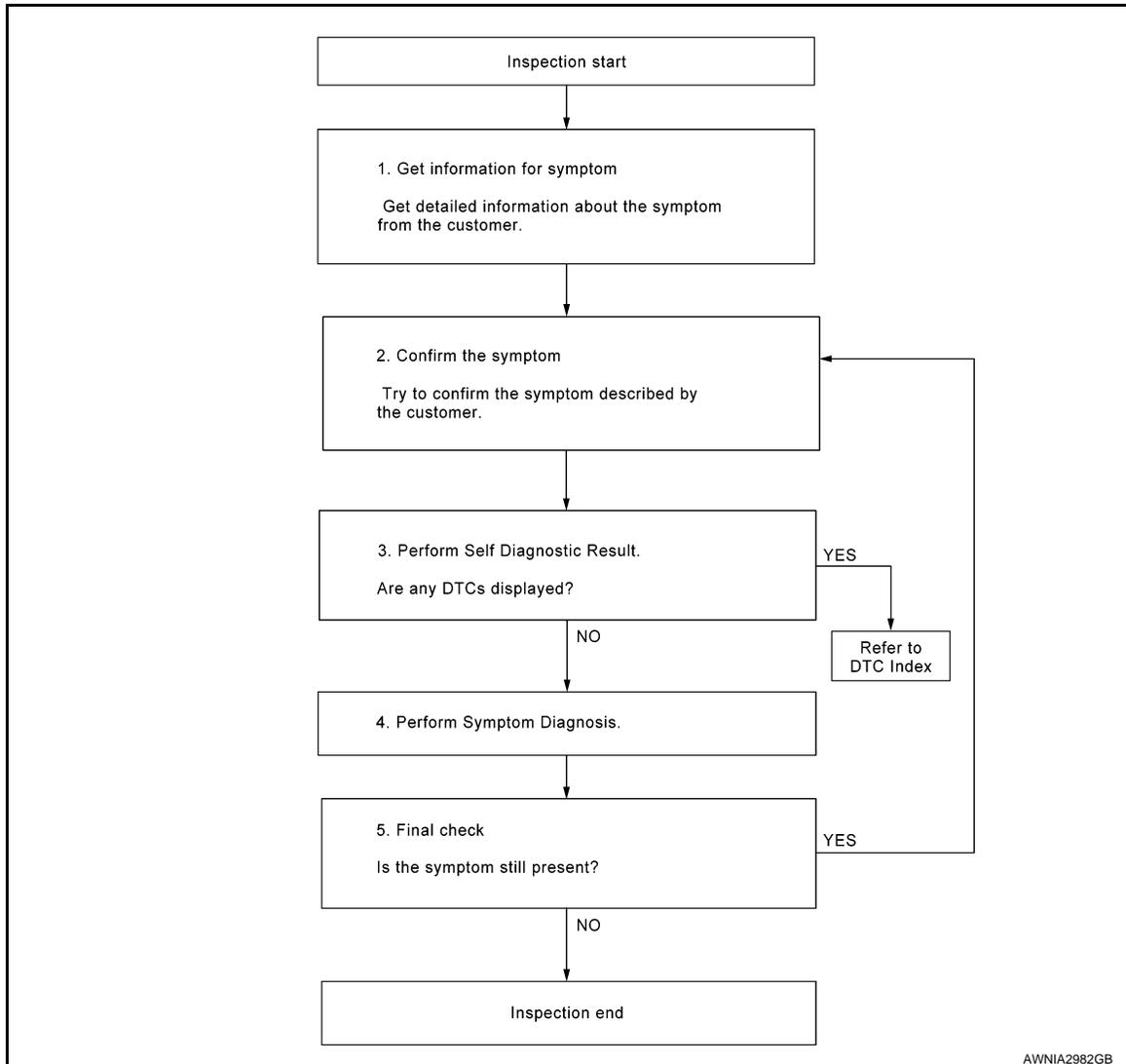
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:000000010435667

#### OVERALL SEQUENCE



AWNIA2982GB

#### 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.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.

# DIAGNOSIS AND REPAIR WORKFLOW

[NAVIGATION]

< BASIC INSPECTION >

2. Depending on system being diagnosed, perform Self Diagnostic Result for:

- MULTI AV.
- AVM.

A

Are any DTCs displayed?

YES >> Refer to [AV-151, "DTC Index"](#) (MULTI AV) or [AV-154, "WITHOUT DRIVER ASSISTANCE SYSTEM : DTC Index"](#) (AVM).

B

NO >> GO TO 4.

## 4.PERFORM SYMPTOM DIAGNOSIS

C

Refer to [AV-245, "Symptom Table"](#).

>> GO TO 5.

D

## 5.FINAL CHECK

Refer to symptom described by the customer in step 1.

E

Is the symptom still present?

YES >> GO TO 2.

NO >> Inspection End.

F

G

H

I

J

K

L

M

AV

O

P

## INSPECTION AND ADJUSTMENT

## ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

## ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:000000010435668

## 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:000000010435669

## 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-259. "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-178. "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-178. "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 4.

## 4. OPERATION CHECK

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

>> Work End.

## ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT

**ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL**

UNIT : Description

INFOID:000000010435670

**BEFORE REPLACEMENT**

When replacing around view monitor 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 around view monitor control unit.

**AFTER REPLACEMENT****CAUTION:**

When replacing around view monitor 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 AROUND VIEW MONITOR CONTROL**

UNIT : Work Procedure

INFOID:000000010435671

**1. SAVING VEHICLE SPECIFICATION****Ⓜ-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 around view monitor control unit.

&gt;&gt; GO TO 2.

**2. REPLACE AROUND VIEW MONITOR CONTROL UNIT**

Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

&gt;&gt; GO TO 3.

**3. WRITING VEHICLE SPECIFICATION****ⓂCONSULT**

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-179, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : 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-179, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Work Procedure"](#).

&gt;&gt; GO TO 4.

**4. OPERATION CHECK**

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

&gt;&gt; Work End.

**CONFIGURATION (AV CONTROL UNIT)**

## CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:000000010435672

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"> <li>• Reads the vehicle configuration of current AV control unit.</li> <li>• Saves the read vehicle configuration.</li> </ul>
"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:000000010435673

**1.** WRITING MODE SELECTION**CONSULT**

Select "Reprogramming, Configuration" of AV control unit.

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-179. "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.

**4.** OPERATION CHECK

Confirm that each function controlled by AV control unit operates normally.

>> Work End.

## CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:0000000010435674

**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

## CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

### CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Description

INFOID:0000000010435675

Vehicle specification needs to be written with CONSULT because it is not written after replacing around view monitor control unit.

Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	<ul style="list-style-type: none"> <li>Reads the vehicle configuration of current around view monitor control unit.</li> <li>Saves the read vehicle configuration.</li> </ul>
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

**CAUTION:**

- When replacing around view monitor 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 around view monitor control unit.

### CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure

INFOID:0000000010435676

#### 1. WRITING MODE SELECTION

**CONSULT**

Select "Reprogramming, Configuration" of around view monitor control unit.

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".

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AV

# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[NAVIGATION]

- Identify the correct model and configuration list. Refer to [AV-180. "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Configuration List"](#).
- 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.
- Select "Next".  
**CAUTION:**  
Make sure to select "Next", confirm each setting value and press "OK" even if the indicated configuration of brand new around view monitor control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
- When "Completed", select "End".

>> GO TO 4.

## 4. OPERATION CHECK

Confirm that each function controlled by around view monitor control unit operates normally.

>> Work End.

## CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Configuration List

INFOID:000000010435677

### CAUTION:

Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

MANUAL SETTING ITEM	
Items	Setting value
BCI FUNCTION	WITH ↔ WITHOUT

↔: Items which confirm vehicle specifications

## PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT

### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Description

INFOID:000000010435678

Adjust the center position of the predictive course line of the rear view monitor if it is shifted.

### PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure

INFOID:000000010435679

## 1. DRIVING

Drive the vehicle straight ahead 100 m (328.1 ft) or more at a speed of 30 km/h (18.6 MPH) or more.

>> End.

## CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

### CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Description

INFOID:000000010435680

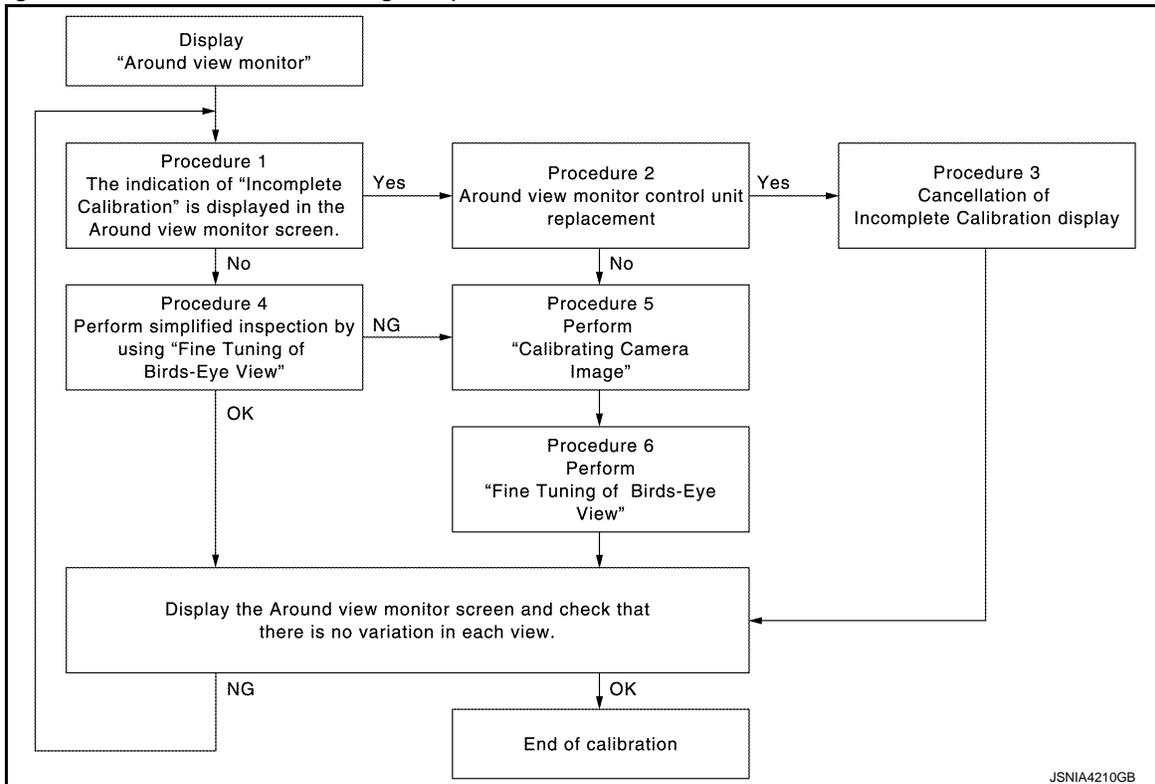
- Calibration must be performed after removing/replacing the cameras, removing parts (e.g. front grille, door mirror, and others) mounted on the cameras, or replacing the Around view monitor control unit.
- The use of CONSULT is required to perform calibration or writing of calibration results to the Around view monitor control unit.
- Align the white lines on the road near the vehicle at the boundary of each camera image by this camera calibration. The white lines far from the vehicle may not be aligned at the boundary of each camera image. The farther the line, the greater the difference is.

## CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure

INFOID:000000010435681

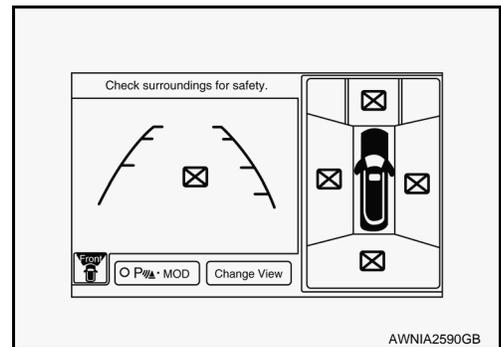
### CALIBRATION FLOWCHART

Following the flowchart shown in the figure, perform the calibration.



**NOTE:**

View in the incomplete calibration state is indicated by on the around view monitor.



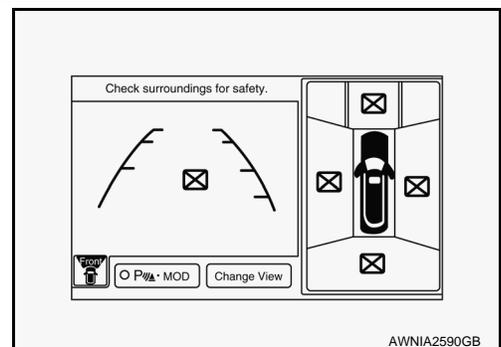
### CALIBRATION PROCEDURE

#### 1. AROUND VIEW MONITOR SCREEN CONFIRMATION

Check that there is no indication of "Incomplete calibration".

Is the "Incomplete calibration" display visible?

- YES >> GO TO 2.
- NO >> GO TO 4.



#### 2. CHECK THAT AROUND VIEW MONITOR CONTROL UNIT IS REPLACED

Check that the around view monitor control unit is replaced.

Is the around view monitor control unit replaced?

- YES >> GO TO 3.
- NO >> GO TO 5.

### 3. CANCEL THE INDICATION OF INCOMPLETE CALIBRATION (PERFORM THIS ONLY AFTER REPLACING AROUND VIEW MONITOR CONTROL UNIT.)

CONSULT work support

- On the CONSULT screen, touch “CALIBRATING CAMERA IMAGE (FRONT CAMERA)”, “CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)”, “CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)”, or “CALIBRATING CAMERA IMAGE (REAR CAMERA)” to accept the selection.

**NOTE:**

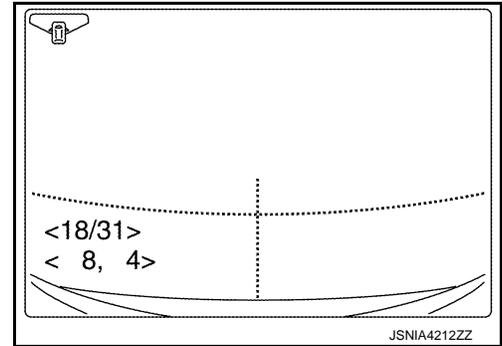
To cancel the indication of Incomplete calibration, select items based on the target camera.

- On the adjustment screen of each camera, touch “APPLY” button. After this, touch “OK” button.

**CAUTION:**

- Never perform operations other than those mentioned above.
- Never perform “Initialize Camera Image Calibration”.

- Display the around view monitor screen to check that there is no errors, such as deviations among the camera images.



