

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:0000000011150067

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

Precaution for Trouble Diagnosis

INFOID:0000000011150068

AV COMMUNICATION SYSTEM

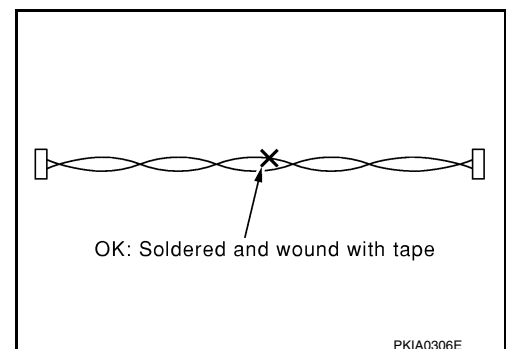
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:0000000011150069

AV COMMUNICATION SYSTEM

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

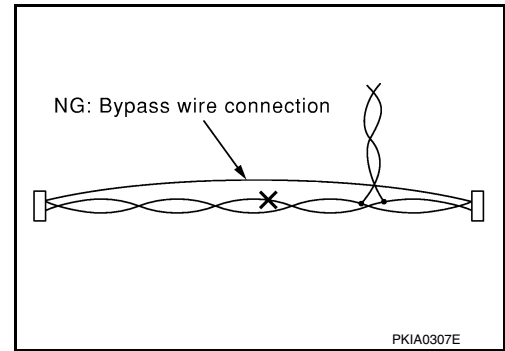


PRECAUTIONS

< PRECAUTION >

[BASE AUDIO]

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



Precaution for Work

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- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
 - Water soluble dirt:
 - Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
 - Then rub with a soft, dry cloth.
 - Oily dirt:
 - Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
 - Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
 - Then rub with a soft, dry cloth.
 - Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
 - For genuine leather seats, use a genuine leather seat cleaner.

PREPARATION

< PREPARATION >

[BASE AUDIO]

PREPARATION

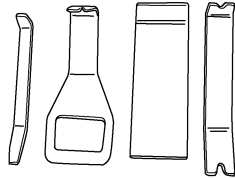
PREPARATION

Special Service Tool

INFOID:0000000011150071

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

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



AWJIA0483ZZ

Commercial Service Tools

INFOID:0000000011150072

Tool name	Description
Power tools	Loosening nuts, screws and bolts



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AV

COMPONENT PARTS

< SYSTEM DESCRIPTION >

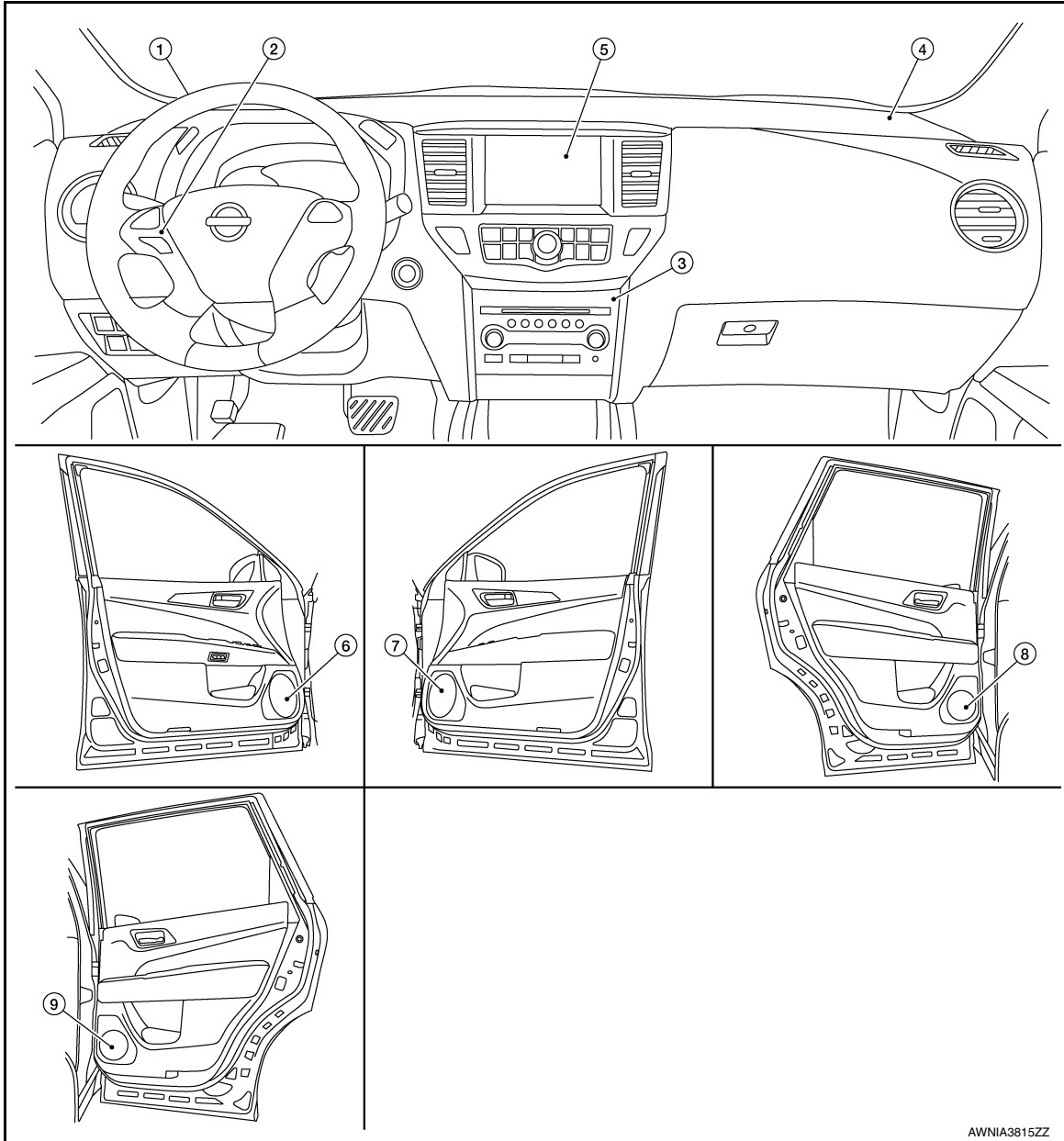
[BASE AUDIO]

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011150073



1. Instrument panel tweeter LH	2. Steering switches	3. Audio unit
4. Instrument panel tweeter RH	5. Display unit	6. Front door speaker LH
7. Front door speaker RH	8. Rear door speaker LH	9. Rear door speaker RH

Component Description

INFOID:0000000011150074

Part name	Description
Audio unit	Controls audio and AUX IN functions.
Display unit	Display image is controlled by audio unit via serial communication.
Front door speaker	Outputs low and mid range sounds.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[BASE AUDIO]

Part name	Description
Instrument panel tweeter	Outputs high range sounds.
Rear door speaker	Outputs low, mid and high range sounds.
Steering switches	• Operations for audio are possible. • Steering switch signal (operation signal) is output to audio unit.
Antenna amp.	• Radio signal received by antenna base is amplified and transmitted to audio unit. • Power (antenna amp. ON signal) is supplied from audio unit.

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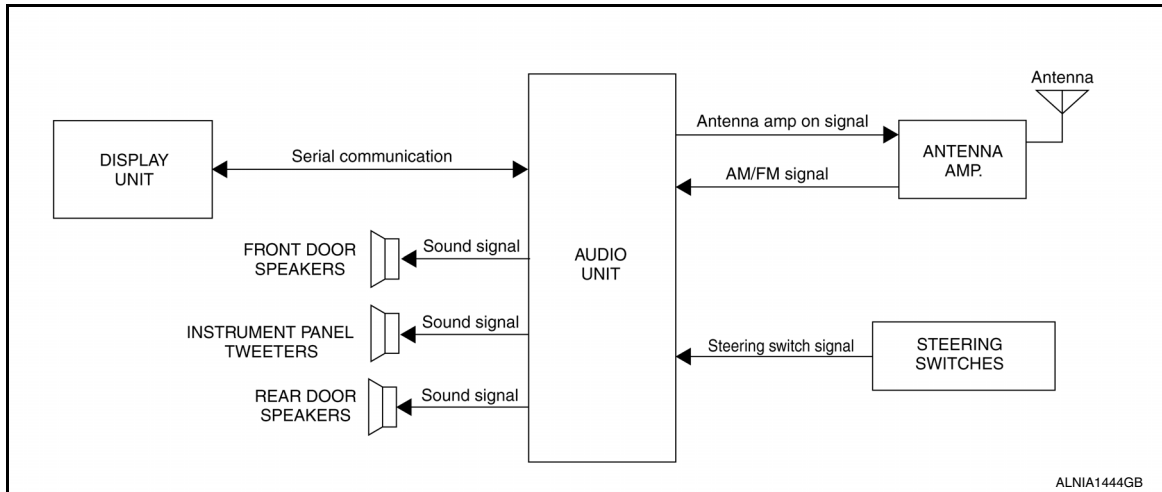
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SYSTEM

AUDIO SYSTEM

AUDIO SYSTEM : System Diagram

INFOID:0000000011150075



AUDIO SYSTEM : System Description

INFOID:0000000011150076

AUDIO SYSTEM

The audio system consists of the following components

- Audio unit
- Display unit
- Steering switches
- Front door speakers
- Instrument panel tweeters
- Rear door speakers
- Antenna

When the audio system is on, radio signals are received by the antenna. The audio unit then sends audio signals to the front door speakers, instrument panel tweeters and rear door speakers.

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

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[BASE AUDIO]

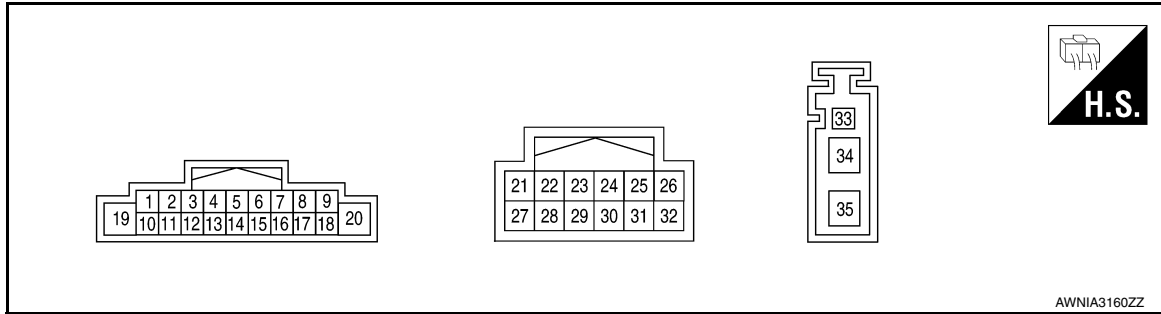
ECU DIAGNOSIS INFORMATION

AUDIO UNIT

Reference Value

INFOID:0000000011150077

TERMINAL LAYOUT



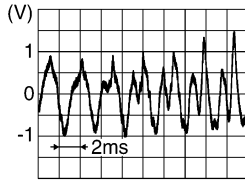
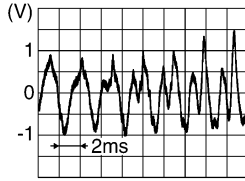
PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
2 (SB)	3 (V)	Sound signal front door speaker and instrument panel tweeter LH	Output	Ignition switch ON	Audio output	SKIB3609E
4 (BR)	5 (Y)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	SKIB3609E
6 (Y)	15 (G)	Steering switch signal A	Input	Ignition switch ON	Press SOURCE switch	0V
					Press Δ switch	1.0V
					Press ∇ switch	2.0V
					Press ENTER switch	4.0V
					Except above	5.0V
7 (P)	Ground	ACC power supply	Input	Ignition switch ACC		Battery voltage
9 (R)	8 (B)	Illumination control signal	Input	Ignition switch ON	Headlamps ON	Battery voltage

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[BASE AUDIO]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
11 (BR)	12 (Y)	Sound signal front door speaker and instrument panel tweeter RH	Output	Ignition switch ON	Audio output	 SKIB3609E
13 (L)	14 (SB)	Sound signal rear door speaker RH	Output	Ignition switch ON	Audio output	 SKIB3609E
16 (BR)	15 (G)	Steering switch signal B	Input	Ignition switch ON	Press  switch	0V
					Press  switch	1.0V
					Press  switch	3.0V
					Press DISP switch	4.0V
					Except above	5.0V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
21 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
22 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
33 (B)	—	Antenna amp. ON signal	Output	Ignition switch ON		Battery voltage
34 (B)	—	AM - FM main	Input	—	—	—
35 (B)	—	FM sub	Input	—	—	—

DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

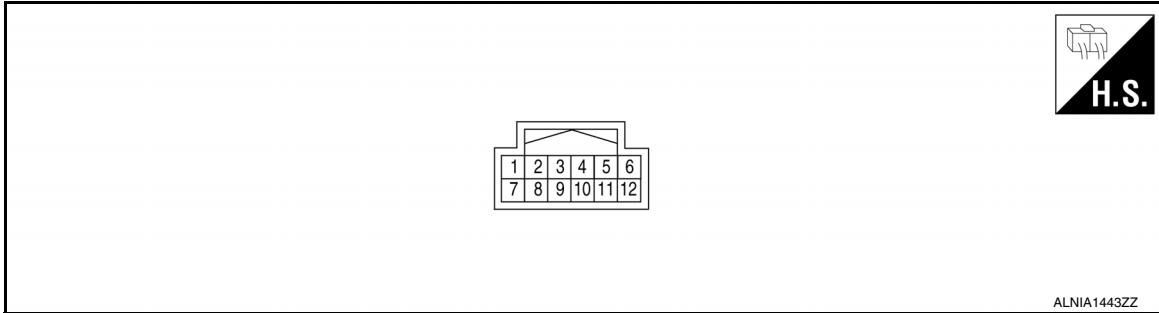
[BASE AUDIO]

DISPLAY UNIT

Reference Value

INFOID:0000000011150078

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
1 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
2 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
3 (B)	Ground	Ground	—	Ignition switch ON	—	0V
8 (P)	Ground	ACC power supply	Input	Ignition switch ACC		Battery voltage
9 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
10 (R)	11 (B)	Illumination control signal	Input	Ignition switch ON	Headlamps ON	Battery voltage

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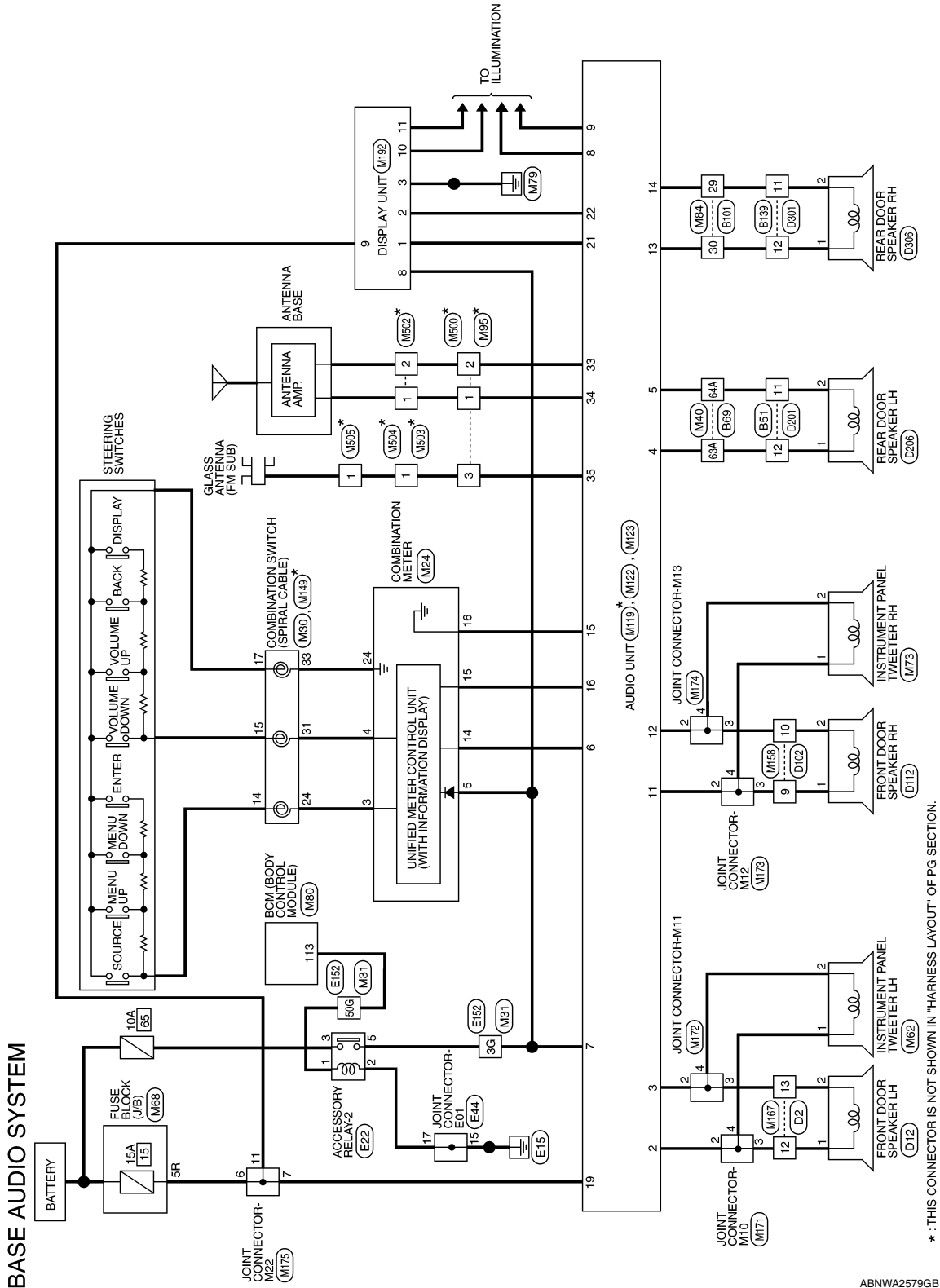
AV

WIRING DIAGRAM

BASE AUDIO

Wiring Diagram

INFOID:0000000011150079



ABNWA2579GB

BASE AUDIO SYSTEM CONNECTORS

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT1
4	BG	STRG SW INPUT 2
5	P	ACC

Terminal No.	Color of Wire	Signal Name
14	Y	STRG SW OUTPUT1 (WITH BASE AUDIO)
15	BR	STRG SW OUTPUT2 (WITH BASE AUDIO)
16	G	STRG SW OUTPUT GND (WITH BASE AUDIO)
24	R	STRG SW GND

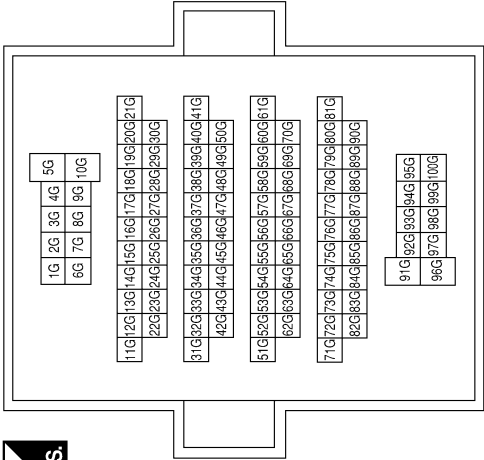


25	24	31	32	33

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

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

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



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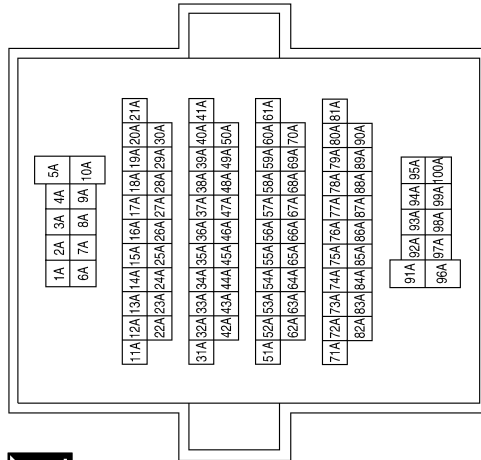
Connector No.	M62
Connector Name	INSTRUMENT PANEL TWEETER LH
Connector Color	BRWN



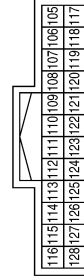
Terminal No.	Color of Wire	Signal Name
1	SB	– (WITHOUT BOSE AUDIO SYSTEM)
2	V	– (WITHOUT BOSE AUDIO SYSTEM)

Terminal No.	Color of Wire	Signal Name
63A	BR	–
64A	Y	–

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



Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



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

Connector No.	M73
Connector Name	INSTRUMENT PANEL TWEETER RH
Connector Color	BROWN



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

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
5R	Y	–

ABNIA4760GB

Connector No.	M119
Connector Name	AUDIO UNIT
Connector Color	GRAY



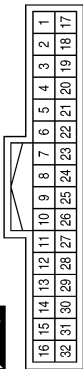
Terminal No.	Color of Wire	Signal Name
33	B	ANT +B
34	B	ANT MAIN
35	B	ANT SUB

Connector No.	M95
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

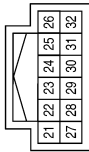
Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
29	SB	-
30	L	-

Terminal No.	Color of Wire	Signal Name
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-

Connector No.	M122
Connector Name	AUDIO UNIT
Connector Color	WHITE



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

ABNIA4761GB

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BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	M149
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



20	19	18	17	16	15	14	13

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

Connector No.	M123
Connector Name	AUDIO UNIT
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10

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

Connector No.	M171
Connector Name	JOINT CONNECTOR-M10
Connector Color	WHITE



4	3	2	1

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4

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

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

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

ABNIA7123GB

Connector No.	M174
Connector Name	JOINT CONNECTOR-M13
Connector Color	WHITE



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

Connector No.	M173
Connector Name	JOINT CONNECTOR-M12
Connector Color	WHITE



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

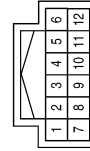
Connector No.	M172
Connector Name	JOINT CONNECTOR-M11
Connector Color	WHITE



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

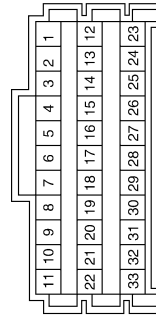
Terminal No.	Color of Wire	Signal Name
8	P	ACC
9	Y	(+) B
10	R	ILL+
11	B	ILL-
12	-	-

Connector No.	M192
Connector Name	DISPLAY UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	M CAN-L
2	SB	M CAN-H
3	B	GND
4	-	-
5	-	-
6	-	-
7	-	-

Connector No.	M175
Connector Name	JOINT CONNECTOR-M22
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	Y	-
7	Y	-
11	Y	-

ABNIA4763GB

BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	M503
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M502
Connector Name	ANTENNA BASE
Connector Color	GRAY



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

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



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

Connector No.	E22
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE



Connector No.	M505
Connector Name	GLASS ANTENNA (FM SUB)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	G	–
2	B	–
3	R	–
5	P	–

Connector No.	M504
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	–

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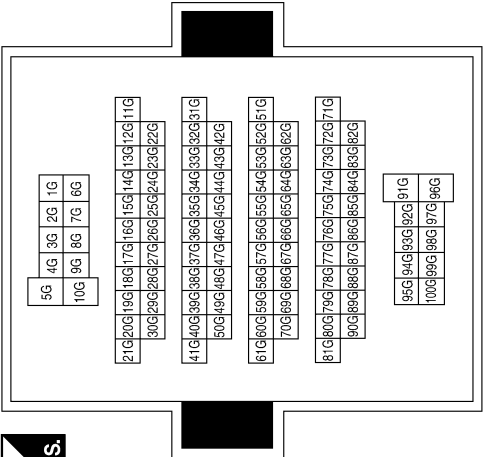
Connector No.	B51
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

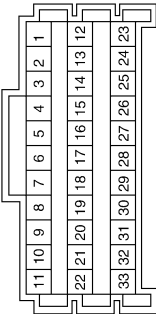
Terminal No.	Color of Wire	Signal Name
11	R	—
12	P	—

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



Terminal No.	Color of Wire	Signal Name
3G	P	—
50G	G	—

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	GR	—
17	B	—

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ABNIA4764GB

BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

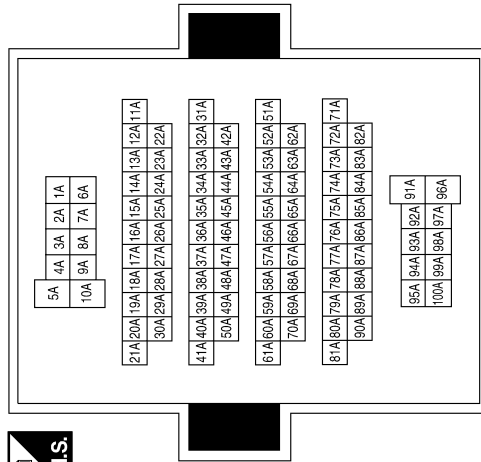


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
29	SB	—
30	LG	—

Terminal No.	Color of Wire	Signal Name
63A	P	—
64A	R	—

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



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



2	1

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



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

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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

Terminal No.	Color of Wire	Signal Name
12	G	—
13	W	—

Terminal No.	Color of Wire	Signal Name
11	SB	-(WITHOUT BOSE AUDIO SYSTEM)
12	LG	-(WITHOUT BOSE AUDIO SYSTEM)

ABNIA4765GB

BASE AUDIO

< WIRING DIAGRAM >

[BASE AUDIO]

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

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



Terminal No.	Color of Wire	Signal Name
11	Y	—
12	LG	—

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

2	1



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

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

4	3	2	1
10	9	8	7
6	5		



Terminal No.	Color of Wire	Signal Name
9	G	—
10	W	—

Connector No.	D306
Connector Name	REAR DOOR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

2	1



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

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

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



Terminal No.	Color of Wire	Signal Name
11	G	—
12	W	—

Connector No.	D206
Connector Name	REAR DOOR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

2	1



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

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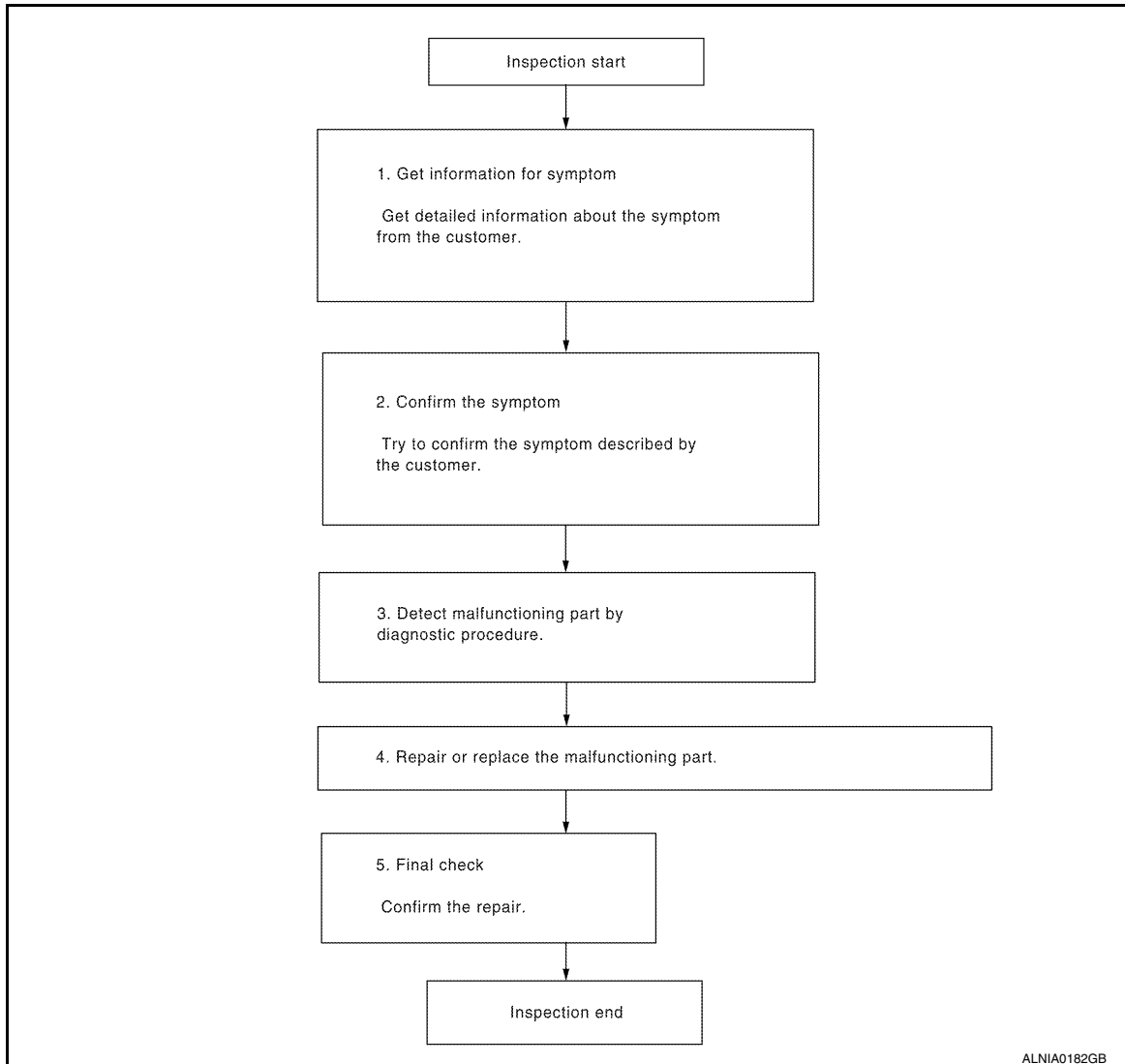
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000011150080

OVERALL SEQUENCE



DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2

2.CONFIRM THE SYMPTOM

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

>> GO TO 3

3.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BASE AUDIO]

Is malfunctioning part detected?

YES >> GO TO 4

NO >> GO TO 2

4.REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 5

5.FINAL CHECK

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

Has the symptom been repaired?

YES >> Inspection End.

NO >> GO TO 2

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

INFOID:0000000011150081

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

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
19	Battery power supply	15 (15A)
7	ACC power supply	65 (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 audio unit connector M123.
3. Check voltage between audio unit connector and ground.

Audio unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M123	19	—	Ignition switch: OFF	Battery voltage
	7		Ignition switch: ACC	

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

DISPLAY UNIT**DISPLAY UNIT : Diagnosis Procedure**

INFOID:0000000011150082

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

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
9	Battery power supply	15 (15A)
8	ACC power supply	65 (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.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

- 2. Disconnect display unit connector M192.
- 3. Check voltage between display unit connector and ground.

Display unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M192	9	—	Ignition switch: OFF	Battery voltage
	8		Ignition switch: ACC	

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 display unit connector and ground.

Display unit		Ground	Continuity
Connector	Terminal		
M192	3	—	Yes

Is the inspection result normal?

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

AV

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FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000011150083

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

1.CONNECTOR CHECK

Check the audio unit and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

2.CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M123 and suspect front door speaker connector.
2. Check continuity between audio unit connector M123 and suspect front door speaker connector.

Audio unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M123	2	D12 (LH)	1	Yes
	3		2	
	11	D112 (RH)	1	
	12		2	

3. Check continuity between audio unit connector M123 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M123	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

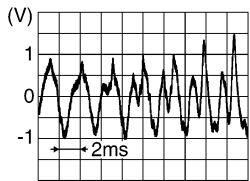
1. Connect audio unit connector M123 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check the signal between the terminals of audio unit connector M123.

Audio unit connector M123		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

2	3	Audio signal output	
11	12		

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-47. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-43. "Removal and Installation"](#).

AV

INSTRUMENT PANEL SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

INSTRUMENT PANEL SPEAKER/TWEETER

Diagnosis Procedure

INFOID:0000000011150084

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

1.CONNECTOR CHECK

Check the audio unit and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

2.CHECK INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M123 and suspect instrument panel tweeter connector.
2. Check continuity between audio unit connector M123 and suspect instrument panel tweeter connector.

Audio unit		Instrument panel tweeter		Continuity
Connector	Terminal	Connector	Terminal	
M123	2	M62 (LH)	1	Yes
	3		2	
	11	M73 (RH)	1	
	12		2	

3. Check continuity between audio unit connector M123 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M123	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

3.CHECK INSTRUMENT PANEL TWEETER SIGNAL

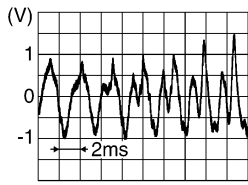
1. Connect audio unit connector M123 and suspect instrument panel tweeter connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check the signal between the terminals of audio unit connector M123.

Audio unit connector M123		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

INSTRUMENT PANEL SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

2	3	Audio signal output	 SKIB3609E
11	12		

Is the inspection result normal?

- YES >> Replace instrument panel tweeter. Refer to [AV-48. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-43. "Removal and Installation"](#).

AV

REAR DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000011150085

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

1.CONNECTOR CHECK

Check the audio unit and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the terminals or connectors.

2.CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect audio unit connector M123 and suspect rear door speaker connector.
2. Check continuity between audio unit connector M123 and suspect rear door speaker connector.

Audio unit		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M123	4	D206 (LH)	1	Yes
	5		2	
	13	D306 (RH)	1	
	14		2	

3. Check continuity between audio unit connector M123 and ground.

Audio unit		Ground	Continuity
Connector	Terminal		
M123	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

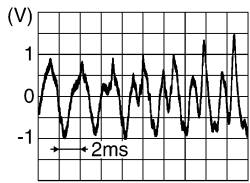
1. Connect audio unit connector M123 and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push audio unit POWER switch.
4. Check the signal between the terminals of audio unit connector M123.

Audio unit connector M123		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

4	5	Audio signal output	
13	14		

Is the inspection result normal?

- YES >> Replace rear door speaker. Refer to [AV-49. "Removal and Installation"](#).
- NO >> Replace audio unit. Refer to [AV-43. "Removal and Installation"](#).

AV

STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

STEERING SWITCH

Diagnosis Procedure

INFOID:0000000011150086

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

1. CHECK STEERING SWITCHES RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M149.
3. Check the resistance between the terminals of combination switch connector M149.

Combination switch connector M149		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress △ switch.	121
		Depress ▽ switch.	321
		Depress ENTER switch.	2023
15		Depress −  switch.	1
		Depress  + switch.	121
		Depress  switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-45. "Removal and Installation"](#).

2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

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

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

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

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK COMBINATION SWITCH

STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[BASE AUDIO]

Check continuity between combination switch connectors M30 and M149.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M149	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

YES >> GO TO 4.

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

4.CHECK HARNESS BETWEEN COMBINATION METER AND AUDIO UNIT

1. Disconnect audio unit connector M123.
2. Check continuity between combination meter connector M24 and audio unit connector M123.

Combination meter		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	14	M123	6	Yes
	15		16	
	16		15	

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

Combination meter		Ground	Continuity
Connector	Terminal		
M24	14	—	No
	15		
	16		

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK AUDIO UNIT VOLTAGE

1. Connect combination meter connector M24 and audio unit connector M123.
2. Turn ignition switch ON.
3. Check the voltage between the terminals of audio unit connector M123.

Audio unit M123		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
6	15	5.0 V
16		

Is the inspection result normal?

YES >> Replace audio unit. Refer to [AV-43, "Removal and Installation"](#).

NO >> Replace combination meter. Refer to [MWI-85, "Removal and Installation"](#).

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:0000000011150087

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	Audio unit	Malfunction in audio unit. Refer to AV-43, "Removal and Installation" .
No sound comes out or the level of the sound is low.	No sound from all speakers.	• Speaker circuit shorted to ground. Refer to AV-18, "Wiring Diagram". • Audio unit power supply and ground circuits malfunction. Refer to AV-30, "AUDIO UNIT : Diagnosis Procedure".
	Only a certain speaker (instrument panel tweeter LH, instrument panel tweeter RH, front door speaker LH, front door speaker RH, rear door speaker LH, rear door speaker RH) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. Refer to: - AV-34, "Diagnosis Procedure" (instrument panel tweeter). - AV-32, "Diagnosis Procedure" (front door speaker). - AV-36, "Diagnosis Procedure" (rear door speaker). • Malfunction in speaker. Refer to: - AV-48, "Removal and Installation" (instrument panel tweeter). - AV-47, "Removal and Installation" (front door speaker). - AV-49, "Removal and Installation" (rear door speaker). • Malfunction in audio unit. Refer to AV-43, "Removal and Installation".

AUDIO SYSTEM

< SYMPTOM DIAGNOSIS >

[BASE AUDIO]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Malfunction in audio unit. Refer to AV-43, "Removal and Installation" .
	Noise comes out only from a certain speaker (instrument panel tweeter LH, instrument panel tweeter RH, front door speaker LH, front door speaker RH, rear door speaker LH, rear door speaker RH).	- Poor connector connection of speaker. - Sound signal circuit malfunction between audio unit and speaker. Refer to: AV-34, "Diagnosis Procedure" (instrument panel tweeter). AV-32, "Diagnosis Procedure" (front door speaker). AV-36, "Diagnosis Procedure" (rear door speaker). - Malfunction in speaker. - Poor Installation of speaker (e.g. backlash and looseness). Refer to: AV-48, "Removal and Installation" (instrument panel tweeter). AV-47, "Removal and Installation" (front door speaker). AV-49, "Removal and Installation" (rear door speaker). - Malfunction in audio unit. Refer to AV-43, "Removal and Installation" .
	Noise is mixed with radio only (when the vehicle hits a bump or while driving over bad roads)	Poor connector connection of antenna or antenna feeder. Refer to AV-50, "Location of Antennas" .
No radio reception or poor reception.	- Other audio sounds are normal. - Any radio station cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	- Antenna amp. ON signal circuit malfunction. Refer to AV-15, "Reference Value" . - Poor connector connection of antenna or antenna feeder. Refer to AV-50, "Location of Antennas" .
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.