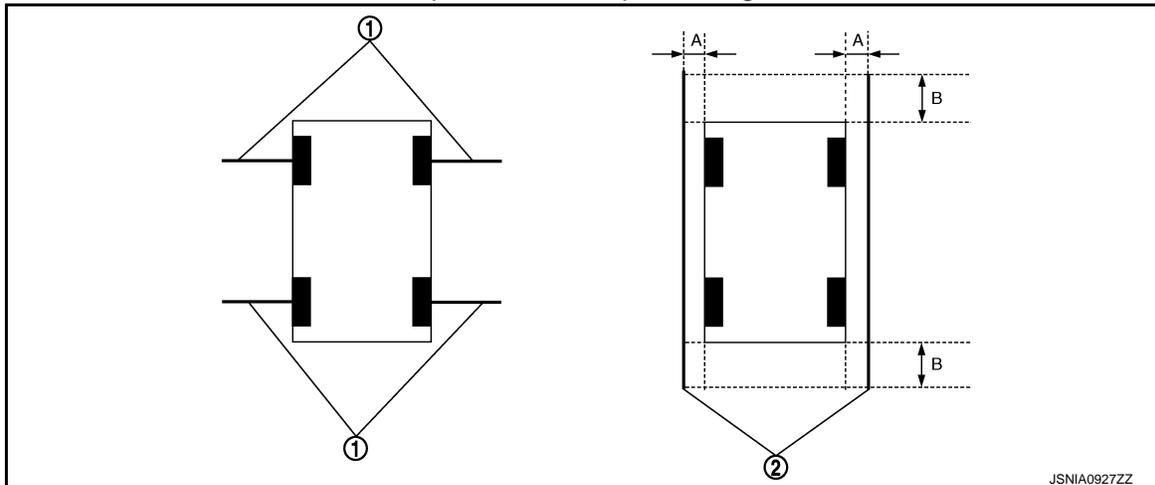
Is there a malfunction?

- YES >> Calibration End.
- NO >> GO TO 1.

### 4. PERFORM SIMPLIFIED CONFIRMATION/ADJUSTMENT BY “FINE TUNING OF BIRDS-EYE VIEW”

- Put target line 1 on the ground beside each axle using packing tape, etc.
- Put target lines 2 equal to the vehicle total length + approximately 1.0 m (39.3 in) from the vehicle side (right and left) at approximately 30 cm (11.8 in) away from the vehicle (make the line as parallel with the vehicle as possible)

Preparation of simplified target line



- |                            |                            |
|----------------------------|----------------------------|
| 1. Target lines 1          | 2. Target lines 2          |
| A. Approx. 30 cm (11.8 in) | B. Approx. 1.0 m (39.3 in) |

3. CONSULT work support

Touch “FINE TUNING OF BIRDS-EYE VIEW” on the CONSULT screen.

- On the CONSULT screen, touch “SELECT” button to select right or left camera and perform camera calibration as instructed below:
  - If the marker on the screen deviates from Target line 1, touch “AXIS X” button and “AXIS Y” button to adjust so that the marker is placed on the Target line 1.
  - If Target line 2 is misaligned among the cameras, adjust each camera image to bring Target line 2 into a straight line.

**CAUTION:**

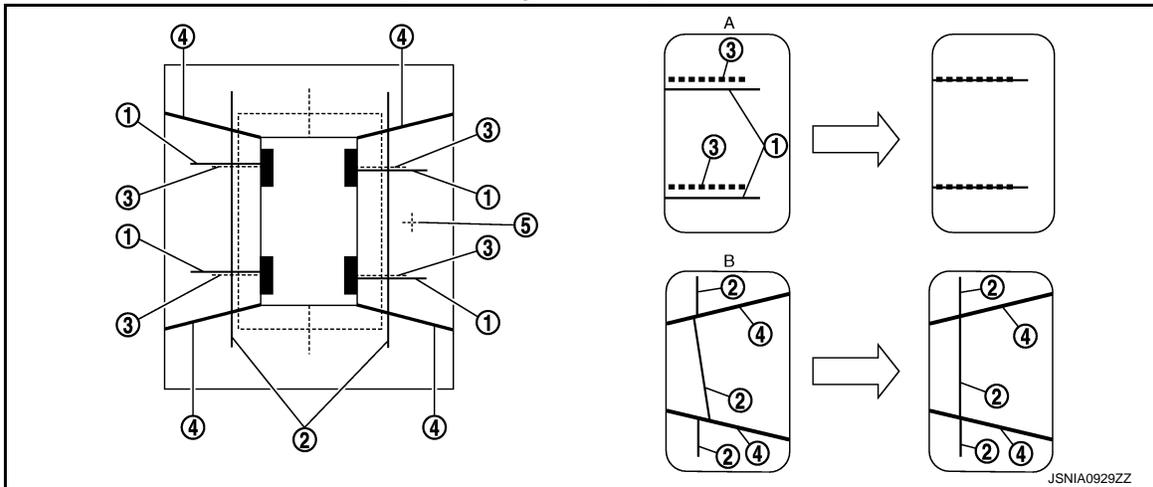
# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[NAVIGATION]

Never adjust the front camera and rear camera. Only adjust the right and left cameras.

## Simplified target line adjustment method



- |   |   |                             |
|---|---|-----------------------------|
| 1. Target lines 1                               | 2. Target lines 2   | 3. Marker for target line 1 |
| 4. Boundary between cameras                     | 5. Crosshairs cursor (mark indicated the selected camera) |                             |
| A. Adjustment method for target lines 1 (right) | B. Adjustment method for target lines 2 (right)           |                             |

- Adjust right and left cameras. Touch "APPLY" on the CONSULT screen to display adjustment results.
- After adjusting right and left cameras, check that the marker is properly placed on the screen and there is no deviation in Target line 1.

**NOTE:**

- It can be initialized to the NISSAN factory default condition with "Initialize Camera Image Calibration".
- The adjustment value is cancelled on this mode by performing "Initialize Camera Image Calibration".

Is the difference corrected?

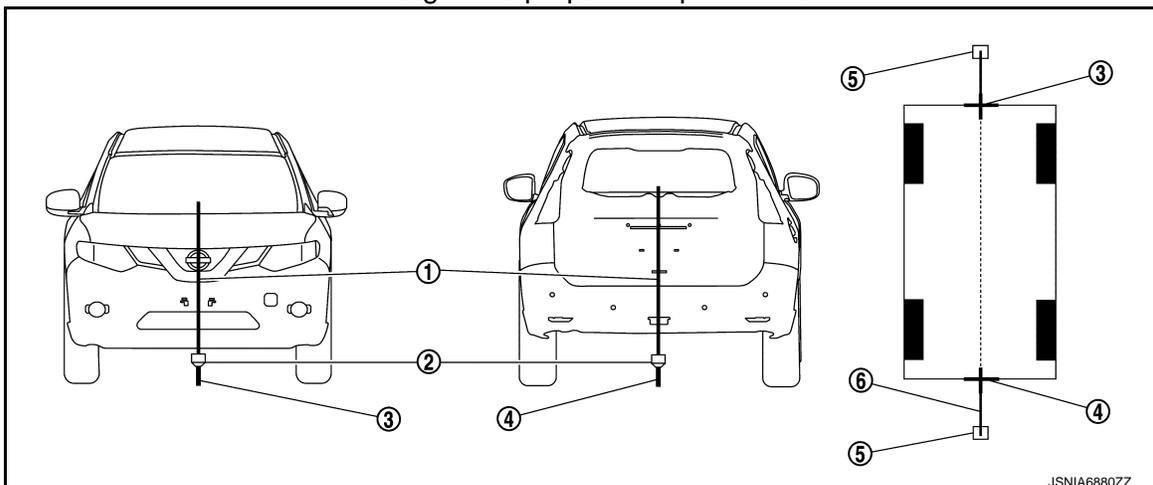
- YES >> On the CONSULT screen, touch "OK" button to complete writing to the around view monitor control unit.
- NO >> GO TO 5.

## 5.PERFORM "CALIBRATING CAMERA IMAGE"

### Preparation of target line

- Hang a string with a weight as shown in the figure. Put the points FM0, RM0 (mark) on the ground at the center of the vehicle front end and rear end with white packing tape or a pen.
- Route the vinyl string under the vehicle, and then pull and fix it on the point approximately 1.0 m (39.9 in) to the front and rear of the vehicle through the points FM0 and RM0 using packing tape.

### Target line preparation procedure 1



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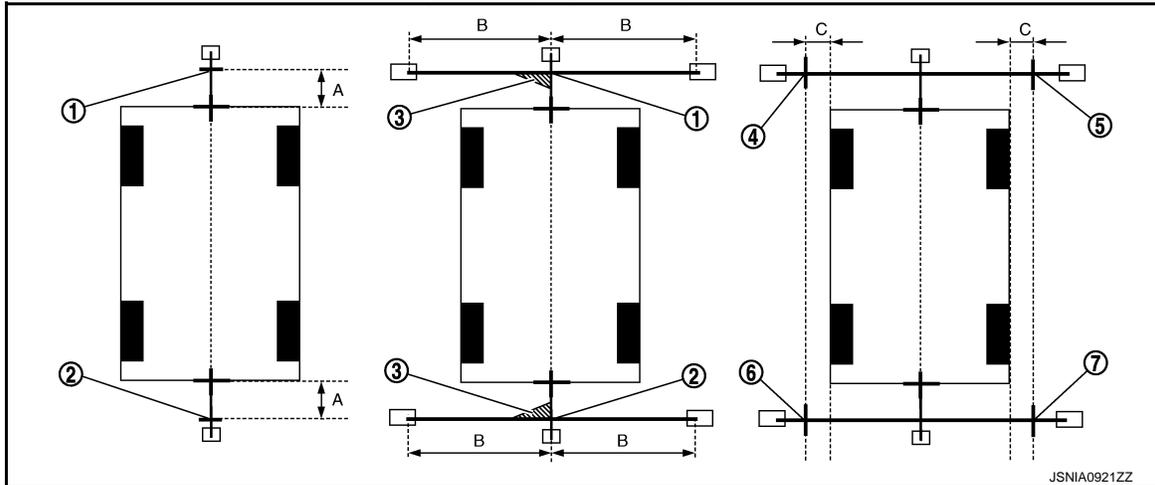
# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[NAVIGATION]

- |                     |   |                     |
|---------------------|---|---------------------|
| 1. Thread           | 2. Weight                                 | 3. Point FM0 (mark) |
| 4. Point RM0 (mark) | 5. Packing tape (to fix the vinyl string) | 6. Vinyl string     |
3. Put the points FM and RM (mark) 75 cm (29.5 in) from the points FM0 and RM0 individually.
  4. Route the vinyl string through the points FM and RM using a triangle scale, and then fix it at approximately 1.5 m (59 in) on both sides with packing tape.
  5. Put the points FL, FR, RL, and RR (mark) to both right and left [vehicle width / 2 + 30 cm (11.8 in)] from the points FM and RM.

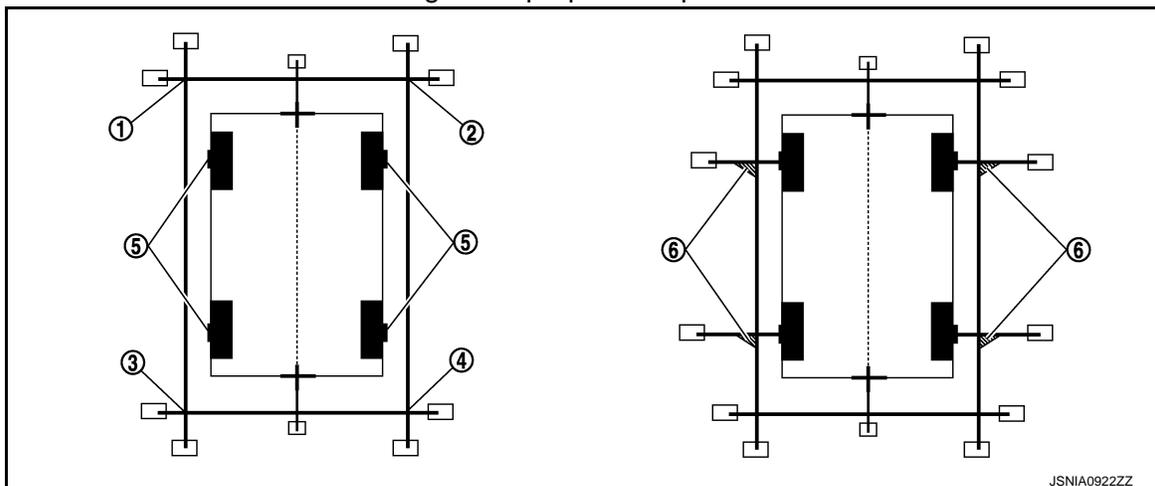
Target line preparation procedure 2



- |                    |                    |                    |
|--------------------|--------------------|--------------------|
| 1. Point FM        | 2. Point RM        | 3. Triangle scale  |
| 4. Point FL (mark) | 5. Point FR (mark) | 6. Point RL (mark) |
| 7. Point RR (mark) |                    |                    |
- A. 75 cm (29.5 in)      B. Approx. 1.5 m (59 in)      C. 30 cm (11.8 in)  
[Vehicle width / 2 + 30 cm (11.8 in) from the points FM and RM]

6. Draw the lines of the points FL – RL and FR – RR with vinyl string, and fix it with packing tape.
7. Put a mark on the center of each axle, draw vertical lines to the lines of the points FL – RL and FR – RR from the marks on the center of the axle using a triangle scale, and then fix the lines using packing tape.

Target line preparation procedure 3



- |             |                            |                   |
|-------------|----------------------------|-------------------|
| 1. Point FL | 2. Point FR                | 3. Point RL       |
| 4. Point RR | 5. Center position of axle | 6. Triangle scale |

Perform “Calibrating Camera Image”

CONSULT work support

# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[NAVIGATION]

1. On the CONSULT screen, touch “CALIBRATING CAMERA IMAGE (FRONT CAMERA)”, “CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)”, “CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)”, or “CALIBRATING CAMERA IMAGE (REAR CAMERA)” to accept the selection.

**NOTE:**

To cancel the indication of Incomplete calibration, select items based on the target camera.

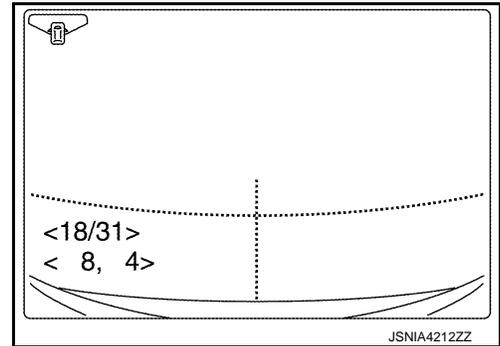
2. On the adjustment screen of each camera, adjust the parameter by touching the “AXIS X” button, “AXIS Y” button, and “ROTATE” button to place the calibration marker shown on the camera screen on the target line drawn on the ground.

Adjustment range

Rotation direction (Center dial) : 31 patterns (16 on the center)

Upper/lower direction (upper/lower switch) : -22 – 22

Left/right direction (left/right switch) : -22 – 22



3. Touch “APPLY” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are shown on the camera screen.

**CAUTION:**

**Check that “PRCSNG” is displayed. Never perform other operations while “PRCSNG” is displayed.**

4. Touch “OK” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are written to the around view monitor control unit.

**CAUTION:**

**Check that “PRCSNG” is displayed. Never perform other operations while “PRCSNG” is displayed.**

>> GO TO 6.

## 6. PERFORM “FINE TUNING OF BIRDS-EYE VIEW”

This mode is designed to align the boundary between each camera image that could not be aligned in the “Calibrating Camera Image” mode.

ⓂCONSULT work support

1. Select “FINE TUNING OF BIRDS-EYE VIEW” by touching CONSULT screen.

2. On the adjustment screen of each camera, adjust the parameter by touching the “AXIS X” button, “AXIS Y” button”, and “ROTATE” button to place the calibration marker shown on the camera screen on the target line drawn on the ground.

**NOTE:**

Touch “SELECT” button on the CONSULT screen to select the target camera.

3. Touch “APPLY” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are shown on the camera screen.

**CAUTION:**

**Check that “PRCSNG” is displayed. Never perform other operations while “PRCSNG” is displayed.**

4. Touch “OK” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are written to the around view monitor control unit.

**CAUTION:**

• **Check that “PRCSNG” is displayed. Never perform other operations while “PRCSNG” is displayed.**

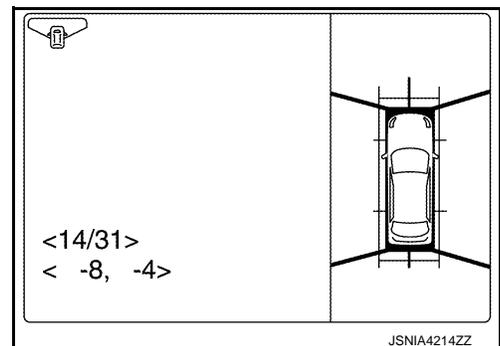
• **After pressing the “OK” button, never press buttons other than the “BACK” button.**

**NOTE:**

• It can be initialized to the NISSAN factory default condition with “Initialize Camera Image Calibration”.

• The adjustment value is cancelled in this mode by performing “Initialize Camera Image Calibration”.

>> Calibration End.



# DTC/CIRCUIT DIAGNOSIS

## C1A00 CONTROL UNIT

### DTC Logic

INFOID:000000010944751

### DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
C1A00	AVM CIRC (Around view monitor circuit)	Around view monitor control unit malfunction is detected

### POSSIBLE CAUSE

Around view monitor control unit

### FAIL-SAFE

Around view monitor with Park Assist is cancel

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓜ WITH CONSULT

1. Turn ignition switch ON.
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "C1A00" is detected as the current malfunction in "Self Diagnostic Result" of "AVM".

##### Is "C1A00" detected?

- YES >> Refer to [AV-186, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-41, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000010944752

#### 1. PERFORM THE SELF-DIAGNOSIS

##### Ⓜ With CONSULT

Check if any DTC other than "C1A00" is detected in "Self Diagnostic Result" of "AVM".

##### Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-154, "WITHOUT DRIVER ASSISTANCE SYSTEM : DTC Index"](#).
- NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

C1B56 SONAR

DTC Logic

INFOID:000000010944764

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
C1B56	SONAR CIRC (Sonar circuit)	The around view monitor control unit detects that sonar control unit has a malfunction.

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

Around view monitor with Park Assist is cancel

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

Ⓜ WITH CONSULT.

1. Perform "All DTC Reading" with CONSULT.
2. Check if the "C1B56" is detected as the current malfunction in "Self Diagnostic Result" of "AVM".

"C1B56" detected as the current malfunction?

- YES >> Refer to [AV-187, "DTC Logic"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-41, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000010944765

1. CHECK SELF-DIAGNOSIS RESULTS

Ⓜ With CONSULT.

Check if the "U1000" is detected other than "C1B56" in "Self Diagnostic Result" of "AVM".

"U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.  
Refer to [AV-189, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).
- NO >> GO TO 2.

2. CHECK SELF-DIAGNOSIS RESULTS

Ⓜ With CONSULT.

Check if any DTC is detected in "Self Diagnostic Result" of "SONAR".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [SN-67, "DTC Index"](#).
- NO >> Replace the around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

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AV

# U0428 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U0428 STEERING ANGLE SENSOR

### DTC Logic

INFOID:000000010435682

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANG SEN CALIB [U0428]	The neutral position adjustment of the steering angle sensor is incomplete.	Adjust neutral position of the steering angle sensor.

### Diagnosis Procedure

INFOID:000000010435683

#### 1. ADJUST THE NEUTRAL POSITION OF THE STEERING ANGLE SENSOR

When U0428 is detected, adjust the neutral position of the steering angle sensor.

>> Perform adjustment of the neutral position of the steering angle sensor. Refer to [AV-144. "WITHOUT DRIVER ASSISTANCE SYSTEM : CONSULT Function"](#).

# U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1000 CAN COMM CIRCUIT

### AV CONTROL UNIT

#### AV CONTROL UNIT : DTC Logic

INFOID:0000000010435684

#### 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.

#### AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000010435685

### 1.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform "Self Diagnostic Result" for "MULTI AV".

#### Is CAN COMM CIRCUIT displayed?

YES >> Refer to [LAN-24, "Trouble Diagnosis Flow Chart"](#).

NO >> Refer to [GI-41, "Intermittent Incident"](#).

## AROUND VIEW MONITOR CONTROL UNIT

#### AROUND VIEW MONITOR CONTROL UNIT : DTC Logic

INFOID:0000000010435686

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	Around view monitor control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

#### AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:0000000010435687

### 1.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform "Self Diagnostic Result" for "AVM".

#### Is CAN COMM CIRCUIT displayed?

YES >> Refer to [LAN-24, "Trouble Diagnosis Flow Chart"](#).

NO >> Refer to [GI-41, "Intermittent Incident"](#).

AV

# U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1010 CONTROL UNIT (CAN)

### AV CONTROL UNIT

#### AV CONTROL UNIT : DTC Logic

INFOID:000000010435688

#### 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 <a href="#">AV-259</a> , "Removal and Installation".

## AROUND VIEW MONITOR CONTROL UNIT

#### AROUND VIEW MONITOR CONTROL UNIT : DTC Logic

INFOID:000000010435689

#### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	Error during CAN controller hardware initialization (VCAN).	Replace the Around view monitor control unit if the malfunction occurs constantly. Refer to <a href="#">AV-267</a> , "Removal and Installation".

# U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

### DTC Logic

INFOID:000000010435690

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Rear display output signal diagnosis (Harness disconnection) [U111A]	Rear view camera image signal circuit open or short.	Check rear view camera image signal circuit.

### Diagnosis Procedure

INFOID:000000010435691

Regarding Wiring Diagram information, refer to [AV-159, "Wiring Diagram"](#).

### WITHOUT DRIVER ASSISTANCE SYSTEM

#### 1. CHECK REAR VIEW CAMERA POWER SUPPLY AND GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit and rear view camera connectors.
- Check continuity between around view monitor control unit connector M95 and rear view camera connector D86.

Around view monitor control unit		Rear view camera		Continuity
Connector	Terminals	Connector	Terminals	
M95	26	D86	2	Yes
	25		1	

- Check continuity between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	26		No

Is the inspection result normal?

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

#### 2. CHECK REAR VIEW CAMERA POWER SUPPLY VOLTAGE

- Connect around view monitor control unit and rear view camera connectors.
- Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M95	26	—	CAMERA switch is ON or selector lever in R (reverse).	6.0 V

Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

#### 3. CHECK REAR VIEW CAMERA IMAGE SIGNAL AND IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit and rear view camera connectors.

# U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

- Check continuity between around view monitor control unit connector M95 and rear view camera connector D86.

Around view monitor control unit		Rear view camera		Continuity
Connector	Terminals	Connector	Terminals	
M95	28	D86	4	Yes
	27		5	

- Check continuity between around view monitor control unit connector M95 and ground.

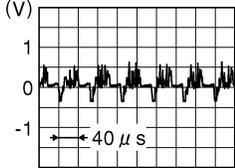
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	28		No

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> Repair or replace harness or connectors.

## 4.CHECK REAR VIEW CAMERA IMAGE SIGNAL

- Connect around view monitor control unit and rear view camera connectors.
- Turn ignition switch ON.
- Check signal between the terminals of around view monitor control unit connector M95.

Around view monitor control unit connector M95		Condition	Reference value
(+) Terminal	(-) Terminal		
28	27	CAMERA switch is ON or selector lever in R (reverse).	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

Is the inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).  
 NO >> Replace rear view camera. Refer to [AV-270, "Removal and Installation"](#).

## WITH DRIVER ASSISTANCE SYSTEM

### 1.CHECK REAR VIEW CAMERA POWER SUPPLY AND GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit and rear view camera connectors.
- Check continuity between around view monitor control unit connector M8 and rear view camera connector D80.

Around view monitor control unit		Rear view camera		Continuity
Connector	Terminals	Connector	Terminals	
M8	50	D80	8	Yes
	52		7	

- Check continuity between around view monitor control unit connector M8 and ground.

# U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M8	50		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2.CHECK REAR VIEW CAMERA POWER SUPPLY VOLTAGE

1. Connect around view monitor control unit and rear view camera connectors.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M8 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M8	50	—	CAMERA switch is ON or selector lever in R (reverse).	6.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

## 3.CHECK REAR VIEW CAMERA IMAGE SIGNAL AND IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit and rear view camera connectors.
3. Check continuity between around view monitor control unit connector M8 and rear view camera connector D80.

Around view monitor control unit		Rear view camera		Continuity
Connector	Terminals	Connector	Terminals	
M8	53	D80	5	Yes
	54		1	

4. Check continuity between around view monitor control unit connector M8 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M8	53		No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

## 4.CHECK REAR VIEW CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit and rear view camera connectors.
2. Turn ignition switch ON.
3. Check signal between the terminals of around view monitor control unit connector M8.

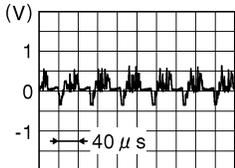
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# U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Around view monitor control unit connector M8		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
53	54	CAMERA switch is ON or selector lever in R (reverse).	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

Is the inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-267. "Removal and Installation"](#).
- NO >> Replace rear view camera. Refer to [AV-270. "Removal and Installation"](#).

# U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

### DTC Logic

INFOID:000000010435692

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Right side display output signal diagnosis (Harness disconnection) [U111B]	Right side camera image signal circuit open or short.	Check right side camera image signal circuit.

### Diagnosis Procedure

INFOID:000000010435693

Regarding Wiring Diagram information, refer to [AV-159, "Wiring Diagram"](#).

### WITHOUT DRIVER ASSISTANCE SYSTEM

#### 1. CHECK RH SIDE CAMERA POWER SUPPLY AND GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit and RH side camera connectors.
- Check continuity between around view monitor control unit connector M103 and RH side camera connector D107.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M95	34	D27	7	Yes
	33		8	

- Check continuity between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	34		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

#### 2. CHECK RH SIDE CAMERA POWER SUPPLY VOLTAGE

- Connect around view monitor control unit and RH side camera connectors.
- Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M95	34	—	CAMERA switch is ON or selector lever in R (reverse).	6.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

#### 3. CHECK RH SIDE CAMERA IMAGE SIGNAL AND IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.

# U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

2. Disconnect around view monitor control unit and RH side camera connectors.
3. Check continuity between around view monitor control unit connector M95 and RH side camera connector D27.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M95	36	D27	16	Yes
	35		15	

4. Check continuity between around view monitor control unit connector M103 and ground.

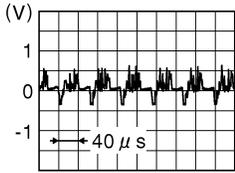
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	36		No

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> Repair or replace harness or connectors.

## 4.CHECK RH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit and RH side camera connectors.
2. Turn ignition switch ON.
3. Check signal between the terminals of around view monitor control unit connector M95.

Around view monitor control unit connector M95		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
36	35	CAMERA switch is ON or selector lever in R (reverse).	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

Is the inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).  
 NO >> Replace RH side camera. Refer to [AV-269, "Removal and Installation"](#).

## WITH DRIVER ASSISTANCE SYSTEM

### 1.CHECK RH SIDE CAMERA POWER SUPPLY AND GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit and RH side camera connectors.
3. Check continuity between around view monitor control unit connector M8 and RH side camera connector D27.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M8	62	D27	7	Yes
	64		8	

4. Check continuity between around view monitor control unit connector M8 and ground.

# U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M8	62		No

Is the inspection result normal?

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

## 2. CHECK RH SIDE CAMERA POWER SUPPLY VOLTAGE

1. Connect around view monitor control unit and RH side camera connectors.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M8 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M8	62	—	CAMERA switch is ON or selector lever in R (reverse).	6.0 V

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

## 3. CHECK RH SIDE CAMERA IMAGE SIGNAL AND IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit and RH side camera connectors.
3. Check continuity between around view monitor control unit connector M8 and RH side camera connector D27.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M8	65	D27	16	Yes
	66		15	

4. Check continuity between around view monitor control unit connector M8 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M8	65		No

Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace harness or connectors.

## 4. CHECK RH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit and RH side camera connectors.
2. Turn ignition switch ON.
3. Check signal between the terminals of around view monitor control unit connector M8.

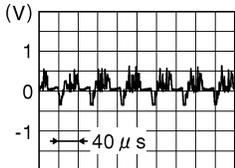
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# U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Around view monitor control unit connector M8		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
65	66	CAMERA switch is ON or selector lever in R (reverse).	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

Is the inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-267. "Removal and Installation"](#).
- NO >> Replace RH side camera. Refer to [AV-269. "Removal and Installation"](#).

# U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

### DTC Logic

INFOID:000000010435694

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Front display output signal diagnosis (Harness disconnection) [U111C]	Front camera image signal circuit open or short.	Check front camera image signal circuit.

### Diagnosis Procedure

INFOID:000000010435695

Regarding Wiring Diagram information, refer to [AV-159, "Wiring Diagram"](#).

### WITHOUT DRIVER ASSISTANCE SYSTEM

#### 1. CHECK FRONT CAMERA POWER SUPPLY AND GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit and front camera connectors.
- Check continuity between around view monitor control unit connector M95 and front camera connector E106.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
M95	38	E106	2	Yes
	37		1	

- Check continuity between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	38		No

Is the inspection result normal?

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

#### 2. CHECK FRONT CAMERA POWER SUPPLY VOLTAGE

- Connect around view monitor control unit and front camera connectors.
- Turn ignition switch ON.
- Check voltage between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M95	38	—	CAMERA switch is ON or selector lever in R (reverse).	6.0 V

Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

#### 3. CHECK FRONT CAMERA IMAGE SIGNAL AND IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit and front camera connectors.

# U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

3. Check continuity between around view monitor control unit connector M95 and front camera connector E106.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
M95	40	E106	4	Yes
	39		5	

4. Check continuity between around view monitor control unit connector M95 and ground.

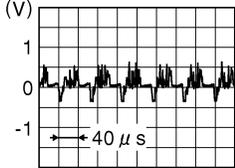
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	40		No

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> Repair or replace harness or connectors.

## 4.CHECK FRONT CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit and front camera connectors.
2. Turn ignition switch ON.
3. Check signal between the terminals of around view monitor control unit connector M95.