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NORMAL OPERATING CONDITION

Description

INFOID:0000000011150088

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

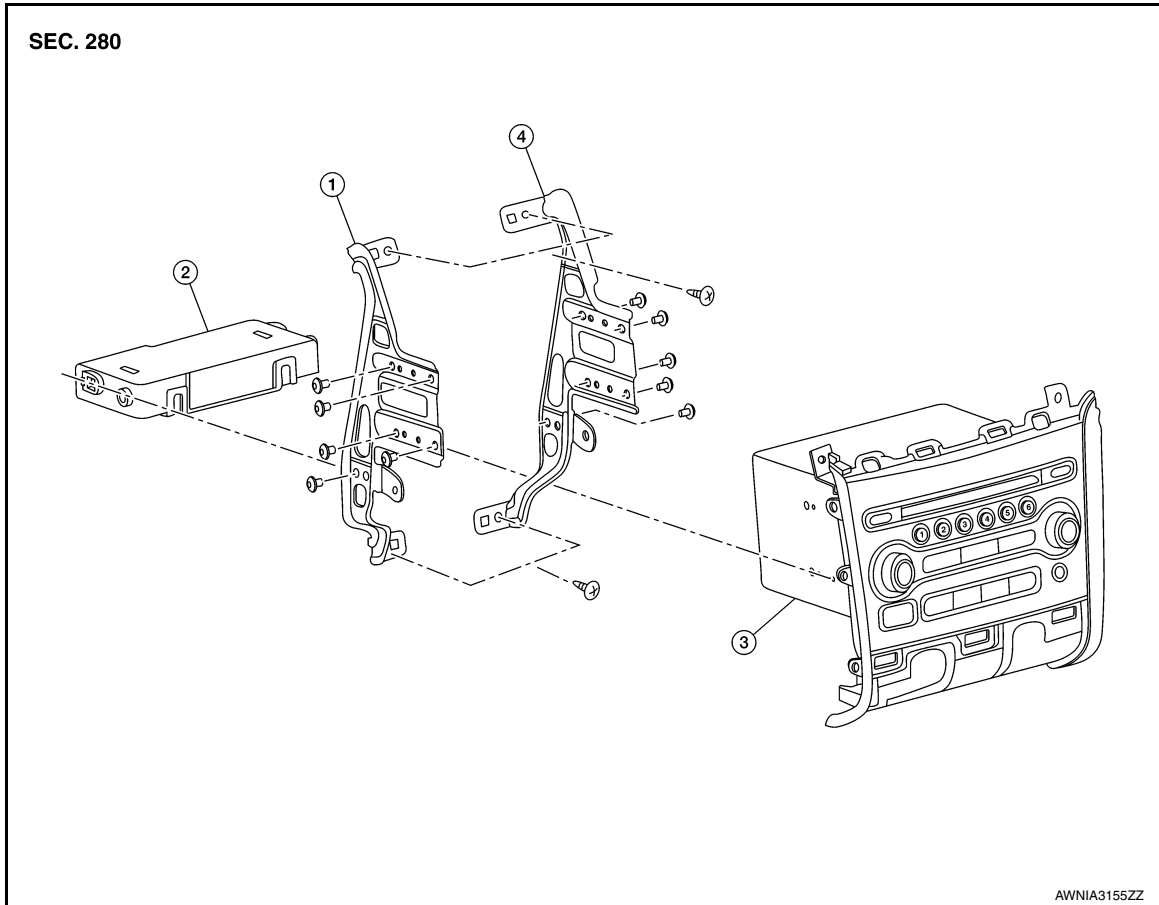
Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	• Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		• Fuel pump condenser
Noise only occurs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

REMOVAL AND INSTALLATION

AUDIO UNIT

Exploded View

INFOID:0000000011150089



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

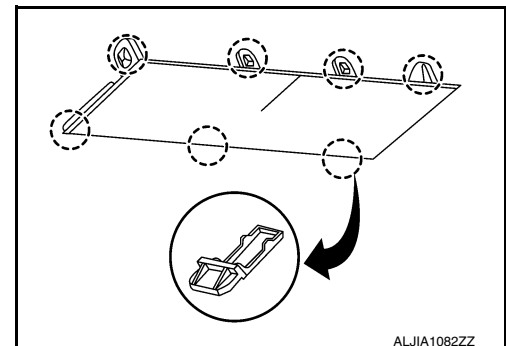
Removal and Installation

INFOID:0000000011150090

REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-95, "Removal and Installation"](#).
2. Remove cluster lid C. Refer to [IP-22, "CLUSTER LID C : Removal and Installation"](#).
3. Release cluster lid C lower pawls using a suitable tool and remove.

○: Pawl



4. Remove the screws, then pull out the audio unit.
5. Disconnect the harness connectors from the audio unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

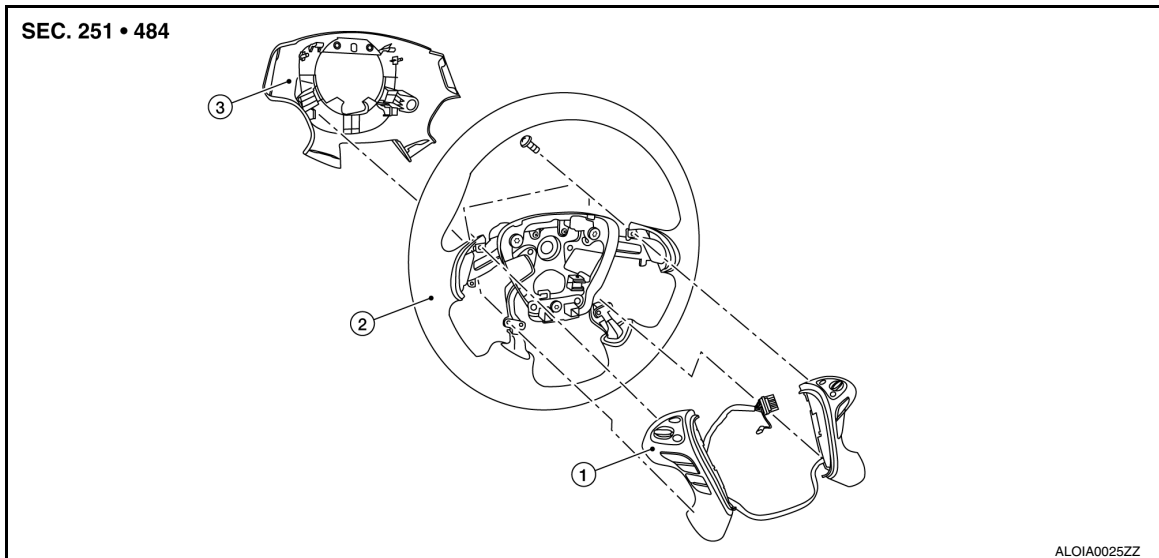
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

STEERING SWITCH

Exploded View

INFOID:0000000011150091



1. Steering switches

2. Steering wheel

3. Steering wheel rear finisher

Removal and Installation

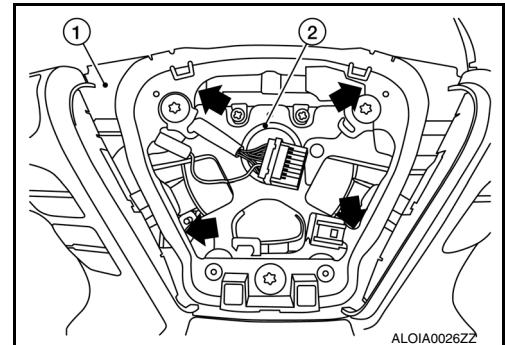
INFOID:0000000011150092

REMOVAL

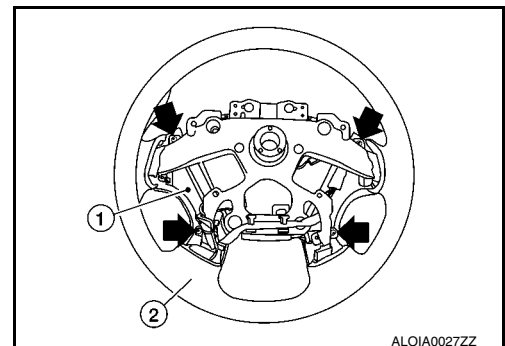
NOTE:

The steering switches are serviced as an assembly.

1. Remove steering wheel. Refer to [ST-45. "Removal and Installation"](#).
2. Release pawls and remove steering wheel rear finisher (1) from steering wheel (2).



3. Remove steering switches screws.
4. Remove steering switches (1) from steering wheel (2).



INSTALLATION

Installation is in the reverse order of removal.

DISPLAY UNIT

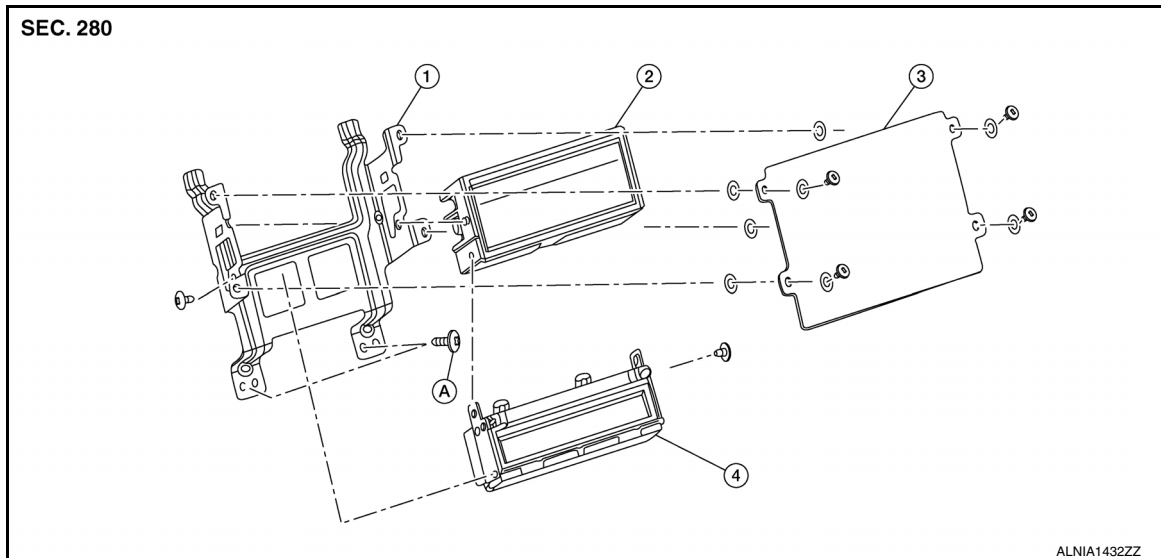
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

DISPLAY UNIT

Exploded View

INFOID:0000000011150093



Removal and Installation

INFOID:0000000011150094

REMOVAL

1. Remove cluster lid D. Refer to [IP-24, "Removal and Installation"](#).
2. Remove the display unit screws, then pull out the display unit and bracket assembly.
3. Disconnect the harness connector from the display unit and remove.
4. Remove the display unit bracket screws, then remove the display unit and A/C display unit from the display unit bracket.

INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

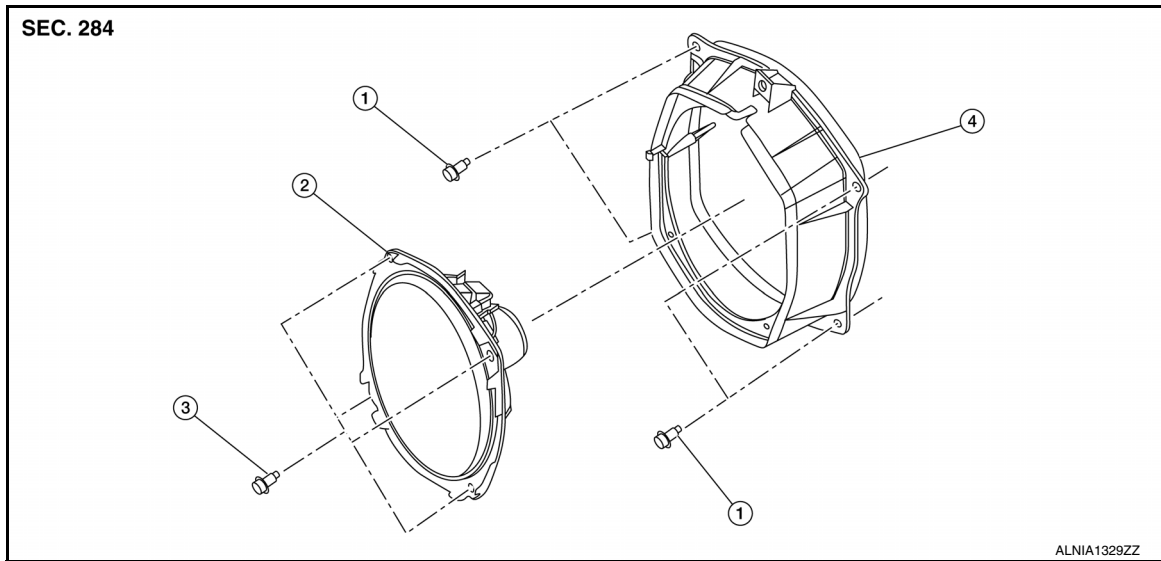
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

FRONT DOOR SPEAKER

Exploded View

INFOID:00000000111150095



1. Speaker bracket bolt	2. Front door speaker	3. Speaker bolt
4. Speaker bracket		

Removal and Installation

INFOID:00000000111150096

REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "Removal and Installation"](#).
2. Remove the front door speaker bolts.
3. Pull out the front door speaker from the speaker bracket.
4. Disconnect the harness connector from front door speaker and remove.
5. Remove the speaker bracket bolts and the speaker bracket from front door (if necessary).

INSTALLATION

Installation is in the reverse order of removal.

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AV

INSTRUMENT PANEL SPEAKER/TWEETER

< REMOVAL AND INSTALLATION >

[BASE AUDIO]

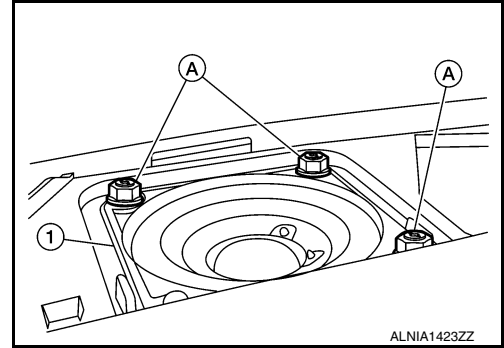
INSTRUMENT PANEL SPEAKER/TWEETER

Removal and Installation

INFOID:0000000011150097

REMOVAL

1. Remove instrument panel tweeter grille. Refer to [IP-14. "Exploded View"](#).
2. Remove the bolts (A), then pull out the instrument panel tweeter (1).
3. Disconnect the harness connector from the instrument panel tweeter (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

REAR DOOR SPEAKER

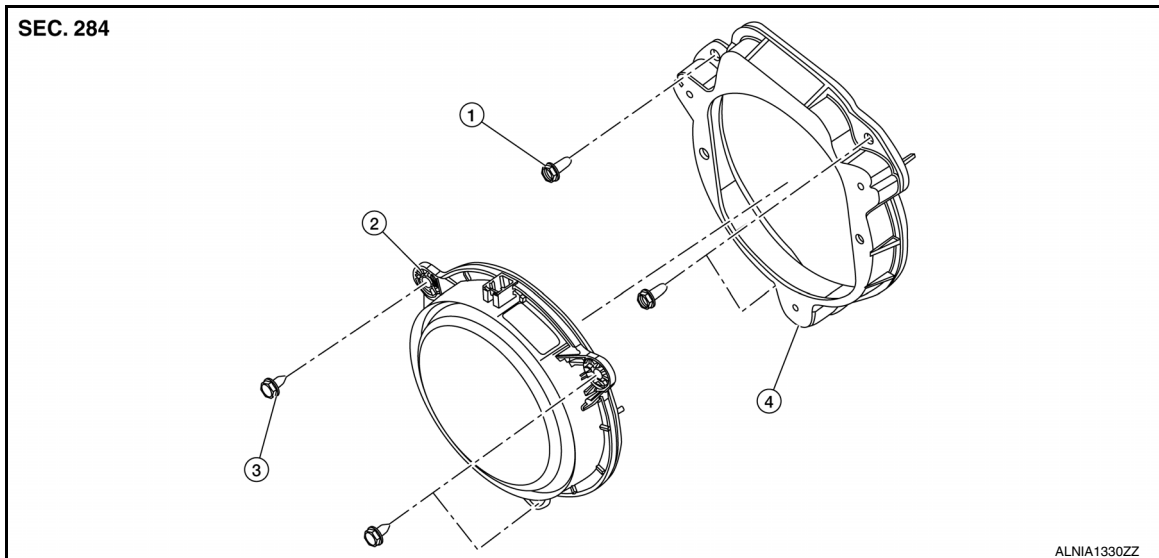
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

REAR DOOR SPEAKER

Exploded View

INFOID:0000000011150098



1. Speaker bracket bolt	2. Rear door speaker	3. Speaker bolt
4. Speaker bracket		

Removal and Installation

INFOID:0000000011150099

REMOVAL

1. Remove the rear door finisher. Refer to [INT-17, "Removal and Installation"](#).
2. Remove the rear door speaker bolts.
3. Disconnect the harness connector from the rear door speaker and remove.
4. Remove the speaker bracket bolts and the speaker bracket from the rear door (if necessary).

INSTALLATION

Installation is in the reverse order of removal.

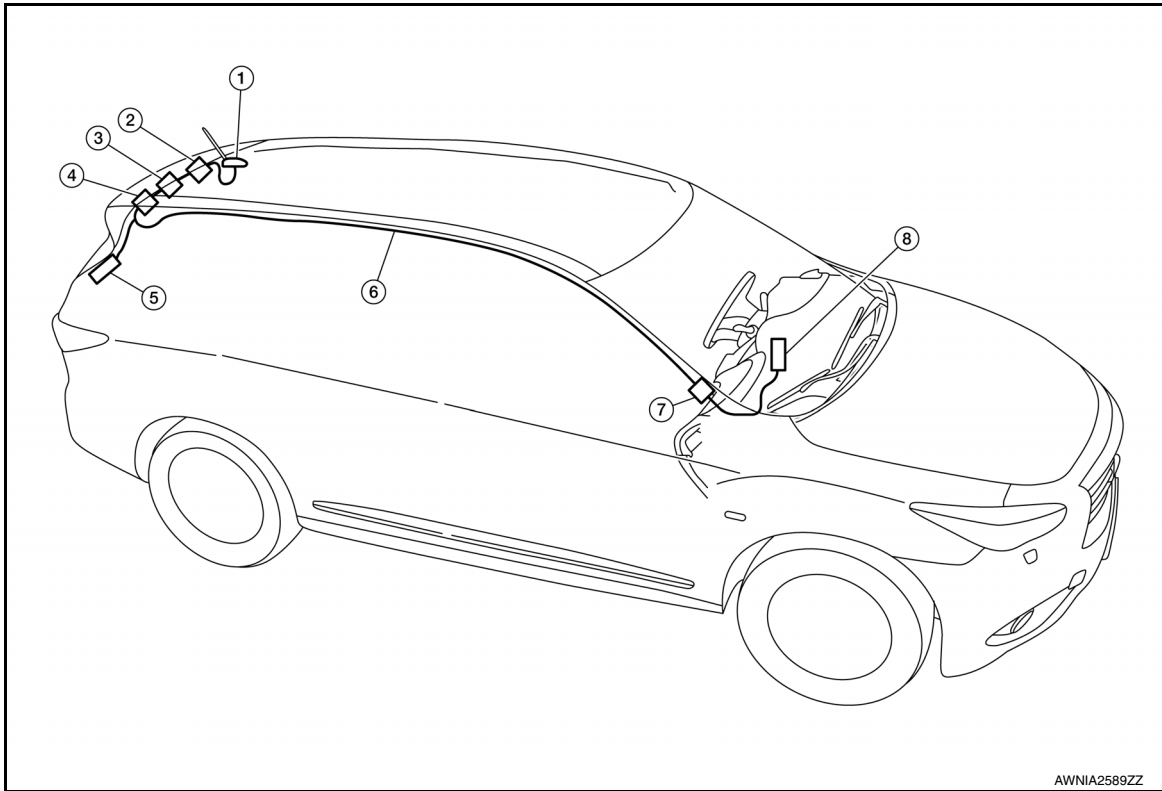
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AV

AUDIO ANTENNA

Location of Antennas

INFOID:0000000011150100



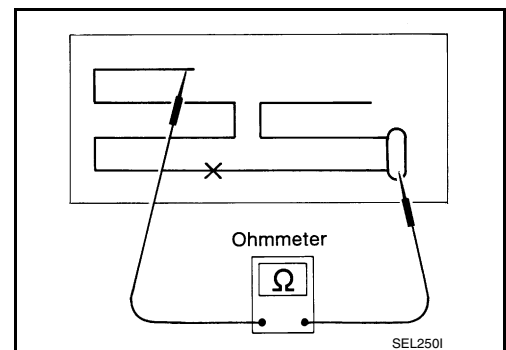
1. Antenna base (antenna and antenna amp)	2. M502	3. M501
4. M503, M504	5. M505	6. Antenna Feeder
7. M95, M500	8. Audio unit M113	

Window Antenna Repair

INFOID:0000000011150101

ELEMENT CHECK

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

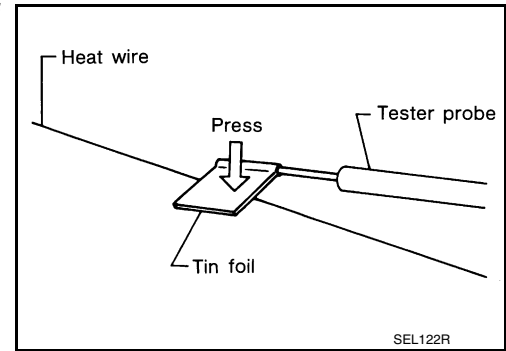


AUDIO ANTENNA

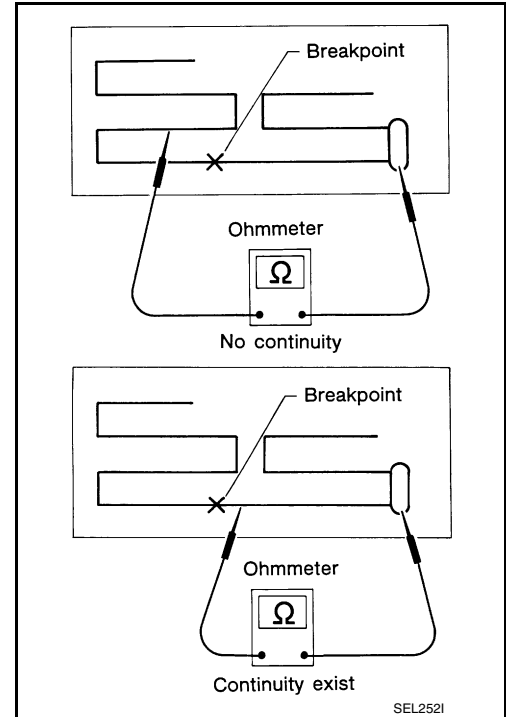
< REMOVAL AND INSTALLATION >

[BASE AUDIO]

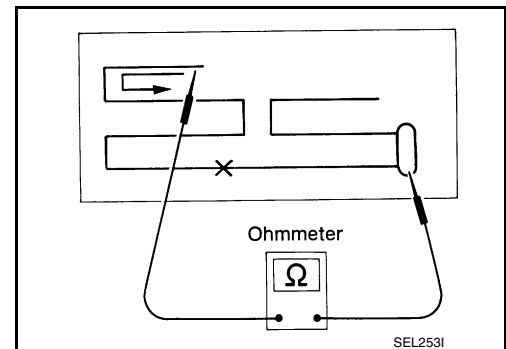
- When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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



PRECAUTION

PRECAUTIONS

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

INFOID:0000000011579207

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

INFOID:0000000011579208

CAUTION:

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF.

NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:0000000011579209

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:0000000011579210

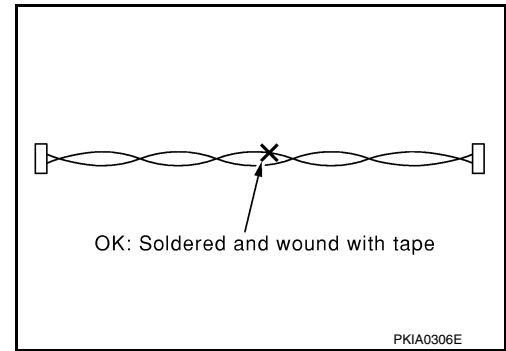
AV COMMUNICATION SYSTEM

PRECAUTIONS

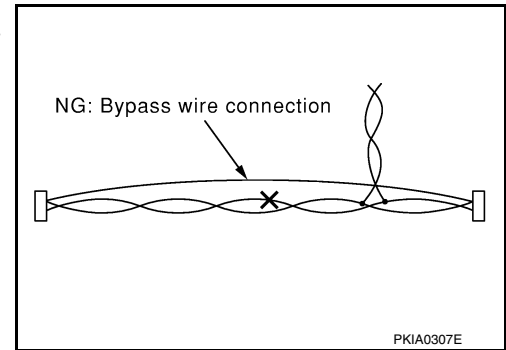
< PRECAUTION >

[MID AUDIO]

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



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



Precaution for Work

INFOID:000000011579211

- 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 >

[MID AUDIO]

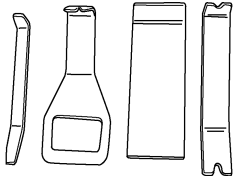
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000011579212

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:0000000011579213

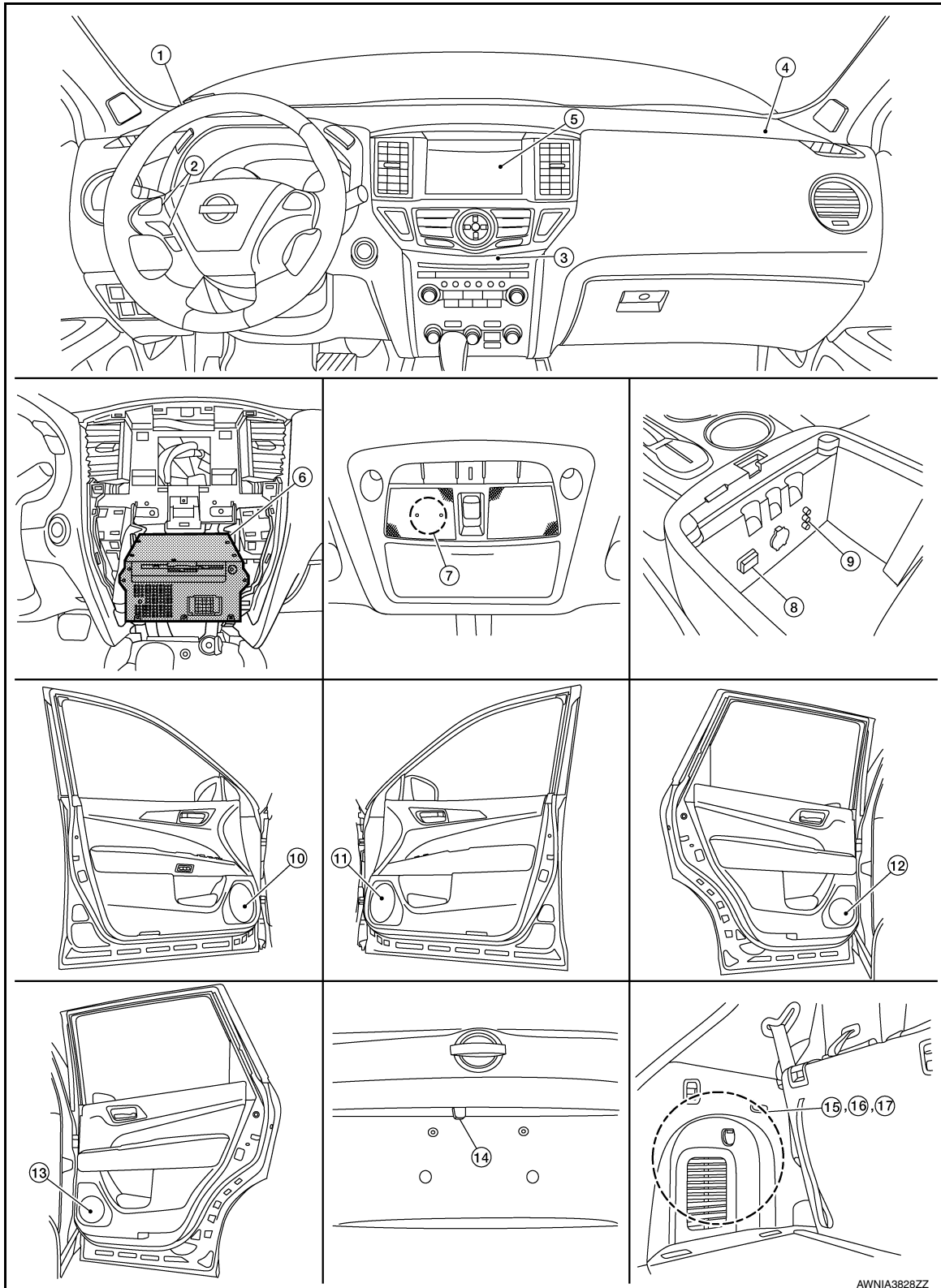
(TechMate No.) Tool name	Description
(—) Power tools  PIIB1407E	Loosening nuts, screws and bolts

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011579214



AWNIA3828ZZ

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[MID AUDIO]

1. Instrument panel tweeter LH	2. Steering switches	3. A/C and AV switch assembly
4. Instrument panel tweeter RH	5. Display unit	6. AV control unit (view with center stack removed)
7. Microphone	8. USB interface	9. Front auxiliary input jacks
10. Front door speaker LH	11. Front door speaker RH	12. Rear door speaker LH
13. Rear door speaker RH	14. Rear view camera	15. Bluetooth® control unit
16. Satellite radio tuner (if equipped)	17. Bluetooth® antenna	

Component Description

INFOID:0000000011579215

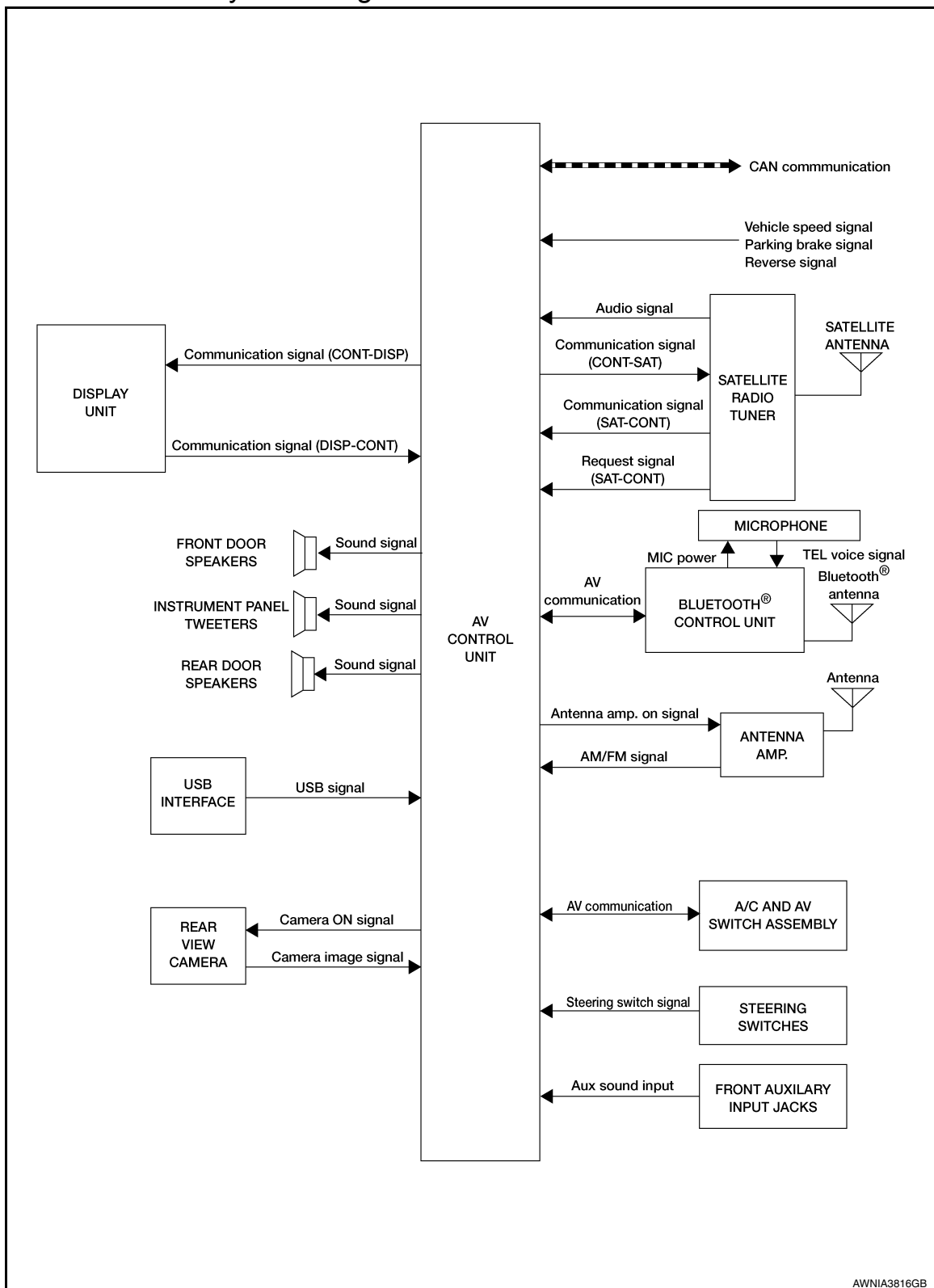
Part name	Description
AV control unit	- Master unit of MULTI AV system. - AV control unit includes audio, USB connection and vehicle status functions. - Connected to MULTI AV system control units via AV communication. - Connected to other vehicle control units via CAN communication to obtain necessary information for vehicle information function. - Inputs signals for driving status recognition (vehicle speed, reverse and parking brake). - TEL voice signal and voice guidance signal are input from Bluetooth® control unit. - Camera image signal is received and transmitted to display unit.
Display unit	- Display image is controlled by AV control unit via serial communication. - Receives power (signal VCC and inverter VCC) from AV control unit. - RGB image signals (RGB image, RGB area and RGB synchronizing) are input from AV control unit. - Composite image signals are input from AV control unit. - Synchronizing signals (HP, VP) are output to AV control unit.
Front door speaker	Outputs low and mid range sounds.
Instrument panel tweeter	Outputs high range sounds.
Rear door speaker	Outputs low, mid and high range sounds.
A/C and AV switch assembly	- Operation panels are equipped with switches for audio and air conditioner operations. - Operation signal is transmitted via AV communication to AV control unit. - Disk eject operation signal is performed via hardware.
Rear view camera	- Camera power supply is input from AV control unit. - Vehicle rear view image is transmitted to display unit via AV control unit.
Steering switches	- Operations for audio and hands-free phone are possible. - Steering switch signal (operation signal) is output to AV control unit.
Microphone	- Used for hands-free phone and voice recognition operation. - Microphone signal is transmitted to Bluetooth® control unit. - Power (Microphone VCC) is supplied from Bluetooth® control unit.
Antenna amp.	- Radio signal received by window antenna is amplified and transmitted to AV control unit. - Power (antenna amp. ON signal) is supplied from AV control unit.
Satellite radio tuner	- Inputs satellite radio signal from satellite radio antenna and outputs sound signal to AV control unit. - Controlled via serial communication (communication signal and request signal) by AV control unit.
Satellite radio antenna	Satellite radio signal is received and transmitted to satellite radio tuner.
Bluetooth® control unit	- Inputs TEL voice signal from Bluetooth® antenna and outputs it to AV control unit. - Controlled via AV communication by AV control unit.
Bluetooth® antenna	Receives TEL voice signal and outputs it to Bluetooth® control unit.
USB connector	USB sound and data input signals are transmitted to AV control unit.

SYSTEM

MULTI AV SYSTEM

MULTI AV SYSTEM : System Diagram

INFOID:0000000011579216



MULTI AV SYSTEM : System Description

INFOID:0000000011579217

AUDIO SYSTEM

The audio system consists of the following components

- AV control unit
- A/C and AV switch assembly
- Display unit
- Steering switches
- Front door speakers
- Instrument panel tweeters
- Rear door speakers
- Antenna

When the audio system is on, radio signals are received by the antenna. The AV control unit then sends audio signals to the front door speakers, instrument panel tweeters and rear door speakers.

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

SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components

- Satellite antenna
- Satellite radio tuner

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

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

HANDS-FREE PHONE SYSTEM

System Operation

NOTE:

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

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

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

Bluetooth® Control Unit

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

Steering Switches

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

The following functions can be performed using the steering switches:

- Initiate self-diagnosis of the Bluetooth® telephone system
- Answer and end telephone calls
- Adjust the volume of calls

Microphone

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

AV Control Unit

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

REAR VIEW CAMERA SYSTEM

When the shift selector is in the R position, the display shows a view to the rear of the vehicle. Lines which indicate the vehicle clearance and distances are also displayed.

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.

A
B
C
D
E
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O
P

AV

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[MID AUDIO]

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:0000000011579218

The AV control unit on board diagnosis includes the following functions:

- A/C and AV switch assembly self diagnosis that checks the ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly.

NOTE:

The hazard switch and disk eject switch are not included in this operation check.

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

Mode		Description
Self Diagnosis		• AV control unit diagnosis. • Diagnoses the connections across system components (between AV control unit and each unit).
Confirmation/ Adjustment	Display Diagnosis	• Color tone check using color spectrum bar display and white display. • Light and shade check by gradation bar display.
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition and reverse.
	Speaker Test	Speaker connection can be confirmed by test tone.
	Error History	• The system malfunction and frequency of past occurrences is displayed. • When malfunctioning item is selected, time and place that the malfunction last occurred are displayed.
	Camera Cont.	• Guiding line position that overlaps rear view camera image can be adjusted. • Configuration stored in the AV control unit can be checked.
	Vehicle CAN Diagnosis	Transmit/receive function of CAN communication can be monitored.
	AV COMM Diagnosis	Communication condition of each unit of Multi AV system can be monitored.
	Delete Unit Connection Log	Erase connection history of unit and error history.
	Initialize Settings	Initializes the AV control unit memory.

Perform CONSULT diagnosis if the AV control unit on board diagnosis does not start, the screen does not display anything, or the A/C and AV switch assembly self diagnosis does not function.

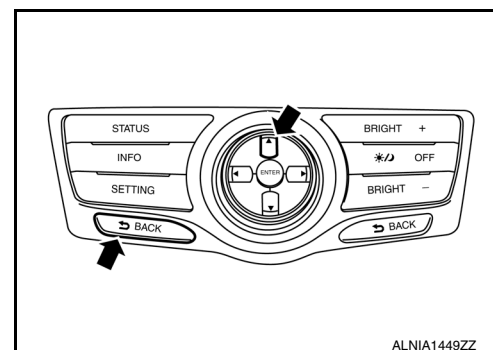
On Board Diagnosis Function

INFOID:0000000011579219

METHOD OF STARTING

A/C and AV Switch Assembly Self Diagnosis

- Press the BACK and UP switches within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more.
- The buzzer sounds, all indicators of the switches illuminate, and the self-diagnosis mode begins.
- The ON position continuity of each switch can be checked by pressing the switch. The buzzer sounds if continuity is present.
- The self diagnosis mode is canceled when the ignition switch is turned OFF.



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AV Control Unit Self Diagnosis

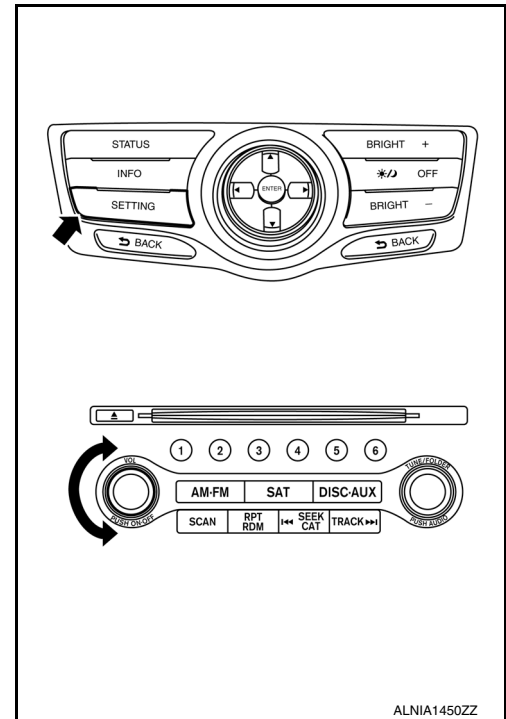
1. Turn the ignition ON.
2. Turn the audio system OFF.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

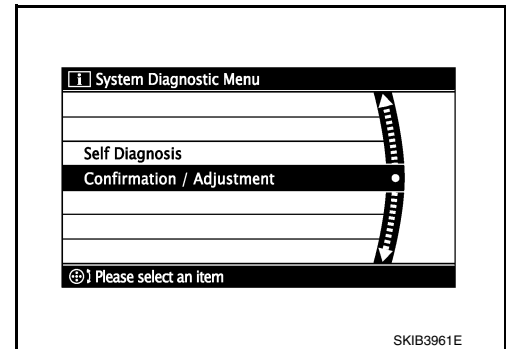
< SYSTEM DESCRIPTION >

[MID AUDIO]

- While pressing the SETTING button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. When self-diagnosis mode begins, a short beep will be heard. Shifting from current screen to previous screen is performed by pressing BACK button.



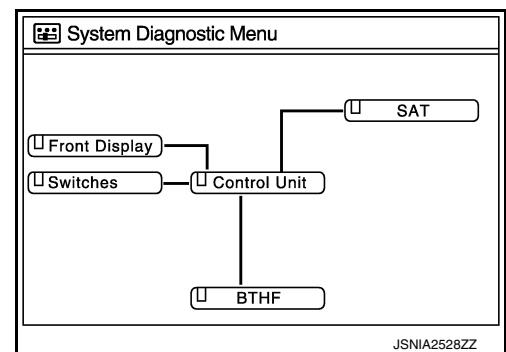
- The trouble diagnosis initial screen is displayed, and Self Diagnosis or Confirmation/Adjustment can be selected.



SELF DIAGNOSIS MODE

AV Control Unit Self Diagnosis

- Select Self Diagnosis.
- Self diagnosis screen is displayed. The bar graph visible in center of screen indicates progress of self diagnosis.
- Diagnosis results are displayed after self diagnosis is completed. Unit names and connection lines are color coded according to diagnostic results. Control Unit (AV control unit) is displayed in red.



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

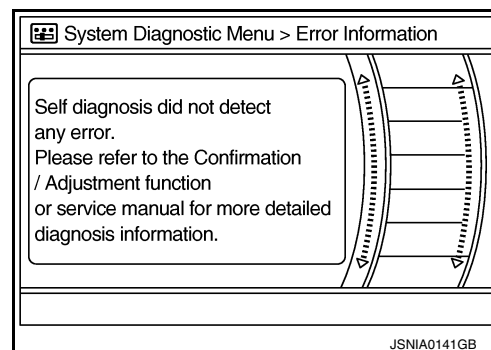
1: Control Unit (AV control unit) is displayed in red.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[MID AUDIO]

< SYSTEM DESCRIPTION >

- Replace AV control unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is AV control unit internal error. Refer to [AV-185, "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.



AV Control Unit Self Diagnosis Results

Only Unit Part Is Displayed In Red		
Screen switch	Description	Possible cause
Control unit	Malfunction is detected in AV control unit power supply or ground circuit.	• AV control unit power supply or ground circuits. Refer to AV-142, "AV CONTROL UNIT : Diagnosis Procedure". • If no malfunction is detected in AV control unit power supply and ground circuits, replace AV control unit. Refer to AV-185, "Removal and Installation".
A Connecting Cable Between Units Is Displayed In Yellow		
Area with yellow connection lines	Description	Possible cause
Control unit ↔ Front Display	Malfunction is detected in serial communication circuits between AV control unit and display unit.	Serial communication circuits between AV control unit and display unit. Refer to AV-134, "Diagnosis Procedure" .
Control unit ↔ SAT	When any of the following is detected: • satellite radio tuner power supply or ground circuit malfunction. • communication circuit malfunction between AV control unit and satellite radio tuner. • request signal circuit malfunction between AV control unit and satellite radio tuner.	• Satellite radio tuner power supply or ground circuits. Refer to AV-144, "SATELLITE RADIO TUNER : Diagnosis Procedure". • Communication circuit between AV control unit and satellite radio tuner. Refer to AV-136, "Diagnosis Procedure". • Request signal circuit between AV control unit and satellite radio tuner. Refer to AV-136, "Diagnosis Procedure".
Control unit ↔ BTHF	When any of the following is detected: • Bluetooth® control unit power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and Bluetooth® control unit.	• Bluetooth® control unit power supply or ground circuits. Refer to AV-145, "BLUETOOTH® CONTROL UNIT : Diagnosis Procedure". • AV communication circuits between AV control unit and Bluetooth® control unit.

AV Control Unit Confirmation/Adjustment

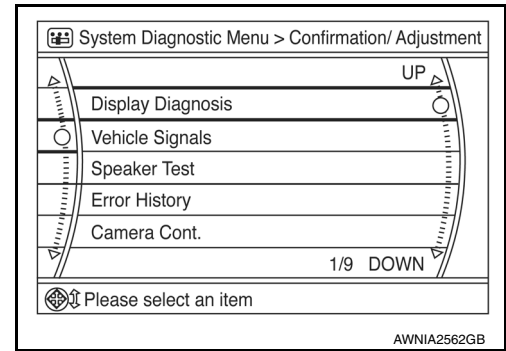
1. Select Confirmation/Adjustment.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

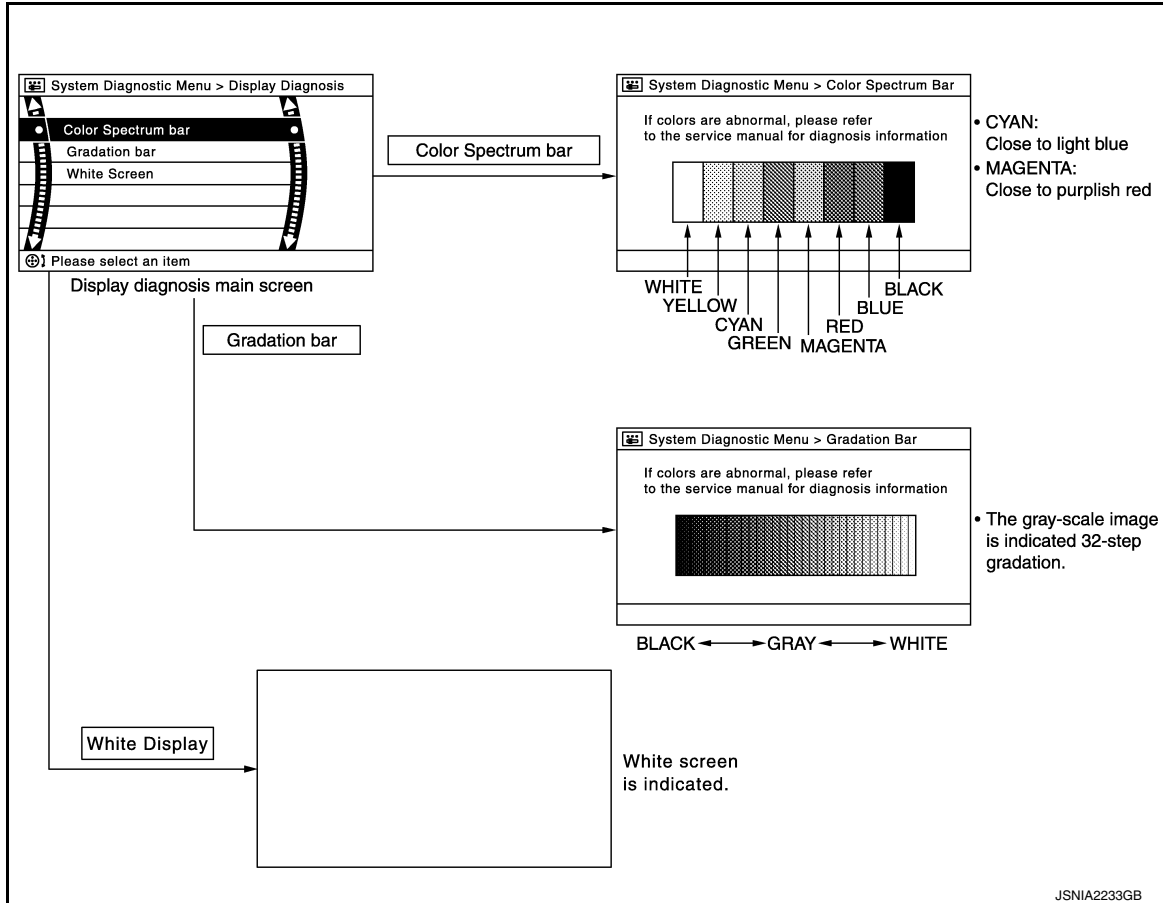
< SYSTEM DESCRIPTION >

[MID AUDIO]

- 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.

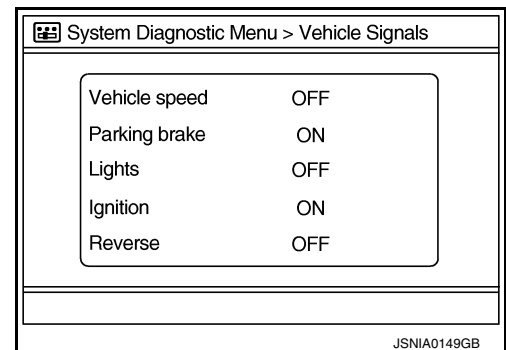


Display Diagnosis



Vehicle Signals

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



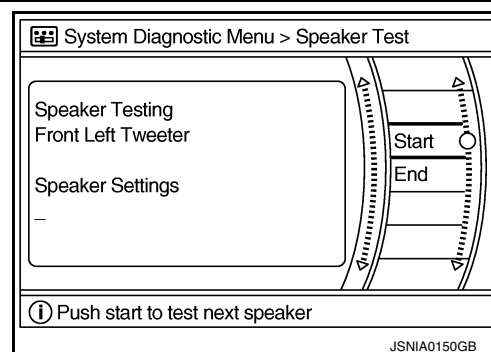
Speaker Test

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[MID 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.

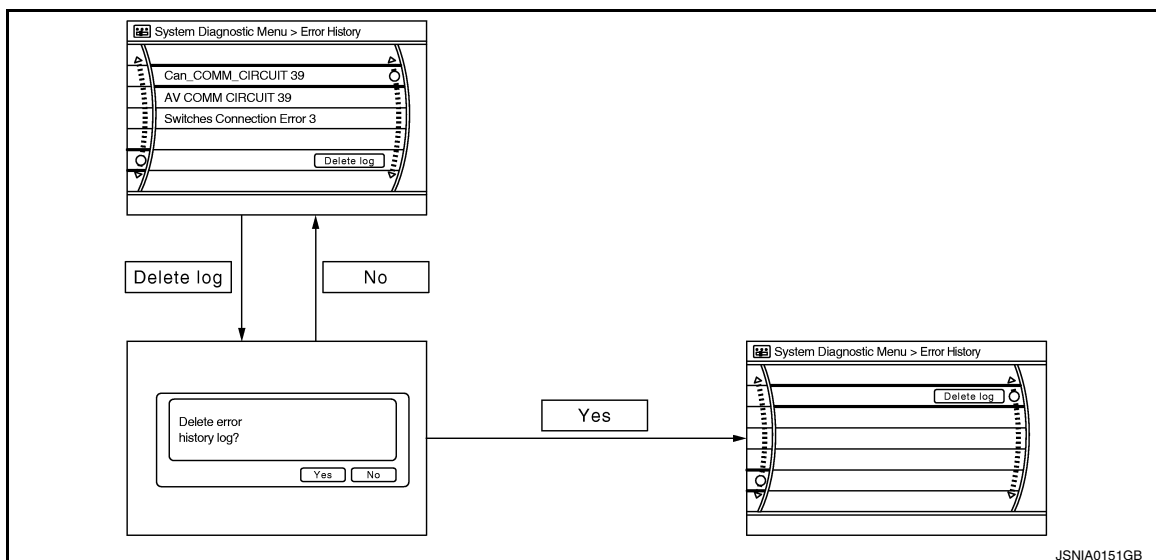
Count up method A

- The counter resets to 0 if an error occurs when ignition switch is turned ON. The counter increases by 1 if the condition is normal at a next ignition ON cycle.
- The counter upper limit is 39. Any counts exceeding 39 are ignored. The counter can be reset (no error record display) with the "Delete log" switch or CONSULT.

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 or CONSULT.

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



Error item

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

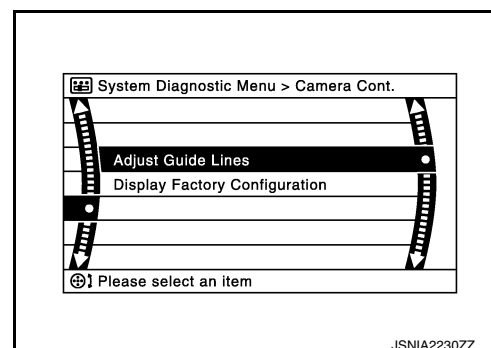
< SYSTEM DESCRIPTION >

[MID AUDIO]

Error item	Description	Possible cause
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, then repair the malfunctioning components according to diagnosis results. Refer to AV-67, "CONSULT Function"
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-185, "Removal and Installation" .
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
CAN Controller Memory Error		
Display Connection Error	When any of the following is detected: - display unit power supply or ground circuits malfunction. - communication circuit malfunction between AV control unit and display unit.	- Display unit power supply or ground circuits. Refer to AV-142, "DISPLAY UNIT : Diagnosis Procedure". - Communication circuits between AV control unit and display unit. Refer to AV-134, "Diagnosis Procedure".
XM Connection Error	When any of the following is detected: - satellite radio tuner power supply or ground circuit malfunction. - communication circuit malfunction between AV control unit and satellite radio tuner. - request signal circuit malfunction between AV control unit and satellite radio tuner.	- Satellite radio tuner power supply or ground circuits. Refer to AV-144, "SATELLITE RADIO TUNER : Diagnosis Procedure". - Communication circuit between AV control unit and satellite radio tuner. Refer to AV-136, "Diagnosis Procedure". - Request signal circuit between AV control unit and satellite radio tuner. Refer to AV-136, "Diagnosis Procedure".
- AV COMM CIRCUIT - Switches Connection Error	When any of the following is detected: - A/C and AV switch assembly power supply or ground circuit malfunction. - AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	- A/C and AV switch assembly power supply or ground circuits. Refer to AV-146, "A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure". - AV communication circuits between AV control unit and A/C and AV switch assembly.
- AV COMM CIRCUIT - BTHF Unit Connection Error	When any of the following is detected: - Bluetooth® control unit power supply or ground circuit malfunction. - AV communication circuit malfunction between AV control unit and Bluetooth® control unit.	- Bluetooth® control unit power supply or ground circuits. Refer to AV-145, "BLUETOOTH® CONTROL UNIT : Diagnosis Procedure". - AV communication circuits between AV control unit and Bluetooth® control unit.
- AV COMM CIRCUIT - Switches Connection Error - BTHF Unit Connection Error	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.

Camera Cont.

The two functions of "Correct Draw Line of Rear view Cam", "Confirm Configuration" are available.



Adjust Offset of Rear view Camera

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

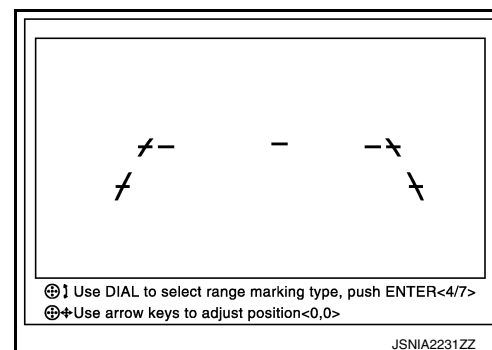
[MID AUDIO]

< SYSTEM DESCRIPTION >

- Use this mode to adjust the guide line display position of the rear view monitor if necessary after removing the rear view monitor camera.

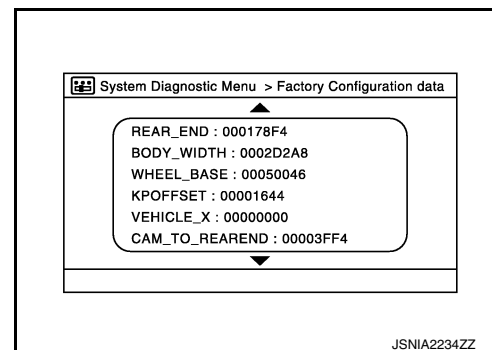
CAUTION:

After the adjustment, never perform other operations for one minute.



Factory Configuration Confirmation

- Configuration stored in the AV control unit can be checked.



Vehicle CAN Diagnosis

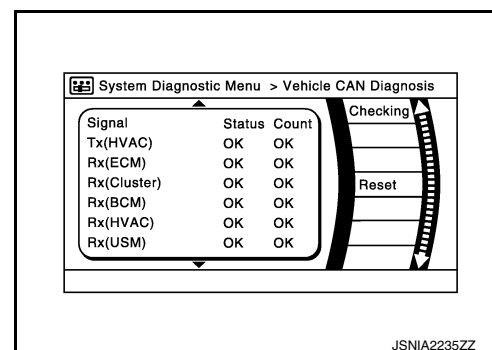
- CAN communication status and error counter is displayed.
- The error counter displays “OK” if any malfunction was not detected in the past and displays “0” if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. The upper limit of the counter is 39.
- The error counter is erased if “Reset” is pressed.

Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(BCM)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(VDC)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39

NOTE:

“???” indicates UNKWN.

AV COMM Diagnosis



DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[MID AUDIO]

- Displays the communication status between AV control 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.

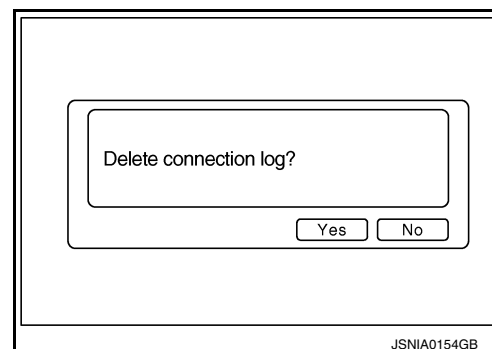
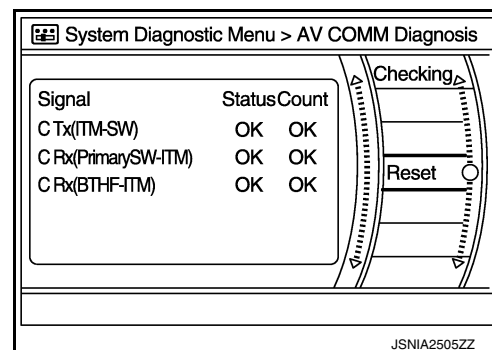
Items	Status (Current)	Counter (Past)
C Tx(ITM-SW)	OK / ???	OK / 0 – 39
C Rx(PrimarySW-ITM)	OK / ???	OK / 0 – 39
C Rx(BTHF-ITM)	OK / ???	OK / 0 – 39

NOTE:

"???" indicates UNKWN.

Delete Unit Connection Log

Deletes any unit connection records and error records from the AV control unit memory. (Clear the records of the unit that has been removed.)

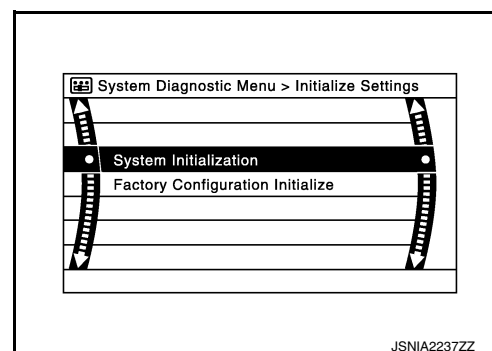


Initialize Settings

"User Data Initialization" and "Accessory Number Initialization" are possible.

CAUTION:

- **Never perform Accessory Number Initialization except when configuration is unsuccessful.**
- **Accessory Number Initialization requires configuration. For details, refer to [AV-115, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).**



CONSULT Function

INFOID:0000000011579220

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

CONSULT FUNCTIONS

CONSULT performs the following functions via communication with the AV control unit.

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[MID AUDIO]

Direct Diagnostic Mode	Description
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing AV control unit.
CAN Diag Support Mntr	• The result of transmit/receive diagnosis of AV communication is displayed. • The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSTIC RESULT

Refer to [AV-76, "DTC Index"](#).

DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	• On: vehicle speed > 0 km/h (0 MPH). • Off: vehicle speed = 0 km/h (0 MPH).
PKB SIG [On/Off]	• On: parking brake applied. • Off: parking brake released.
ILLUM SIG [On/Off]	• On: optical sensor signal is received. • Off: optical sensor signal is not received.
IGN SIG [On/Off]	• On: ignition switch ON. • Off: ignition switch ACC.
REV SIG [On/Off]	• On: selector lever in R position. • Off: selector lever in any position other than R.

CONFIGURATION

Refer to [AV-115, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

CAN DIAG SUPPORT MNTR

Refer to [LAN-18, "CAN Diagnostic Support Monitor"](#).

DIAGNOSIS SYSTEM (BLUETOOTH® CONTROL UNIT)

< SYSTEM DESCRIPTION >

[MID AUDIO]

DIAGNOSIS SYSTEM (BLUETOOTH® CONTROL UNIT)

Diagnosis Description

INFOID:0000000011579221

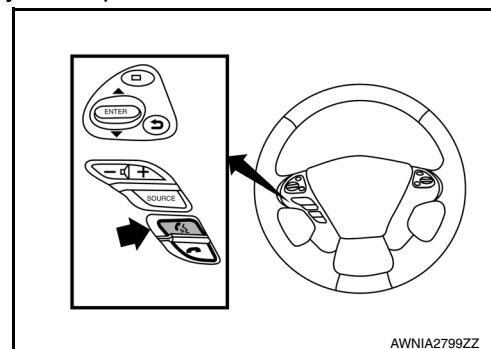
The Bluetooth® control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering switches prior to trouble diagnosis.

Bluetooth® CONTROL UNIT INITIALIZATION CHECKS

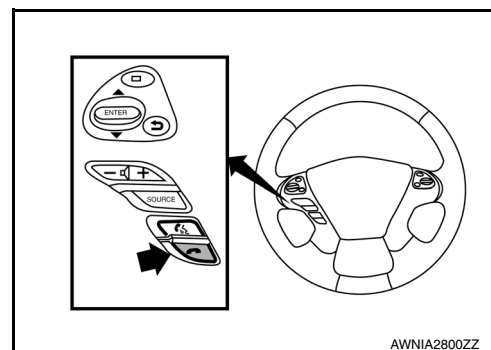
- Internal control unit failure
- Bluetooth® antenna connection open or shorted
- Steering switches  (PHONE/SEND),  (PHONE/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth® inquiry check

OPERATION PROCEDURE

1. Turn ignition switch to ACC or ON.
2. Wait for the Bluetooth® system to complete initialization. This may take up to 20 seconds.
3. Press and hold the steering switches  (PHONE/SEND) button for at least 5 seconds. The Bluetooth® system will begin to play a verbal prompt.



4. While the prompt is playing, press and hold the steering switches  (PHONE/END) button until you hear the “Diagnostics mode” prompt. The Bluetooth® system will sound a 5-second beep.
5. While the beep is sounding, press and hold the steering switches  (PHONE/END) button again until you hear prompts.
6. The Bluetooth® system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to [AV-69, "Work Flow"](#).
7. After the failure records are reported, an interactive microphone test will be performed. Follow the voice prompt. If the microphone test fails, refer to [AV-69, "Work Flow"](#).



Work Flow

INFOID:0000000011579222

Failure Message	Action
“Internal failure”	Replace Bluetooth® control unit. Refer to AV-195, "Removal and Installation" .
“Bluetooth® antenna open”	1. Inspect harness connection. 2. Replace Bluetooth® antenna. Refer to AV-195, "Removal and Installation" .
“Bluetooth® antenna shorted”	
“Phone/Send for Hands Free System is stuck”	Check steering switches. Refer to AV-176, "Diagnosis Procedure" .
“Phone/End for the Hands Free System is stuck”	
“Microphone test” (failed interactive test)	1. Inspect harness between Bluetooth® control unit and microphone. 2. Replace microphone. Refer to AV-196, "Removal and Installation" .

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[MID AUDIO]

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

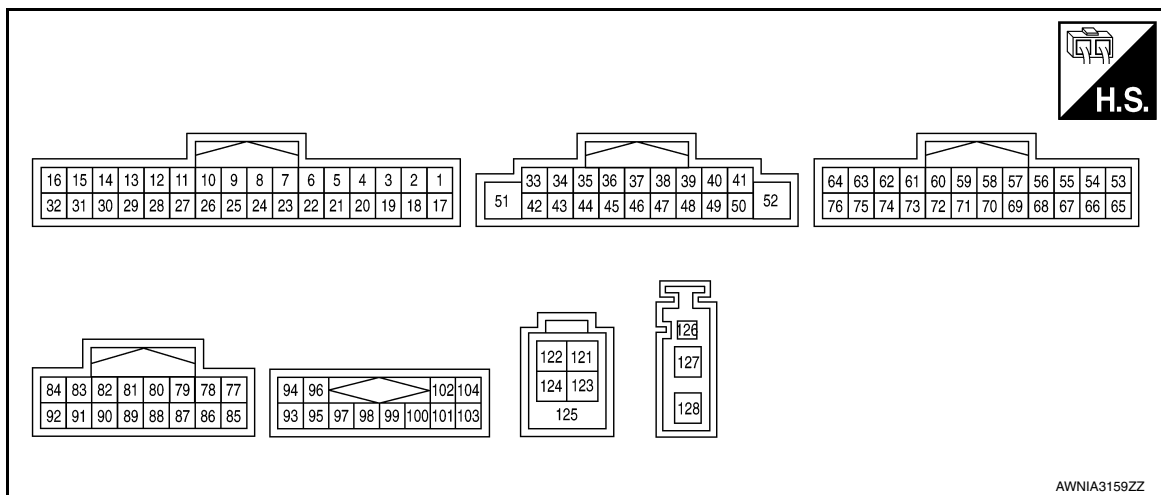
Reference Value

INFOID:0000000011579223

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
PKB SIG	Parking brake released.	Off
	Parking brake applied.	On
ILLUM SIG	Optical sensor signal is not received.	Off
	Optical sensor signal is received.	On
IGN SIG	Ignition switch OFF or ACC.	Off
	Ignition switch ON.	On
REV SIG	Selector lever in any position other than R.	Off
	Selector lever in R position.	On

TERMINAL LAYOUT



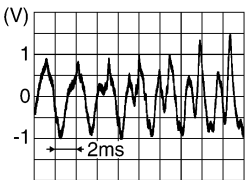
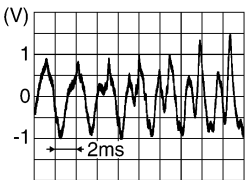
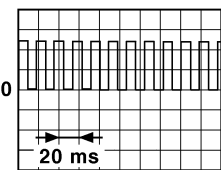
PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
5 (W)	4 (B)	Bluetooth® voice signal	Input	Ignition switch ON	During voice guide output with switch pressed.	 SKIB3609E
6	—	Shield	—	—	—	—
10 (V)	Ground	Eject ground	—	Ignition switch ON		0 V

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

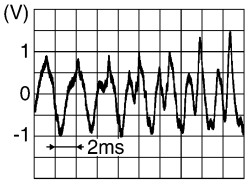
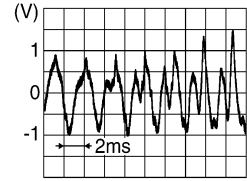
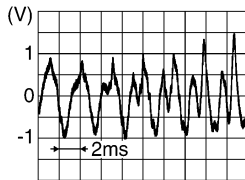
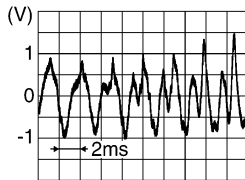
[MID AUDIO]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
11 (L)	—	CAN-H	Input/ Output	—	—	—
12 (P)	—	CAN-L	Input/ Output	—	—	—
13 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
14 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
15 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
16 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
20 (W)	22 (B)	AUX sound signal RH	Input	Ignition switch ON	AUX mode selected.	 SKIB3609E
21 (R)	22 (B)	AUX sound signal LH	Input	Ignition switch ON	AUX mode selected.	 SKIB3609E
25	—	Shield	—	—	—	—
28 (Y)	Ground	CD (DVD) eject signal	Input	Ignition switch ON	Pressing eject switch.	0 V
					Except above.	5.0 V
29 (LG)	Ground	Ignition signal	Input	Ignition switch ON		Battery voltage
30 (R)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever in R position.	Battery voltage
					Selector lever in any position other than R.	0 V
31 (G)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake applied.	0 V
					Parking brake released.	12 V
32 (GR)	Ground	Vehicle speed signal	Input	Ignition switch ON	Vehicle speed approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

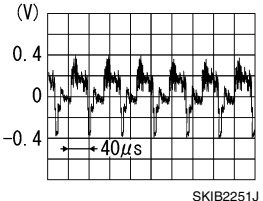
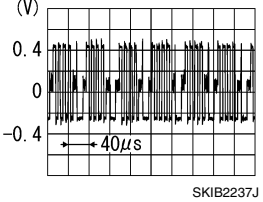
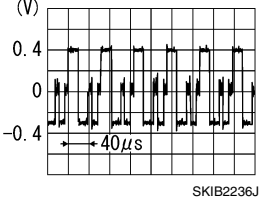
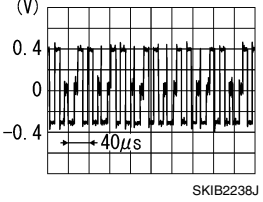
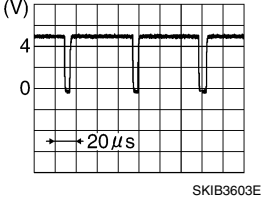
[MID AUDIO]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
34 (SB)	35 (V)	Sound signal front door speaker and instrument panel tweeter LH	Output	Ignition switch ON	Audio output	 SKIB3609E
36 (BR)	37 (Y)	Sound signal rear door speaker LH	Output	Ignition switch ON	Audio output	 SKIB3609E
38 (G)	47 (B)	Steering switch signal A	Input	Ignition switch ON	Press SOURCE switch	0V
					Press Δ switch	1.0V
					Press ∇ switch	2.0V
					Press  Σ switch	3.0V
					Press ENTER switch	4.0V
					Except above	5.0V
39 (P)	Ground	ACC power supply	Input	Ignition switch ACC		Battery voltage
41 (R)	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch OFF	0 V
					Lighting switch ON	Battery voltage
43 (BR)	44 (Y)	Sound signal front door speaker and instrument panel tweeter RH	Output	Ignition switch ON	Audio output	 SKIB3609E
45 (L)	46 (SB)	Sound signal rear door speaker RH	Output	Ignition switch ON	Audio output	 SKIB3609E
48 (W)	47 (B)	Steering switch signal B	Input	Ignition switch ON	Press   switch	0V
					Press  + switch	1.0V
					Press  switch	2.0V
					Press  switch	3.0V
					Press DISP switch	4.0V
					Except above	5.0V

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[MID AUDIO]

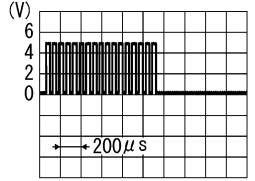
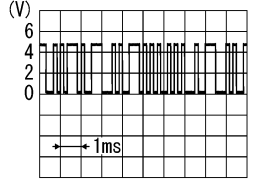
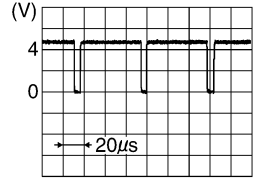
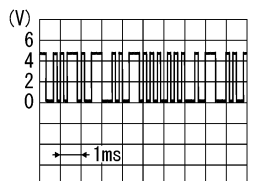
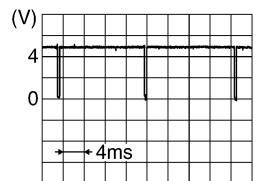
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
51 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
52 (B)	Ground	Ground	—	Ignition switch ON		0 V
53 (B)	Ground	Composite image signal	Output	Ignition switch ON	Camera image or AUX image displayed	
54 (W)	Ground	Composite image signal ground	—	Ignition switch ON		0 V
55 (W)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Begin Confirmation/Adjustment mode, then select "Color Spectrum Bar"	
56 (B)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Begin Confirmation/Adjustment mode, then select "Color Spectrum Bar"	
57 (R)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Begin Confirmation/Adjustment mode, then select "Color Spectrum Bar"	
58 (B)	Ground	RGB synchronizing signal	Output	Ignition switch ON		
59	—	Shield (RGB SYN GND)	—	—	—	—

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AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