Around view monitor control unit connector M95		Condition	Reference value
(+) Terminal	(-) Terminal		
40	39	CAMERA switch is ON or selector lever in R (reverse).	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

Is the inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).  
 NO >> Replace front camera. Refer to [AV-268, "Removal and Installation"](#).

## WITH DRIVER ASSISTANCE SYSTEM

### 1.CHECK FRONT CAMERA POWER SUPPLY AND GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit and front camera connectors.
3. Check continuity between around view monitor control unit connector M8 and front camera connector E106.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
M8	68	E106	2	Yes
	70		1	

4. Check continuity between around view monitor control unit connector M8 and ground.

# U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M8	68		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

## 2. CHECK FRONT CAMERA POWER SUPPLY VOLTAGE

1. Connect around view monitor control unit and front camera connectors.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M8 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M8	68	—	CAMERA switch is ON or selector lever in R (reverse).	6.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

## 3. CHECK FRONT CAMERA IMAGE SIGNAL AND IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit and front camera connectors.
3. Check continuity between around view monitor control unit connector M8 and front camera connector E106.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
M8	71	E106	4	Yes
	72		5	

4. Check continuity between around view monitor control unit connector M8 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M8	71		No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

## 4. CHECK FRONT CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit and front camera connectors.
2. Turn ignition switch ON.
3. Check signal between the terminals of around view monitor control unit connector M8.

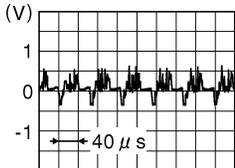
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# U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Around view monitor control unit connector M8		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
71	72	CAMERA switch is ON or selector lever in R (reverse).	<div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">(V)</div>  </div> <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

Is the inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).
- NO >> Replace front camera. Refer to [AV-268, "Removal and Installation"](#).

# U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

### DTC Logic

INFOID:000000010435696

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Left side display output signal diagnosis (Harness disconnection) [U111D]	Left side camera image signal circuit open or short.	Check left side camera image signal circuit.

### Diagnosis Procedure

INFOID:000000010435697

Regarding Wiring Diagram information, refer to [AV-159, "Wiring Diagram"](#).

### WITHOUT DRIVER ASSISTANCE SYSTEM

#### 1. CHECK LH SIDE CAMERA POWER SUPPLY AND GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit and LH side camera connectors.
3. Check continuity between around view monitor control unit connector M95 and LH side camera connector D3.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M95	30	D3	7	Yes
	29		8	

4. Check continuity between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	30		No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

#### 2. CHECK LH SIDE CAMERA POWER SUPPLY VOLTAGE

1. Connect around view monitor control unit and LH side camera connectors.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M95	30	—	CAMERA switch is ON or selector lever in R (reverse).	6.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

#### 3. CHECK LH SIDE CAMERA IMAGE SIGNAL AND IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.

# U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

2. Disconnect around view monitor control unit and LH side camera connectors.
3. Check continuity between around view monitor control unit connector M95 and LH side camera connector D3.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M95	32	D3	16	Yes
	31		15	

4. Check continuity between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	32		No

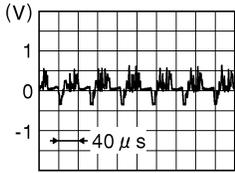
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

## 4.CHECK LH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit and LH side camera connectors.
2. Turn ignition switch ON.
3. Check signal between the terminals of around view monitor control unit connector M95.

Around view monitor control unit connector M95		Condition	Reference value
(+) Terminal	(-) Terminal		
32	31	CAMERA switch is ON or selector lever in R (reverse).	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

Is the inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

NO >> Replace LH side camera. Refer to [AV-269, "Removal and Installation"](#).

## WITH DRIVER ASSISTANCE SYSTEM

### 1.CHECK LH SIDE CAMERA POWER SUPPLY AND GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit and LH side camera connectors.
3. Check continuity between around view monitor control unit connector M8 and LH side camera connector D3.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M8	56	D3	7	Yes
	58		8	

4. Check continuity between around view monitor control unit connector M8 and ground.

# U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M8	56		No

Is the inspection result normal?

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

## 2. CHECK LH SIDE CAMERA POWER SUPPLY VOLTAGE

1. Connect around view monitor control unit and LH side camera connectors.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M8 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M8	56	—	CAMERA switch is ON or selector lever in R (reverse).	6.0 V

Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

## 3. CHECK LH SIDE CAMERA IMAGE SIGNAL AND IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit and LH side camera connectors.
3. Check continuity between around view monitor control unit connector M8 and LH side camera connector D3.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M8	59	D3	16	Yes
	60		15	

4. Check continuity between around view monitor control unit connector M8 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M8	59		No

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> Repair or replace harness or connectors.

## 4. CHECK LH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit and LH side camera connectors.
2. Turn ignition switch ON.
3. Check signal between the terminals of around view monitor control unit connector M8.

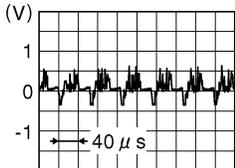
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# U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Around view monitor control unit connector M8		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
59	60	CAMERA switch is ON or selector lever in R (reverse).	 <p style="text-align: right; font-size: small;">JSNIA0834GB</p>

Is the inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-267. "Removal and Installation"](#).
- NO >> Replace LH side camera. Refer to [AV-269. "Removal and Installation"](#).

## U112F EPS CIRCUIT

### DTC Logic

INFOID:000000010944762

### DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	DTC detecting condition
U112F	EPS CIRC (EPS circuit)	The around view monitor control unit detects that EPS has a malfunction.

### POSSIBLE CAUSE

EPS

### FAIL-SAFE

Around view monitor with Park Assist is cancel

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

##### WITH CONSULT

1. Turn the ignition switch ON
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "U112F" is detected as the current malfunction in "Self Diagnostic Result" of "AVM".

##### "U112F" detected as the current malfunction?

- YES >> Refer to [AV-207, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-41, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000010944763

#### 1. CHECK SELF-DIAGNOSIS RESULTS

##### With CONSULT.

Check if the "U1000" is detected other than "U112F" in "Self Diagnostic Result" of "AVM".

##### "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.  
Refer to [AV-189, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).
- NO >> GO TO 2.

#### 2. CHECK SELF-DIAGNOSIS RESULTS

##### With CONSULT.

Check if any DTC is detected in "Self Diagnostic Result" of "EPS/DAST3".

##### Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [STC-19, "DTC Index"](#).
- NO >> Replace the around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

# U1217 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1217 AV CONTROL UNIT

### DTC Logic

INFOID:000000010435698

### 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 <a href="#">AV-259, "Removal and Installation"</a> .

# U1229 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1229 AV CONTROL UNIT

### DTC Logic

INFOID:000000010435699

### 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 <a href="#">AV-259, "Removal and Installation"</a> .

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AV

# U122F AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U122F AV CONTROL UNIT

### DTC Logic

INFOID:000000010435700

### 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 <a href="#">AV-259, "Removal and Installation"</a> .

# U1232 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1232 STEERING ANGLE SENSOR

### DTC Logic

INFOID:000000010435701

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANG SEN CALIB [U1232]	The neutral position adjustment of the steering angle sensor is incomplete.	Adjust neutral position of the steering angle sensor.

### Diagnosis Procedure

INFOID:000000010435702

#### 1. ADJUST THE NEUTRAL POSITION OF THE STEERING ANGLE SENSOR

When U1232 is detected, adjust the neutral position of the steering angle sensor.

>> Perform adjustment of the neutral position of the steering angle sensor. Refer to [AV-144, "WITHOUT DRIVER ASSISTANCE SYSTEM : CONSULT Function"](#).

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AV

# U1244 GPS ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1244 GPS ANTENNA

### DTC Logic

INFOID:000000010435703

### 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"><li>• GPS antenna disconnection.</li><li>• Open or short to ground in GPS antenna signal circuit.</li></ul>

### Diagnosis Procedure

INFOID:000000010435704

Regarding Wiring Diagram information, refer to [AV-159, "Wiring Diagram"](#).

### 1. GPS ANTENNA INSPECTION

Visually inspect the GPS antenna and antenna feeder. Refer to [AV-271, "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 M317.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M317 and ground.

AV control unit		Ground	Voltage
Connector	Terminal		
M317	56	—	5.0 V

Is inspection result normal?

YES >> Replace GPS antenna. Refer to [AV-271, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-259, "Removal and Installation"](#).

# U1258 SATELLITE RADIO ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1258 SATELLITE RADIO ANTENNA

### DTC Logic

INFOID:000000010435705

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
SXM ANTENNA CONN [U1258]	Open or short to ground is detected in satellite antenna connection.	<ul style="list-style-type: none"><li>Satellite antenna disconnection.</li><li>Open or short to ground in satellite antenna signal circuit.</li></ul>

### Diagnosis Procedure

INFOID:000000010435706

Regarding Wiring Diagram information, refer to [AV-159, "Wiring Diagram"](#).

### 1. SATELLITE ANTENNA INSPECTION

Visually inspect the satellite antenna and antenna feeder. Refer to [AV-273, "Feeder Layout"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

### 2. CHECK AV CONTROL UNIT VOLTAGE

- Turn ignition switch ON.
- Check voltage between AV control unit connector M399 and ground.

AV control unit		Ground	Voltage
Connector	Terminal		
M399	152	—	5.0 V

Is inspection result normal?

YES >> Replace satellite radio antenna [AV-272, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-259, "Removal and Installation"](#).

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AV

U1263 USB

DTC Logic

INFOID:000000010435707

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"> <li>• Device connected to USB interface.</li> <li>• Harness between the AV control unit and USB interface.</li> </ul>

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" for "MULTI AV".

Is DTC U1263 displayed?

- YES >> Refer to [AV-214, "Diagnosis Procedure"](#).  
 NO >> Inspection End.

Diagnosis Procedure

INFOID:000000010435708

1.CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness. Refer to [AV-265, "Removal and Installation"](#).

Is the inspection result normal?

- YES >> GO TO 2.  
 NO >> Replace USB interface harness. Refer to [AV-265, "Removal and Installation"](#).

2.CHECK USB INTERFACE HARNESS

Check USB interface harness. Refer to [AV-243, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-259, "Removal and Installation"](#).  
 NO >> Replace USB interface harness. Refer to [AV-265, "Removal and Installation"](#).

# U12AA CONFIGURATION ERROR

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U12AA CONFIGURATION ERROR

### DTC Logic

INFOID:000000010435709

### 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 <a href="#">AV-178, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure"</a> .

### Diagnosis Procedure

INFOID:000000010435710

#### 1.PERFORM CONFIGURATION

When U12AA is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to [AV-178, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).

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AV

# U1264 ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1264 ANTENNA AMP.

### DTC Logic

INFOID:0000000010435711

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FM Antenna error [U12AB]	Open or short to ground is detected in AM-FM antenna connection.	<ul style="list-style-type: none"><li>AM-FM antenna disconnection.</li><li>Open or short to ground in AM-FM antenna signal circuit.</li></ul>

### Diagnosis Procedure

INFOID:0000000010435712

Regarding Wiring Diagram information, refer to [AV-159, "Wiring Diagram"](#).

### 1. AM-FM ANTENNA INSPECTION

Visually inspect the antenna base (AM-FM antenna) and antenna feeder. Refer to [AV-273, "Feeder Layout"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning components.

### 2. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA BASE

- Turn ignition switch OFF.
- Disconnect AV control unit connector M399 and antenna base connector M394.
- Check continuity between AV control unit connector M399 and antenna base connector M394.

AV control unit		Antenna base		Continuity
Connector	Terminal	Connector	Terminal	
M399	152	M394	1	Yes

- Check continuity between AV control unit connector M139 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M399	152	—	No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

### 3. CHECK AV CONTROL UNIT VOLTAGE

- Connect AV control unit connector M399.
- Turn ignition switch ON.
- Check voltage between AV control unit connector M399 and ground.

AV control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M399	152	—	5.0 V

Is the inspection result normal?

YES >> Replace antenna base. Refer to [AV-272, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-259, "Removal and Installation"](#).

# U12AC AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U12AC AV CONTROL UNIT

### DTC Logic

INFOID:000000010435713

### 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 <a href="#">AV-259, "Removal and Installation"</a> .

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# U12AD AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U12AD AV CONTROL UNIT

### DTC Logic

INFOID:000000010435714

### 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 <a href="#">AV-259, "Removal and Installation"</a> .

# U12AE AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U12AE AV CONTROL UNIT

### DTC Logic

INFOID:000000010435715

### 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 <a href="#">AV-259, "Removal and Installation"</a> .

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# U12AF AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U12AF AV CONTROL UNIT

### DTC Logic

INFOID:000000010435716

### 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 <a href="#">AV-259, "Removal and Installation"</a> .

# U1300 AV COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1300 AV COMM CIRCUIT

### DTC Logic

INFOID:000000010435721

### 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:000000010435722

#### 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" for "METER M&A".

#### Are any DTCs displayed?

YES >> Refer to [MWI-39, "DTC Index"](#).

NO >> GO TO 2.

#### 2. CHECK AV COMMUNICATION CIRCUIT (MCAN L) CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M49 and combination meter connector M52.
3. Check continuity between AV control unit connector M49 and combination meter connector M52.

AV control unit		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
M49	32	M52	48	Yes
	39			

4. Check continuity between AV control unit connector M49 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M49	32	—	No
	39		

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

#### 3. CHECK AV COMMUNICATION CIRCUIT (MCAN H) CONTINUITY

1. Check continuity between AV control unit connector M49 and combination meter connector M52.

AV control unit		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
M49	31	M52	47	Yes
	38			

2. Check continuity between AV control unit connector M49 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M49	31	—	No
	38		

## U1300 AV COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

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Is the inspection result normal?

- YES >> Replace the AV control unit. Refer to [AV-259, "Removal and Installation"](#).
- NO >> Repair or replace harness or connectors.

# U1304 CAMERA IMAGE CALIBRATION

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1304 CAMERA IMAGE CALIBRATION

### DTC Logic

INFOID:000000010435723

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Non-completion of the calibration [U1304]	Camera image calibration is incomplete.	Perform calibration of camera image.

### Diagnosis Procedure

INFOID:000000010435724

#### 1.PERFORM CALIBRATION

When U1304 is detected, perform calibration of camera image.

>> Refer to [AV-181, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

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# U1305 CONFIG UNFINISH

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1305 CONFIG UNFINISH

### DTC Logic

INFOID:000000010435725

### DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
Non-completion of the configuration [U1305]	Configuration of around view monitor control unit is incomplete.	Perform configuration of around view monitor control unit.

### Diagnosis Procedure

INFOID:000000010435726

#### 1.PERFORM CONFIGURATION

When U1305 is detected, perform configuration of around view monitor control unit.

>> Refer to [AV-179, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Work Procedure"](#).