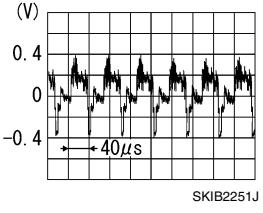
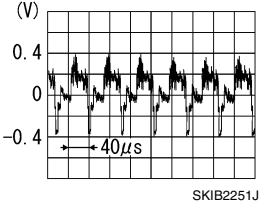
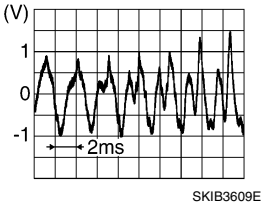
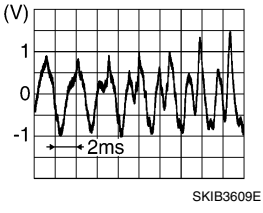
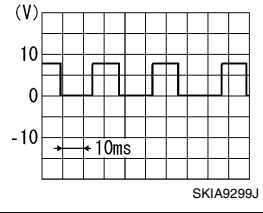
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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
60 (W)	Ground	RGB area (YS) signal	Output	Ignition switch ON	RGB image displayed	5.0 V
					AUX image displayed	 PKIB4948J
61 (B)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	Adjusting display bright- ness	 PKIB5039J
62 (G)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON		 SKIB3601E
63 (B)	Ground	Signal ground	—	Ignition switch OFF		0 V
64 (V)	Ground	Signal VCC	Output	Ignition switch ACC		9.0 V
66	—	Shield	—	—	—	—
67	—	Shield	—	—	—	—
72	—	Shield	—	—	—	—
73 (W)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	Adjusting display bright- ness	 PKIB5039J
74 (R)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch ON		 SKIB3598E
75 (LG)	Ground	Inverter ground	—	Ignition switch OFF		0 V
76 (L)	Ground	Inverter VCC	Output	Ignition switch ACC		9.0 V

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[MID AUDIO]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
82 (B)	Ground	Camera image signal	Input	Ignition switch ON	Camera image displayed	
83 (W)	Ground	AUX image signal	Input	Ignition switch ON	AUX image displayed	
87 (R)	Ground	Camera power supply	Output	Ignition switch ON	Selector lever in "R" posi- tion	6.0 V
88 (W)	Ground	Camera ground	—	Ignition switch ON		0 V
89	—	Shield	—	—	—	—
90	—	Shield	—	—	—	—
91 (B)	Ground	AUX image signal ground	—	Ignition switch ON		0 V
94 (B)	93 (W)	Satellite radio sound signal LH	Input	Ignition switch ON	Satellite radio mode select- ed	
96 (G)	95 (R)	Satellite radio sound signal RH	Input	Ignition switch ON	Satellite radio mode select- ed	
97	—	Shield	—	—	—	—
98	—	Shield	—	—	—	—
100 (W)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	Satellite radio mode select- ed	

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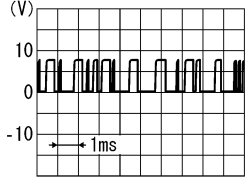
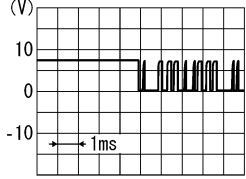
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AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[MID AUDIO]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
101 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	Satellite radio mode select- ed	 SKIA9300J
102 (R)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	Satellite radio mode select- ed	 SKIA9301J
121 (W)	—	V BUS signal	—	—	—	—
122 (G)	—	USB ground	—	—	—	—
123 (L)	—	USB D+ signal	—	—	—	—
124 (R)	—	USB D— signal	—	—	—	—
125	—	Shield	—	—	—	—
126 (B)	—	Antenna amp. ON signal	Output	Ignition switch ON		Battery voltage
127 (B)	—	AM - FM main	Input	—	—	—
128 (B)	—	FM sub	Input	—	—	—

DTC Index

INFOID:0000000011579224

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-117, "DTC Logic"
U1010: CONTROL UNIT	AV-118, "DTC Logic"
U1200: CONT UNIT	AV-119, "DTC Logic"
U1216: CAN CONT	AV-120, "DTC Logic"
U1218: HDD CONN	AV-121, "DTC Logic"
U1219: HDD READ	AV-122, "DTC Logic"
U121A: HDD WRITE	AV-123, "DTC Logic"
U121B: HDD COMM	AV-124, "DTC Logic"
U121C: HDD ACCESS	AV-125, "DTC Logic"
U121D: DSP CONN	AV-126, "DTC Logic"
U121E: DSP COMM	AV-127, "DTC Logic"
U1225: USB CONTROLLER	AV-128, "DTC Logic"

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[MID AUDIO]

CONSULT Display	Reference Page
U1227: DVD COMM	AV-129, "DTC Logic"
U1228: SUB CPU CONN	AV-130, "DTC Logic"
U1229: iPod CERTIFICATION	AV-131, "DTC Logic"
U122A: CONFIG UNFINISH	AV-132, "DTC Logic"
U122E: Built-in AUDIO CONN	AV-133, "DTC Logic"
U1240: SWITCH CONN	AV-140, "Description"
U1243: FRONT DISP CONN	AV-134, "DTC Logic"
U1255: SAT CONN	AV-136, "DTC Logic"
U1256: HAND FREE CONN	AV-140, "Description"
U1263: USB OVERCURRENT	AV-138, "DTC Logic"
U1264: ANTENNA AMP TERMINAL (OPEN or SHORT)	AV-139, "DTC Logic"
U1300: AV COMM CIRCUIT	AV-140, "Description"
U1310: CONTROL UNIT	AV-141, "DTC Logic"

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DISPLAY UNIT

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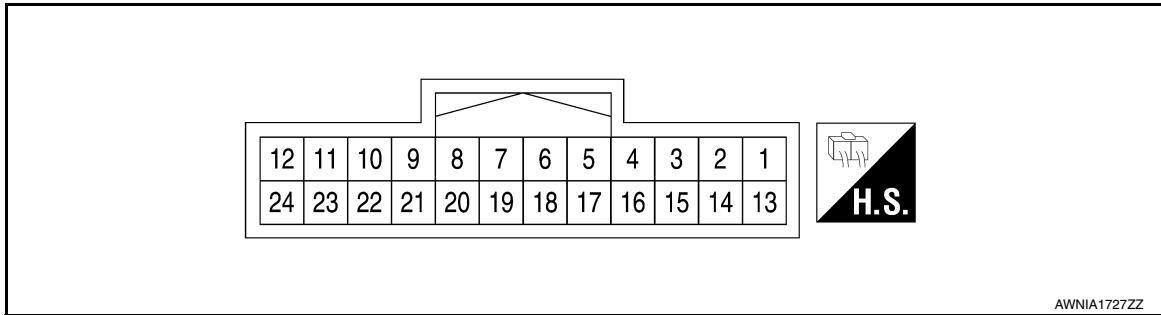
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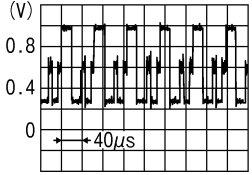
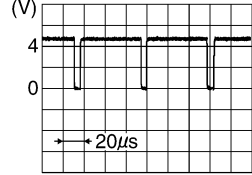
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TERMINAL LAYOUT



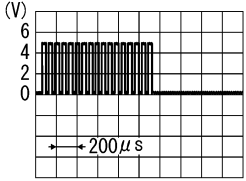
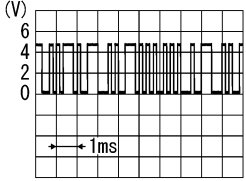
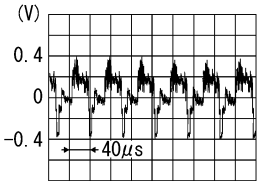
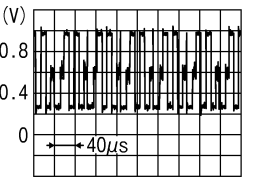
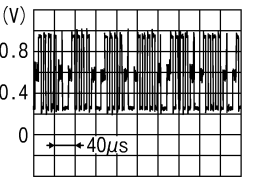
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0V
2 (L)	Ground	Inverter VCC	Input	Ignition switch ACC	—	9V
3 (V)	Ground	Signal VCC	Input	Ignition switch ACC	—	9V
4 (W)	Ground	Composite image ground	—	Ignition switch ON	—	0V
5	—	Shield	—	—	—	—
6 (B)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Start Confirmation/Adjust- ment mode, and then dis- play color bar by selecting “Color Spectrum Bar” on Display Diagnosis screen.	 JSNIA1030ZZ
7	—	Shield (RGB GND)	—	—	—	—
8 (G)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	—	 SKIB3601E

DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

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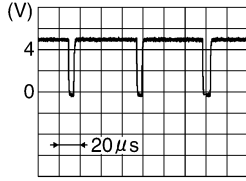
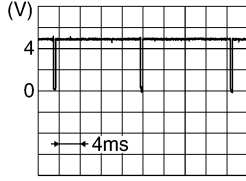
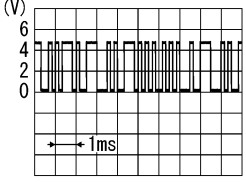
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
9 (W)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image is displayed.	5V
				Ignition switch ON	At DVD image is displayed.	 PKIB4948J
11 (W)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
13 (LG)	Ground	Inverter ground	—	Ignition switch ON	—	0V
14 (B)	Ground	Signal ground	—	Ignition switch ON	—	0V
15 (B)	Ground	Composite image signal	Input	Ignition switch ON	At rear view camera image is displayed.	 SKIB2251J
17 (R)	Ground	RGB signal (R: red)	Input	Ignition switch ON	Start Confirmation/Adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on Display Diagnosis screen.	 JSNIA1029ZZ
18 (W)	Ground	RGB signal (B: blue)	Input	Ignition switch ON	Start Confirmation/Adjustment mode, and then display color bar by selecting "Color Spectrum Bar" on Display Diagnosis screen.	 JSNIA1031ZZ

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DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

[MID AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
19 (B)	Ground	RGB synchronizing signal	Input	Ignition switch ON	—	 SKIB3603E
20 (R)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	—	 SKIB3598E
21	—	Shield	—	—	—	—
22 (B)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
23	—	Shield	—	—	—	—

SATELLITE RADIO TUNER

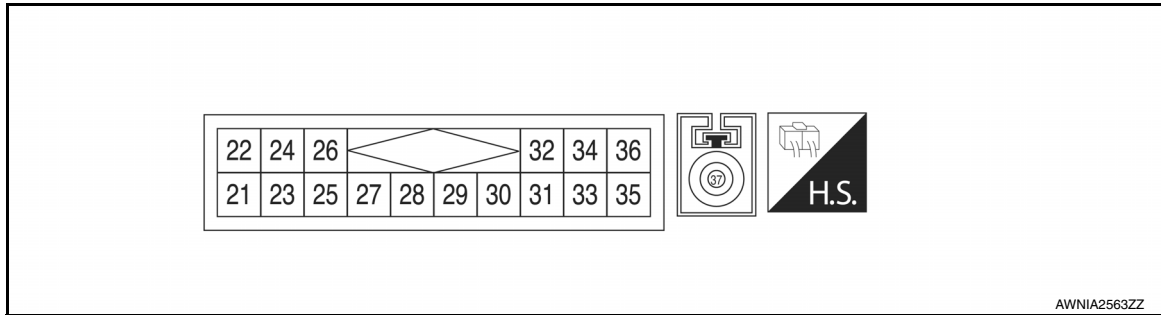
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SATELLITE RADIO TUNER

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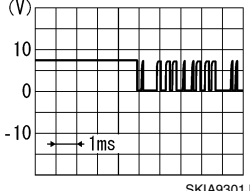
PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/Output			
22 (B)	21 (W)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	
24 (G)	23 (R)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	
25	—	Shield	—	—	—	—
26	—	Shield (DATA GND)	—	—	—	—
28 (W)	Ground	Request signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	
29 (R)	Ground	Communication signal (SAT→CONT)	Output	Ignition switch ON	When satellite radio mode is selected	

SATELLITE RADIO TUNER

< ECU DIAGNOSIS INFORMATION >

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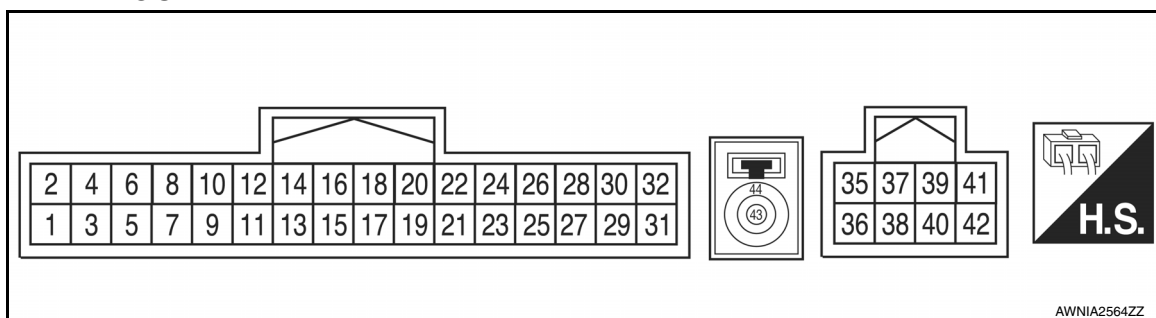
Terminal		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
30 (B)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	
32 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
35 (GR)	Ground	Ground	—	Ignition switch ON	—	0V
36 (BG)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
37 (B)	—	Satellite antenna	—	—	—	—

BLUETOOTH® CONTROL UNIT

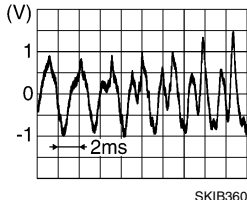
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TERMINAL LAYOUT



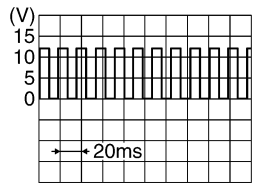
PHYSICAL VALUES

Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/out- put			
1 (Y)	Ground	Battery power	Input	–	–	Battery voltage
2 (R)	Ground	ACC power	Input	Ignition switch ACC/ON	–	Battery voltage
3 (P)	Ground	IGN power	Input	Ignition switch ON/ START	–	Battery voltage
4 (B)	Ground	Ground	–	Ignition switch ON	–	0V
5	–	Shield	–	–	–	—
7 (B)	8	MIC in signal	Input	–	–	–
9 (W)	10 (B)	Audio out	Output	Ignition switch ACC/ON	Bluetooth® control unit sends audio sig- nal	
20 (B)	Ground	Ground	–	Ignition switch ON	–	0V
22 (B)	Ground	Ground	–	Ignition switch ON	–	0V
24 (B)	Ground	Ground	–	Ignition switch ON	–	0V
27 (B)	Ground	Ground	–	Ignition switch ON	–	0V

BLUETOOTH® CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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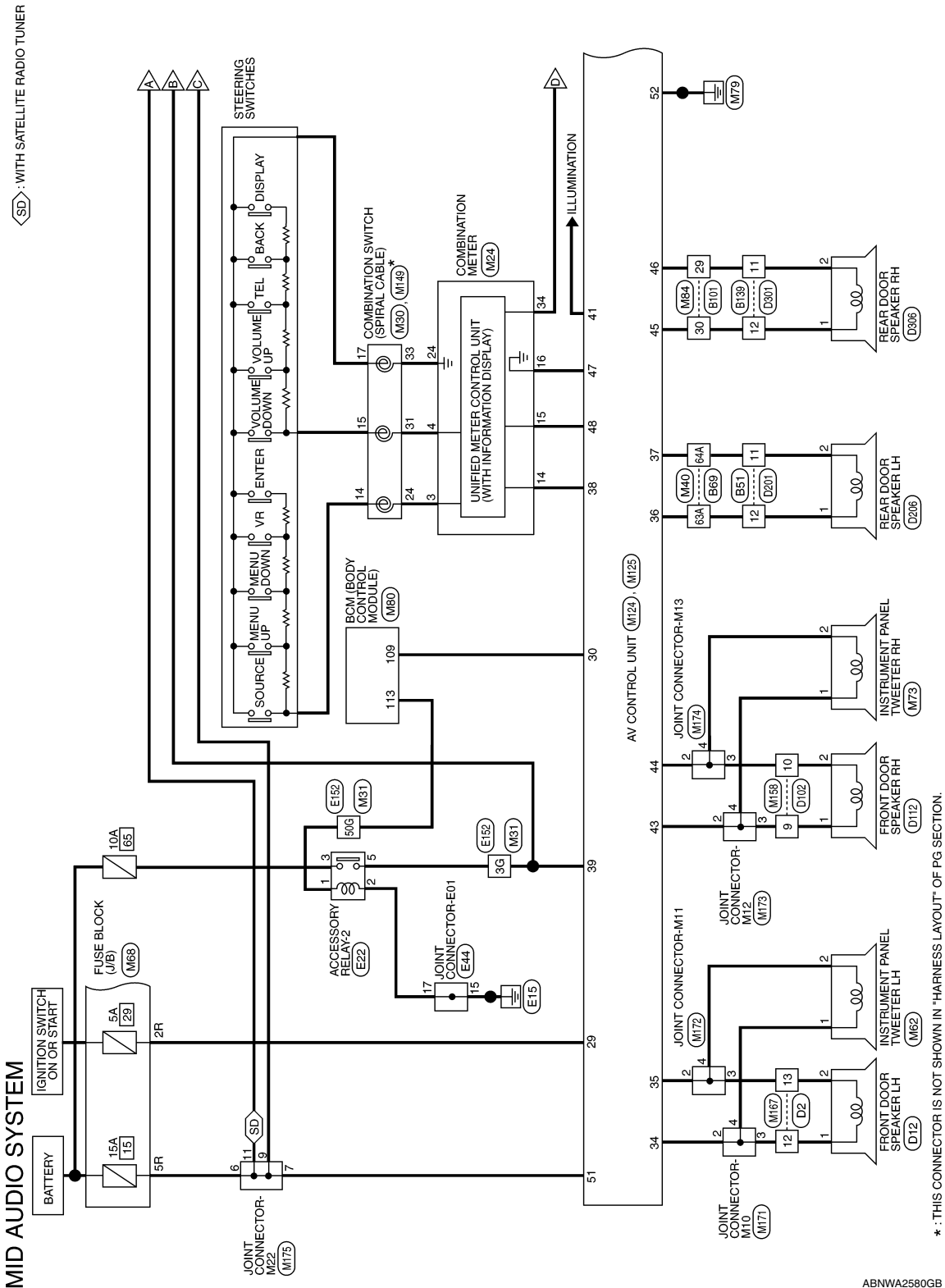
Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/out- put			
28 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	 PKIA1935E
29 (W)	Ground	Microphone power	Output	Ignition switch ON	–	5V
35 (SB)	–	M-CAN1 (H)	–	–	–	—
36 (LG)	–	M-CAN1 (L)	–	–	–	—
43 (B)	–	Bluetooth® antenna	–	–	–	—
44	–	Shield	–	–	–	—

WIRING DIAGRAM

MID AUDIO SYSTEM

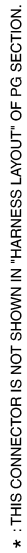
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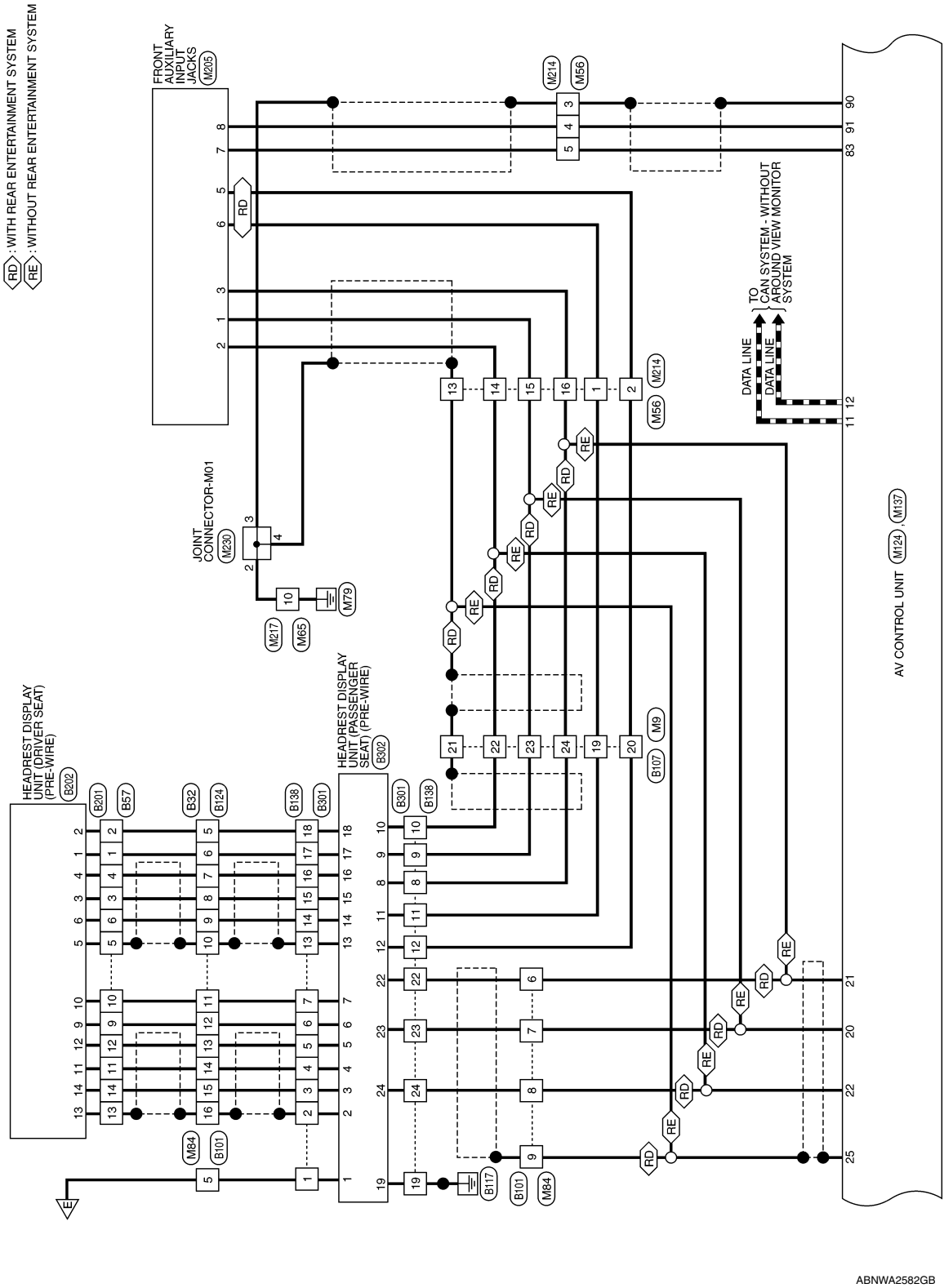


2015 Pathfinder

MID AUDIO SYSTEM

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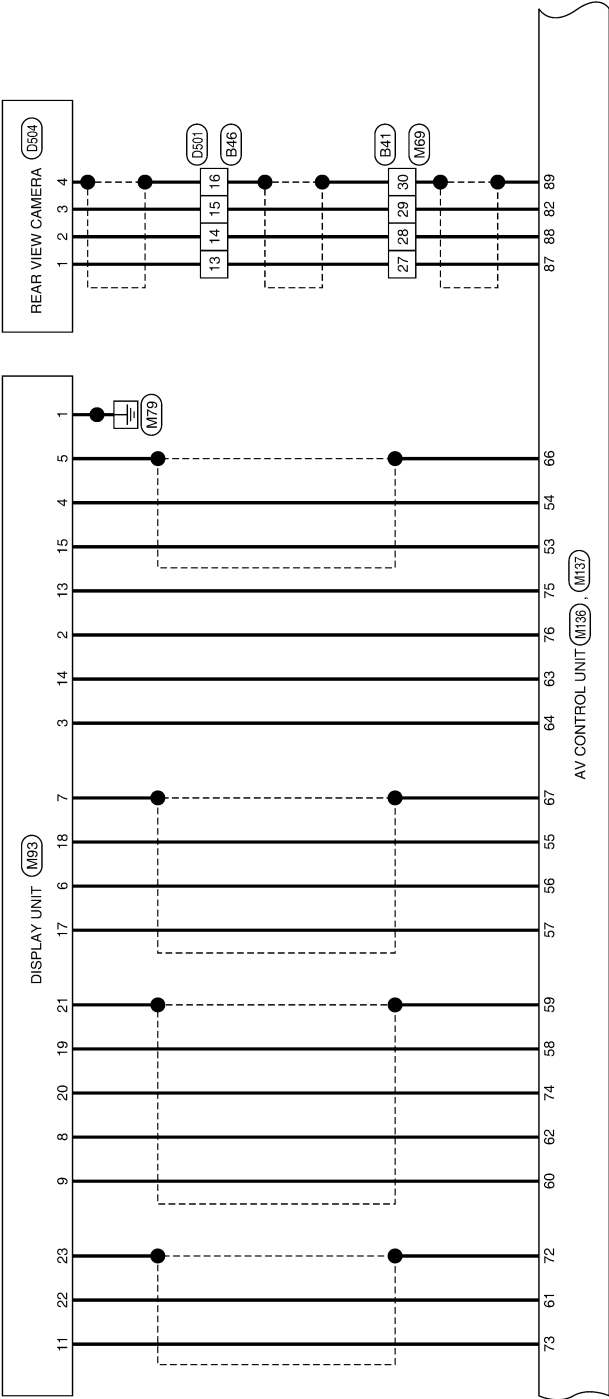
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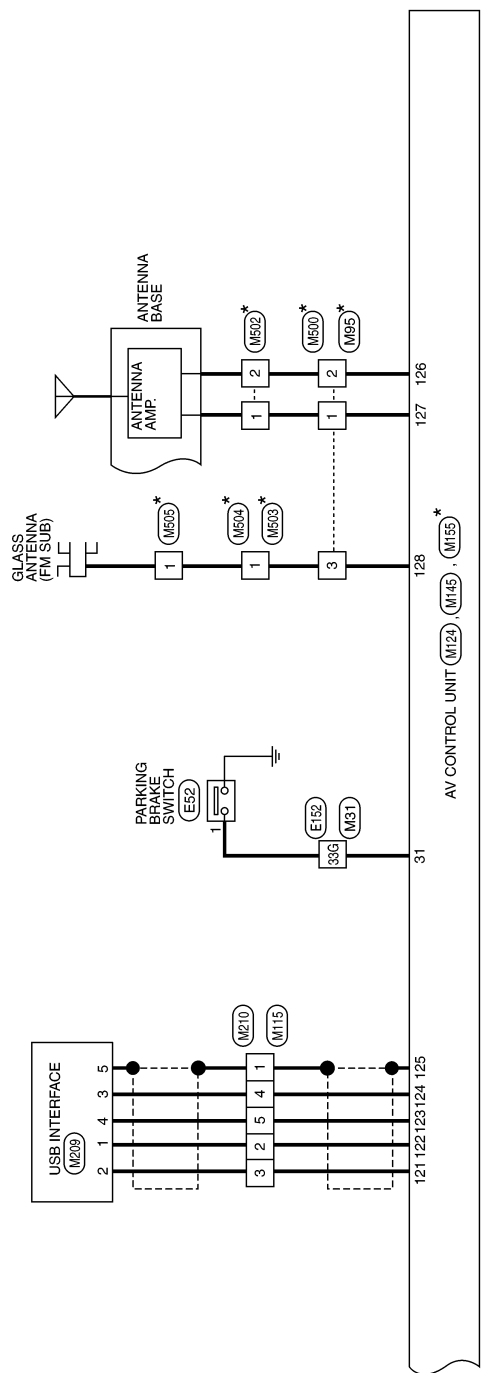


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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]



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

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MID AUDIO SYSTEM CONNECTORS

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



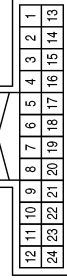

Terminal No.	Color of Wire	Signal Name
13	W	–
14	B	–
15	SHIELD	–

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




Terminal No.	Color of Wire	Signal Name
7P	LG	–

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

Terminal No.	Color of Wire	Signal Name
19	P	–
20	G	–
21	SHIELD	–
22	B	–
23	R	–
24	W	–

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




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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE




Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT 1
4	BG	STRG SW INPUT 2
14	G	STRG SW OUTPUT 1 (EXCEPT BASE AUDIO)
15	W	STRG SW OUTPUT 2 (EXCEPT BASE AUDIO)
16	B	STRG SW OUTPUT GND (EXCEPT BASE AUDIO)
24	R	STRG SW GND
34	GR	SPEED 8 P/R

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




Terminal No.	Color of Wire	Signal Name
24	P	–
31	BG	–
33	R	–

Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
1	P	-
2	G	-
3	SHIELD	-
4	B	-
5	W	-
13	SHIELD	-
14	B	-
15	R	-
16	W	-

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



1A	2A	3A	4A	5A
6A	7A	8A	9A	10A

11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A
22A	23A	24A	25A	26A	27A	28A	29A	30A		
31A	32A	33A	34A	35A	36A	37A	38A	39A	40A	41A
42A	43A	44A	45A	46A	47A	48A	49A	50A		
51A	52A	53A	54A	55A	56A	57A	58A	59A	60A	61A
62A	63A	64A	65A	66A	67A	68A	69A	70A		
71A	72A	73A	74A	75A	76A	77A	78A	79A	80A	81A
82A	83A	84A	85A	86A	87A	88A	89A	90A		
91A	92A	93A	94A	95A	96A	97A	98A	99A	100A	

Terminal No.	Color of Wire	Signal Name
63A	BR	-
64A	Y	-

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



1G	2G	3G	4G	5G
6G	7G	8G	9G	10G

11G	12G	13G	14G	15G	16G	17G	18G	19G	20G	21G
22G	23G	24G	25G	26G	27G	28G	29G	30G		
31G	32G	33G	34G	35G	36G	37G	38G	39G	40G	41G
42G	43G	44G	45G	46G	47G	48G	49G	50G		
51G	52G	53G	54G	55G	56G	57G	58G	59G	60G	61G
62G	63G	64G	65G	66G	67G	68G	69G	70G		
71G	72G	73G	74G	75G	76G	77G	78G	79G	80G	81G
82G	83G	84G	85G	86G	87G	88G	89G	90G		
91G	92G	93G	94G	95G	96G	97G	98G	99G	100G	

Terminal No.	Color of Wire	Signal Name
3G	P	-
33G	G	-
50G	L	-

Connector No.	M62
Connector Name	INSTRUMENT PANEL TWEETER LH
Connector Color	BROWN



2	1

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

Connector No.	M65
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	B	-

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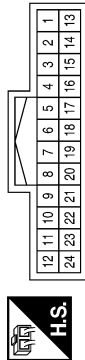
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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

Connector No.	M66
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
4	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	LG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	GR	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
2	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
7	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
10	SHIELD	–
11	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
12	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
14	SB	–
15	LG	–
16	LG	–
17	SB	–

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
2R	LG	–
5R	Y	–

Terminal No.	Color of Wire	Signal Name
22	G	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
23	SHIELD	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
27	R	– (WITHOUT AROUND VIEW MONITOR)
28	W	– (WITHOUT AROUND VIEW MONITOR)
29	B	– (WITHOUT AROUND VIEW MONITOR)
30	SHIELD	–

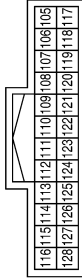
Terminal No.	Color of Wire	Signal Name
3	R	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
4	SHIELD	–
17	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
18	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
19	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
20	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
21	R	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

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Connector No.	M73
Connector Name	INSTRUMENT PANEL TWEETER RH
Connector Color	BROWN



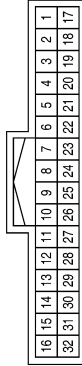
Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



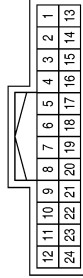
Terminal No.	Color of Wire	Signal Name
1	BR	-(WITHOUT BOSE AUDIO SYSTEM)
2	Y	-(WITHOUT BOSE AUDIO SYSTEM)

Terminal No.	Color of Wire	Signal Name
109	R	REVERSE SIGNAL
113	L	ACC RELAY OUT

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M93
Connector Name	DISPLAY UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	P	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
6	W	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
7	R	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
8	B	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	-
29	SB	-
30	L	-

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	L	INV VCC
3	V	SIG VCC
4	W	COMP GND
5	SHIELD	COMP SHIELD
6	B	G
7	SHIELD	RGB GND
8	G	HP

Terminal No.	Color of Wire	Signal Name
9	W	YS
10	-	-
11	W	UART IN
12	-	-
13	LG	INV GND
14	B	SIG GND
15	B	COMP
16	-	-
17	R	R
18	W	B
19	B	RGB SYNC
20	R	VP
21	SHIELD	SYNC GND
22	B	UART OUT
23	SHIELD	UART GND
24	-	-

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MID AUDIO SYSTEM

< WIRING DIAGRAM >

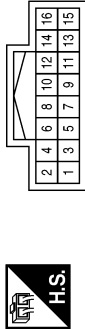
[MID AUDIO]

Connector No.	M95
Connector Name	WIRE TO WIRE
Connector Color	GRAY



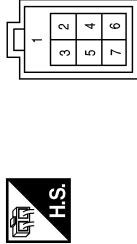
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
3	B	-

Connector No.	M98
Connector Name	A/C AND AV SWITCH ASSEMBLY
Connector Color	WHITE



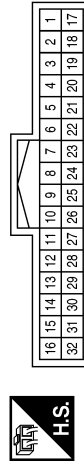
Terminal No.	Color of Wire	Signal Name
1	B	-
3	P	-
4	R	-
5	B	-
6	SB	-
8	LG	-
9	V	-
14	Y	-

Connector No.	M115
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

Connector No.	M124
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	B	TEL VOICE-
5	W	TEL VOICE+

Terminal No.	Color of Wire	Signal Name
6	SHIELD	VOICE SHIELD
7	-	-
8	-	-
9	-	-
10	V	EJECT GND
11	L	CAN-H
12	P	CAN-L
13	SB	M CAN-H
14	LG	M CAN-L
15	SB	M CAN-H TRM
16	LG	M CAN-L TRM
17	-	-
18	-	-
19	-	-

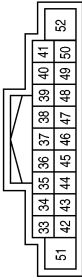
Terminal No.	Color of Wire	Signal Name
20	W	AUX AUDIO RH+
21	R	AUX AUDIO LH+
22	B	AUX AUDIO-
23	-	-
24	-	-
25	SHIELD	AUDIO BUS SHIELD
26	-	-
27	-	-
28	Y	CD (DVD) EJECT
29	LG	IGN
30	R	REVERSE SIG
31	G	PKB SIG
32	GR	SPEED 8P

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Terminal No.	Color of Wire	Signal Name
44	Y	FR RH SP-
45	L	RR RH SP+
46	SB	RR RH SP-
47	B	STRG SW GND
48	W	STRG SW B
49	-	-
50	-	-
51	Y	+B
52	B	GND

Terminal No.	Color of Wire	Signal Name
35	V	FR LH SP-
36	BR	RR LH SP+
37	Y	RR LH SP-
38	G	STRG SW A
39	P	ACC
40	-	-
41	R	ILL
42	-	-
43	BR	FR RH SP+

Connector No.	M125
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE

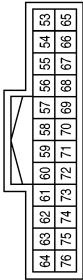


Terminal No.	Color of Wire	Signal Name
33	-	-
34	SB	FR LH SP+

Terminal No.	Color of Wire	Signal Name
70	-	-
71	-	-
72	SHIELD	DISP SHIELD
73	W	IT DISP
74	R	VP
75	LG	INV GND
76	L	INV VCC

Terminal No.	Color of Wire	Signal Name
58	B	RGB SYNC
59	SHIELD	RGB SYN GND
60	W	YS
61	B	DISP IT
62	G	HP
63	B	SIG GND
64	V	SIG VCC
65	-	-
66	SHIELD	COMP OUT SHIELD
67	SHIELD	RGB GND
68	-	-
69	-	-

Connector No.	M136
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
53	B	COMP OUT+
54	W	COMP OUT-
55	W	B
56	B	G
57	R	R

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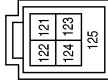
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MID AUDIO SYSTEM

< WIRING DIAGRAM >

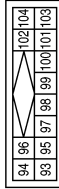
[MID AUDIO]

Connector No.	M145
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	BLUE



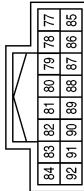
Terminal No.	Color of Wire	Signal Name
121	W	VBUS
122	G	USB GND
123	L	USB D+
124	R	USB D-
125	SHIELD	SHIELD

Connector No.	M138
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
93	W	N-BUS LH-
94	B	N-BUS LH+
95	R	N-BUS RH-
96	G	N-BUS RH+
97	SHIELD	N-BUS SHIELD
98	SHIELD	DATA GND
99	-	-
100	W	REQ1
101	B	RX
102	R	TX
103	-	-
104	-	-

Connector No.	M137
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
77	-	-
78	-	-
79	-	-
80	-	-
81	-	-
82	B	COMP2 IN+
83	W	COMP1 IN+
84	-	-
85	-	-
86	-	-
87	R	CAM 6.2V
88	W	CAM GND
89	SHIELD	COMP2 IN SHIELD
90	SHIELD	COMP1 IN SHIELD
91	B	COMP1 IN-
92	-	-

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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4
5	6	7	8
9	10		

Connector No.	M155
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	GRAY



126	127	128

Terminal No.	Color of Wire	Signal Name
9	BR	– (WITHOUT BOSE AUDIO SYSTEM)
10	Y	– (WITHOUT BOSE AUDIO SYSTEM)

Terminal No.	Color of Wire	Signal Name
126	B	ANT +B
127	B	ANT MAIN
128	B	ANT SUB

Connector No.	M149
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
14	B	–
15	GR	–
17	BR	–

Connector No.	M172
Connector Name	JOINT CONNECTOR-M11
Connector Color	WHITE



4	3	2	1

Connector No.	M171
Connector Name	JOINT CONNECTOR-M10
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	V	– (WITHOUT BOSE AUDIO SYSTEM)
3	V	– (WITHOUT BOSE AUDIO SYSTEM)
4	V	– (WITHOUT BOSE AUDIO SYSTEM)

Terminal No.	Color of Wire	Signal Name
2	SB	– (WITHOUT BOSE AUDIO SYSTEM)
3	SB	– (WITHOUT BOSE AUDIO SYSTEM)
4	SB	– (WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
12	SB	– (WITHOUT BOSE AUDIO SYSTEM)
13	V	– (WITHOUT BOSE AUDIO SYSTEM)

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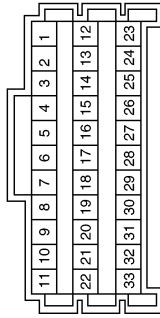
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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

Connector No.	M175
Connector Name	JOINT CONNECTOR-M22
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	Y	—
7	Y	—
9	Y	—
11	Y	—

Connector No.	M174
Connector Name	JOINT CONNECTOR-M13
Connector Color	WHITE



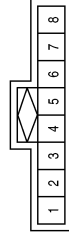
Terminal No.	Color of Wire	Signal Name
2	Y	— (WITHOUT BOSE AUDIO SYSTEM)
3	Y	— (WITHOUT BOSE AUDIO SYSTEM)
4	Y	— (WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M173
Connector Name	JOINT CONNECTOR-M12
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	BR	— (WITHOUT BOSE AUDIO SYSTEM)
3	BR	— (WITHOUT BOSE AUDIO SYSTEM)
4	BR	— (WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M205
Connector Name	FRONT AUXILIARY INPUT JACKS
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	—
2	B	—
3	W	—
5	G	—
6	P	—
7	W	—
8	B	—

Connector No.	M177
Connector Name	JOINT CONNECTOR-M57
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	—
2	LG	—
3	LG	—
4	LG	—

Connector No.	M176
Connector Name	JOINT CONNECTOR-M56
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	SB	—
2	SB	—
3	SB	—
4	SB	—

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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

Connector No.	M214
Connector Name	WIRE TO WIRE
Connector Color	WHITE



12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
1	P	-
2	G	-
3	SHIELD	-
4	B	-
5	W	-
13	SHIELD	-
14	B	-
15	R	-
16	W	-

Connector No.	M210
Connector Name	WIRE TO WIRE
Connector Color	GRAY



1	2	3	4	5	6	7

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

Connector No.	M209
Connector Name	USB INTERFACE
Connector Color	GREEN



2	1	3	4	5

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

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



1	2	3

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

Connector No.	M230
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



6	5	4	3	2	1

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

Connector No.	M217
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	B	-

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Connector No.	M503
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M502
Connector Name	ANTENNA BASE
Connector Color	GRAY



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

Connector No.	M501
Connector Name	ANTENNA BASE
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M507
Connector Name	WIRE TO WIRE
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M505
Connector Name	GLASS ANTENNA (FM SUB)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M504
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-

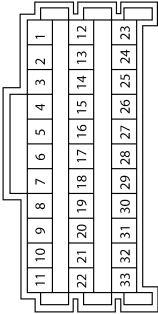
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Connector No.	E52
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	LG	-

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	GR	-
17	B	-

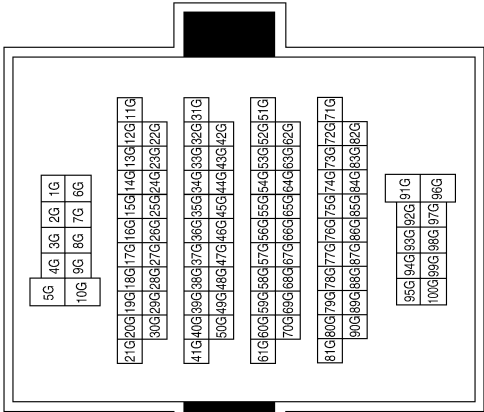
Connector No.	E22
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	B	-
3	R	-
5	P	-

Terminal No.	Color of Wire	Signal Name
3G	P	-
33G	LG	-
50G	G	-

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



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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

Terminal No.	Color of Wire	Signal Name
27	—	—
28	W	REQ1 (SAT-COMBI)
29	R	TXD (SAT-COMBI)
30	B	RXD (COMBI-SAT)
31	—	—
32	SB	BAT
33	—	—
34	—	—
35	GR	GND
36	BG	ACC

Connector No.	B2
Connector Name	SATELLITE RADIO TUNER
Connector Color	WHITE

22	24	26					32	34	36
21	23	25	27	28	29	30	31	33	35



Terminal No.	Color of Wire	Signal Name
21	W	SAT LCH (-)
22	B	SAT LCH (+)
23	R	SAT RCH (-)
24	G	SAT RCH (+)
25	SHIELD	GND (SIG)
26	SHIELD	DATA GND

Terminal No.	Color of Wire	Signal Name
21	—	—
22	B	CONT3
23	—	—
24	B	CONT5
25	—	—
26	—	—
27	B	CONT6
28	V	SPEED SIGNAL
29	W	MIC POWER (VCC)
30	—	—
31	—	—
32	—	—

Terminal No.	Color of Wire	Signal Name
9	W	AUDIO OUT+
10	B	AUDIO OUT-
11	—	—
12	—	—
13	—	—
14	—	—
15	—	—
16	—	—
17	—	—
18	—	—
19	—	—
20	B	CONT1

Connector No.	B3
Connector Name	BLUETOOTH® CONTROL UNIT
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
1	Y	BAT
2	R	ACC
3	P	IGN
4	B	GND
5	SHIELD	AUDIO SHIELD
6	—	—
7	B	MIC IN + (SIG)
8	SHIELD	MIC IN- (GND)

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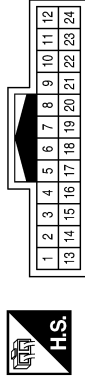
MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

Terminal No.	Color of Wire	Signal Name
7	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
10	SHIELD	–
11	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
12	W	–
14	SB	–
15	LG	–
16	LG	–
17	SB	–

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



Terminal No.	Color of Wire	Signal Name
3	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
4	R	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	V	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

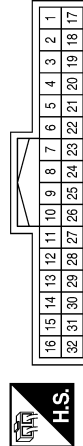
Connector No.	B4
Connector Name	BLUETOOTH® CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
35	SB	M CAN-H
36	LG	M CAN-L
37	–	–
38	–	–
39	–	–
40	–	–
41	–	–
42	–	–

Terminal No.	Color of Wire	Signal Name
13	B	–
14	R	–
15	W	–
16	SHIELD	–

Connector No.	B32
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G	–
6	R	–
7	B	–
8	R	–
9	W	–
10	SHIELD	–
11	B	–
12	L	–

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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Color	WHITE

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24



Terminal No.	Color of Wire	Signal Name
19	W	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
20	B	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
21	R	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
22	G	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
23	SHIELD	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
27	R	-(WITHOUT AROUND VIEW MONITOR)
28	B	-
29	W	-(WITHOUT AROUND VIEW MONITOR)
30	SHIELD	-

Connector No.	B41
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
1	W	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
2	R	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
3	B	-
4	SHIELD	-
17	BG	-(WITHOUT REAR ENTERTAINMENT SYSTEM)
18	SB	-(WITHOUT REAR ENTERTAINMENT SYSTEM)

Connector No.	B53
Connector Name	SATELLITE ANTENNA
Connector Color	GREEN



Connector No.	B51
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
37	B	SAT ANT

Terminal No.	Color of Wire	Signal Name
11	R	-
12	P	-

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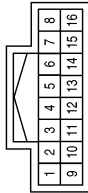
Connector No.	B59
Connector Name	BLUETOOTH®CONTROL UNIT
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
43	B	BT ANTENNA
44	SHIELD	BT SHIELD

Terminal No.	Color of Wire	Signal Name
6	W	-
9	L	-
10	B	-
11	R	-
12	B	-
13	SHIELD	-
14	W	-

Connector No.	B57
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	B62
Connector Name	JOINT CONNECTOR-B19
Connector Color	WHITE



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

Connector No.	B61
Connector Name	JOINT CONNECTOR-B18
Connector Color	WHITE



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

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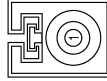
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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

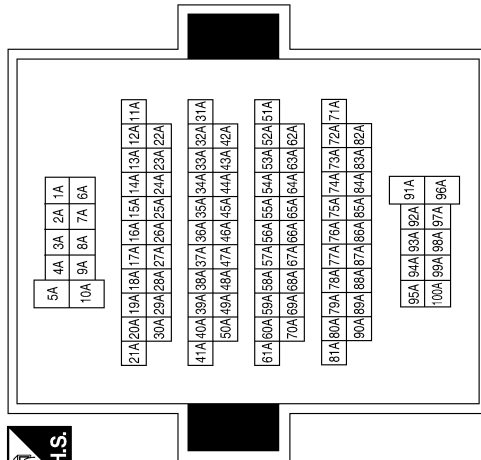
Connector No.	B78
Connector Name	WIRE TO WIRE
Connector Color	GREEN



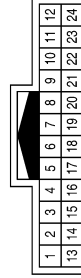
Terminal No.	Color of Wire	Signal Name
1	B	—

Terminal No.	Color of Wire	Signal Name
63A	P	—
64A	R	—

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



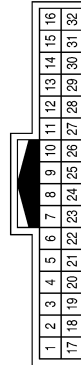
Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
19	V	—
20	Y	—
21	SHIELD	—
22	B	—
23	R	—
24	W	—

Terminal No.	Color of Wire	Signal Name
5	V	— (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	W	— (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	R	— (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	B	— (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	—
29	SB	—
30	LG	—

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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Terminal No.	Color of Wire	Signal Name
11	B	-
12	L	-
13	B	-
14	R	-
15	W	-
16	SHIELD	-

Connector No.	B124
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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

Terminal No.	Color of Wire	Signal Name
10	B	-
11	V	-
12	Y	-
13	SHIELD	-
14	W	-
15	R	-
16	B	-
17	R	-
18	G	-
19	B	-
22	W	-
23	R	-
24	B	-

Connector No.	B138
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

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

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
11	SB	-(WITHOUT BOSE AUDIO SYSTEM)
12	LG	-(WITHOUT BOSE AUDIO SYSTEM)

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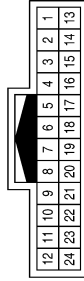
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MID AUDIO SYSTEM

< WIRING DIAGRAM >

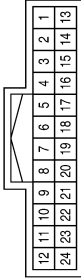
[MID AUDIO]

Connector No.	B301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



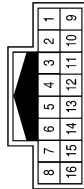
Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
22	-	-
23	-	-
24	-	-

Connector No.	B202
Connector Name	HEADREST DISPLAY UNIT (DRIVER SEAT) (PRE-WIRE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
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16	-	-
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22	-	-
23	-	-
24	-	-

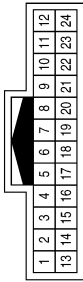
Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-

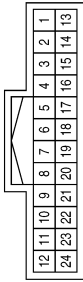
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Connector No.	R11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



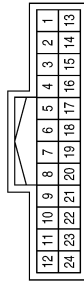
Terminal No.	Color of Wire	Signal Name
5	SHIELD	-
6	B	-
7	W	-

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



Terminal No.	Color of Wire	Signal Name
13	W	-
14	B	-
15	SHIELD	-

Connector No.	B302
Connector Name	HEADREST DISPLAY UNIT (PASSENGER SEAT) (PRE-WIRE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
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22	-	-
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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

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

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



Terminal No.	Color of Wire	Signal Name
12	G	-
13	W	-

Connector No.	R109
Connector Name	MICROPHONE
Connector Color	WHITE

1	2	3	4	5	6



Terminal No.	Color of Wire	Signal Name
3	GR	-
5	SHIELD	-
6	R	-

Connector No.	R101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13



Terminal No.	Color of Wire	Signal Name
5	SHIELD	-
6	R	-
7	GR	-

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

2	1



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

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

4	3	2	1
10	9	8	7
6	5		



Terminal No.	Color of Wire	Signal Name
9	G	-
10	W	-

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

2	1



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

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MID AUDIO SYSTEM

< WIRING DIAGRAM >

[MID AUDIO]

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

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



Terminal No.	Color of Wire	Signal Name
11	G	—
12	W	—

Connector No.	D206
Connector Name	REAR DOOR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

2	1



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

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

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



Terminal No.	Color of Wire	Signal Name
11	Y	—
12	LG	—

Connector No.	D504
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE

1	2	3	4



Terminal No.	Color of Wire	Signal Name
1	W	— (WITHOUT NAVI OR WITH AROUND VIEW MONITOR)
2	B	—
3	R	— (WITHOUT NAVI OR WITH AROUND VIEW MONITOR)
4	SHIELD	—

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13



Terminal No.	Color of Wire	Signal Name
13	W	— (WITHOUT NAVI OR WITH AROUND VIEW MONITOR)
14	B	—
15	R	— (WITHOUT NAVI OR WITH AROUND VIEW MONITOR)
16	SHIELD	—

Connector No.	D306
Connector Name	REAR DOOR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

2	1



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

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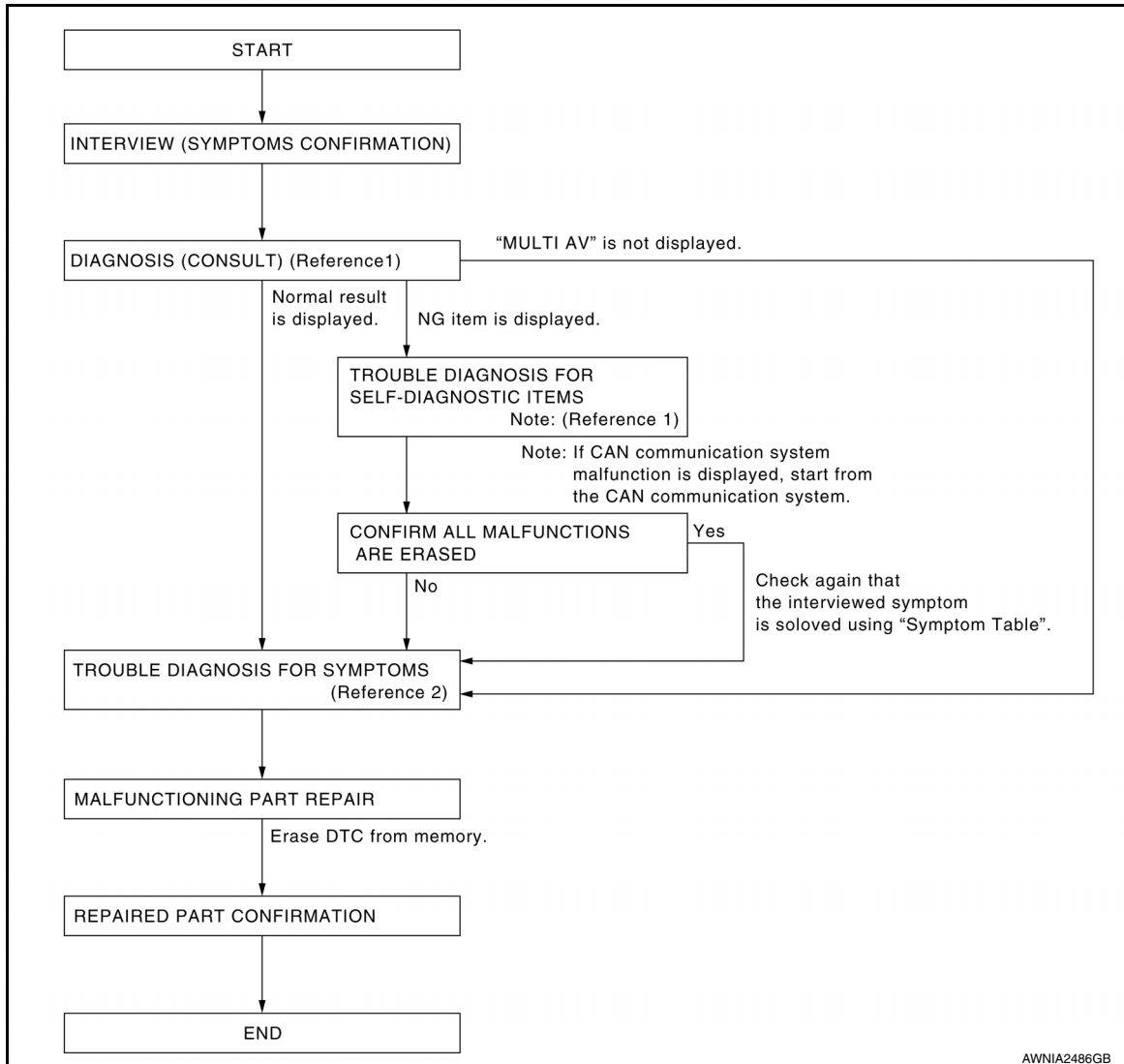
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000011579229

OVERALL SEQUENCE



Reference 1: Refer to [AV-67, "CONSULT Function"](#).

Reference 2: Refer to [AV-179, "Symptom Table"](#).

DETAILED FLOW

1. CHECK SYMPTOM

Check the malfunction symptoms by performing the following items:

- Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).
- Check the symptom.

>> GO TO 2

2. SELF-DIAGNOSIS (CONSULT)

1. Connect CONSULT and perform "SELF-DIAGNOSIS" for "MULTI AV".

NOTE:

Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.

2. Check if any DTC No. is displayed in the self-diagnosis results.

DIAGNOSIS AND REPAIR WORKFLOW

[MID AUDIO]

< BASIC INSPECTION >

Is any DTC No. displayed?

YES >> GO TO 3

NO >> GO TO 4

3.CHECK SELF-DIAGNOSIS RESULTS (CONSULT)

1. Check the DTC No. indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC No. list. Refer to [AV-76, "DTC Index"](#).

NOTE:

Start with the diagnosis for the CAN communication system if "CAN COMM CIRCUIT [U1000] or CONTROL UNIT (CAN) [U1010]" is displayed.

>> GO TO 5

4.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-179, "Symptom Table"](#).

>> GO TO 5

5.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

NOTE:

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC No. has been indicated in the self-diagnosis results.

>> GO TO 6

6.CHECK AFTER REPAIR

1. Perform self-diagnosis for "MULTI AV" with CONSULT after repairing or replacing the malfunctioning parts.
2. Check if any DTC No. is displayed in the self-diagnosis results.

Is any DTC No. displayed?

YES >> GO TO 3

NO >> GO TO 7

7.FINAL CHECK

Perform the operation check to confirm that the malfunction symptom is solved or that any other symptoms are present.

Are any symptoms present?

YES >> GO TO 4

NO >> Inspection End.

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INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:0000000011579231

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:0000000011579231

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-185. "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-115. "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-115. "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 and predictive course lines) are normal.

>> Work End.

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:0000000011579232

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"	• Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:

- When replacing AV control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new AV control unit.

CONFIGURATION (AV CONTROL UNIT) : Work Procedure

INFOID:0000000011579233

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-116. "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.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[MID AUDIO]

>> Work End.

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:0000000011579234

CAUTION:

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

MANUAL SETTING ITEM	
Items	Setting value
CAMERA SYSTEM	NONE/AVM ⇔ REAR CAMERA
SOUND SYSTEM	BASE ⇔ BOSE

⇔: Items which confirm vehicle specifications

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Logic

INFOID:0000000011579235

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:0000000011579236

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-21, "Trouble Diagnosis Flow Chart"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

AV

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000011579237

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-185, "Removal and Installation" .

U1200 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579238

CONSULT Display	DTC Detection Condition	Possible Cause
CONT UNIT [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-185, "Removal and Installation" .

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AV

U1216 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1216 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579239

CONSULT Display	DTC Detection Condition	Possible Cause
CAN CONT [U1216]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-185, "Removal and Installation" .

U1218 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1218 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579240

CONSULT Display	DTC Detection Condition	Possible Cause
HDD CONN [U1218]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-185 "Removal and Installation" .

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AV

U1219 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1219 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579241

CONSULT Display	DTC Detection Condition	Possible Cause
HDD READ [U1219]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-185, "Removal and Installation" .

U121A AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U121A AV CONTROL UNIT

DTC Logic

INFOID:0000000011579242

CONSULT Display	DTC Detection Condition	Possible Cause
HDD WRITE [U121A]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-185 "Removal and Installation" .

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U121B AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U121B AV CONTROL UNIT

DTC Logic

INFOID:0000000011579243

CONSULT Display	DTC Detection Condition	Possible Cause
HDD COMM [U121B]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-185 "Removal and Installation" .

U121C AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U121C AV CONTROL UNIT

DTC Logic

INFOID:0000000011579244

CONSULT Display	DTC Detection Condition	Possible Cause
HDD ACCESS [U121C]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-185 "Removal and Installation" .

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U121D AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U121D AV CONTROL UNIT

DTC Logic

INFOID:0000000011579245

CONSULT Display	DTC Detection Condition	Possible Cause
DSP CONN [U121D]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-185, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011579246

1. CHECK CD PLAYBACK

Check the CD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the CD playback function of the AV control unit operating normally?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

U121E AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U121E AV CONTROL UNIT

DTC Logic

INFOID:0000000011579247

CONSULT Display	DTC Detection Condition	Possible Cause
DSP COMM [U121E]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-185, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011579248

1.CHECK CD PLAYBACK

Check the CD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the CD playback function of the AV control unit operating normally?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

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AV

U1225 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1225 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579249

CONSULT Display	DTC Detection Condition	Possible Cause
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that connection to USB connector is normal.

U1227 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1227 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579250

CONSULT Display	DTC Detection Condition	Possible Cause
DVD COMM [U1227]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-185, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011579251

1.CHECK DVD PLAYBACK

Check the DVD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the DVD playback function of the AV control unit operating normally?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

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U1228 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1228 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579252

CONSULT Display	DTC Detection Condition	Possible Cause
SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-185. "Removal and Installation" .

U1229 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579253

CONSULT Display	DTC Detection Condition	Possible Cause
iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-185. "Removal and Installation" .

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AV

U122A AV CONTROL UNIT

[MID AUDIO]

< DTC/CIRCUIT DIAGNOSIS >

U122A AV CONTROL UNIT

DTC Logic

INFOID:0000000011579254

CONSULT Display	DTC Detection Condition	Possible Cause
CONFIG UNFINISH [U122A]	Configuration data is incomplete.	Write configuration data. Refer to AV-115, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure" .

Diagnosis Procedure

INFOID:0000000011579255

1.PERFORM CONFIGURATION

When U122A is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to [AV-115, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).

U122E AV CONTROL UNIT

DTC Logic

INFOID:0000000011579256

CONSULT Display	DTC Detection Condition	Possible Cause
Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-185. "Removal and Installation" .

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AV

U1243 DISPLAY UNIT

DTC Logic

INFOID:0000000011579257

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT DISP CONN [U1243]	When any of the following is detected: - display unit power supply or ground circuit malfunction. - serial communication circuit malfunction between display unit and AV control unit.	- Display unit power supply and ground circuits. - Serial communication circuits between display unit and AV control unit.

Diagnosis Procedure

INFOID:0000000011579258

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuits. Refer to [AV-142, "DISPLAY UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK COMMUNICATION CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect display unit connector and AV control unit connector M136.
- Check continuity between display unit connector M93 terminals 11, 22 and AV control unit connector M136 terminals 73, 61.

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M93	11	M136	73	Yes
	22		61	

- Check continuity between display unit connector M93 terminals 11, 22 and ground.

Display unit		Ground	Continuity
Connector	Terminal		
M93	11	—	No
	22		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

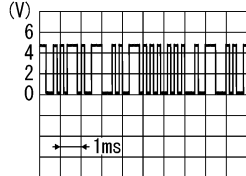
3. CHECK COMMUNICATION SIGNAL (CONT→DISP)

- Connect display unit connector and AV control unit connector M136.
- Turn ignition switch ON.
- Check signal between display unit connector M93 terminal 11 and ground.

U1243 DISPLAY UNIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

Display unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M93	11	—	When adjusting display brightness.	(V)  PKIB5039J

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

4.CHECK COMMUNICATION SIGNAL (DISP→CONT)

Check signal between display unit connector M93 terminal 22 and ground.

Display unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M93	22	—	When adjusting display brightness.	(V) <

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace display unit. Refer to [AV-189. "Removal and Installation"](#).

AV

U1255 SATELLITE RADIO TUNER

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1255 SATELLITE RADIO TUNER

DTC Logic

INFOID:000000011579259

CONSULT Display	DTC Detection Condition	Possible Cause
SAT CONN [U1255]	When any of the following is detected: - satellite radio tuner power supply or ground circuit malfunction. - communication circuit malfunction between AV control unit and satellite radio tuner. - request signal circuit malfunction between AV control unit and satellite radio tuner.	- Satellite radio tuner power supply and ground circuits. - Communication circuits between AV control unit and satellite radio tuner. - Request signal circuits between AV control unit and satellite radio tuner.

Diagnosis Procedure

INFOID:000000011579260

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK SATELLITE RADIO TUNER POWER SUPPLY AND GROUND CIRCUIT

Check satellite radio tuner power supply and ground circuit. Refer to [AV-144, "SATELLITE RADIO TUNER : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK COMMUNICATION CIRCUIT AND REQUEST SIGNAL CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect AV control unit connector M138 and satellite radio tuner connector B2.
- Check continuity between AV control unit connector M138 terminals 100, 101, 102 and satellite radio tuner connector B2 terminals 28, 29, 30.

AV control unit		Satellite radio tuner		Continuity
Connector	Terminal	Connector	Terminal	
M138	100	B2	28	Yes
	101		29	
	102		30	

- Check continuity between AV control unit connector M138 terminals 100, 101, 102 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M138	100		No
	101		
	102		

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 M138.
- Turn ignition switch ON.
- Check voltage between AV control unit connector M138 terminals 100, 101 and ground.

U1255 SATELLITE RADIO TUNER

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

AV control unit		Ground	Voltage (Approx.)
(+) (–)		(–)	
Connector	Terminal		
M138	100	—	7.0 V
	101		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

4.CHECK SATELLITE RADIO TUNER VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M138.
3. Connect satellite radio tuner connector B2.
4. Turn ignition switch ON.
5. Check voltage between satellite radio tuner connector B2 terminal 32 and ground.

Satellite radio tuner		Ground	Voltage (Approx.)
(+) (–)		(–)	
Connector	Terminal		
B2	30	—	7.0 V

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace satellite radio tuner. Refer to [AV-197. "Removal and Installation"](#).

AV

U1263 USB

DTC Logic

INFOID:0000000011579261

CONSULT Display	DTC Detection Condition	Possible Cause
USB OVERCURRENT [U126]	Overcurrent in USB connector is detected.	Check USB harness between the AV control unit and USB connector.

Diagnosis Procedure

INFOID:0000000011579262

1.CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace USB interface harness. Refer to [AV-193, "Removal and Installation"](#).

2.CHECK USB INTERFACE HARNESS CONTINUITY

Check USB interface harness continuity. Refer to [AV-178, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

NO >> Replace USB interface harness. Refer to [AV-193, "Removal and Installation"](#).

U1264 ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

U1264 ANTENNA AMP.

DTC Logic

INFOID:0000000011579263

CONSULT Display	DTC Detection Condition	Possible Cause
ANTENNA AMP TERMINAL [U1264]	Antenna amp. ON signal circuit open or short circuited.	Antenna amp. ON signal circuit between AV control unit and antenna amp.

Diagnosis Procedure

INFOID:0000000011579264

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA BASE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M155 and antenna base connector M502.
3. Check continuity between AV control unit connector M155 and antenna base connector M502.

AV control unit		Antenna base		Continuity
Connector	Terminal	Connector	Terminal	
M155	126	M502	2	Yes

4. Check continuity between AV control unit connector M155 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M155	126	—	No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M155.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M155 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(−)	
Connector	Terminal		
M155	126	—	Battery voltage

Is the inspection result normal?

YES >> Replace antenna base. Refer to [AV-199, "Location of Antennas"](#).

NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

U1300 AV COMM CIRCUIT

Description

INFOID:000000011579265

U1300 is indicated when a malfunction occurs in the communication signal of the multi AV system. Indicated simultaneously, without fail, the malfunction of control units connected to the AV control unit through communication circuits. Determine the possible malfunction cause from the table below.

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

CONSULT Display	DTC Detection Condition	Possible Cause
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	When any of the following is detected: • A/C and AV switch assembly power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	• A/C and AV switch assembly power supply and ground circuits. • AV communication circuits between AV control unit and A/C and AV switch assembly.
• AV COMM CIRCUIT [U1300] • HAND FREE CONN [U1256]	When any of the following is detected: • Bluetooth® control unit power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and Bluetooth® control unit.	• Bluetooth® control unit power supply and ground circuits. • AV communication circuits between AV control unit and Bluetooth® control unit.
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • HAND FREE CONN [U1256]	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.

U1310 AV CONTROL UNIT

DTC Logic

INFOID:0000000011579266

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-185. "Removal and Installation" .

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AV

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000011579267

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
29	Ignition signal	29 (5A)
39	ACC power supply	65 (10A)
51	Battery power supply	15 (15A)

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 M124 and M125.
3. Check voltage between AV control unit connectors and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M124	29	—	Ignition switch: ON	Battery voltage
M125	39		Ignition switch: ACC	
	51		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. Check continuity between AV control unit connector M125 terminal 52 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M125	52	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000011579268

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1.CHECK INVERTER VCC AND SIGNAL VCC (POWER SUPPLY) CIRCUIT 1

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

Check voltage between display unit harness connector M93 terminals 2, 3 and ground.

Display unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M93	2	—	Ignition switch: ACC	9.0 V
	3			

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK INVERTER VCC AND SIGNAL VCC (POWER SUPPLY) CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect AV control unit connector M136 and display unit connector.
- Check continuity between AV control unit connector M136 terminals 64, 76 and display unit connector M93 terminals 3, 2.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	64	M93	3	Yes
	76		2	

- Check continuity between AV control unit connector M136 terminals 64, 76 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	64	—	No
	76		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK INVERTER VCC AND SIGNAL VCC (POWER SUPPLY) CIRCUIT 2

- Connect the AV control unit connector M136.
- Check voltage between AV control unit connector M136 terminals 64, 76 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(−)		
Connector	Terminal			
M136	64	—	Ignition switch: ACC	9.0 V
	76			

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

4.CHECK INVERTER GROUND AND SIGNAL GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect AV control unit connector M136 and display unit connector.
- Check continuity between AV control unit connector M136 terminals 63, 75 and display unit connector M93 terminals 14, 13.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	63	M93	14	Yes
	75		13	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK DISPLAY UNIT GROUND CIRCUIT

Check continuity between display unit connector M93 terminal 1 and ground.

Display unit		Ground	Continuity
Connector	Terminal		
M93	1	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:0000000011579269

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
32	Battery power supply	15 (15A)
36	ACC power supply	65 (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 satellite radio tuner connector B2.
3. Check voltage between satellite radio tuner connector B2 terminal 32, 36 and ground.

Satellite radio tuner		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
B2	32	—	Ignition switch: OFF	Battery voltage
	36		Ignition switch: ACC	

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 satellite radio tuner connector B2 terminal 35 and ground.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

Satellite radio tuner		Ground	Continuity
Connector	Terminal		
B2	35	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

BLUETOOTH® CONTROL UNIT

BLUETOOTH® CONTROL UNIT : Diagnosis Procedure

INFOID:0000000011579270

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
1	Battery power supply	15 (15A)
2	ACC power supply	65 (10A)
3	Ignition signal	30 (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 Bluetooth® control unit connector B3.
3. Check voltage between Bluetooth® control unit connector B3 and ground.

Bluetooth® control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
B3	1	—	Ignition switch: OFF	Battery voltage
	2		Ignition switch: ACC	
	3		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 Bluetooth® control unit connector B3 and ground.

Bluetooth® control unit		Ground	Continuity
Connector	Terminal		
B3	4	—	Yes
	20		
	22		
	24		
	27		

POWER SUPPLY AND GROUND CIRCUIT

[MID AUDIO]

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:0000000011579271

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
3	ACC power supply	65 (10A)

Is the fuse 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 A/C and AV switch assembly connector.
3. Check voltage between A/C and AV switch assembly connector M98 terminal 3 and ground.

A/C and AV switch assembly		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M98	3	—	Ignition switch: ACC	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK CONTROL UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M124.
3. Check continuity between A/C and AV switch assembly connector M98 terminal 9 and AV control unit connector M124 terminal 10.

A/C and AV switch assembly		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M98	9	M124	10	Yes

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

4.CHECK SWITCH GROUND CIRCUIT

Check continuity between A/C and AV switch assembly connector M98 terminal 1 and ground.

A/C and AV switch assembly		Ground	Continuity
Connector	Terminal		
M98	1	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000011579272

Regarding Wiring Diagram information, refer to [AV-85. "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 M125 and suspect front door speaker connector.
2. Check continuity between AV control unit connector M125 and suspect front door speaker connector.

AV control unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M125	34	D12 (LH)	1	Yes
	35		2	
	43	D112 (RH)	1	
	44		2	

3. Check continuity between AV control unit connector M125 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M125	34	—	No
	35		
	43		
	44		

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

3.CHECK FRONT DOOR SPEAKER SIGNAL

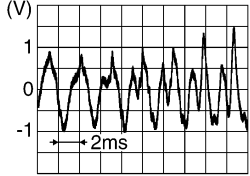
1. Connect AV control unit connector M125 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of AV control unit connector M125.

AV control unit connector M125		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

34	35	Audio signal output	 SKIB3609E
43	44		

Is the inspection result normal?

- YES >> Replace front door speaker. Refer to [AV-190. "Removal and Installation"](#).
 NO >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

INSTRUMENT PANEL SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

INSTRUMENT PANEL SPEAKER/TWEETER

Diagnosis Procedure

INFOID:0000000011579273

Regarding Wiring Diagram information, refer to [AV-85. "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 INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M125 and suspect instrument panel tweeter connector.
2. Check continuity between AV control unit connector M125 and suspect instrument panel tweeter connector.

AV control unit		Instrument panel tweeter		Continuity
Connector	Terminal	Connector	Terminal	
M125	34	M62 (LH)	1	Yes
	35		2	
	43	M73 (RH)	1	
	44		2	

3. Check continuity between AV control unit connector M125 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M125	34	—	No
	35		
	43		
	44		

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

3.CHECK INSTRUMENT PANEL TWEETER SIGNAL

1. Connect AV control unit connector M125 and suspect instrument panel tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of AV control unit connector M125.

AV control unit connector M125		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

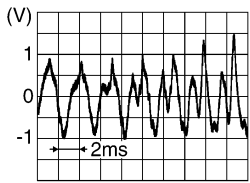
A
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AV

INSTRUMENT PANEL SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

34	35	Audio signal output	
43	44		

Is the inspection result normal?

- YES >> Replace instrument panel tweeter. Refer to [AV-191. "Removal and Installation"](#).
NO >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

REAR DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000011579274

Regarding Wiring Diagram information, refer to [AV-85. "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 M125 and suspect rear door speaker connector.
2. Check continuity between AV control unit connector M125 and suspect rear door speaker connector.

AV control unit		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M125	36	D206 (LH)	1	Yes
	37		2	
	45	D306 (RH)	1	
	46		2	

3. Check continuity between AV control unit connector M125 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M125	36	—	No
	37		
	45		
	46		

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

3.CHECK REAR DOOR SPEAKER SIGNAL

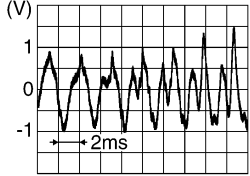
1. Connect AV control unit connector M125 and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of AV control unit connector M125.

AV control unit connector M125		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

36	37	Audio signal output	
45	46		

Is the inspection result normal?

- YES >> Replace rear door speaker. Refer to [AV-192. "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579275

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1.CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY

1. Turn ignition OFF.
2. Disconnect AV control unit connector M124 and front auxiliary input jacks connector.
3. Check continuity between AV control unit connector M124 and front auxiliary input jacks connector.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M124	20	M205	1	Yes
	21		3	

4. Check continuity between AV control unit connector M124 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M124	20	—	No
	21		

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M124 and front auxiliary input jacks connector.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M124	22	M205	2	Yes

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK AUX SOUND SIGNAL

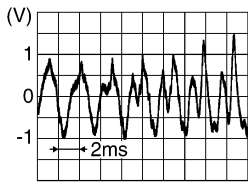
1. Connect AV control unit connector M124 and front auxiliary input jacks connector.
2. Turn ignition switch to ACC.
3. Select AUX mode.
4. Check signals between AV control unit connector M124 and ground.

AV control unit connector M124		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

20	22	AUX mode selected	 SKIB3609E
21	22		

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).
- NO >> Replace front auxiliary input jacks. Refer to [AV-194. "Removal and Installation"](#).

SATELLITE AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

SATELLITE AUDIO SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579276

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1. CHECK SATELLITE SOUND SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M138 and satellite radio tuner connector B2.
3. Check continuity between AV control unit connector M138 and satellite radio tuner connector B2.

AV control unit		Satellite radio tuner		Continuity
Connector	Terminal	Connector	Terminal	
M138	94	B2	22	Yes
	96		24	

4. Check continuity between AV control unit connector M138 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M138	94		No
	96		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK SATELLITE SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M138 and satellite radio tuner connector B2.

AV control unit		Satellite radio tuner		Continuity
Connector	Terminal	Connector	Terminal	
M138	93	B2	21	Yes
	95		23	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK SATELLITE SOUND SIGNAL

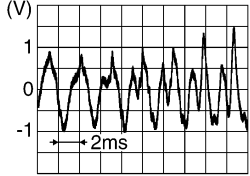
1. Connect AV control unit connector M138 and satellite radio tuner connector B2.
2. Turn ignition switch to ACC.
3. Select satellite radio mode.
4. Check the signal between the terminals of AV control unit connector M138.