# U1310 CONTROL UNIT (AV)

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U1310 CONTROL UNIT (AV)

### DTC Logic

INFOID:000000010435727

### 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 <a href="#">AV-259, "Removal and Installation"</a> .

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## U1320 REPROGRAMMING

### DTC Logic

INFOID:000000010944754

### DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1320	Reprogramming Failed (Reprogramming failed)	Reprogramming of around view monitor control unit is incomplete

### POSSIBLE CAUSE

Around view monitor control unit

### FAIL-SAFE

Around view monitor with Park Assist is cancel

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓜ WITH CONSULT

1. Turn the ignition switch ON and wait at least a minute.
2. Perform "All DTC Reading" with CONSULT.
3. If "U1320" is detected in "Self Diagnostic Result" of "AVM", erase it.
4. Turn the ignition switch OFF.
5. Turn the ignition switch ON and wait at least a minute.
6. Check if the "U1320" is detected as the current malfunction in "Self Diagnostic Result" of "AVM".

##### Is "U1320" detected as the current malfunction?

YES >> Refer to [AV-226, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-41, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000010944755

#### 1.PERFORM REPROGRAMMING

Perform reprogramming of the around view monitor control unit again.

>> GO TO 2.

#### 2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-226, "DTC Logic"](#).

##### Is DTC U1320 detected again?

YES >> Replace around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

NO >> INSPECTION END

# U150E BCM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## U150E BCM CIRCUIT

### DTC Logic

INFOID:000000010944756

### DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U150E	BCM CIRC (Body control module circuit)	BCM malfunction is detected

### POSSIBLE CAUSE

- BCM
- Around view monitor control unit

### FAIL-SAFE

Around view monitor with Park Assist is cancel

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

##### Ⓜ WITH CONSULT

1. Turn the ignition switch ON
2. Perform "All DTC Reading" with CONSULT.
3. Check if the "U150E" is detected as the current malfunction in "Self Diagnostic Result" of "AVM".

##### Is "U150E" detected as the current malfunction?

YES >> Refer to [AV-227, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-41, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000010944757

#### 1. CHECK AROUND VIEW MONITOR CONTROL UNIT SELF-DIAGNOSIS RESULTS

##### Ⓜ With CONSULT.

Check if the "U1000" is detected other than "U150E" in "Self Diagnostic Result" of "AVM".

##### Is "U1000" detected?

YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts.  
Refer to [AV-189, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).

NO >> GO TO 2.

#### 2. CHECK BCM SELF-DIAGNOSIS RESULTS

##### Ⓜ With CONSULT.

Check if any DTC is detected in "Self Diagnostic Result" of "BCM".

##### Is any DTC detected?

YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [BCS-90, "DTC Index"](#).

NO >> Replace the around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

U1971 SONAR

DTC Logic

INFOID:000000010944758

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1971	SONAR Message Counter (Sonar message counter)	Around view monitor control unit receives an incorrect signal from sonar control unit via CAN communication

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

Around view monitor with Park Assist is cancel

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

Ⓜ WITH CONSULT

1. Perform "All DTC Reading" with CONSULT.
2. Check if the "U1971" is detected as the current malfunction in "Self Diagnostic Result" of "AVM".

Is "U1971" detected as the current malfunction?

- YES >> Refer to [AV-228, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-41, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000010944759

1. CHECK SELF-DIAGNOSIS RESULTS

Ⓜ With CONSULT.

Check if the "U1000" is detected other than "U1971" in "Self Diagnostic Result" of "AVM".

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to [AV-189, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).
- NO >> GO TO 2.

2. CHECK SELF-DIAGNOSIS RESULTS

Ⓜ With CONSULT.

Check if any DTC is detected in "Self Diagnostic Result" of "SONAR".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [SN-67, "DTC Index"](#).
- NO >> Replace the around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

U1972 EPS

DTC Logic

INFOID:000000010944760

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1972	EPS Message Counter (Electronically controlled power steering message counter)	Around view monitor control unit receives an incorrect signal from EPS control unit via CAN communication

POSSIBLE CAUSE

EPS control unit

FAIL-SAFE

Around view monitor with Park Assist

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

ⓂWITH CONSULT

1. Perform "All DTC Reading" with CONSULT.
2. Check if the "U1972" is detected as the current malfunction in "Self Diagnostic Result" of "AVM".

"U1972" detected as the current malfunction?

- YES >> Refer to [AV-229, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-41, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000010944761

1.CHECK SELF-DIAGNOSIS RESULTS

ⓂWith CONSULT.

Check if the "U1000" is detected other than "U1972" in "Self Diagnostic Result" of "AVM".

Is "U1000" detected?

- YES >> Perform the CAN communication system inspection. Repair or replace the malfunctioning parts. Refer to [AV-189, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).
- NO >> GO TO 2.

2.CHECK SELF-DIAGNOSIS RESULTS

ⓂWith CONSULT.

Check if any DTC is detected in "Self Diagnostic Result" of "EPS/DAST3".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [STC-19, "DTC Index"](#).
- NO >> Replace the around view monitor control unit. Refer to [AV-267, "Removal and Installation"](#).

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AV

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## POWER SUPPLY AND GROUND CIRCUIT

### AV CONTROL UNIT

#### AV CONTROL UNIT : Diagnosis Procedure

INFOID:000000010435728

Regarding Wiring Diagram information, refer to [AV-159. "Wiring Diagram"](#).

#### 1. CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
19	Battery power supply	19 (20A)
40	Ignition power supply	4 (10A)

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 M48 and M49.
3. Check voltage between AV control unit connectors M48 and M49 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M48	19	—	Ignition switch: OFF	Battery voltage
M49	40		Ignition switch: ON	

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 M49 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M49	20	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

## AROUND VIEW MONITOR CONTROL UNIT

#### AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:000000010435729

Regarding Wiring Diagram information, refer to [AV-159. "Wiring Diagram"](#).

### WITHOUT DRIVER ASSISTANCE SYSTEM

#### 1. CHECK FUSE

Check that the following fuses are not blown.

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

Terminal No.	Signal name	Fuse No.
2	Battery power supply	19 (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 around view monitor control unit connector M95.
3. Check voltage between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M95	2	—	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. Check continuity between around view monitor control unit connector M95 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M95	1	—	Yes

Is the inspection result normal?

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

## WITH DRIVER ASSISTANCE SYSTEM

### 1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
2	Battery power supply	19 (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 around view monitor control unit connector M7.
3. Check voltage between around view monitor control unit connector M7 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M7	2	—	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

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## POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

1. Turn ignition switch OFF.
2. Check continuity between around view monitor control unit connector M7 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M7	1	—	Yes

Is the inspection result normal?

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

FRONT TWEETER

Diagnosis Procedure

INFOID:000000010435730

Regarding Wiring Diagram information, refer to [AV-159. "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 TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M48 and suspect front tweeter connector.
2. Check continuity between AV control unit connector M48 and suspect front tweeter connector.

AV control unit		Front tweeter		Continuity
Connector	Terminal	Connector	Terminal	
M48	2	M84 (LH)	1	Yes
	3		2	
	11	M83 (RH)	1	
	12		2	

3. Check continuity between AV control unit connector M48 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M48	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK FRONT TWEETER SIGNAL

1. Connect AV control unit connector M48 and suspect front tweeter connector.
2. Turn ignition switch to ON.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M48.

AV control unit connector M48		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

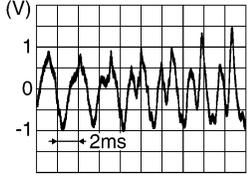
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AV

# FRONT TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

2	3		
11	12	Audio signal output	 SKIB3609E

Is the inspection result normal?

YES >> Replace front tweeter. Refer to [AV-262. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-259. "Removal and Installation"](#).

## FRONT DOOR SPEAKER

### Diagnosis Procedure

INFOID:000000010435731

Regarding Wiring Diagram information, refer to [AV-159. "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 M48 and suspect front door speaker connector.
2. Check continuity between AV control unit connector M48 and suspect front door speaker connector.

AV control unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M48	2	D14 (LH)	1	Yes
	3		2	
	11	D34 (RH)	1	
	12		2	

3. Check continuity between AV control unit connector M48 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M48	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

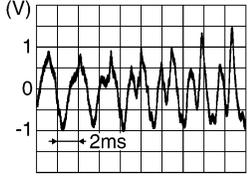
1. Connect AV control unit connector M48 and suspect front door speaker connector.
2. Turn ignition switch to ON.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M48.

AV control unit connector M48		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

# FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

2	3		
11	12	Audio signal output	

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-263. "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-259. "Removal and Installation"](#).

## REAR DOOR SPEAKER

### Diagnosis Procedure

INFOID:000000010435732

Regarding Wiring Diagram information, refer to [AV-159. "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 DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M48 and suspect rear door speaker connector.
2. Check continuity between AV control unit connector M48 and suspect rear door speaker connector.

AV control unit		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M48	4	D55 (LH)	1	Yes
	5		2	
	13	D69 (RH)	1	
	14		2	

3. Check continuity between AV control unit connector M48 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M48	4	—	No
	5		
	13		
	14		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

### 3. CHECK REAR DOOR SPEAKER SIGNAL

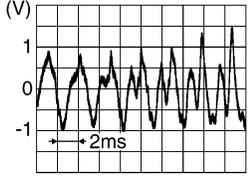
1. Connect AV control unit connector M48 and suspect rear door speaker connector.
2. Turn ignition switch to ON.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M48.

AV control unit connector M48		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

# REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

4	5		
13	14	Audio signal output	

Is the inspection result normal?

- YES >> Replace rear door speaker. Refer to [AV-264. "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-259. "Removal and Installation"](#).

# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## MICROPHONE SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:0000000010435733

Regarding Wiring Diagram information, refer to [AV-159. "Wiring Diagram"](#).

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

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M49 and microphone connector R20.
3. Check continuity between AV control unit connector M49 and microphone connector R20.

AV control unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M49	34	R20	2	Yes
	35		3	
	36		1	

4. Check continuity between AV control unit connector M49 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M49	34	—	No
	35		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connectors.

### 2. CHECK MICROPHONE POWER SUPPLY

1. Connect AV control unit connector M49 and microphone connector R20.
2. Turn ignition switch ON.
3. Check voltage between microphone connector R20 and ground.

Microphone (+)		Ground (-)	Voltage (Approx.)
Connector	Terminal		
R20	3	—	5V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace AV control unit. Refer to [AV-259. "Removal and Installation"](#).

### 3. CHECK MICROPHONE SIGNAL

Check signal between terminals of AV control unit connector M49.

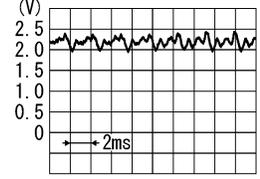
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AV

# MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

AV control unit connector M102		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
34	36	Speak into microphone.	 <p style="text-align: right;">PKIB5037J</p>

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-259. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-266. "Removal and Installation"](#).

# STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## STEERING SWITCH

### Diagnosis Procedure

INFOID:000000010435734

Regarding Wiring Diagram information, refer to [AV-159. "Wiring Diagram"](#).

### 1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M66.
3. Check resistance between the terminals of combination switch connector M66.

Combination switch connector M66		Condition	Resistance $\Omega$ (Approx.)
Terminal	Terminal		
29	23	Depress SOURCE switch.	1
		Depress $\Delta$ switch.	121
		Depress $\nabla$ switch.	321
		Depress  switch.	723
		Depress ENTER switch.	2023
24		Depress -  switch.	1
		Depress  + switch.	121
		Depress  switch.	321
		Depress  switch.	723
		Depress DISPLAY switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-261. "Removal and Installation"](#).

### 2. CHECK HARNESS BETWEEN COMBINATION METER AND COMBINATION SWITCH

1. Disconnect combination meter connector M51 and combination switch connector M66.
2. Check continuity between combination meter connector M51 and combination switch connector M66.

Combination meter		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
M51	22	M66	29	Yes
	23		24	
	21		23	

3. Check continuity between combination meter connector M51 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M51	22	—	No
	23		
	21		

Is the inspection result normal?

# STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

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

## 3.CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M66 and M303.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M66	29	M303	5	Yes
	24		10	
	23		4	

Is the inspection result normal?

- YES >> INSPECTION END.  
NO >> Replace spiral cable. Refer to [SR-17, "Exploded View"](#).

USB CONNECTOR

Diagnosis Procedure

INFOID:000000010435735

Regarding Wiring Diagram information, refer to [AV-159. "Wiring Diagram"](#).

**1**.CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and USB interface connector M384.
3. Check continuity between AV control unit connector and USB interface connector M384.

AV control unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M	58	M384	5	Yes
	61		6	
	60		7	
	59		8	
	62		9	

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-265. "Removal and Installation"](#).
- NO >> Repair or replace harness or connectors.

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AV

# AUXILIARY INPUT JACK

< DTC/CIRCUIT DIAGNOSIS >

[NAVIGATION]

## AUXILIARY INPUT JACK

### Diagnosis Procedure

INFOID:000000010435736

Regarding Wiring Diagram information, refer to [AV-159. "Wiring Diagram"](#).

#### 1. CHECK AUX IN JACK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M49 and AUX in jack connector M13.
3. Check continuity between AV control unit connector M49 and AUX in jack connector M13.

AV control unit		AUX in jack		Continuity
Connector	Terminal	Connector	Terminal	
M49	21	M13	4	Yes
	22		3	
	23		1	

4. Check continuity between AV control unit connector M49 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M49	21	Ground	No
	23		

Is the inspection result normal?

- YES >> Replace the AUX in jack. Refer to [AV-265. "Removal and Installation"](#).  
NO >> Repair or replace harness or connectors.

# SYMPTOM DIAGNOSIS

## MULTI AV SYSTEM

### Symptom Table

INFOID:000000010435737

#### RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	AV control unit	Malfunction in AV control unit. Refer to <a href="#">AV-142, "On Board Diagnosis Function"</a> .
No sound comes out or the level of the sound is low.	No sound from all speakers.	<ul style="list-style-type: none"> <li>• Speaker circuit shorted to ground. Refer to <a href="#">AV-159, "Wiring Diagram"</a>.</li> <li>• AV control unit power supply and ground circuits malfunction. Refer to <a href="#">AV-230, "AV CONTROL UNIT : Diagnosis Procedure"</a>.</li> </ul>
	Only a certain speaker (front tweeter LH, front tweeter RH, front door speaker LH, front door speaker RH, rear door speaker LH, rear door speaker RH) does not output sound.	<ul style="list-style-type: none"> <li>• Poor connector connection of speaker.</li> <li>• Sound signal circuit malfunction between AV control unit and speaker. Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-233, "Diagnosis Procedure"</a> (front tweeter).</li> <li>- <a href="#">AV-235, "Diagnosis Procedure"</a> (front door speaker).</li> <li>- <a href="#">AV-237, "Diagnosis Procedure"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in speaker. Refer to:                             <ul style="list-style-type: none"> <li>- <a href="#">AV-262, "Removal and Installation"</a> (front tweeter).</li> <li>- <a href="#">AV-263, "Removal and Installation"</a> (front door speaker).</li> <li>- <a href="#">AV-264, "Removal and Installation"</a> (rear door speaker).</li> </ul> </li> <li>• Malfunction in AV control unit. Refer to <a href="#">AV-142, "On Board Diagnosis Function"</a>.</li> </ul>

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AV

# MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Malfunction in AV control unit. Refer to <a href="#">AV-142, "On Board Diagnosis Function"</a> .
	Noise comes out only from a certain speaker (front tweeter LH, front tweeter RH, front door speaker LH, front door speaker RH, rear door speaker LH, rear door speaker RH).	<ul style="list-style-type: none"> <li>Poor connector connection of speaker.</li> <li>Sound signal circuit malfunction between AV control unit and speaker. Refer to:                             <ul style="list-style-type: none"> <li><a href="#">AV-233, "Diagnosis Procedure"</a> (front tweeter).</li> <li><a href="#">AV-235, "Diagnosis Procedure"</a> (front door speaker).</li> <li><a href="#">AV-237, "Diagnosis Procedure"</a> (rear door speaker).</li> </ul> </li> <li>Malfunction in speaker.</li> <li>Poor Installation of speaker (e.g. backlash and looseness). Refer to:                             <ul style="list-style-type: none"> <li><a href="#">AV-262, "Removal and Installation"</a> (front tweeter).</li> <li><a href="#">AV-263, "Removal and Installation"</a> (front door speaker).</li> <li><a href="#">AV-264, "Removal and Installation"</a> (rear door speaker).</li> </ul> </li> <li>Malfunction in AV control unit. Refer to <a href="#">AV-142, "On Board Diagnosis Function"</a>.</li> </ul>
	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 <a href="#">AV-273, "Feeder Layout"</a> .
No radio reception or poor reception.	<ul style="list-style-type: none"> <li>Other audio sounds are normal.</li> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Antenna amp. ON signal circuit malfunction. Refer to <a href="#">AV-216, "Diagnosis Procedure"</a>.</li> <li>Poor connector connection of antenna or antenna feeder. Refer to <a href="#">AV-273, "Feeder Layout"</a>.</li> </ul>
No satellite radio reception.	There is malfunction in the CONSULT self diagnosis result. Refer to <a href="#">AV-143, "CONSULT Function"</a> .	<ul style="list-style-type: none"> <li>Malfunction in antenna, antenna feeder or AV control unit. Perform DTC diagnosis. Refer to <a href="#">AV-213, "Diagnosis Procedure"</a>.</li> <li>Poor continuity in antenna feeder.</li> <li>Poor connector connection of antenna or antenna feeder. Refer to <a href="#">AV-273, "Feeder Layout"</a>.</li> </ul>
	There is no malfunction in the CONSULT self diagnosis result. Refer to <a href="#">AV-143, "CONSULT Function"</a> .	<ul style="list-style-type: none"> <li>Poor continuity in antenna feeder.</li> <li>Poor connector connection of antenna or antenna feeder.</li> <li>Loose satellite radio antenna mounting nut. Refer to <a href="#">AV-273, "Feeder Layout"</a>.</li> </ul>
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAGNOSIS" in the appropriate interior trim section.

## 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

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

## Check Compatibility

1. Make sure the customer's Bluetooth<sup>®</sup> 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<sup>®</sup> 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"> <li>• Hands-free phone operation can be made, but the communication cannot be established.</li> <li>• Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.</li> </ul>	Malfunction in AV control unit. Replace AV control unit. Refer to <a href="#">AV-259, "Removal and Installation"</a> .
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 <a href="#">AV-239, "Diagnosis Procedure"</a> .
The system cannot be operated.	<ul style="list-style-type: none"> <li>• The voice recognition can be controlled.</li> <li>• Steering switch's , , and  switch works, but  does not work.</li> </ul>	Steering switch malfunction. Replace steering switch. Refer to <a href="#">AV-261, "Removal and Installation"</a> .
	Steering switch's  ,  ,  , and  switches do not work.	Steering switch signal circuit malfunction. Refer to <a href="#">AV-241, "Diagnosis Procedure"</a> .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to <a href="#">AV-241, "Diagnosis Procedure"</a> .

RELATED TO NAVIGATION

# MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

Symptoms	Check items	Probable malfunction location
Navigation system is inoperative.	Navigation malfunction.	<ul style="list-style-type: none"> <li>Malfunction in SD card.</li> <li>Malfunction in AV control unit. Refer to <a href="#">AV-142, "On Board Diagnosis Function"</a>.</li> </ul>
	Steering switches malfunction.	Steering switch signal circuit malfunction. Refer to <a href="#">AV-241, "Diagnosis Procedure"</a> .
	Voice activated control malfunction.	Microphone signal circuit malfunction. Refer to <a href="#">AV-239, "Diagnosis Procedure"</a> . Steering switch signal circuit malfunction. Refer to <a href="#">AV-241, "Diagnosis Procedure"</a> .

## RELATED TO AROUND VIEW MONITOR

Symptoms	Check items	Probable malfunction location
Display does not switch to camera image when CAMERA switch is pressed or selector lever is in R (reverse).	Around view monitor control unit malfunction.	Around view monitor control unit power supply and ground circuits malfunction. Refer to <a href="#">AV-230, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"</a> .
	Camera image signal circuit (output) malfunction.	Camera image signal circuit (output) malfunction between around view monitor control unit and display unit. Refer to <a href="#">AV-152, "WITHOUT DRIVER ASSISTANCE SYSTEM : Reference Value"</a> .
Display switches to camera image when CAMERA switch is pressed or selector lever is in R (reverse), but all views are not displayed.	Camera image signal circuit (input) malfunction.	Camera image signal circuit (input) malfunction between camera and around view monitor control unit. Refer to: <ul style="list-style-type: none"> <li><a href="#">AV-199, "Diagnosis Procedure"</a> (front camera).</li> <li><a href="#">AV-191, "Diagnosis Procedure"</a> (rear camera).</li> <li><a href="#">AV-203, "Diagnosis Procedure"</a> (side camera LH).</li> <li><a href="#">AV-195, "Diagnosis Procedure"</a> (side camera RH).</li> </ul>
Camera image is rolling.	Camera image signal circuit (output) malfunction.	Camera image signal circuit (output) malfunction between around view monitor control unit and display unit. Refer to <a href="#">AV-152, "WITHOUT DRIVER ASSISTANCE SYSTEM : Reference Value"</a> .
Display does not switch to rear view monitor even when selector lever is in R (reverse).	Reverse signal circuit malfunction.	Reverse signal circuit between BCM and around view monitor control unit. Refer to <a href="#">AV-152, "WITHOUT DRIVER ASSISTANCE SYSTEM : Reference Value"</a> .
Predicted course line display in front view and rear view is malfunctioning.	Steering angle sensor malfunction.	Predicted course line center position is malfunctioning. Refer to <a href="#">AV-180, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure"</a> .
Front view and front of birds-eye view is not displayed.	<ul style="list-style-type: none"> <li>Front camera malfunction.</li> <li>Front camera image signal circuit malfunction.</li> </ul>	<ul style="list-style-type: none"> <li>Front camera power supply and ground circuits malfunction.</li> <li>Front camera image signal circuit malfunction between front camera and around view monitor control unit.</li> </ul> Refer to <a href="#">AV-199, "Diagnosis Procedure"</a> .
Rear view and rear of birds-eye view is not displayed.	<ul style="list-style-type: none"> <li>Rear view camera malfunction.</li> <li>Rear view camera image signal circuit malfunction.</li> </ul>	<ul style="list-style-type: none"> <li>Rear view camera power supply and ground circuits malfunction.</li> <li>Rear view camera image signal circuit malfunction between rear view camera and around view monitor control unit.</li> </ul> Refer to <a href="#">AV-191, "Diagnosis Procedure"</a> .

# MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

Symptoms	Check items	Probable malfunction location
Driver side of birds-eye view is not displayed.	<ul style="list-style-type: none"> <li>Side camera LH malfunction.</li> <li>Side camera LH image signal circuit malfunction.</li> </ul>	<ul style="list-style-type: none"> <li>Side camera LH power supply and ground circuits malfunction.</li> <li>Side camera LH image signal circuit malfunction between side camera LH and around view monitor control unit.</li> </ul> Refer to <a href="#">AV-203. "Diagnosis Procedure"</a> .
Front-side and passenger side of birds-eye view is not displayed.	<ul style="list-style-type: none"> <li>Side camera RH malfunction.</li> <li>Side camera RH image signal circuit malfunction.</li> </ul>	<ul style="list-style-type: none"> <li>Side camera RH power supply and ground circuits malfunction.</li> <li>Side camera RH image signal circuit malfunction between side camera RH and around view monitor control unit.</li> </ul> Refer to <a href="#">AV-195. "Diagnosis Procedure"</a> .
Selector lever is in a position other than R (reverse) and front, rear, front-side and Birds-Eye views are displayed even as vehicle speed increases.	Vehicle speed signal malfunction.	Vehicle speed signal malfunction between ABS actuator and electric unit (control unit) and around view monitor control unit. Refer to <a href="#">AV-152. "WITHOUT DRIVER ASSISTANCE SYSTEM : Reference Value"</a> .

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# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

## NORMAL OPERATING CONDITION

### Description

INFOID:000000010435738

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

#### 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<sup>®</sup> enabled cellular phones may not be recognized by the in-vehicle phone module. Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in <a href="#">AV-245, "Symptom Table"</a>.</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"> <li>• The vehicle is outside of the telephone service area.</li> <li>• 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.</li> <li>• The cellular phone is locked to prevent it from being dialed.</li> </ul> <p><b>NOTE:</b> While a cellular phone is connected through the Bluetooth<sup>®</sup> wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth<sup>®</sup> Hands-Free Phone System cannot charge cellular phones.</p>

# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

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 or set it to ON.
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 malfunction.

### 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]

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]

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 <sup>(Note)</sup> 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.)

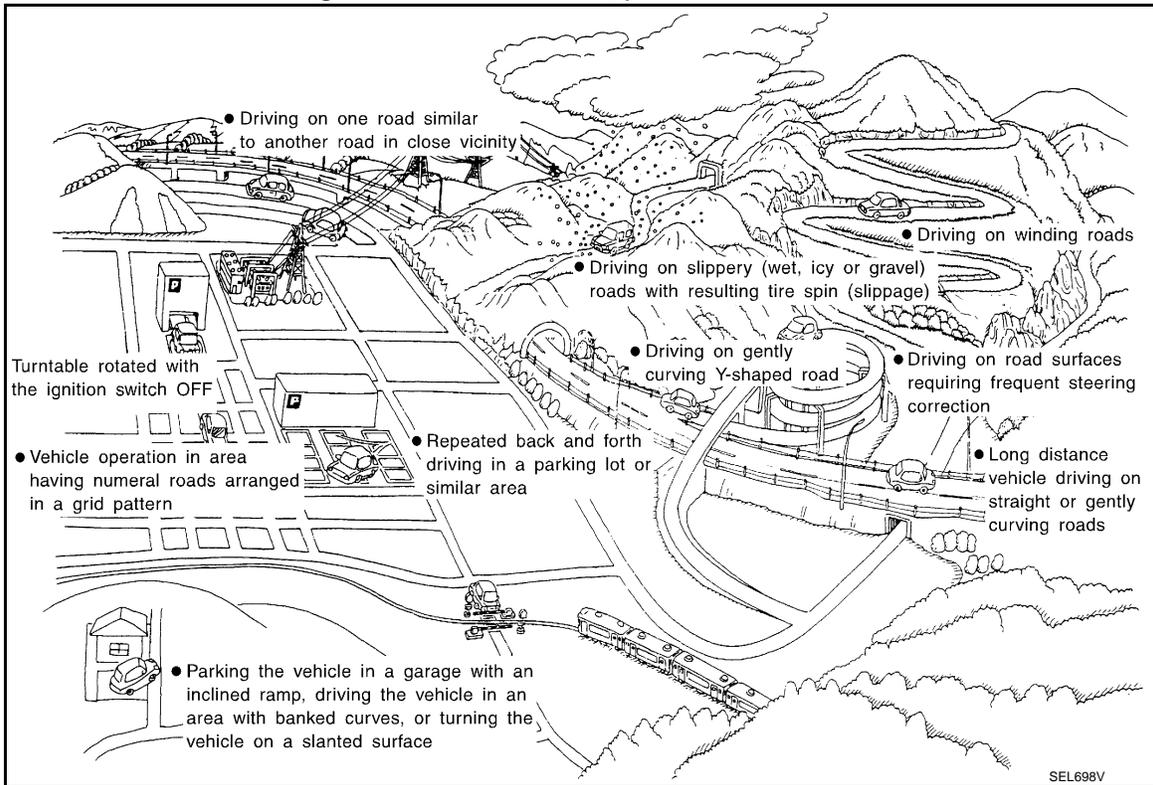
Examples of Current-Location Mark Displacement

# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

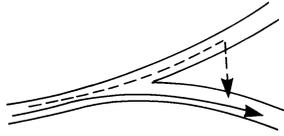
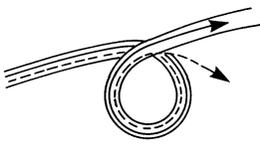
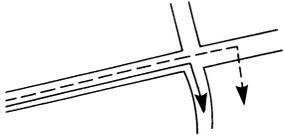
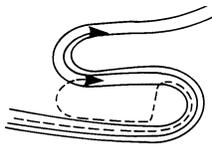
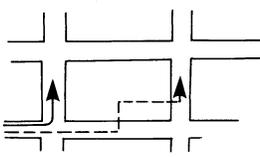
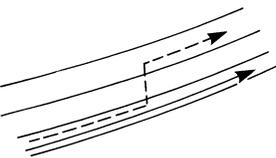
Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.



# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

Cause (condition) –: While driving    ooo: Display	Driving condition	Remarks (correction, etc.)
Y-intersections  <small>ELK0192D</small>	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.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
Spiral roads  <small>ELK0193D</small>	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.	
Straight roads  <small>ELK0194D</small>	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.	
Zigzag roads  <small>ELK0195D</small>	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.	
Roads laid out in a grid pattern  <small>ELK0196D</small>	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.	
Parallel roads  <small>ELK0197D</small>	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.	

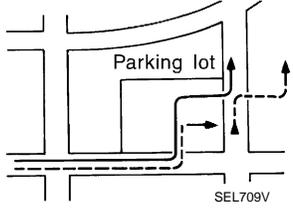
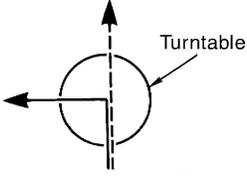
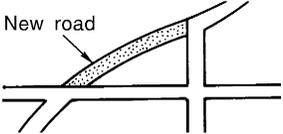
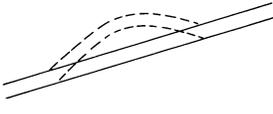
Road configuration

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# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

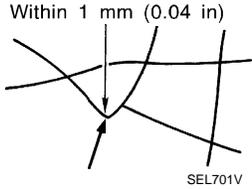
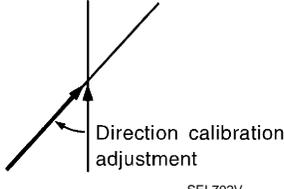
[NAVIGATION]

	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.)

# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[NAVIGATION]

Cause (condition) –: While driving    ooo: Display	Driving condition	Remarks (correction, etc.)
Precautions for driving	Just after the engine is started	If the vehicle is driven just after the engine is started when the gyroscope (angular speed sensor) correction is not completed, the vehicle can lose its direction and may have deviated from the correct location.  Wait for a short while before driving after starting the engine.
	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 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]

- Because calculation of the current location cannot be done when traveling with the ignition off, for example when traveling by ferry or when being towed, the location before travel is displayed. If the precise location can be detected with GPS, the location will be corrected.