AV control unit connector M138		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

SATELLITE AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

94	93	Satellite radio mode selected	 SKIB3609E
96	95		

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).
 NO >> Replace satellite radio tuner. Refer to [AV-197, "Removal and Installation"](#).

BLUETOOTH® VOICE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579277

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1. CHECK BLUETOOTH® VOICE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M124 and Bluetooth® control unit connector B3.
3. Check continuity between AV control unit connector M124 terminal 5 and Bluetooth® control unit connector B3 terminal 9.

AV control unit		Bluetooth® control unit		Continuity
Connector	Terminal	Connector	Terminal	
M124	5	B3	9	Yes

4. Check continuity between AV control unit connector M124 terminal 5 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M124	5	—	No

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK BLUETOOTH® VOICE SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M124 terminal 4 and Bluetooth® control unit connector B3 terminal 10.

AV control unit		Bluetooth® control unit		Continuity
Connector	Terminal	Connector	Terminal	
M124	4	B3	10	Yes

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK BLUETOOTH® VOICE SIGNAL

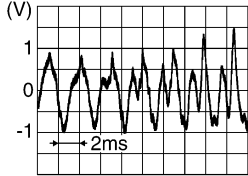
1. Connect AV control unit connector M124 and Bluetooth® control unit connector B3.
2. Turn ignition switch to ACC.
3. Press  switch.
4. Check the signal between the terminals of AV control unit connector M124.

AV

BLUETOOTH® VOICE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

AV control unit connector M124		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
5	4	During voice guide output with  switch pressed.	 SKIB3609E

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).
 NO >> Replace Bluetooth® control unit. Refer to [AV-195. "Removal and Installation"](#).

RGB (R: RED) SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

RGB (R: RED) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579278

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK RGB (R: RED) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M136 and display unit connector.
3. Check continuity between AV control unit connector M136 terminal 57 and display unit connector M93 terminal 17.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	57	M93	17	Yes

4. Check continuity between AV control unit connector M136 terminal 57 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	57		No

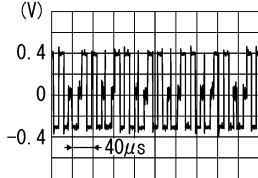
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK RGB (R: RED) SIGNAL

1. Connect AV control unit connector M136 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 17 and ground.

Display unit		Ground	Condition	Reference value
(+) (V)		(-)		
Connector	Terminal			
M93	17	—	"Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	

Is inspection result normal?

YES >> Replace display unit. Refer to [AV-189, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

RGB (G: GREEN) SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

RGB (G: GREEN) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579279

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1. CHECK RGB (G: GREEN) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M136 and display unit connector.
3. Check continuity between AV control unit connector M136 terminal 56 and display unit connector M93 terminal 6.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	56	M93	6	Yes

4. Check continuity between AV control unit connector M136 terminal 56 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	56		No

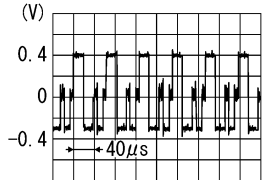
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK RGB (G: GREEN) SIGNAL

1. Connect AV control unit connector M136 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 6 and ground.

Display unit		Ground	Condition	Reference value
(+) (V)		(-)		
Connector	Terminal			
M93	6	—	"Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	 SKIB2236J

Is inspection result normal?

YES >> Replace display unit. Refer to [AV-189. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

RGB (B: BLUE) SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

RGB (B: BLUE) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579280

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK RGB (B: BLUE) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M136 and display unit connector.
3. Check continuity between AV control unit connector M136 terminal 55 and display unit connector M93 terminal 18.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	55	M93	18	Yes

4. Check continuity between AV control unit connector M136 terminal 55 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	55		No

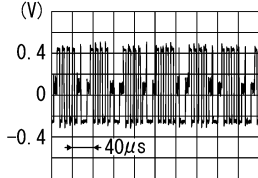
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK RGB (B: BLUE) SIGNAL

1. Connect AV control unit connector M136 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 18 and ground.

Display unit		Ground	Condition	Reference value
(+) (V)		(-)		
Connector	Terminal			
M93	18	—	"Color Spectrum Bar" on DISPLAY DIAGNOSIS screen.	

SKIB2237J

Is inspection result normal?

YES >> Replace display unit. Refer to [AV-189, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

RGB SYNCHRONIZING SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

RGB SYNCHRONIZING SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579281

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK RGB SYNCHRONIZING SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M136 and display unit connector.
3. Check continuity between AV control unit connector M136 terminal 58 and display unit connector M93 terminal 19.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	58	M93	19	Yes

4. Check continuity between AV control unit connector M136 terminal 58 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	58		No

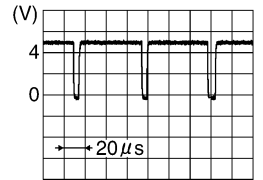
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK RGB SYNCHRONIZING SIGNAL

1. Connect AV control unit connector M136 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 19 and ground.

Display unit		Ground	Reference value
(+) (V)		(-)	
Connector	Terminal		
M93	19	—	

SKIB3603E

Is inspection result normal?

YES >> Replace display unit. Refer to [AV-189, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

RGB AREA (YS) SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

RGB AREA (YS) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579282

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK RGB AREA (YS) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M136 and display unit connector.
3. Check continuity between AV control unit connector M136 terminal 60 and display unit connector M93 terminal 9.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	60	M93	9	Yes

4. Check continuity between AV control unit connector M136 terminal 60 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	60		No

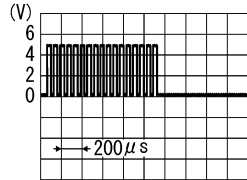
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK RGB AREA (YS) SIGNAL

1. Connect AV control unit connector M136 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 9 and ground.

Display unit		Ground	Condition	Reference value
(+) (–)		(–)		
Connector	Terminal			
M93	9	—	RGB image displayed.	5.0 V
			AUX image displayed.	

PKIB4948J

Is inspection result normal?

YES >> Replace display unit. Refer to [AV-189, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579283

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M136 and display unit connector.
3. Check continuity between AV control unit connector M136 terminal 62 and display unit connector M93 terminal 8.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	62	M93	8	Yes

4. Check continuity between AV control unit connector M136 terminal 62 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	62		No

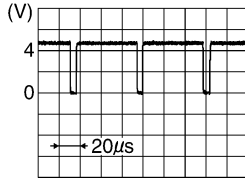
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

1. Connect AV control unit connector M136 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 8 and ground.

Display unit		Ground	Reference value
(+) (V)		(-)	
Connector	Terminal		
M93	8	—	

SKIB3601E

Is inspection result normal?

YES >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

NO >> Replace display unit. Refer to [AV-189, "Removal and Installation"](#).

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579284

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M136 and display unit connector.
3. Check continuity between AV control unit connector M136 terminal 74 and display unit connector M93 terminal 20.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	74	M93	20	Yes

4. Check continuity between AV control unit connector M136 terminal 74 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	74		No

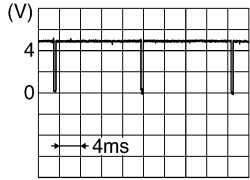
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

1. Connect AV control unit connector M136 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 20 and ground.

Display unit		Ground	Reference value
(+) (V)		(-)	
Connector	Terminal		
M93	20	—	

SKIB3598E

Is inspection result normal?

YES >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

NO >> Replace display unit. Refer to [AV-189, "Removal and Installation"](#).

COMPOSITE IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

COMPOSITE IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579285

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M136 and display unit connector.
3. Check continuity between AV control unit connector M136 terminal 53 and display unit connector M93 terminal 15.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	53	M93	15	Yes

4. Check continuity between AV control unit connector M136 terminal 53 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M136	53		No

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK COMPOSITE IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

- Check continuity between AV control unit connector M136 terminal 54 and display unit connector M93 terminal 4.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M136	54	M93	4	Yes

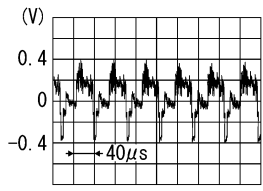
Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector M136 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 15 and ground.

Display unit		Ground	Condition	Reference value
(+) (V)		(-)		
Connector	Terminal			
M93	15	—	Camera image displayed.	 SKIB2251J

COMPOSITE IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

Is inspection result normal?

- YES >> Replace display unit. Refer to [AV-189, "Removal and Installation"](#).
- NO >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

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AV

AUX IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579286

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1. CHECK AUX IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M137 and front auxiliary input jacks connector.
3. Check continuity between AV control unit connector M137 terminal 83 and front auxiliary input jacks connector M205 terminal 7.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M137	83	M205	7	Yes

4. Check continuity between AV control unit connector M137 terminal 83 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M137	83		No

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK AUX IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M137 and front auxiliary input jacks connector.
3. Check continuity between AV control unit connector M137 terminal 91 and front auxiliary input jacks connector M205 terminal 8.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M137	91	M205	8	Yes

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

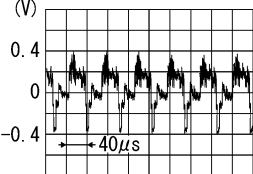
3. CHECK AUX IMAGE SIGNAL

1. Connect AV control unit connector M137 and front auxiliary input jacks connector.
2. Turn ignition switch ON.
3. Check signal between front auxiliary input jacks connector M205 terminal 7 and ground.

AUX IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

Front auxiliary input jacks		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M205	7	—	AUX image displayed.	 (V) 0.4 0 -0.4 40μs SKIB2251J

Is inspection result normal?

YES >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

NO >> Replace front auxiliary input jacks. Refer to [AV-194, "Removal and Installation"](#).

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CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579287

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1. CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M137 and rear view camera connector.
3. Check continuity between AV control unit connector M137 terminal 87 and rear view camera connector D504 terminal 1.

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M137	87	D504	1	Yes

4. Check continuity between AV control unit connector M137 terminal 87 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M137	87		No

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK CAMERA POWER SUPPLY VOLTAGE

1. Connect AV control unit connector M137 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to "R".
4. Check voltage between AV control unit connector M137 terminal 87 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+) Terminal		(-)		
Connector	Terminal			
M137	87	—	Selector lever is in "R".	6.0 V

Is inspection result normal?

YES >> GO TO 3.

NO >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

3. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M137 and rear view camera connector.
3. Check continuity between AV control unit connector M137 terminal 82 and rear view camera connector D504 terminal 3.

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M137	82	D504	3	Yes

4. Check continuity between AV control unit connector M137 terminal 82 and ground.

CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

AV control unit		Ground	Continuity
Connector	Terminal		
M137	82		No

Is inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

4.CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M137 terminal 88 and rear view camera connector D504 terminal 2.

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M137	88	D504	2	Yes

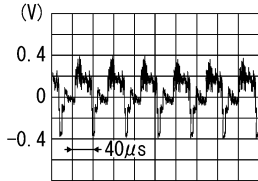
Is inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK CAMERA IMAGE SIGNAL

1. Connect AV control unit connector M137 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to "R".
4. Check signal between AV control unit connector M137 terminal 82 and ground.

AV control unit		Ground	Condition	Reference value
(+) (V)		(-)		
Connector	Terminal			
M137	82	—	Camera image displayed.	 SKIB2251J

Is inspection result normal?

YES >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).

NO >> Replace rear view camera. Refer to [AV-198, "Removal and Installation"](#).

AV

DISK EJECT SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

DISK EJECT SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000011579288

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1. CHECK DISK EJECT SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M124 and A/C and AV switch assembly connector.
3. Check continuity between AV control unit connector M124 terminal 28 and A/C and AV switch assembly connector M98 terminal 14.

AV control unit		A/C and AV switch assembly		Continuity
Connector	Terminal	Connector	Terminal	
M124	28	M98	14	Yes

4. Check continuity between AV control unit connector M124 terminal 28 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M124	28		No

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M124 and A/C and AV switch assembly connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M124 terminal 28 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M124	28	—	Pressing eject switch	0 V
			Except above	5.0 V

Is the inspection result normal?

YES >> Replace AV control unit. Refer to [AV-185. "Removal and Installation"](#).

NO >> Replace A/C and AV switch assembly. Refer to [AV-187. "Removal and Installation"](#).

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

MICROPHONE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579289

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1.CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect Bluetooth® control unit connector B3 and microphone connector.
3. Check continuity between Bluetooth® control unit connector B3 terminals 7, 8, 29 and microphone connector R109 terminals 6, 5, 3.

Bluetooth® control unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
B3	7	R109	6	Yes
	8		5	
	29		3	

4. Check continuity between Bluetooth® control unit connector B3 terminals 7, 8, 29 and ground.

Bluetooth® control unit		Ground	Continuity
Connector	Terminal		
B3	7	—	No
	8		
	29		

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK MICROPHONE VCC VOLTAGE

1. Connect Bluetooth® control unit connector B3.
2. Turn ignition switch ON.
3. Check voltage between Bluetooth® control unit connector B3.

Bluetooth® control unit connector B3		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
29	8	5.0 V

Is the inspection result normal?

YES >> GO TO 3.

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

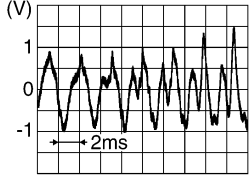
3.CHECK MICROPHONE SIGNAL

1. Connect microphone connector.
2. Check signal between Bluetooth® control unit connector B3.

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

Bluetooth® control unit connector B3		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
7	8	Speak into microphone.	 SKIB3609E

Is the inspection result normal?

YES >> Replace Bluetooth® control unit. Refer to [AV-195. "Removal and Installation"](#).

NO >> Replace microphone. Refer to [AV-196. "Removal and Installation"](#).

BLUETOOTH® CONTROL SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011579290

1.CHECK CONTROL SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect Bluetooth® control unit connector B3.
3. Check continuity between Bluetooth® control unit connector B3 terminals 20, 24 and ground.

Bluetooth® control unit		Ground	Continuity
Connector	Terminal		
B3	20	—	Yes
	24		

Is the inspection result normal?

- YES >> Replace Bluetooth® control unit. Refer to [AV-195, "Removal and Installation"](#).
- NO >> Repair or replace harness or connectors.

STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

STEERING SWITCH

Diagnosis Procedure

INFOID:0000000011579291

Regarding Wiring Diagram information, refer to [AV-85. "Wiring Diagram"](#).

1. CHECK STEERING SWITCHES RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M149.
3. Check the resistance between the terminals of combination switch connector M149.

Combination switch connector M149		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress △ switch.	121
		Depress ▽ switch.	321
		Depress ⌂ switch.	723
		Depress ENTER switch.	2023
15		Depress - ⏮ switch.	1
		Depress ⏭+ switch.	121
		Depress ⏮ switch.	321
		Depress ⏭ switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-188. "Removal and Installation"](#).

2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

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

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

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

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

Is the inspection result normal?

STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[MID AUDIO]

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

3.CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M149.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M149	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

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

4.CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

1. Disconnect AV control unit connector M125.
2. Check continuity between combination meter connector M24 and AV control unit connector M125.

Combination meter		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	14	M125	38	Yes
	15		48	
	16		47	

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

Combination meter		Ground	Continuity
Connector	Terminal		
M24	14	—	No
	15		
	16		

Is the inspection result normal?

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

5.CHECK AV CONTROL UNIT VOLTAGE

1. Connect combination meter connector M125 and AV control unit connector M125.
2. Turn ignition switch ON.
3. Check the voltage between the terminals of AV control unit connector M125.

AV control unit M125		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
38	47	5.0 V
48		

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-185, "Removal and Installation"](#).
NO >> Replace combination meter. Refer to [MWI-85, "Removal and Installation"](#).

USB CONNECTOR

Diagnosis Procedure

INFOID:0000000011579292

Regarding Wiring Diagram information, refer to [AV-85, "Wiring Diagram"](#).

1. CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M145 and USB interface connector M209.
3. Check continuity between AV control unit connector M145 and USB interface connector M209.

AV control unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M145	121	M209	2	Yes
	122		1	
	123		4	
	124		3	
	125		5	

4. Check continuity between AV control unit connector M145 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M145	121	Ground	No
	123		

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-193, "Removal and Installation"](#).
 NO >> Repair or replace harness or connectors.

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:0000000011579293

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	AV control unit	Malfunction in AV control unit. Refer to AV-60, "On Board Diagnosis Function" .
No sound comes out or the level of the sound is low.	No sound from all speakers.	• Speaker circuit shorted to ground. Refer to AV-85, "Wiring Diagram". • AV control unit power supply and ground circuits malfunction. Refer to AV-147, "Diagnosis Procedure".
	Only a certain speaker (front door speaker LH, front door speaker RH, front instrument panel tweeter LH, front instrument panel tweeter RH, rear door speaker LH, rear door speaker RH) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and speaker. Refer to: - AV-147, "Diagnosis Procedure" (front door speaker). - AV-149, "Diagnosis Procedure" (front instrument panel tweeter). - AV-151, "Diagnosis Procedure" (rear door speaker). • Malfunction in speaker. Refer to: - AV-190, "Removal and Installation" (front door speaker). - AV-191, "Removal and Installation" (front instrument panel tweeter). - AV-192, "Removal and Installation" (rear door speaker). • Malfunction in AV control unit. Refer to AV-60, "On Board Diagnosis Function".

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[MID AUDIO]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Malfunction in AV control unit. Refer to AV-60, "On Board Diagnosis Function" .
	Noise comes out only from a certain speaker (front door speaker LH, front door speaker RH, front instrument panel tweeter LH, front instrument panel tweeter RH, rear door speaker LH, rear door speaker RH).	- Poor connector connection of speaker. - Sound signal circuit malfunction between AV control unit and speaker. Refer to: AV-147, "Diagnosis Procedure" (front door speaker). AV-149, "Diagnosis Procedure" (front instrument panel tweeter). AV-151, "Diagnosis Procedure" (rear door speaker). - Malfunction in speaker. - Poor Installation of speaker (e.g. backlash and looseness). Refer to: AV-190, "Removal and Installation" (front door speaker). AV-191, "Removal and Installation" (front instrument panel tweeter). AV-192, "Removal and Installation" (rear door speaker). - Malfunction in AV control unit. Refer to AV-60, "On Board Diagnosis Function".
	Noise is mixed with radio only (when the vehicle hits a bump or while driving over bad roads)	Poor connector connection of antenna or antenna feeder. Refer to AV-199, "Location of Antennas" .
No radio reception or poor reception.	- Other audio sounds are normal. - Any radio station cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	- Antenna amp. ON signal circuit malfunction. - Poor connector connection of antenna or antenna feeder. Refer to AV-199, "Location of Antennas".
No satellite radio reception.	There is malfunction in the CONSULT self diagnosis result. Refer to AV-67, "CONSULT Function" .	- Malfunction in antenna, antenna feeder or AV control unit. Perform DTC diagnosis. Refer to AV-67, "CONSULT Function". - Poor continuity in antenna feeder. - Poor connector connection of antenna or antenna feeder. Refer to AV-199, "Location of Antennas".
	There is no malfunction in the CONSULT self diagnosis result. Refer to AV-67, "CONSULT Function" .	- Poor continuity in antenna feeder. - Poor connector connection of antenna or antenna feeder. - Loose satellite radio antenna mounting nut. Refer to AV-199, "Location of Antennas".
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 >

[MID AUDIO]

Check Compatibility

1. Make sure the customer's Bluetooth® related concern is understood.
2. Verify the customer's concern.
NOTE:
The customer's phone may be required, depending upon their concern.
3. Write down the customer's phone brand, model and service provider.
NOTE:
It is necessary to know the service provider. On occasion, a given phone may be on the approved list with one provider, but may not be on the approved list with other providers.
4. Go to "www.nissanusa.com/bluetooth/".
 - a. Using the website's search engine, find out if the customer's phone is on the approved list.
 - b. If the customer's phone is NOT on the approved list:
Stop diagnosis here. The customer needs to obtain a Bluetooth® phone that is on the approved list before any further action.
 - c. If the feature related to the customer's concern shows as "N" (not compatible):
Stop diagnosis here. If the customer still wants the feature to function, they will need to get an approved phone showing the feature as "Y" (compatible) in the "Basic Features".
 - d. If the feature related to the customer's concern shows as "Y" (compatible):
Perform diagnosis as per the following table.

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection (no connection is displayed on the display at the guide).	Repeat the registration of cellular phone.	
Hands-free phone cannot be established.	- Hands-free phone operation can be made, but the communication cannot be established. - Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.	Malfunction in AV control unit. Replace AV control unit. Refer to AV-195, "Removal and Installation" .
The other party's voice cannot be heard by hands-free phone.	Check the "microphone speaker" in Inspection & Adjustment Mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-173, "Diagnosis Procedure" .
The system cannot be operated.	- The voice recognition can be controlled. - Steering switch's , , and  switch works, but  does not work.	Steering switch malfunction. Replace steering switch. Refer to AV-188, "Removal and Installation" .
	Steering switch's  ,  ,  , and  switches do not work.	Steering switch signal circuit malfunction. Refer to AV-176, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-176, "Diagnosis Procedure" .

RELATED TO REAR VIEW CAMERA

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[MID AUDIO]

Symptoms	Check items	Probable malfunction location
Rear view camera is inoperative.	Reverse signal circuit malfunction.	Reverse signal circuit malfunction between BCM and AV control unit. Refer to AV-170, "Diagnosis Procedure" .
	Camera image signal circuit malfunction.	Camera image signal circuit malfunction between rear view camera and AV control unit. Refer to AV-170, "Diagnosis Procedure" .
	Rear view camera malfunction.	Replace rear view camera. Refer to AV-198, "Removal and Installation" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[MID AUDIO]

NORMAL OPERATING CONDITION

Description

INFOID:0000000011579294

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.	• Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		• Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	• Relay malfunction, AV control unit malfunction
	The noise occurs when various motors are operating.	• Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		• Rear defogger coil malfunction • Open circuit in printed heater • Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		• Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

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® enabled cellular phones may not be recognized by the in-vehicle phone module. Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in AV-179, "Symptom Table" .
Cannot use hands-free phone.	Customer will not be able to use a hands-free phone under the following conditions: • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. NOTE: 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.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[MID AUDIO]

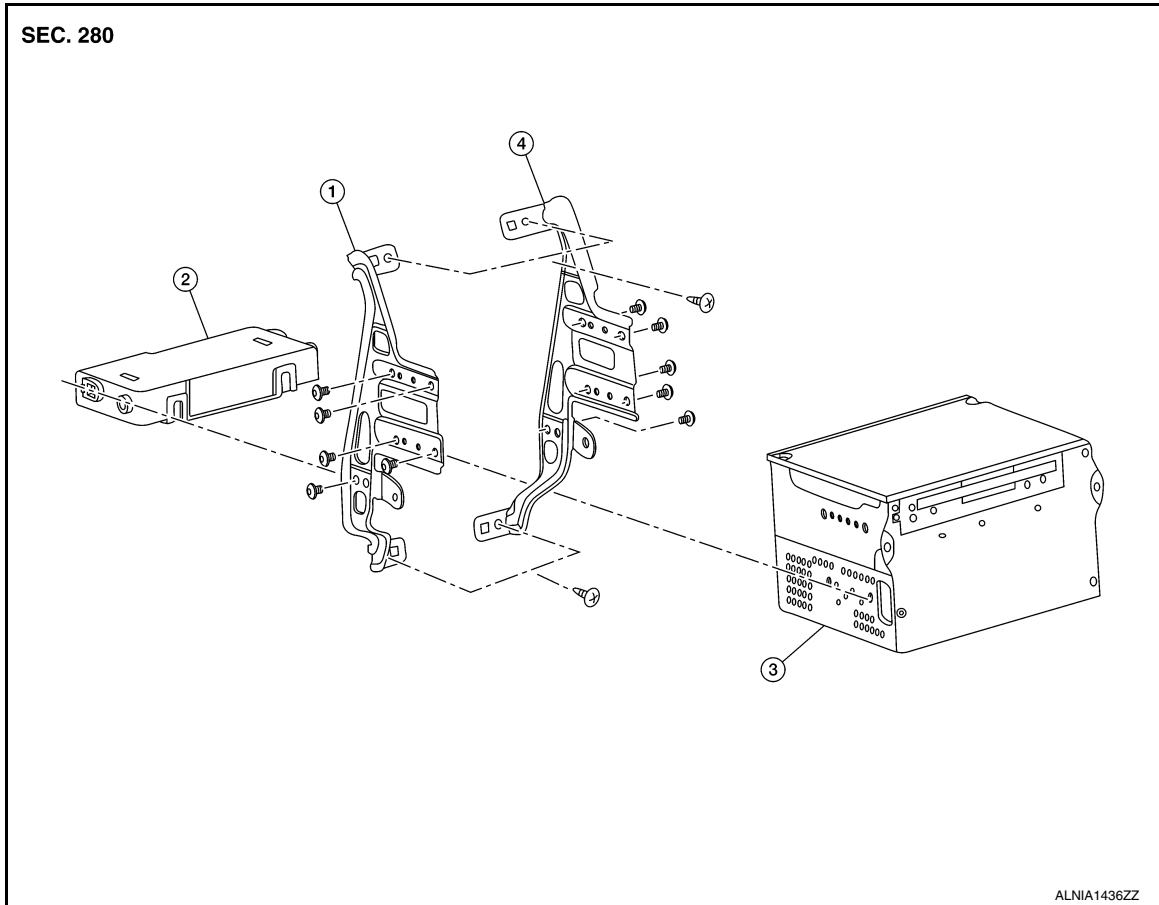
Symptom	Cause and Counter measure
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality.	Do not place the cellular phone in an area surrounded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

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

INFOID:0000000011579295



1. AV control unit bracket (LH)	2. A/C auto amp.	3. AV control unit
4. AV control unit bracket (RH)		

Removal and Installation

INFOID:0000000011579296

REMOVAL

CAUTION:

- Remove battery terminal and AV control unit after a lapse of 30 seconds or more after turning the ignition switch OFF.
- Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to [AV-116, "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 [IP-22, "CLUSTER LID C : Removal and Installation"](#).
2. Remove cluster lid C. Refer to [IP-22, "CLUSTER LID C : Removal and Installation"](#).
3. Remove the screws, then pull out the AV control unit.
4. Disconnect the harness connectors from the AV control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

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AV CONTROL UNIT

< REMOVAL AND INSTALLATION >

[MID AUDIO]

- When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to [AV-116, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).

A/C AND AV SWITCH ASSEMBLY

Removal and Installation

INFOID:0000000011579297

REMOVAL

1. Remove cluster lid C lower. Refer to [IP-22. "CLUSTER LID C LOWER : Removal and Installation"](#).
2. Remove the A/C and AV switch assembly lower screws.
3. Release upper pawls and remove A/C and AV switch assembly.

INSTALLATION

Installation is in the reverse order of removal.

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AV

STEERING SWITCH

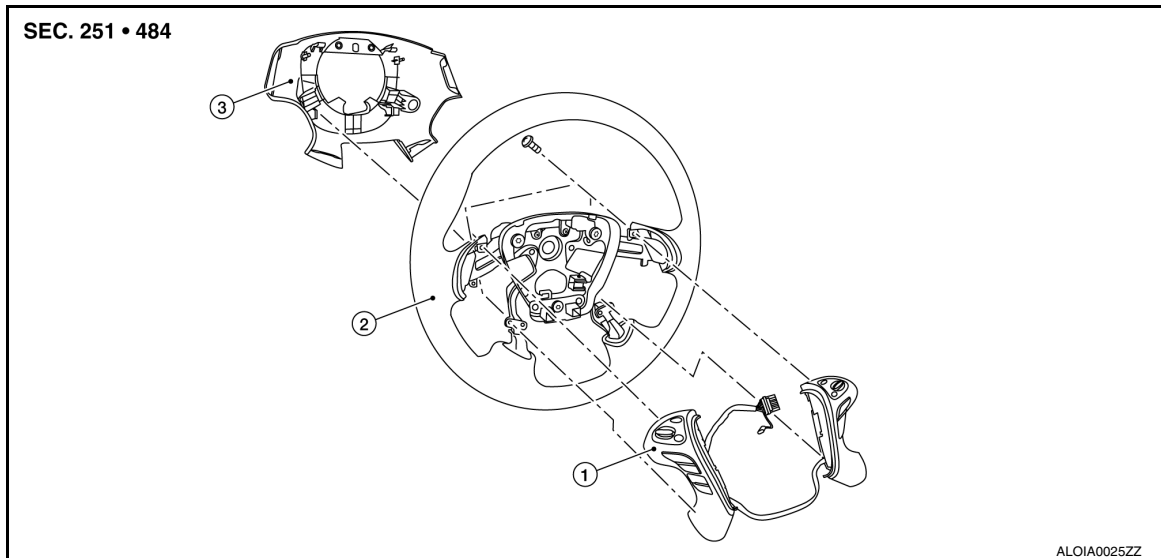
< REMOVAL AND INSTALLATION >

[MID AUDIO]

STEERING SWITCH

Exploded View

INFOID:000000011579298



1. Steering switches

2. Steering wheel

3. Steering wheel rear finisher

Removal and Installation

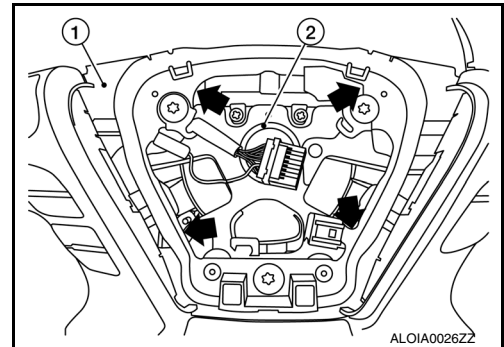
INFOID:000000011579299

REMOVAL

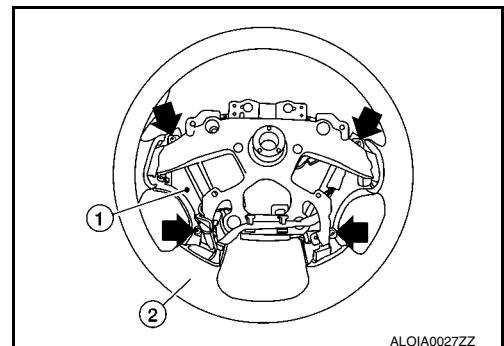
NOTE:

The steering switches are serviced as an assembly.

1. Remove steering wheel. Refer to [ST-45, "Removal and Installation"](#).
2. Release pawls and remove steering wheel rear finisher (1) from steering wheel (2).



3. Remove steering switches screws.
4. Remove steering switches (1) from steering wheel (2).



INSTALLATION

Installation is in the reverse order of removal.

DISPLAY UNIT

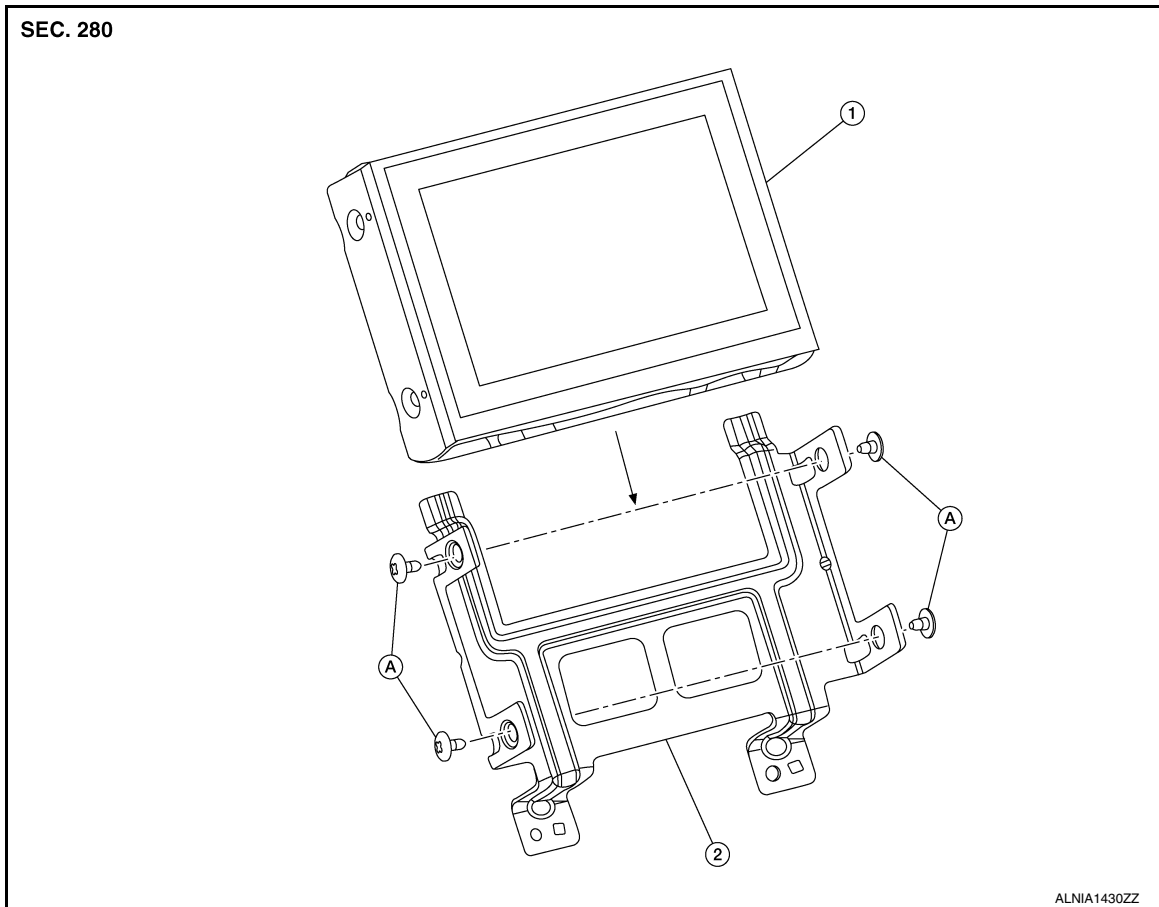
< REMOVAL AND INSTALLATION >

[MID AUDIO]

DISPLAY UNIT

Exploded View

INFOID:0000000011579300



Removal and Installation

INFOID:0000000011579301

REMOVAL

1. Remove cluster lid D. Refer to [IP-24. "Removal and Installation"](#).
2. Remove the display unit screws, then pull out the display unit and bracket.
3. Disconnect the harness connector from the display unit and remove.
4. Remove the display unit bracket screws and the display unit from the display unit bracket (if necessary).

INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

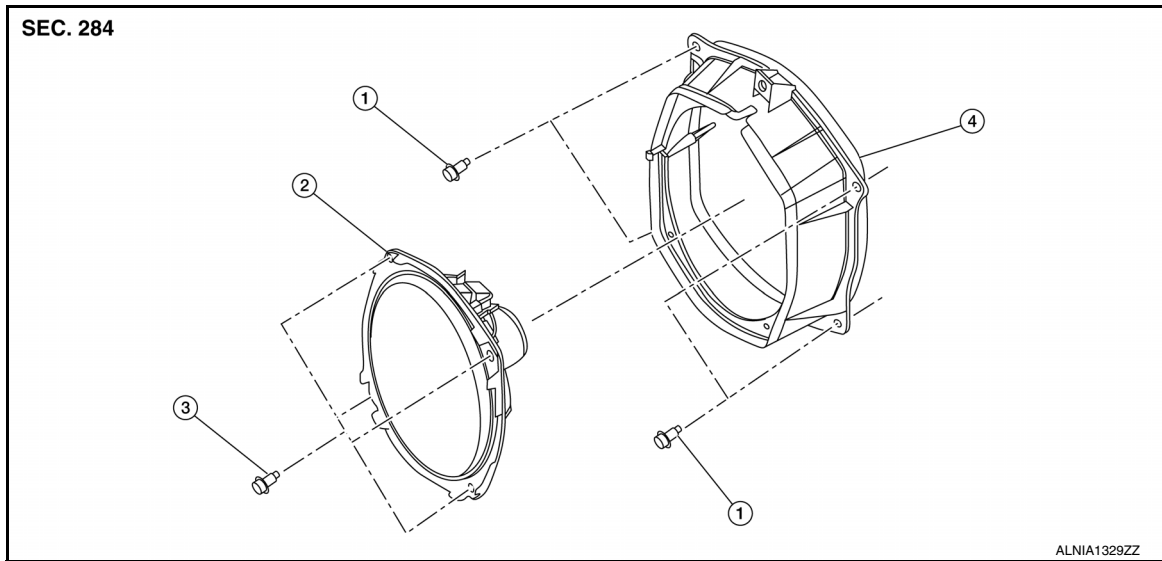
< REMOVAL AND INSTALLATION >

[MID AUDIO]

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000011579302



1. Speaker bracket bolt	2. Front door speaker	3. Speaker bolt
4. Speaker bracket		

Removal and Installation

INFOID:0000000011579303

REMOVAL

1. Remove the front door finisher. Refer to [INT-15. "Removal and Installation"](#).
2. Remove the front door speaker bolts.
3. Pull out the front door speaker from the speaker bracket.
4. Disconnect the harness connector from front door speaker and remove.
5. Remove the speaker bracket bolts and the speaker bracket from front door (if necessary).

INSTALLATION

Installation is in the reverse order of removal.

INSTRUMENT PANEL SPEAKER/TWEETER

< REMOVAL AND INSTALLATION >

[MID AUDIO]

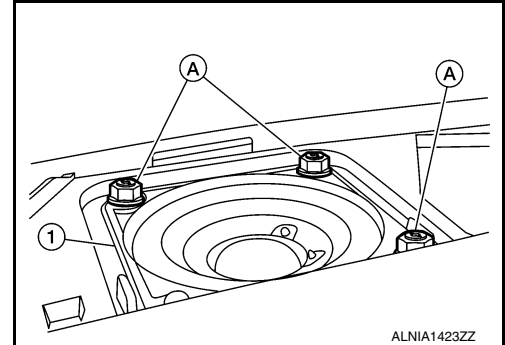
INSTRUMENT PANEL SPEAKER/TWEETER

Removal and Installation

INFOID:0000000011579304

REMOVAL

1. Remove instrument panel tweeter grille. Refer to [IP-14, "Exploded View"](#).
2. Remove the bolts (A), then pull out the instrument panel tweeter (1).
3. Disconnect the harness connector from the instrument panel tweeter (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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AV

REAR DOOR SPEAKER

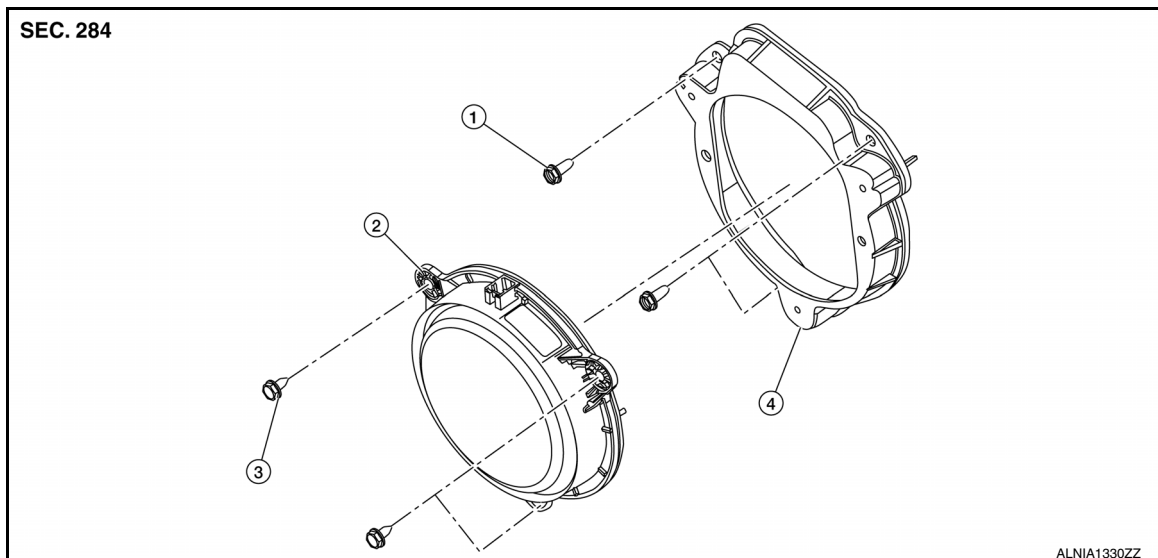
< REMOVAL AND INSTALLATION >

[MID AUDIO]

REAR DOOR SPEAKER

Exploded View

INFOID:0000000011579305



1. Speaker bracket bolt	2. Rear door speaker	3. Speaker bolt
4. Speaker bracket		

Removal and Installation

INFOID:0000000011579306

REMOVAL

1. Remove the rear door finisher. Refer to [INT-17, "Removal and Installation"](#).
2. Remove the rear door speaker bolts.
3. Disconnect the harness connector from the rear door speaker and remove.
4. Remove the speaker bracket bolts and the speaker bracket from the rear door (if necessary).

INSTALLATION

Installation is in the reverse order of removal.

USB INTERFACE

Removal and Installation

INFOID:0000000011579307

REMOVAL

1. Remove shift selector finisher. Refer to [IP-18. "Exploded View"](#).
2. Disconnect the harness connector from the USB interface.
3. Release the pawl from the back of USB interface, then remove USB interface.

INSTALLATION

Installation is in the reverse order of removal.

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AV

FRONT AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000011579308

REMOVAL

1. Remove shift selector finisher. Refer to [IP-18. "Exploded View"](#).
2. Disconnect the harness connector from the front auxiliary input jack.
3. Remove front auxiliary input jack screws and the front auxiliary input jack.

INSTALLATION

Installation is in the reverse order of removal.

BLUETOOTH CONTROL UNIT

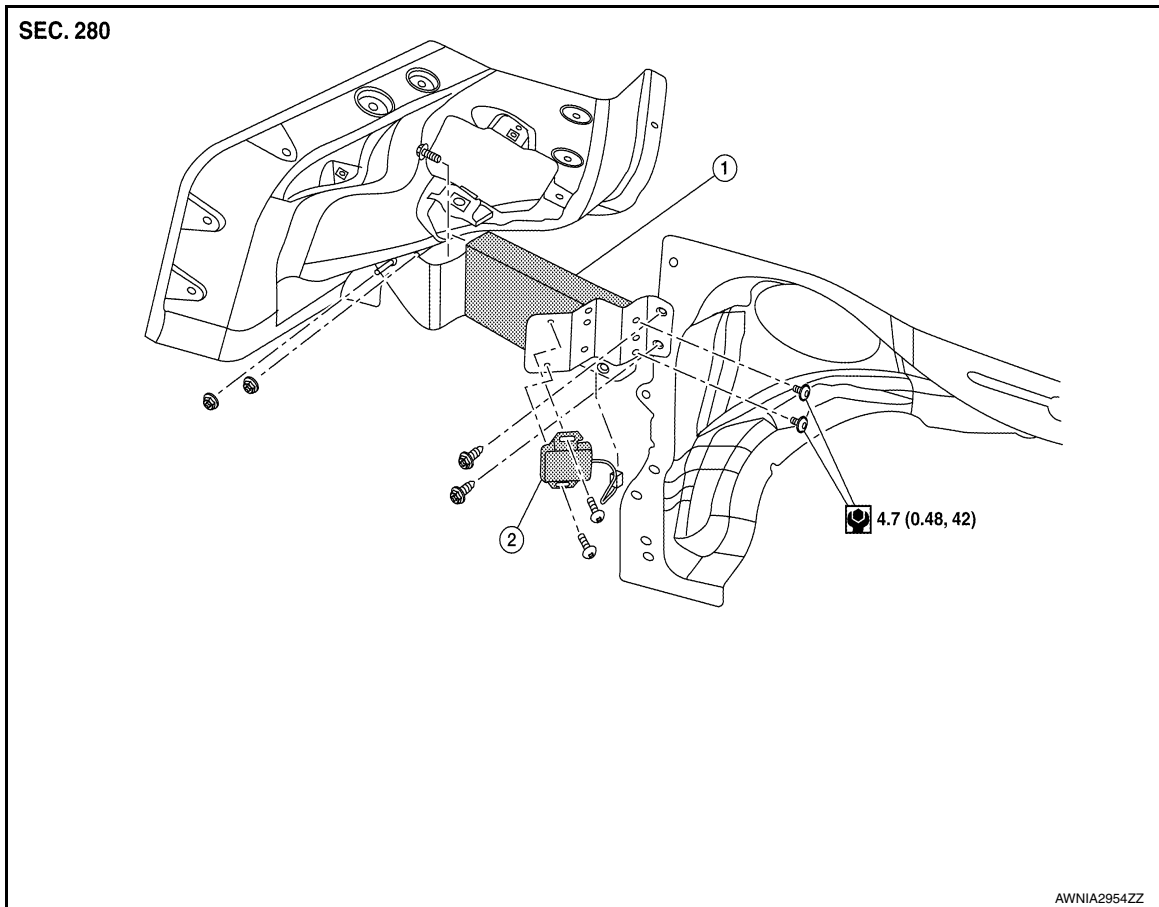
< REMOVAL AND INSTALLATION >

[MID AUDIO]

BLUETOOTH CONTROL UNIT

Exploded View

INFOID:0000000011579309



1. Bluetooth control unit

2. Bluetooth antenna

Removal and Installation

INFOID:0000000011579310

REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-95, "Removal and Installation"](#).
2. Remove satellite radio tuner. Refer to [AV-197, "Removal and Installation"](#)
3. Disconnect the harness connectors from bluetooth control unit.
4. Remove bluetooth control unit screws and the bluetooth control unit.
5. Remove the bluetooth antenna screws and the bluetooth antenna.

INSTALLATION

Installation is in the reverse order of removal.

MICROPHONE

Removal and Installation

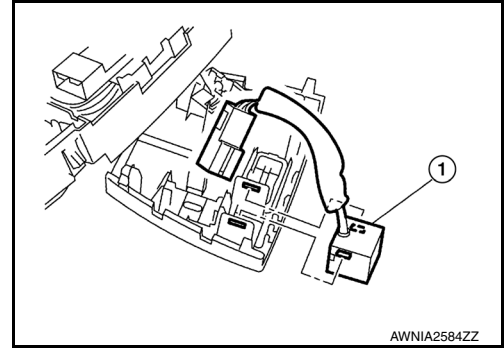
INFOID:0000000011579311

REMOVAL

1. Remove the front room/map lamp assembly. Refer to [INL-59. "Removal and Installation"](#).
2. Remove the microphone (1) from the front room/map lamp assembly.

CAUTION:

Carefully handle the pawls that retain the microphone to avoid damaging.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Make sure the microphone is firmly secure after installation.

SATELLITE RADIO TUNER

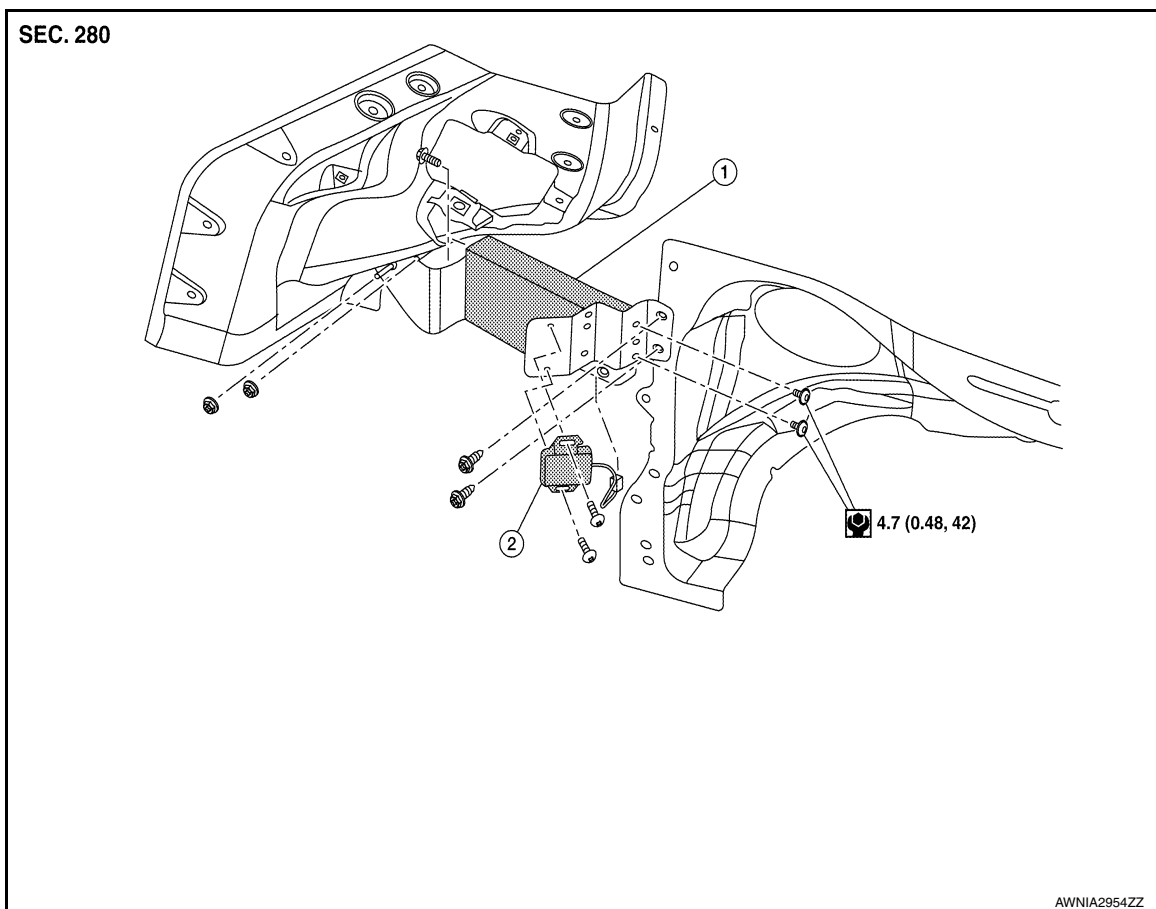
< REMOVAL AND INSTALLATION >

[MID AUDIO]

SATELLITE RADIO TUNER

Exploded View

INFOID:0000000011579312



1. Bluetooth control unit

2. Bluetooth antenna

Removal and Installation

INFOID:0000000011579313

REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-95, "Removal and Installation"](#).
2. Remove the luggage side lower finisher (LH). Refer to [INT-31, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).
3. Disconnect the harness connectors from satellite radio antenna.
4. Remove the screws and the satellite radio tuner.

INSTALLATION

Installation is in the reverse order of removal.

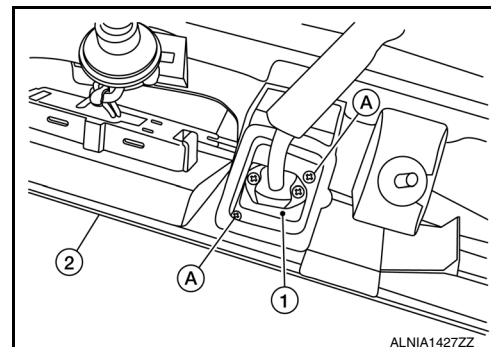
REAR VIEW CAMERA

Removal and Installation

INFOID:0000000011579314

REMOVAL

1. Remove the back door outer finisher. Refer to [EXT-43. "Removal and Installation"](#).
2. Remove rear view camera screws (A), then remove rear view camera (1) from the back door outer finisher (2).



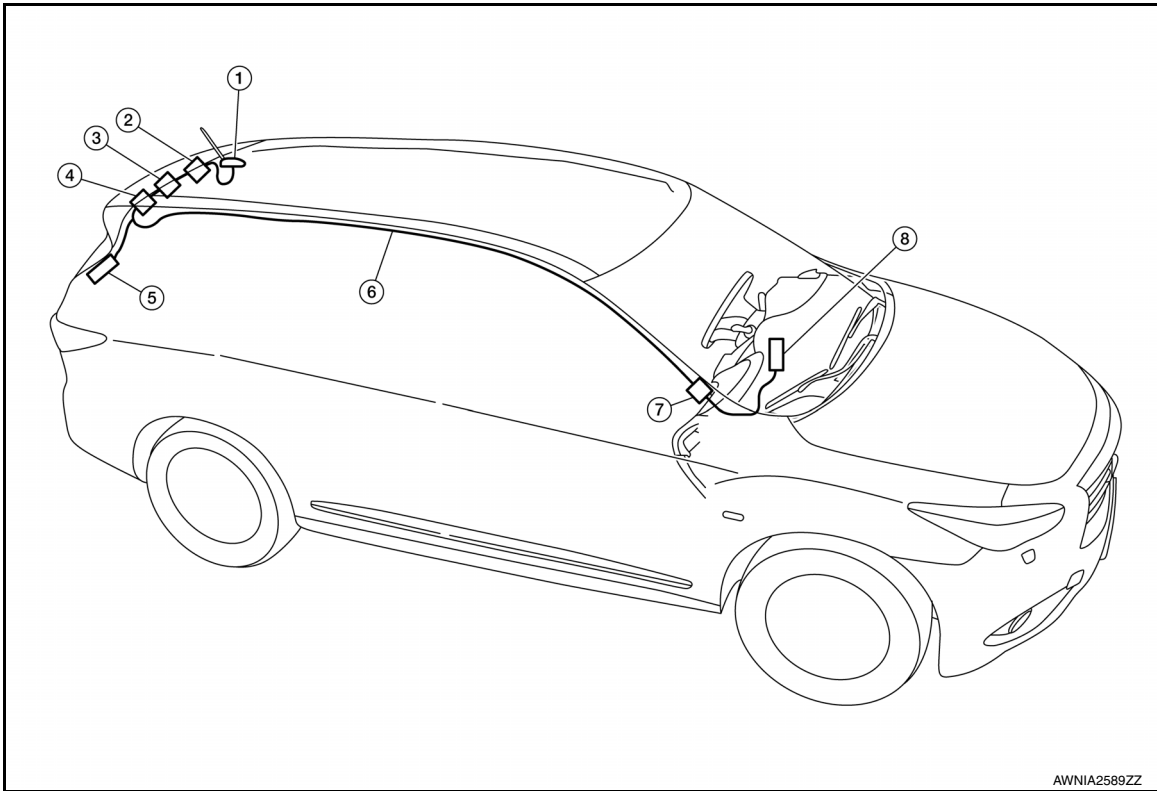
INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antennas

INFOID:0000000011579315



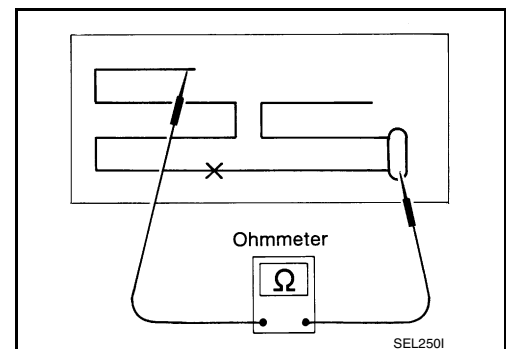
1. Antenna base (satellite antenna and antenna amp)	2. M502	3. M501
4. M503, M504	5. M505	6. Antenna Feeder
7. M95, M500	8. AV control unit M155	

Window Antenna Repair

INFOID:0000000011579316

ELEMENT CHECK

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

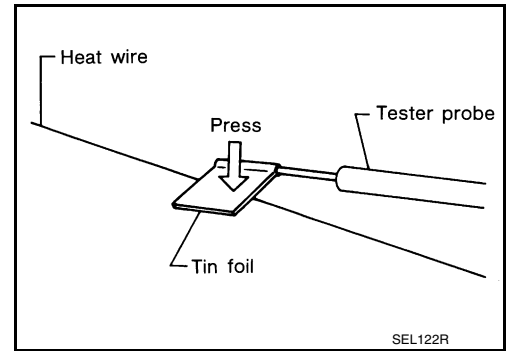


AUDIO ANTENNA

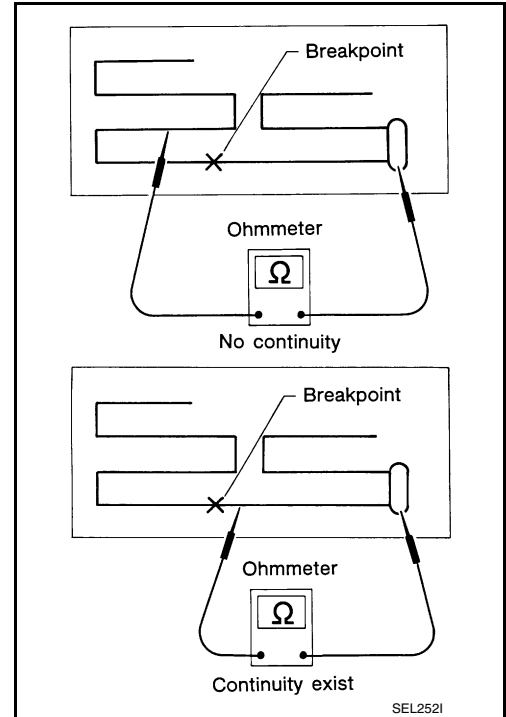
< REMOVAL AND INSTALLATION >

[MID AUDIO]

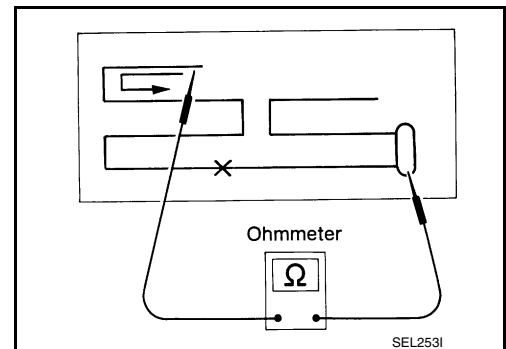
- When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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



BLUETOOTH® ANTENNA

Removal and Installation

INFOID:0000000011579317

REMOVAL

1. Remove luggage side lower finisher (LH). Refer to [INT-31. "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).
2. Disconnect the bluetooth antenna harness connector from bluetooth control unit.
3. Remove bolts and the bluetooth antenna from bracket.

INSTALLATION

Installation is in the reverse order of removal.

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AV

SATELLITE RADIO ANTENNA

< REMOVAL AND INSTALLATION >

[MID AUDIO]

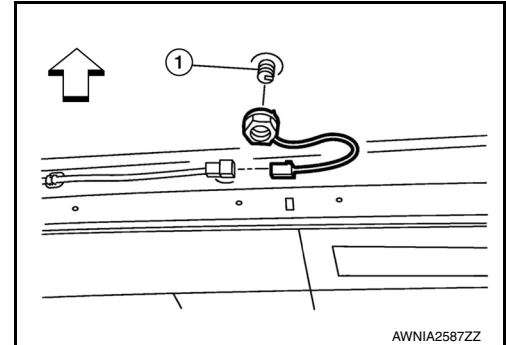
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:0000000011579318

REMOVAL

1. Lower headlining (rear). Refer to [INT-27, "Removal and Installation"](#).
2. Disconnect harness connector from antenna feeder.
3. Remove nut from satellite antenna (1) and remove.
↩: Front



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

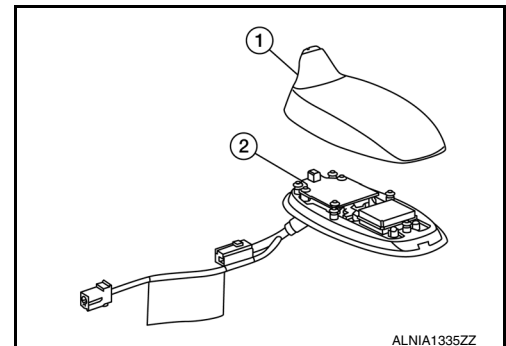
If the satellite antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. If the nut is tightened tighter than the specified torque, this will deform the roof panel.

Disassembly and Assembly

INFOID:0000000011579319

DISASSEMBLY

Insert a suitable tool into gaps between satellite antenna (2) and the cover (1), then remove the cover (1) from satellite antenna (2).



ASSEMBLY

Assembly is in the reverse order of disassembly.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000011150345

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

INFOID:0000000011150346

CAUTION:

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF.

NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:0000000011150347

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:0000000011150348

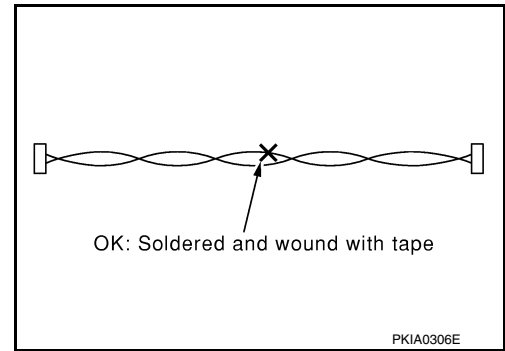
AV COMMUNICATION SYSTEM

PRECAUTIONS

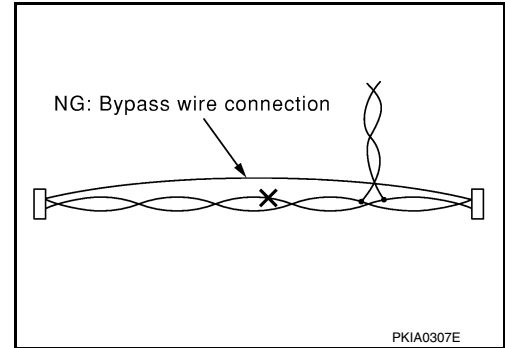
< PRECAUTION >

[PREMIUM AUDIO]

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



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



Precaution for Work

INFOID:000000011150349

- 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 >

[PREMIUM AUDIO]

PREPARATION

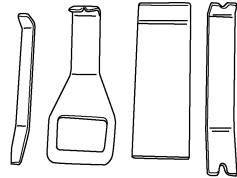
PREPARATION

Special Service Tool

INFOID:0000000011150350

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

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



AWJIA0483ZZ

Commercial Service Tools

INFOID:0000000011150351

Tool name	Description
Power tools	Loosening nuts, screws and bolts



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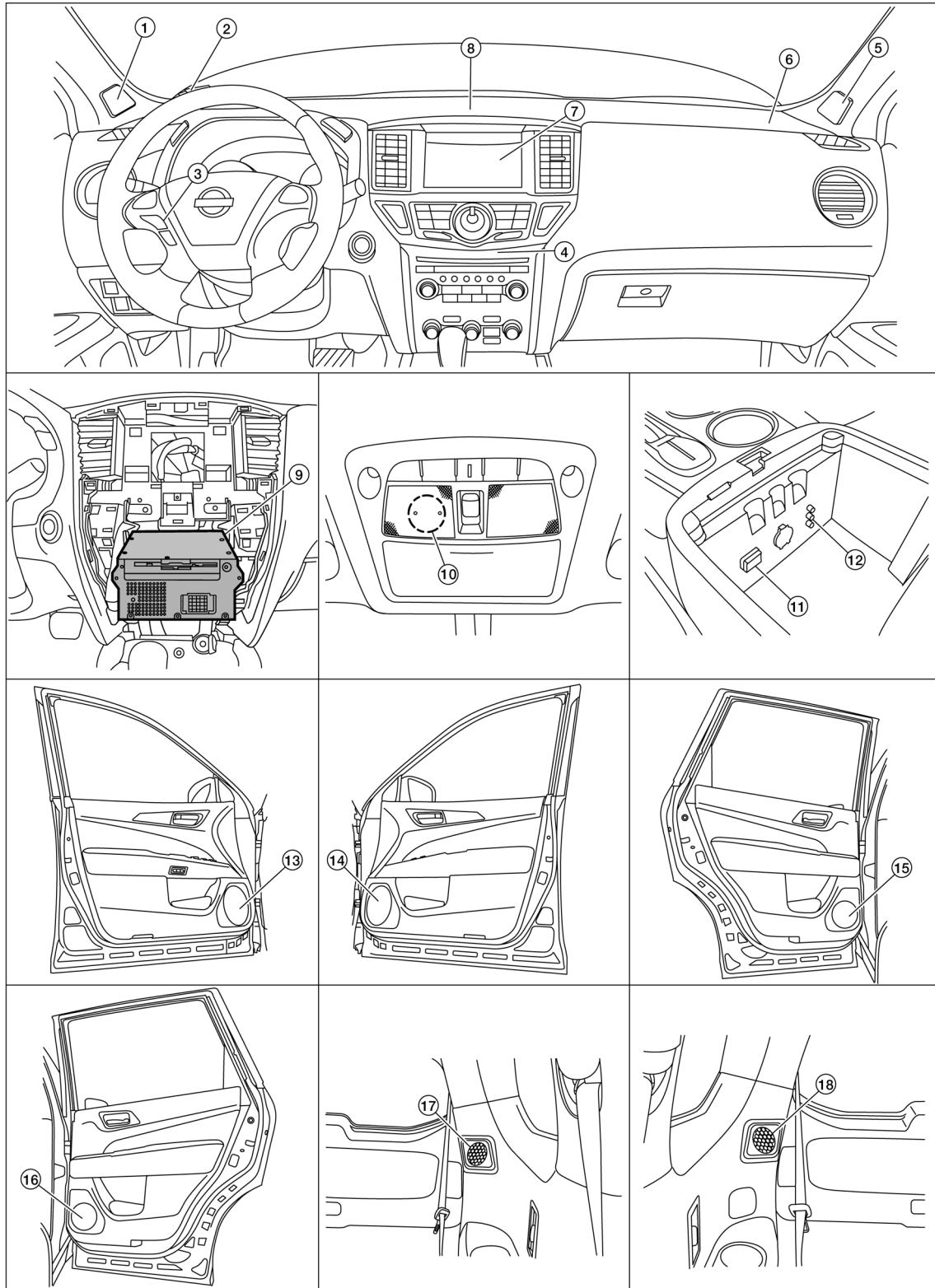
AV

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011150352

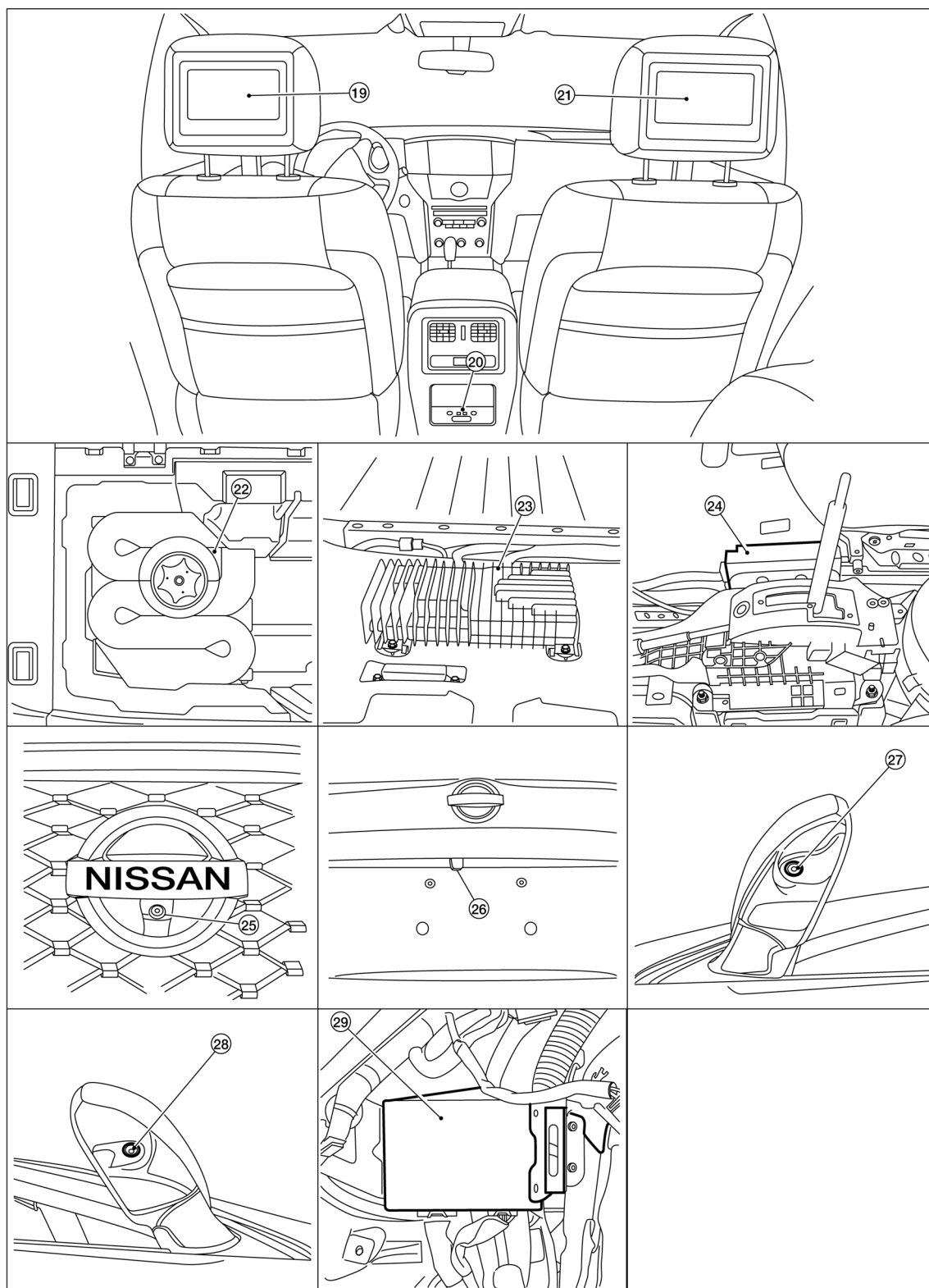


AWNIA2806ZZ

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]



1. Front tweeter LH	2. Instrument panel tweeter LH	3. Steering switches
4. A/C and AV switch assembly	5. Front tweeter RH	6. Instrument panel tweeter RH
7. Display unit	8. Center speaker	9. AV control unit (view with center stack removed)
10. Microphone	11. USB interface	12. Front auxiliary input jacks
13. Front door speaker LH	14. Front door speaker RH	15. Rear door speaker LH

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

16. Rear door tweeter LH	17. Rear side speaker LH	18. Rear side speaker RH
19. Headrest display unit (driver seat) (if equipped)	20. Rear auxiliary input jacks (if equipped)	21. Headrest display unit (passenger seat) (if equipped)
22. Subwoofer	23. Bose speaker amp.	24. Around view monitor control unit (if equipped)
25. Front camera (if equipped)	26. Rear view camera	27. Door mirror LH (side camera) (if equipped)
28. Door mirror RH (side camera) (if equipped)	29. Video distributor (if equipped)	

Component Description

INFOID:0000000011150353

Part name	Description
AV control unit	• Master unit of MULTI AV system. • AV control unit includes audio, hands-free phone, navigation, USB connection, DVD play and vehicle status functions. • Integrates hard disk drive (HDD) allowing map data and music data to be stored. • Connected to MULTI AV system control units via AV communication. • Connected to other vehicle control units via CAN communication to obtain necessary information for vehicle function. • Receives steering angle signal via CAN communication from steering angle sensor and controls an expected course line during around view monitor operation. • Inputs signals for driving status recognition (vehicle speed, reverse and parking brake). • Composite image signal are output to front display unit. • Transmits image and sound output to video distributor and inputs image switch signal from headrest display units via AV communication. • Receives an Intelligent Key identification signal necessary for Intelligent Key interlocking function via hard wire from BCM. • Transmits Amp. ON signal and mode change signal to BOSE speaker amp. • Update of map data is performed using DVD-ROM.
Display unit	• Display image is controlled by AV control unit via serial communication. • Receives power from AV control unit. • Composite image signals are input from AV control unit. • Synchronizing signals are output to AV control unit. • Camera image signals are input from around view monitor control unit via video output signal. • Touch panel functions can be operated by touching display directly.
BOSE speaker amp.	Receives sound signals from AV control unit and outputs sound signals to each speaker.
Instrument panel tweeter	Outputs high range sound signals from BOSE speaker amp.
Center speaker	Outputs mid and high range sound signals from BOSE speaker amp.
Front tweeter	Outputs high range sound signals from BOSE speaker amp.
Front door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Rear door tweeter	Outputs high range sound signals from BOSE speaker amp.
Rear door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Rear side speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Subwoofer	Outputs low range sound signals from BOSE speaker amp.
A/C and AV switch assembly	• Operation panels are equipped with switches for audio and air conditioner operations. • Operation signal is transmitted via AV communication to AV control unit and around view monitor. • Disk eject operation signal is performed via hardwire.
Steering switches	• Operations for audio, hands-free phone and voice recognition are possible. • Steering switch signal (operation signal) is output to AV control unit.
Steering angle sensor	Connected to AV control unit via CAN communication and transmits steering angle sensor signal.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

Part name	Description
Video distributor	- Receives image and sound signals from AV control unit and transmits them to headrest display units. - Receives image and sound signals from rear auxiliary input jacks and transmits them to headrest display units. - Transmits image and sound signals to headrest display unit and receives image switch signal from headrest display units.
Headrest display units	- Composite image signals are input from video distributor. - Receives DVD/AUX/USB sound signals from video distributor and transmits them to headphones. - Transmits image switch signal to video distributor according to remote control operation. - Transmits image switch signal to AV control unit via AV communication according to remote control operation.
Front auxiliary input jacks	Transmits image and sound signals to AV control unit.
Rear auxiliary input jacks	Transmits image and sound signals to video distributor and headrest display units.
Around view monitor control unit	- Supplies power to front, rear and side cameras. - Superimposes images from each camera and outputs them to display unit. - Superimposes guiding line, predicted course line and sonar indicator to camera image that outputs to display unit. - Performs reception/transmission of communication signals with cameras. - Transmits sonar operation signal from sonar control unit via CAN communication. - Receives sonar information from sonar control unit via CAN communication. - Transmits data received/transmitted from sonar control unit to AV control unit via CAN communication.
Front camera	- Inputs power supply from around view monitor control unit. - Outputs image of vehicle front to around view monitor control unit. - Performs reception/transmission of communication signal with around view monitor control unit.
Rear view camera	- Inputs power supply from around view monitor control unit. - Outputs image of vehicle rear to around view monitor control unit. - Performs reception/transmission of communication signal with around view monitor control unit.
Side camera LH	- Inputs power supply from around view monitor control unit. - Outputs image of vehicle LH side to around view monitor control unit. - Performs reception/transmission of communication signal with around view monitor control unit.
Side camera RH	- Inputs power supply from around view monitor control unit. - Outputs image of vehicle RH side to around view monitor control unit. - Performs reception/transmission of communication signal with around view monitor control unit.
Microphone	- Used for hands-free phone operations. - Microphone signal is transmitted to AV control unit. - Power (Microphone VCC) is supplied from AV control unit.
GPS antenna	GPS signal is received and transmitted to AV control unit.
Antenna amp.	- Radio signal received by window antenna is amplified and transmitted to AV control unit. - Power (antenna amp. ON signal) is supplied from AV control unit.
USB connector	USB sound and data input signals are transmitted to AV control unit.