### Vehicle Mark Jumps

In the following cases, the vehicle mark may appear to jump as a result of automatic correction of the current location.

- When map matching has been done
  - If the current location and the vehicle mark are different when map matching is done, the vehicle mark may seem to jump. At this time, the location may be “corrected” to the wrong road or to a location which is not on a road.
- When GPS location correction has been done
  - If the current location and the vehicle mark are different when the location is corrected using GPS measurements, the vehicle mark may seem to jump. At this time, the location may be “corrected” to a location which is not on a road.

### Vehicle Mark is in a River or Sea

The navigation system moves the vehicle mark with no distinction between land and rivers or sea. If the vehicle mark is somehow out of place, it may appear that the vehicle is driving in a river or the sea.

### Vehicle Mark Automatically Rotates

The system wrongly memorizes the rotating status as stopping when the ignition switch is turned ON with the turntable rotating. That causes the vehicle mark to rotate when the vehicle is stopped.

### When Driving on Same Road, Sometimes Vehicle Mark is in Right Place and Sometimes it is in Wrong Place

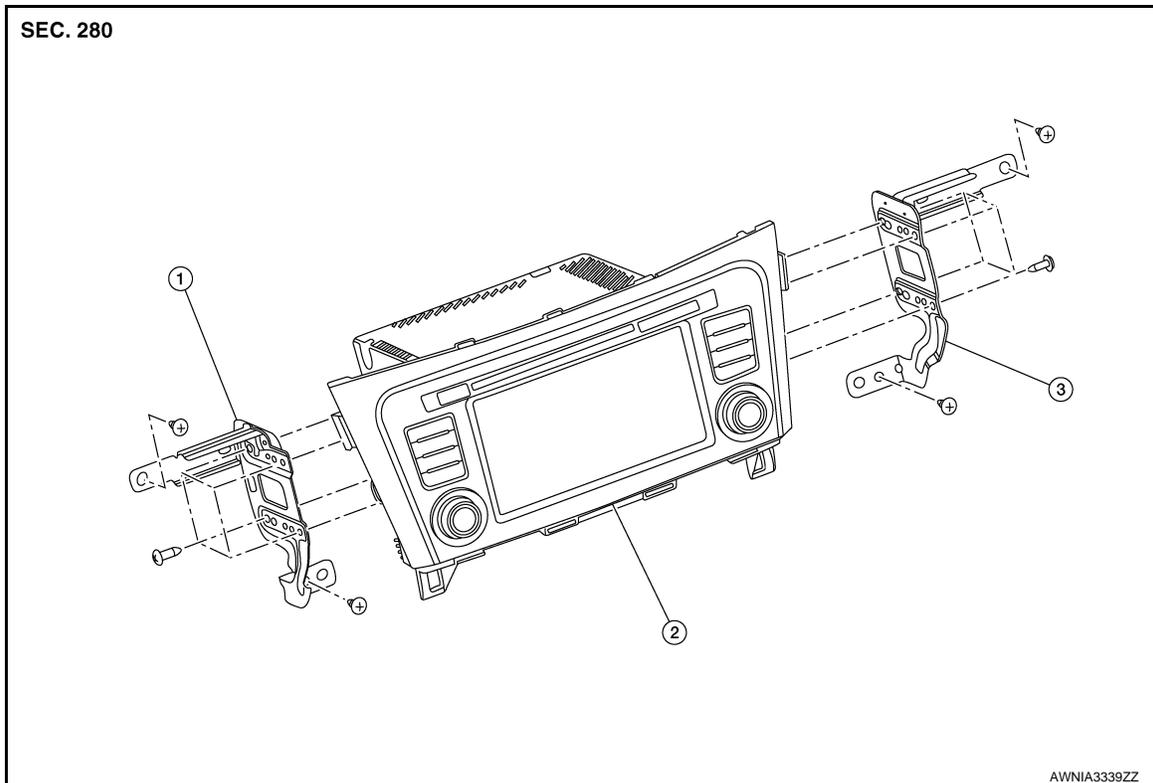
The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

## REMOVAL AND INSTALLATION

### AV CONTROL UNIT

#### Exploded View

INFOID:0000000010435739



1. AV control unit bracket (LH)      2. AV control unit      3. AV control unit bracket (RH)

### Removal and Installation

INFOID:0000000010435740

#### REMOVAL

##### CAUTION:

- Before disconnecting the AV control unit and battery terminals, turn the ignition switch OFF and wait at least 30 seconds.
- Before replacing AV control unit, perform READ "CONFIGURATION" to save current vehicle specification. Refer to [AV-179. "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).

##### 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.

1. Disconnect the negative battery terminal. Refer to [PG-155. "Removal and Installation"](#).
2. Remove A/C switch (AUTOMATIC AIR CONDITIONING) or front air control (MANUAL AIR CONDITIONING).
3. Remove instrument finisher B. Refer to [IP-12. "Exploded View"](#).
4. Remove instrument finisher E. Refer to [IP-12. "Exploded View"](#).
5. Remove the AV control unit screws, then pull out the AV control unit.
6. Disconnect the harness connectors from the AV control unit and remove.
7. Remove the AV control unit bracket (LH/RH) screws and the AV control unit brackets (LH/RH) (if necessary).

#### INSTALLATION

Installation is in the reverse order of removal.

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AV

## AV CONTROL UNIT

< REMOVAL AND INSTALLATION >

[NAVIGATION]

---

**CAUTION:**

When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to [AV-179, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).

# STEERING SWITCH

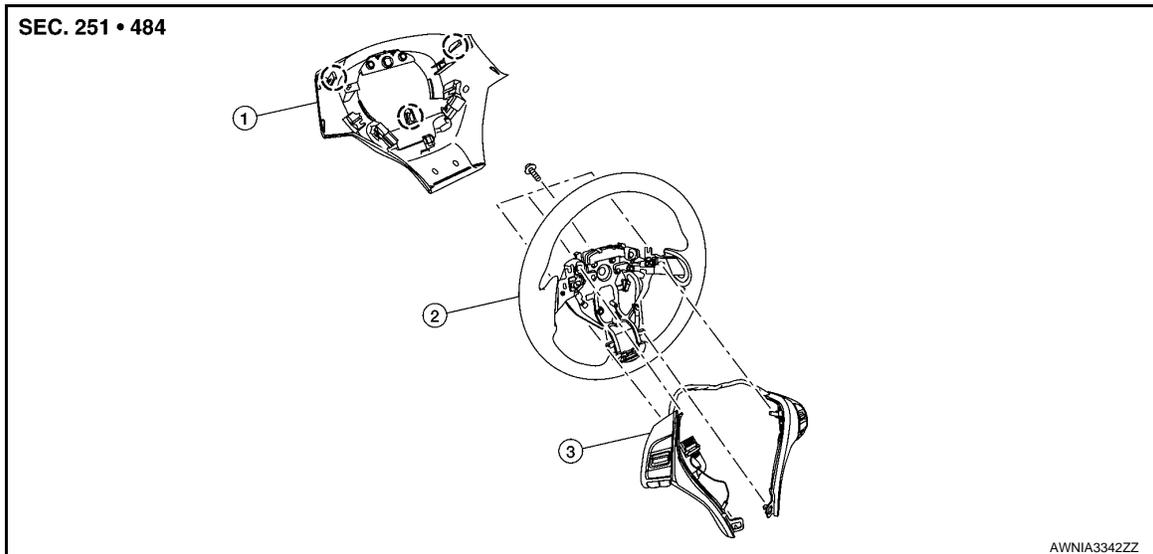
< REMOVAL AND INSTALLATION >

[NAVIGATION]

## STEERING SWITCH

Exploded View

INFOID:000000010435741



1. Steering wheel rear finisher      2. Steering wheel      3. Steering switches

○ Pawl

## Removal and Installation

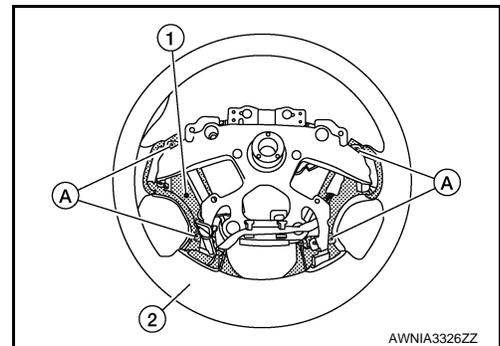
INFOID:000000010435742

### REMOVAL

#### NOTE:

The steering switches are serviced as an assembly.

1. Remove steering wheel. Refer to [ST-8, "Exploded View"](#).
2. Release pawls on the steering wheel rear finisher and remove.
3. Remove screws (A) and steering switches (1) from steering wheel (2).



### INSTALLATION

Installation is in the reverse order of removal.

## FRONT TWEETER

### Removal and Installation

INFOID:000000010435743

#### REMOVAL

1. Remove defroster grille. Refer to [IP-12. "Exploded View"](#).
2. Remove bolts and pull out the front tweeter.
3. Disconnect the harness connector from the front tweeter and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# FRONT DOOR SPEAKER

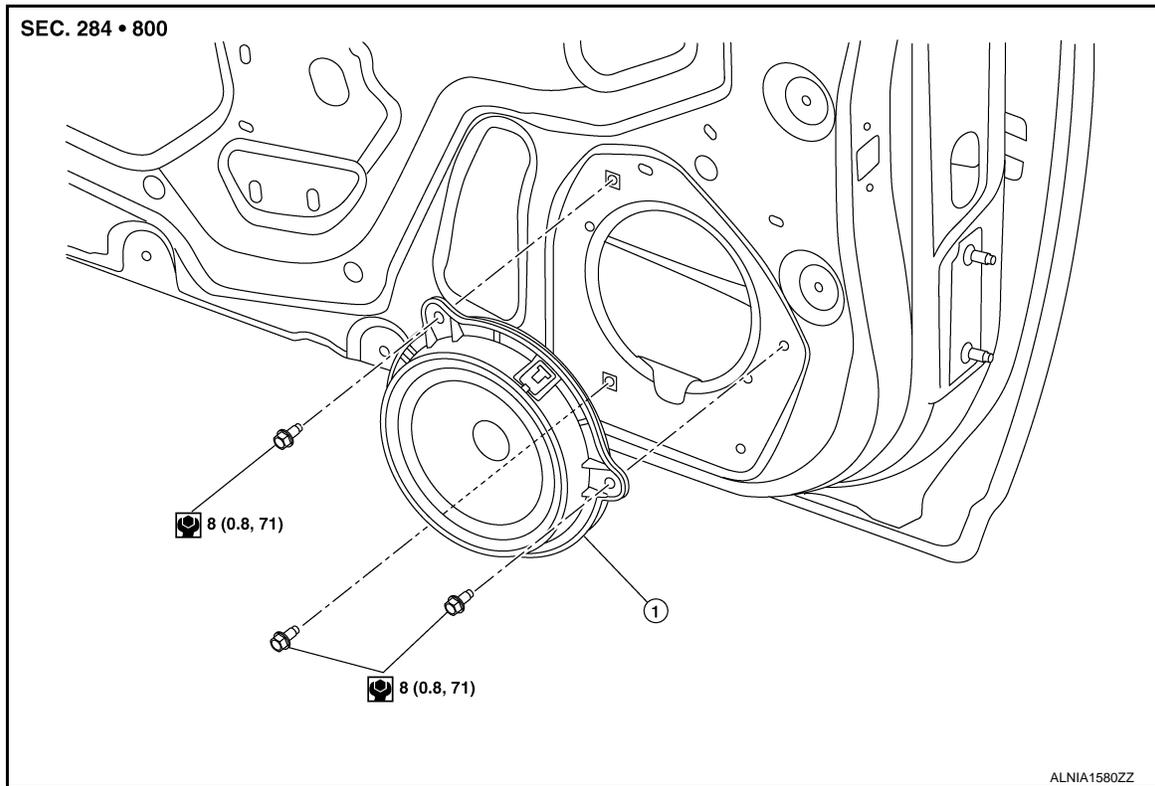
< REMOVAL AND INSTALLATION >

[NAVIGATION]

## FRONT DOOR SPEAKER

### Exploded View

INFOID:000000010435744



1. Front door speaker

### Removal and Installation

INFOID:000000010435745

#### REMOVAL

1. Remove front door finisher. Refer to [INT-12. "FRONT DOOR FINISHER : Exploded View"](#).
2. Remove front door speaker bolts, then pull out front door speaker.
3. Disconnect the harness connector from front door speaker and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

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AV

# REAR DOOR SPEAKER

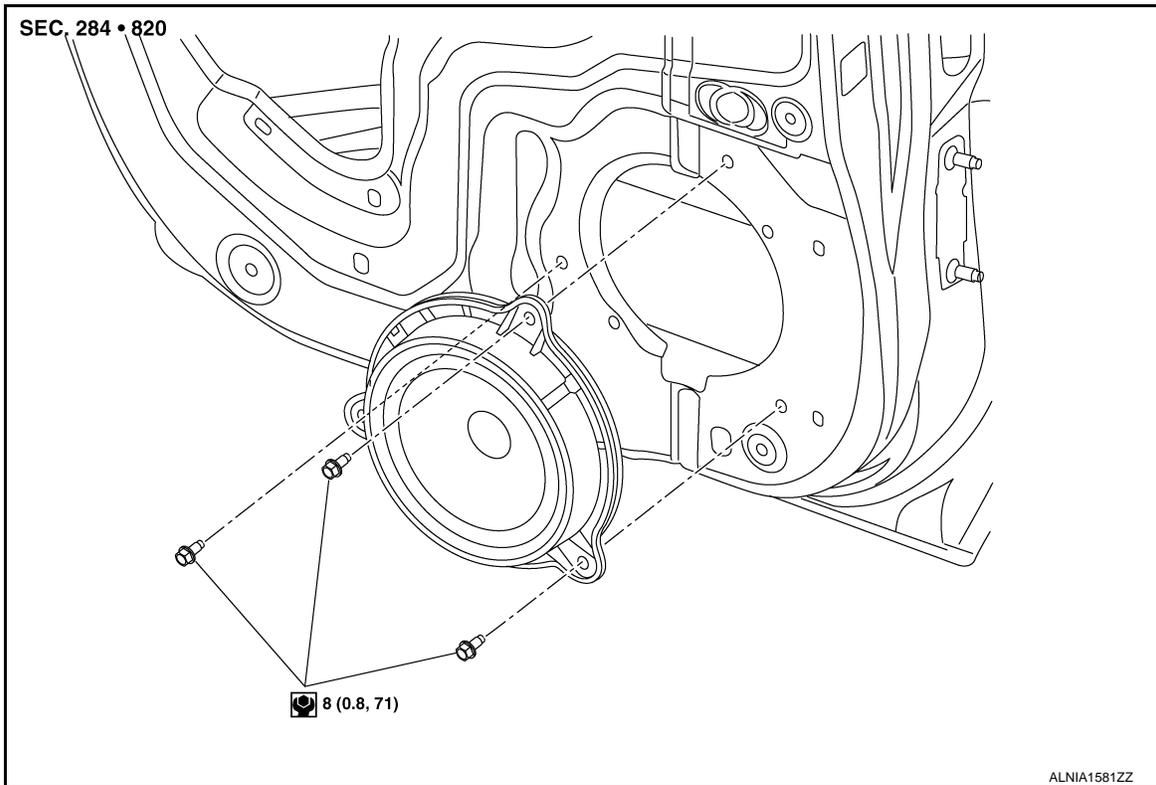
< REMOVAL AND INSTALLATION >

[NAVIGATION]

## REAR DOOR SPEAKER

Exploded View

INFOID:000000010435746



1. Rear door speaker

### Removal and Installation

INFOID:000000010435747

#### REMOVAL

1. Remove rear door finisher. Refer to [INT-15. "REAR DOOR FINISHER : Exploded View"](#).
2. Remove rear door speaker bolts, then pull out rear door speaker.
3. Disconnect the harness connector from the rear door speaker and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# USB INTERFACE AND AUX IN JACK

< REMOVAL AND INSTALLATION >

[NAVIGATION]

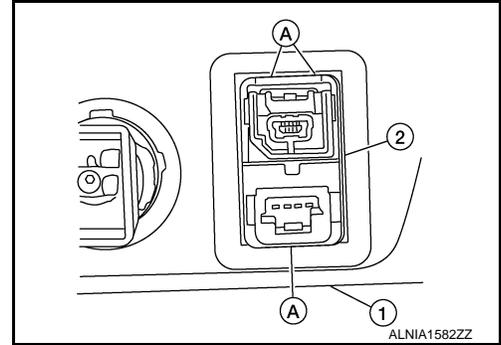
## USB INTERFACE AND AUX IN JACK

### Removal and Installation

INFOID:000000010435748

#### REMOVAL

1. Remove center console. Refer to [IP-18, "Exploded View"](#).
2. Release the pawls (A) on the back of USB interface and AUX in jack (2).



#### INSTALLATION

Installation is in the reverse order of removal.

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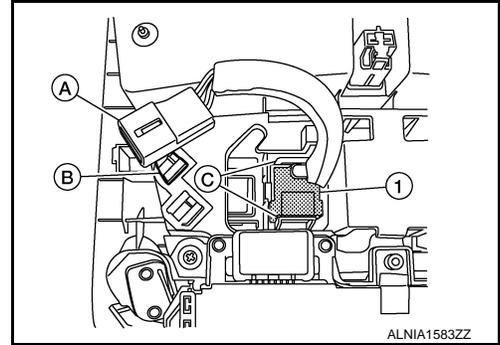
## MICROPHONE

### Removal and Installation

INFOID:000000010435749

#### REMOVAL

1. Remove the map lamp assembly. Refer to [INT-24, "Exploded View"](#).
2. Release harness connector (A) by sliding rearward to remove from the pawl (B).
3. Release pawls (C) and remove the microphone (1) from the front room/map lamp assembly.



#### INSTALLATION

Installation is in the reverse order of removal.

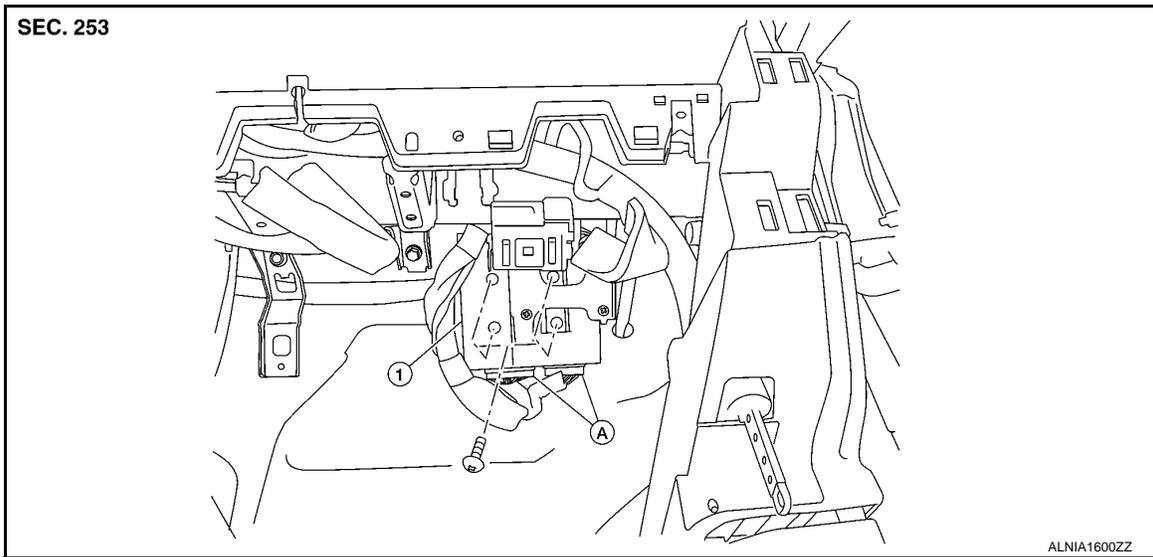
# AROUND VIEW MONITOR CONTROL UNIT

< REMOVAL AND INSTALLATION >

[NAVIGATION]

## AROUND VIEW MONITOR CONTROL UNIT

### Exploded View



1. Around view monitor control unit A. Harness connector

### Removal and Installation

INFOID:000000010435751

#### REMOVAL

##### **CAUTION:**

Before replacing around view monitor control unit, save or print current vehicle specification with CONSULT configuration before replacement. Refer to [AV-177, "ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Work Procedure"](#).

1. Remove glove box assembly. Refer to [IP-12, "Exploded View"](#).
2. Remove around view monitor control unit screws.
3. Disconnect the harness connector from the around view monitor control unit and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

##### **CAUTION:**

- Replace the around view monitor control unit if it has been dropped or sustained an impact.
- When replacing around view monitor control unit, you must perform "After Replace ECU" with CONSULT. Refer to [AV-177, "ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Work Procedure"](#).

##### **NOTE:**

Perform camera image calibration. Refer to [AV-181, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

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# FRONT CAMERA

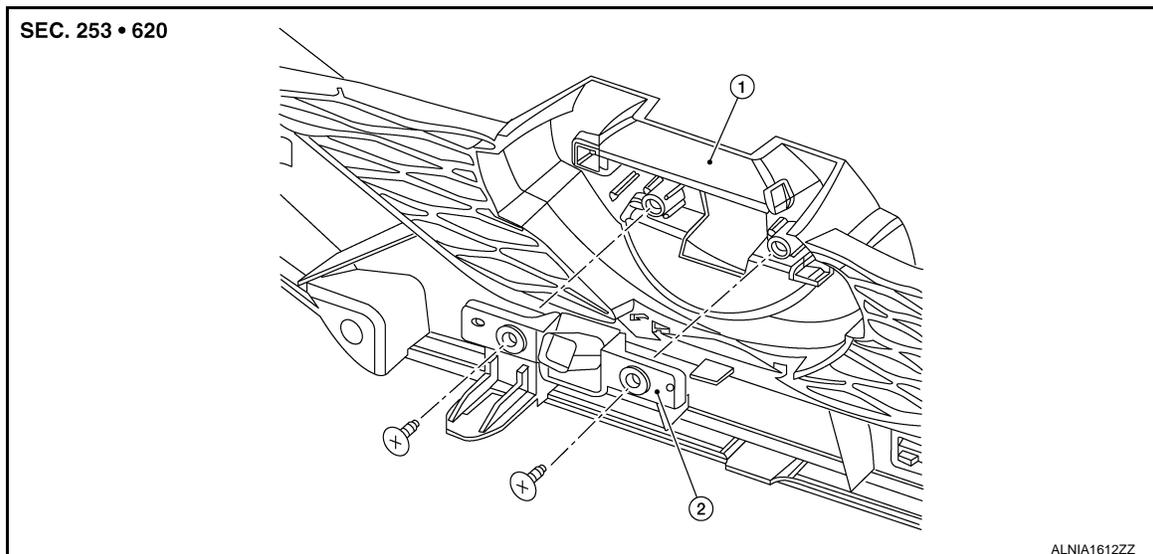
< REMOVAL AND INSTALLATION >

[NAVIGATION]

## FRONT CAMERA

Exploded View

INFOID:000000010435752



1. Front grille

2. Front camera

## Removal and Installation

INFOID:000000010435753

### REMOVAL

1. Remove the front grille. Refer to [EXT-25, "Exploded View"](#).
2. Remove screws and front camera.

### INSTALLATION

Installation is in the reverse order of removal.

#### **NOTE:**

Perform camera image calibration. Refer to [AV-181, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

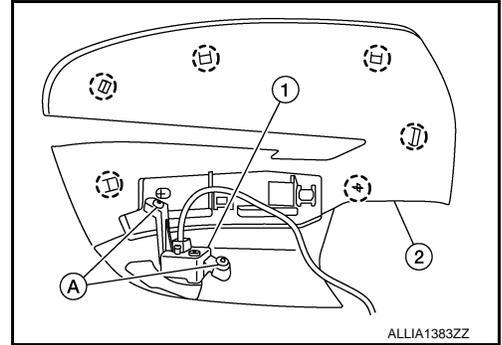
## SIDE CAMERA

### Removal and Installation

INFOID:000000010435754

#### REMOVAL

1. Remove door mirror rear finisher (2). Refer to [MIR-31](#), "[Exploded View](#)".
2. Remove screws (A) and side camera (1).  
○: Pawl



#### INSTALLATION

Installation is in the reverse order of removal.

#### **CAUTION:**

Perform camera image calibration (if equipped with around view camera). Refer to [AV-180](#), "[CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Description](#)".

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## REAR VIEW CAMERA

< REMOVAL AND INSTALLATION >

[NAVIGATION]

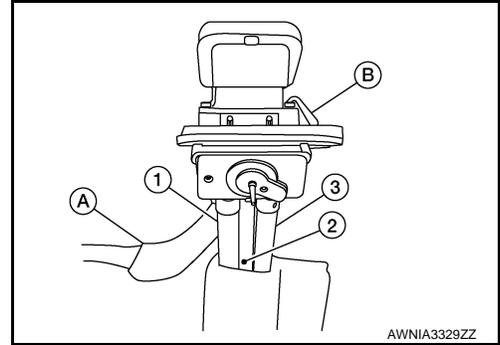
### REAR VIEW CAMERA

#### Removal and Installation

INFOID:000000010435755

#### REMOVAL

1. Remove the back door outer finisher. Refer to [EXT-45, "Exploded View"](#).
2. Disconnect washer tubes (1,3) and air tube (2) (if equipped).
3. Release pawl (B), disconnect harness connector (A) from rear view camera and remove.



#### INSTALLATION

Installation is in the reverse order of removal.

## GPS ANTENNA

### Removal and Installation

INFOID:000000010435756

#### REMOVAL

1. Remove instrument panel. Refer to [IP-12. "Exploded View"](#).
2. Remove screw and the GPS antenna.

#### INSTALLATION

Installation is in the reverse order of removal.

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## AUDIO ANTENNA

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### Removal and Installation

INFOID:000000010435757

#### REMOVAL

1. Remove the luggage side upper finisher (RH). Refer to [INT-28, "Exploded View"](#).
2. Partially lower headlining (rear). Refer to [INT-24, "Exploded View"](#).
3. Disconnect harness connectors from antenna feeder.
4. Remove nut from audio antenna and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

**Audio antenna nut : 6.5 N·m (0.66 kg·m, 58 in-lb)**

#### **CAUTION:**

If the audio antenna nut is not properly tightened, lower sensitivity of the antenna may be experienced. If the nut is over tightened, this will deform the roof panel.

# ANTENNA FEEDER

< REMOVAL AND INSTALLATION >

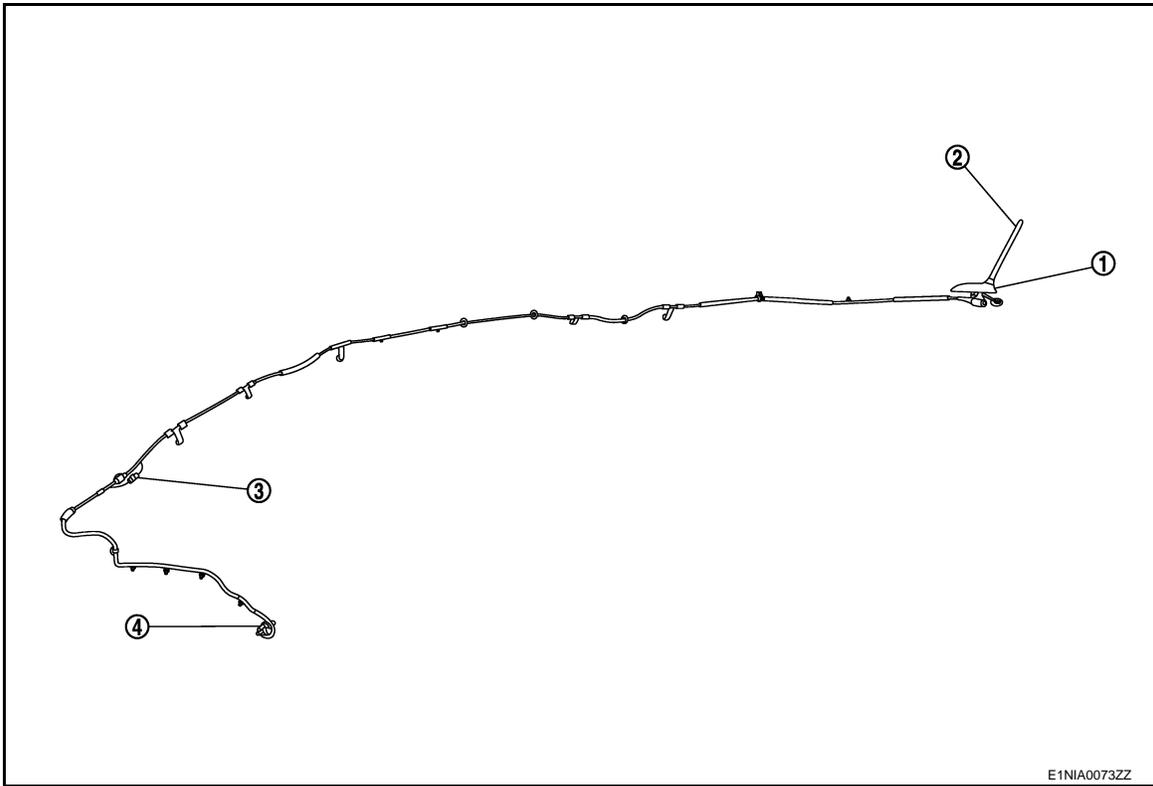
[NAVIGATION]

## ANTENNA FEEDER

### Feeder Layout

INFOID:000000010435758

### ANTENNA FEEDER LAYOUT



1. Antenna base (antenna amp. and satellite antenna)
2. Rod Antenna
3. M394
4. M399

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