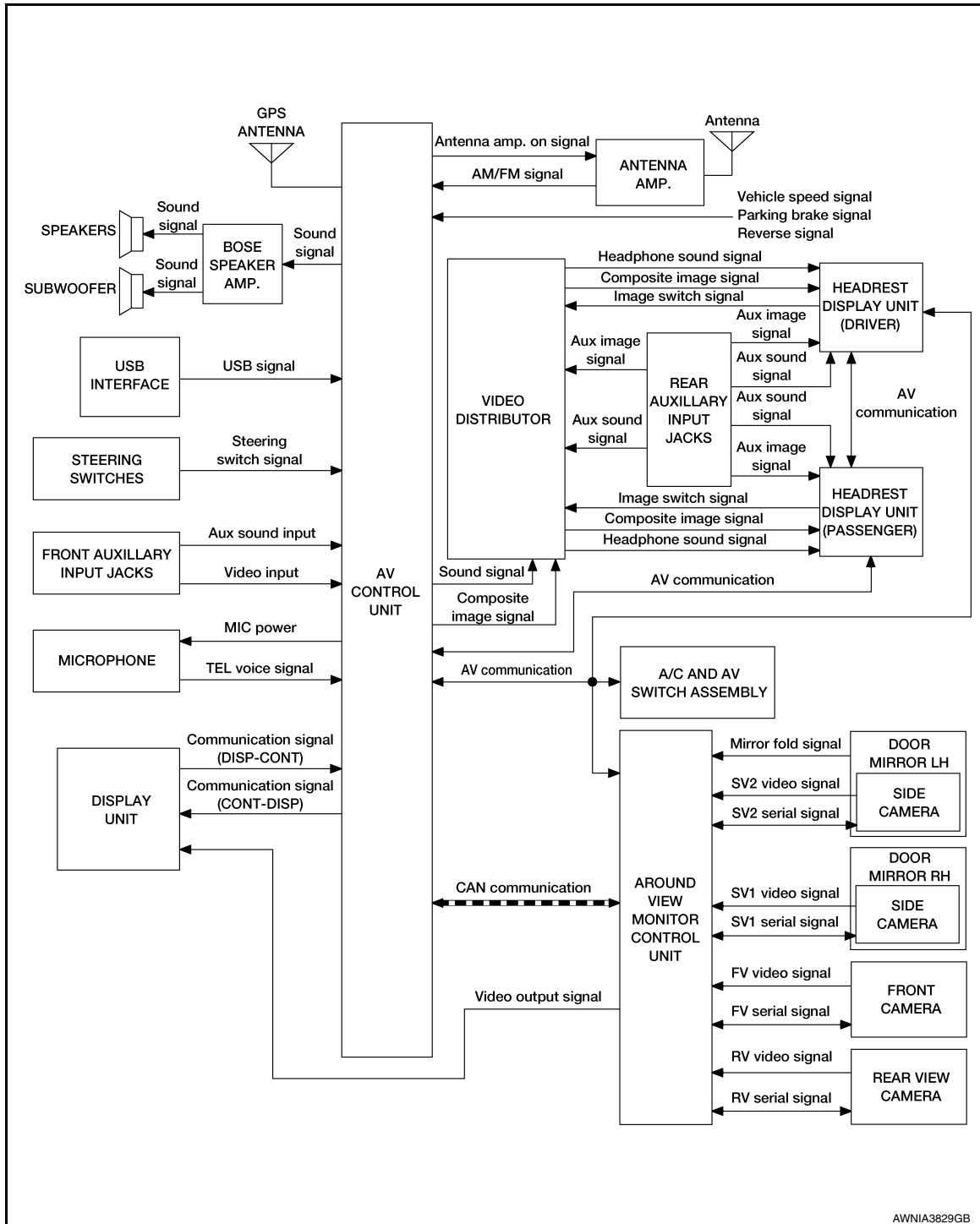
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SYSTEM

MULTI AV SYSTEM

MULTI AV SYSTEM : System Diagram

INFOID:0000000011150354



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MULTI AV SYSTEM : System Description

INFOID:0000000011150355

AUDIO SYSTEM

The audio system consists of the following components

- AV control unit
- A/C and AV switch assembly
- Display unit

- Steering switches
- BOSE speaker amp.
- Center speaker
- Instrument panel tweeters
- Front tweeters
- Front door speakers
- Rear door tweeters
- Rear door speakers
- Rear side speakers
- Subwoofer
- Antenna

A

B

C

When the audio system is on, radio signals are received by the window antenna. The AV control unit then sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the speakers, tweeters and subwoofer.

D

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

E

SATELLITE RADIO SYSTEM (IF EQUIPPED)

The satellite radio system consists of the following components

- Satellite antenna
- AV control unit

F

When the satellite radio system is on, radio signals are supplied to the AV control unit from the satellite antenna. The AV control unit then sends audio signals to the BOSE speaker amp.

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

G

HANDS-FREE PHONE SYSTEM

System Operation

H

NOTE:

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

I

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

J

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

K

AV Control Unit

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

L

Steering Switches

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

M

The following functions can be performed using the steering switches:

- Initiate self-diagnosis of the Bluetooth® telephone system
- Answer and end telephone calls
- Adjust the volume of calls
- Record memos

AV

Microphone

O

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

P

NAVIGATION SYSTEM

System Operation

NOTE:

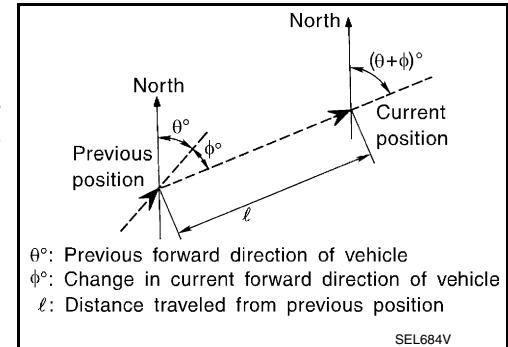
Refer to NAVI System Owner's Manual for system operation.

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), and the 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 data, which is stored in the hard disk drive (HDD) (map-matching), and indicated on the screen with a current-location mark.

By comparing the vehicle position detection results found by the GPS and by map-matching, more accurate vehicle position data can be used.

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 input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance fine adjustment 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). As the gyroscope and GPS antenna have both merit and demerit, input signals from them are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

Type	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	Can detect the vehicle's turning angle quite accurately.	Direction errors may accumulate when the 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 the vehicle speed is low.

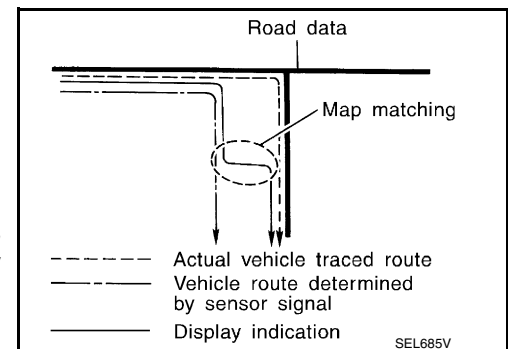
Map-Matching

Map-matching is a function that repositions the vehicle on the road map when a new location is judged to be the most accurate. This is done by comparing the current vehicle position, calculated by the method described in the position detection principle, with the road map data around the vehicle, read from the map data stored on the HDD.

Therefore, the vehicle position may not be corrected after the vehicle is driven over a certain distance or time in which GPS information is hard to receive. In this case, the current-location mark on the display must be corrected manually.

CAUTION:

The road map data is based on data stored on the HDD.



SYSTEM

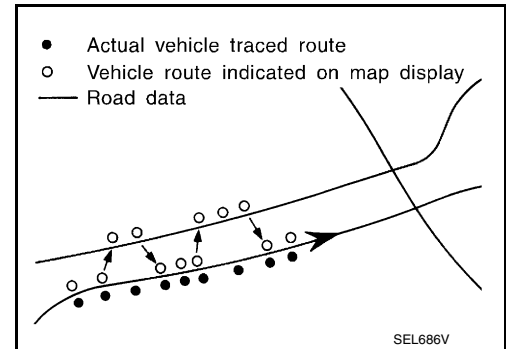
< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

- 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 current-location mark has been repositioned.

If there is an error in distance and/or direction, the alternative routes will be shown in different order of priority, and the wrong road can be avoided.

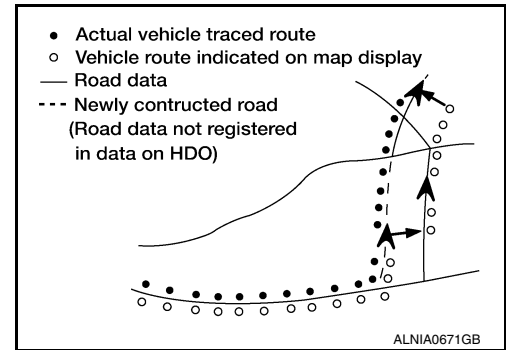
If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.



- Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded on the HDD, or when the road pattern stored in the map data and the actual road pattern are different due to repair.

When driving on a road not present in the map, the map-matching function may find another road and position the current-location mark on it. Then, when the correct road is detected, the current-location mark may leap to it.

- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the HDD is limited. Therefore, when there is an excessive gap between the current vehicle position and the position on the map, correction by map-matching is not possible.



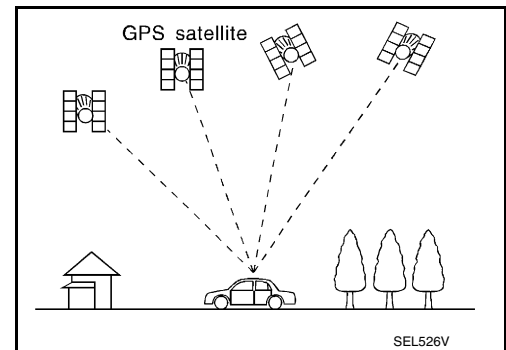
GPS (Global Positioning System)

GPS (Global Positioning System) has been developed and controlled by the US Department of Defense. The system utilizes GPS satellite (NAVSTAR), sending out radio waves while flying on an orbit around the earth at the height of approx. 21,000 km (13,000 mi).

The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates the vehicle's position in two dimensions (latitude/longitude), utilizing the altitude data calculated previously by using radio waves from four or more GPS satellites (two-dimensional positioning).

Accuracy of the GPS will deteriorate under the following conditions.

- In two-dimensional positioning, the GPS accuracy will deteriorate when the altitude of the vehicle position changes.
- There may be an error of approximately 10 m (30 ft.) in position detected by three-dimensional positioning, which is more accurate than two-dimensional positioning. The accuracy can be even lower depending on the arrangement of the GPS satellites utilized for the positioning.
- Position detection is not possible when the vehicle is in an area where radio waves from the GPS satellite do not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from the GPS satellites may not be received when some object is located over the GPS antenna.
- Position correction by GPS is not available while the vehicle is stopped.



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.

FRONT AUXILIARY INPUT JACKS

- Image and sound can be output from an external device connected to the front auxiliary input jacks.
- AUX image signals are transmitted to each unit as follows:
 - To the display unit via AV control unit.
 - To the headrest display units via AV control unit and video distributor.
- AUX sound signals are transmitted to each unit as follows:
 - To each speaker via AV control unit and BOSE speaker amp.

< SYSTEM DESCRIPTION >

- To video distributor via AV control unit.
- Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

REAR ENTERTAINMENT SYSTEM

- Image and sound (DVD, USB memory-stored video data and front auxiliary input) played by AV control unit can be enjoyed in rear seat using headrest display units and headphones.
- Image and sound of an external device connected to rear auxiliary input jacks for rear seat can be enjoyed in rear seat using headrest display units and headphones. Also, image and sound from rear auxiliary input jacks can be selected and played individually on each side as well as on both sides.

NOTE:

Image signal and sound signal from rear auxiliary input jacks are not transmitted to front display unit and each speaker.

Operation Signal

- The rear entertainment system can be controlled by the rear seat remote control.
- The rear seat remote control transmits the operation signal to the remote control receiver built into headrest display units, which then transmits it to the AV control unit and video distributor.

Headphone Sound

- Sound signals output from AV control unit or rear auxiliary input jacks are transmitted to headrest display units via video distributor.
- Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

Headrest Display Units

- Composite image signals from AV control unit are transmitted to headrest display unit via video distributor.
- Image switch signals from headrest display units are transmitted to AV control unit and video distributor, according to rear seat remote control operation.
- When image switch signal is transmitted from headrest display unit to AV control unit via AV communication, image played by AV control unit (DVD, USB memory-stored video data, and front auxiliary input) switches.
- When image switch signal is transmitted from headrest display unit to video distributor, image output from AV control unit and image output from rear auxiliary input jacks switch.

AROUND VIEW MONITOR SYSTEM

- This system is equipped with wide-angle high-resolution cameras on the front and rear of the vehicle and on both right and left door mirrors. The images from front view, rear view, front-side view (RH side), and birds-eye view that shows the view from the top of the vehicle are displayed to monitor the vehicle surroundings.
- Around view monitor control unit cuts out and expands the image received from each camera to create each view.
- The sonar indicator is viewed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warn of the approach of an obstacle.
- In front view and rear view, the vehicle width, distance lines and predictive course lines are superimposed and displayed. In front-side view, the vehicle distance guiding line and vehicle width guiding line are displayed.
- The Birds-Eye view converts the images from 4 cameras into the overhead view and displays the status of the vehicle. The vehicle icon and sonar indicator on the Birds-Eye view display are rendered by around view monitor control unit.

Around View Monitor Screen

- Around view monitor combines and displays the travel direction view and Birds-Eye view, Front-Side view and then displays the sonar indicator on the Birds-Eye view, Front-Side view, Rear wide view.
- AV control unit renders the Change View switch, view icon, warning message on display.

Operation Description

NOTE:

The first, second, and third camera image displayed when switched to the camera image display depends on the settings of Camera View Priority.

- Around view monitor operates by pressing the CAMERA switch on the A/C and AV switch assembly and shifting the selector lever to the R position.
- When the selector lever is in any position other than R, the screen is switched to the around view monitor by pressing the CAMERA switch.
- The screen is switched to the around view monitor by shifting the selector lever to the R position.

- The around view monitor's, Birds-Eye view, Front-side view or rear wide view (rear only) can be switched by pressing the CAMERA switch.
- The around view monitor is cancelled 3 minutes after pressing the CAMERA switch, and the display returns to the previous screen.
- ON/OFF setting of sonar indicator display on the Front-Side view screen can be performed.
- In Birds-Eye view, the invisible area is displayed on the image to specify the boundary of the 4 cameras. The invisible area is displayed in yellow in the Birds-Eye view after turning the ignition switch ON.
- The sonar operates only when the camera screen is displayed.

VEHICLE INFORMATION FUNCTION

- Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.
- AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM and combination meter.
- AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.

INTELLIGENT KEY INTERLOCKING FUNCTION

The AV control unit recognizes a door-unlocked state of Intelligent Key according to an Intelligent Key recognition signal transmitted from BCM and saves two different types of audio settings and navigation settings.

Settings saved in the AV control unit

- Map display
- Route guidance
- Locator
- Route search
- Sound quality
- Radio preset
- Language

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:0000000011150356

The AV control unit on board diagnosis includes the following functions:

- A/C and AV switch assembly self diagnosis that checks the ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly.

NOTE:

The hazard switch and disk eject switch are not included in this operation check.

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

Mode		Description
Self Diagnosis		• AV control unit diagnosis. • Diagnoses the connections across system components.
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display and white display, light and shade check by gray scale display and touch panel calibration response check.
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition, reverse, side view switch and room lamp.
	Speaker Test	The connection of a speaker can be confirmed by test tone.
	Navigation	Steering Angle Adjustment When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.
		Speed Calibration When there is a difference between the current location mark and the actual location, it can be adjusted.
	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.
	Synchronize FES Clock	—
	Vehicle CAN Diagnosis	The transmitting/receiving of CAN communication can be monitored.
	AV COMM Diagnosis	The communication condition of each unit of Multi AV system can be monitored.
	Hands-free Phone	The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.
	Camera cont.	Camera guidelines can be adjusted and the factory configuration can be displayed.
	Delete Unit Connection Log	Erase the connection history of unit and error history.
	Initialize Settings	Initializes the AV control unit memory.
	Version Information	Version information of the AV control unit is displayed.

Perform CONSULT diagnosis if the AV control unit on board diagnosis does not start, the screen does not display anything, or the A/C and AV switch assembly self diagnosis does not function.

On Board Diagnosis Function

INFOID:0000000011150357

METHOD OF STARTING

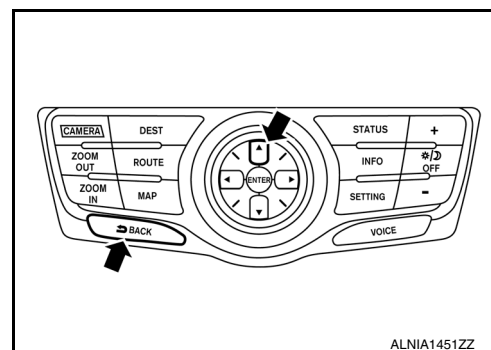
A/C and AV Switch Assembly Self Diagnosis

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

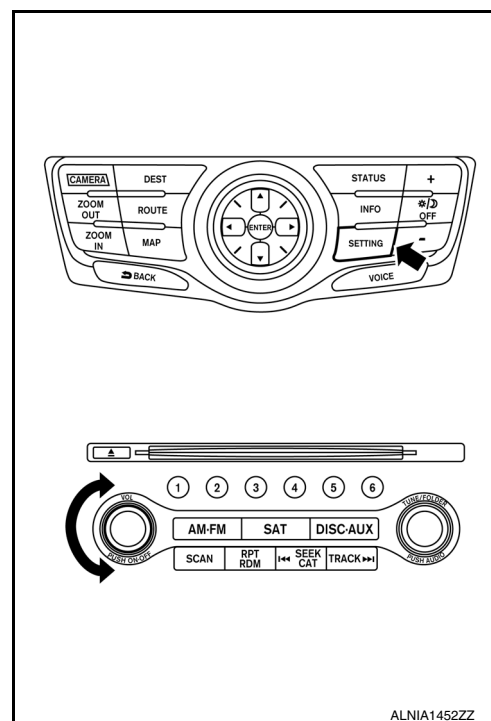
[PREMIUM AUDIO]

- Press the BACK and UP switches within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more.
- The buzzer sounds, all indicators of the switches illuminate, and the self-diagnosis mode begins.
- The ON position continuity of each switch can be checked by pressing the switch. The buzzer sounds if continuity is present.
- The self diagnosis mode is canceled when the ignition switch is turned OFF.

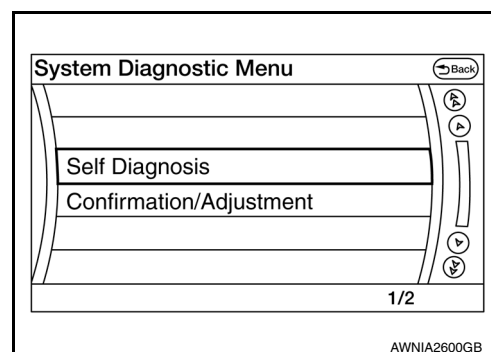


AV Control Unit Self Diagnosis

1. Turn the ignition ON.
2. Turn the audio system OFF.
3. While pressing the SETTING button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. When self-diagnosis mode begins, a short beep will be heard. 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

AV Control Unit Self Diagnosis

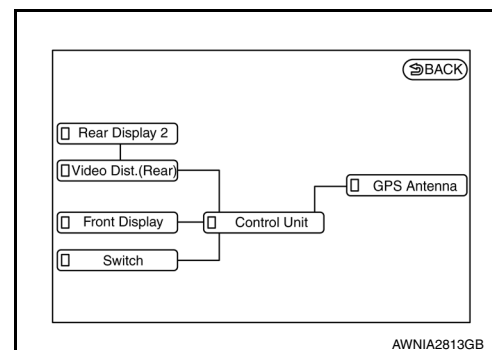
1. Select Self Diagnosis.
2. Self diagnosis screen is displayed. The bar graph visible in center of screen indicates progress of self diagnosis.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[PREMIUM AUDIO]

< 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.

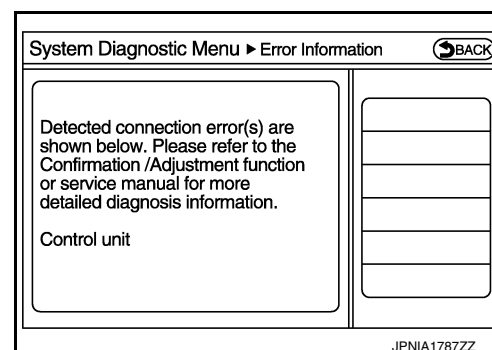


Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction ¹	Red	Green

1: Control Unit (AV control unit) is displayed in red.

- Replace AV control unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is AV control unit internal error. Refer to [AV-425, "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.



AV Control Unit Self Diagnosis Results

Only Unit Part Is Displayed In Red		
Screen switch	Description	Possible cause
Control Unit	Malfunction is detected in AV control unit power supply and ground circuits.	• AV control unit power supply or ground circuit. Refer to AV-363, "AV CONTROL UNIT : Diagnosis Procedure". • If no malfunction is detected in AV control unit power supply and ground circuits, replace AV control unit. Refer to AV-425, "Removal and Installation".

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

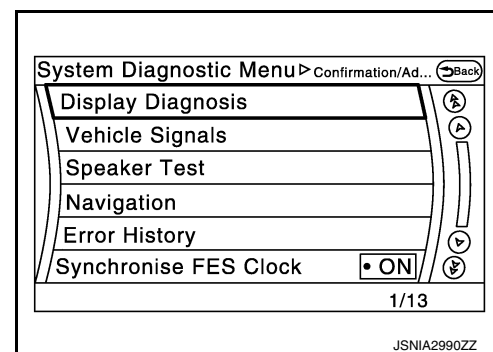
[PREMIUM AUDIO]

A Connecting Cable Between Units Is Displayed In Yellow

Area with yellow connection lines	Description	Possible cause
Control unit ⇔ Front Display	Malfunction is detected in serial communication circuits between AV control unit and front display.	Serial communication circuits between AV control unit and front display.
Control unit ⇔ Switch	When one of the following is detected: - malfunction is detected in A/C and AV switch assembly power supply and ground circuits. - malfunction is detected in AV communication circuits between AV control unit and A/C and AV switch assembly.	- A/C and AV switch assembly power supply or ground circuit. Refer to AV-365, "A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure". - AV communication circuits between AV control unit and A/C and AV switch assembly.
Control unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	Check the connection of the GPS antenna connector.
Control unit ⇔ Video Dist.(Rear) Video Dist.(Rear) ⇔ Rear display 2	When one of the following is detected: - malfunction is detected in video distributor power supply and ground circuits. - malfunction is detected in headrest display unit LH power supply and ground circuits. - malfunction is detected in AV communication circuits between AV control unit and headrest display unit (driver seat).	- Video distributor power supply or ground circuit. Refer to AV-366, "VIDEO DISTRIBUTOR : Diagnosis Procedure". - Headrest display unit LH power supply or ground circuit. Refer to AV-367, "HEADREST DISPLAY UNIT : Diagnosis Procedure". - AV communication circuits between AV control unit and headrest display unit (driver seat).
Video Dist.(Rear) ⇔ Rear display 2	When one of the following is detected: - malfunction is detected in headrest display unit RH power supply and ground circuits. - malfunction is detected in AV communication circuits between headrest display unit (driver seat) and headrest display unit (passenger seat).	- Headrest display unit RH power supply or ground circuit. Refer to AV-367, "HEADREST DISPLAY UNIT : Diagnosis Procedure". - AV communication circuits between headrest display unit (driver seat) and headrest display unit (passenger seat).

AV Control Unit Confirmation/Adjustment

- Select Confirmation/Adjustment.
- 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.

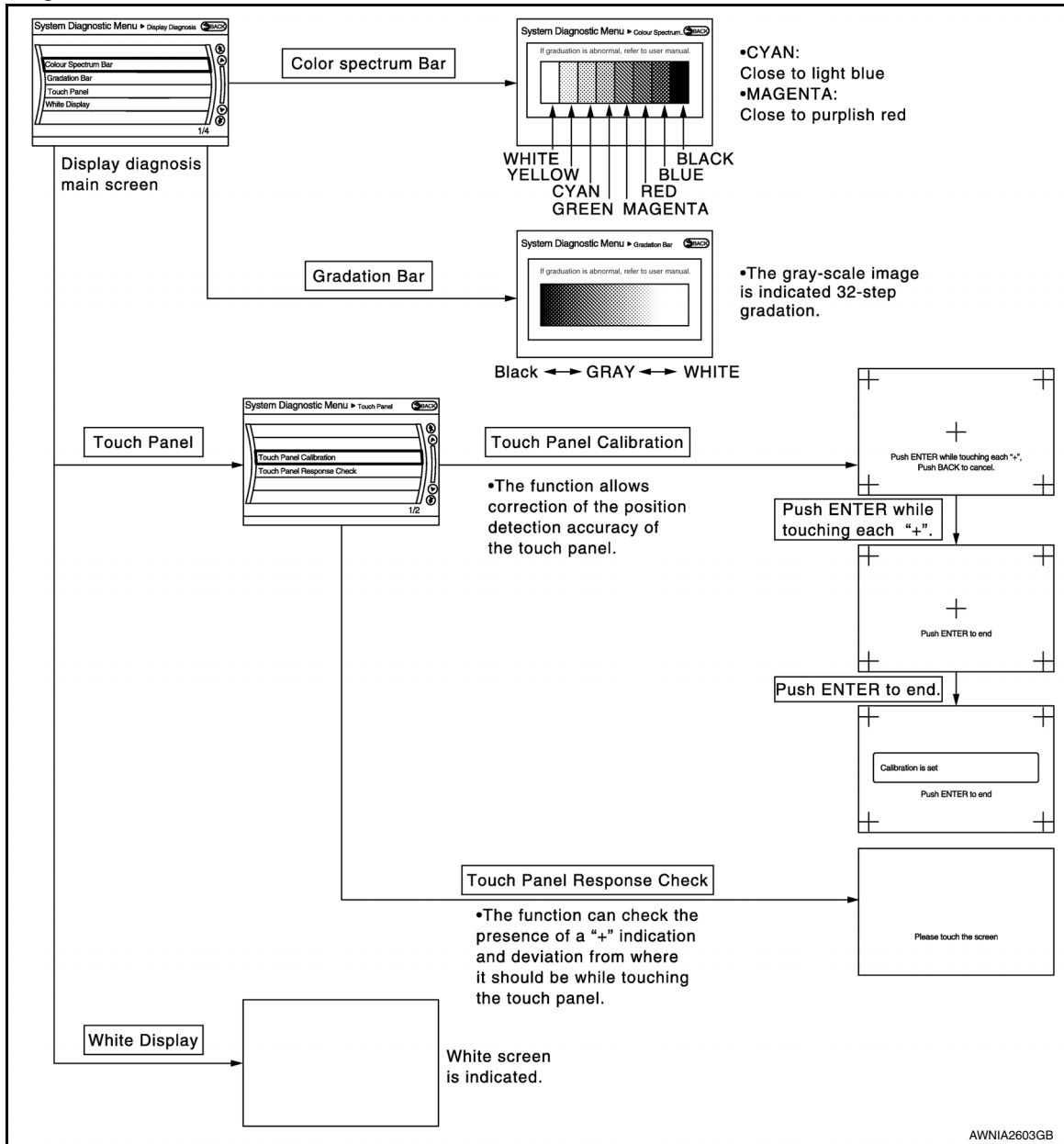


DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

Display Diagnosis



Vehicle Signals

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

System Diagnostic Menu ▶ Vehicle Signals	
Vehicle speed	OFF
Parking brake	ON
Lights	OFF
Ignition	ON
Reverse	OFF
Side view Switch	OFF
Room Lamp	OFF

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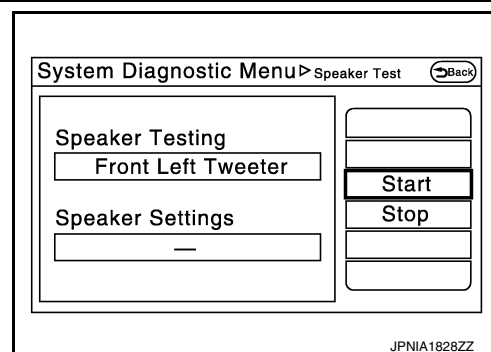
Speaker Test

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

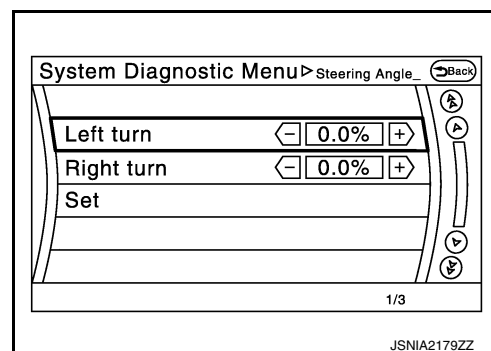
Select Speaker Test to display the Speaker Diagnosis screen. Press Start to generate a test tone in a speaker. Press Start again to generate a test tone in the next speaker. Press End to stop the test tones.



Navigation

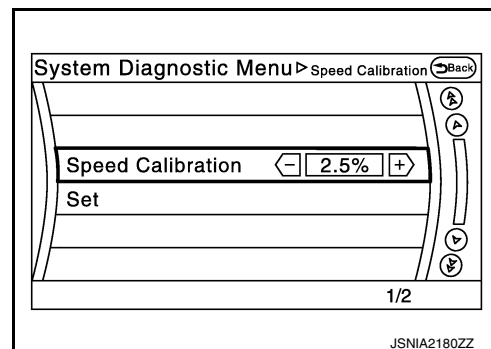
STEERING ANGLE ADJUSTMENT

The steering angle output value detected with the gyroscope is adjusted.



SPEED CALIBRATION

During normal driving, distance error caused by tire wear and tire pressure change is automatically adjusted for by the automatic distance correction function. This function, on the other hand, is for immediate adjustment, in cases such as driving with tire chain fitted on tires.



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 error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.

- If there is a malfunction with the GPS antenna circuit board in the AV control unit, the correct date and time of occurrence may not be able to be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.
- 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 resets to 0 if an error occurs when ignition switch is turned ON. The counter increases by 1 if the condition is normal at a next ignition ON cycle.
- The counter upper limit is 39. Any counts exceeding 39 are ignored. The counter can be reset (no error record display) with the "Delete log" switch or CONSULT.

Count up method B

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[PREMIUM AUDIO]

< SYSTEM DESCRIPTION >

- 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 or CONSULT.

Display type of occurrence frequency	Error history display item
Count up method A	CAN communication line, control unit (CAN), 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 malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-226, "CONSULT Function" .
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
Connection Of Gyro		
Connection of G Sensor		
CAN Controller Memory Error		
Bluetooth® Module Connection Error		
Sub CPU Connection Error		
Audio connection error		
DSP Connection Error	AV control unit malfunction is detected.	• If a disc can be played, there is a possibility of an intermittent malfunction. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-425, "Removal and Installation".
DSP Communication Error		
HDD Connection Error	AV control unit malfunction is detected.	• If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-425, "Removal and Installation".
HDD Read Error		
HDD Write Error		
HDD Communication Error		
HDD Access Error		
GPS Communication Error	GPS malfunction is detected.	• An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-425, "Removal and Installation".
GPS ROM Error		
GPS RAM Error		
GPS RTC Error		
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT. Refer to AV-304, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure" .
USB Controller Communication Error	USB connection malfunction is detected.	Check connection to USB connector is normal.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

Error item	Description	Possible malfunction factor/Action to take
DVD Mechanism Communication Error	AV control unit malfunction is detected.	- If DVD can be played, there is a possibility of an intermittent malfunction. - Replace the AV control unit if the malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor. Refer to AV-307, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure" .
Front Display Connection Error	When one of the following is detected: - malfunction is detected in front display unit power supply and ground circuits. - malfunction is detected in Serial communication circuits between AV control unit and front display unit.	- Front display unit power supply or ground circuit. Refer to AV-363, "DISPLAY UNIT : Diagnosis Procedure". - Serial communication circuits between AV control unit and front display unit. Refer to AV-339, "Diagnosis Procedure".
- AV COMM CIRCUIT 2nd Display Connection Error	When one of the following is detected: - malfunction is detected in video distributor power supply and ground circuits. - malfunction is detected in headrest display unit (driver seat) power supply and ground circuits. - malfunction is detected in AV communication circuits between AV control unit and headrest display unit (driver seat).	- Video distributor power supply or ground circuit. Refer to AV-366, "VIDEO DISTRIBUTOR : Diagnosis Procedure". - Headrest display unit (driver seat) power supply or ground circuit. Refer to AV-367, "HEADREST DISPLAY UNIT : Diagnosis Procedure". - AV communication circuits between AV control unit and headrest display unit (driver seat).
3rd Display Connection Error	When one of the following is detected: - malfunction is detected in headrest display unit (passenger seat) power supply and ground circuits. - malfunction is detected in AV communication circuits between headrest display unit (driver seat) and headrest display unit (passenger seat).	- Headrest display unit (passenger seat) power supply or ground circuit. Refer to AV-367, "HEADREST DISPLAY UNIT : Diagnosis Procedure". - AV communication circuits between headrest display unit (driver seat) and headrest display unit (passenger seat). Refer to AV-343, "Diagnosis Procedure".
AM/FM antenna amplifier short to ground	Radio antenna amp. ON signal circuit malfunction is detected.	Radio antenna amp. ON signal circuit between AV control unit and antenna amp. Refer to AV-345, "Diagnosis Procedure" .
AM/FM antenna amplifier open		
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
USB electric current Error	Detection of overcurrent in USB connector.	Check USB harness between AV control unit and USB connector. Refer to AV-402, "Diagnosis Procedure" .
Front Left Tweeter: open	Malfunction is detected in sound signal circuits between BOSE speaker amp. and instrument panel tweeter LH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter LH. Refer to AV-372, "Diagnosis Procedure" .
Front Left Tweeter: short		
Front Left Tweeter: short to ground		
Front Left Tweeter: short to battery		
Front Right Tweeter: open	Malfunction is detected in sound signal circuits between BOSE speaker amp. and instrument panel tweeter RH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter RH. Refer to AV-372, "Diagnosis Procedure" .
Front Right Tweeter: short		
Front Right Tweeter: short to ground		
Front Right Tweeter: short to battery		

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

[PREMIUM AUDIO]

< SYSTEM DESCRIPTION >

Error item	Description	Possible malfunction factor/Action to take
Left Front: open	Malfunction is detected in sound signal circuits between BOSE speaker amp. and front door speaker.	Sound signal circuits between BOSE speaker amp. and front door speaker. Refer to AV-378 . "Diagnosis Procedure".
Left Front: short		
Left Front: short to ground		
Left Front: short to battery		
Right Front: open		
Right Front: short		
Right Front: short to ground		
Right Front: short to battery	Malfunction is detected in sound signal circuits between BOSE speaker amp. and rear door speaker.	Sound signal circuits between BOSE speaker amp. and rear door speaker. Refer to AV-381 . "Diagnosis Procedure".
Left Rear: open		
Left Rear: short		
Left Rear: short to ground		
Left Rear: short to battery		
Right Rear: open		
Right Rear: short		
Right Rear: short to ground	When one of the following is detected:	- A/C and AV switch assembly power supply or ground circuit. Refer to AV-365. "A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure". - AV communication circuits between AV control unit and A/C and AV switch assembly.
Right Rear: short to battery		
- AV COMM CIRCUIT - Switches Connection Error	- malfunction is detected in A/C and AV switch assembly power supply and ground circuits. - malfunction is detected in AV communication circuits between AV control unit and A/C and AV switch assembly.	
- AV COMM CIRCUIT - Switches Connection Error 2nd Display Connection Error	Malfunction is detected in AV communication circuits between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.

Vehicle CAN Diagnosis

- CAN communication status and error counter is displayed.
- 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	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(TPMS)	OK / ???	OK / 0 – 39

NOTE:

"???" indicates UNKNWN.

AV COMM Diagnosis

System Diagnostic Menu > Vehicle CAN Dia. BACK

Signal	Status	Count.
Tx(HVAC)	OK	OK
Rx(ECM)	OK	OK
Rx(Cluster)	OK	OK
Rx(HVAC)	OK	OK
Rx(USM)	OK	OK
Rx(TPMS)	OK	OK

Checking

Reset

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DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

- Displays the communication status between AV control 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.

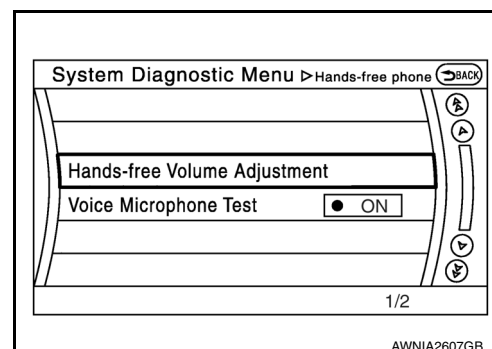
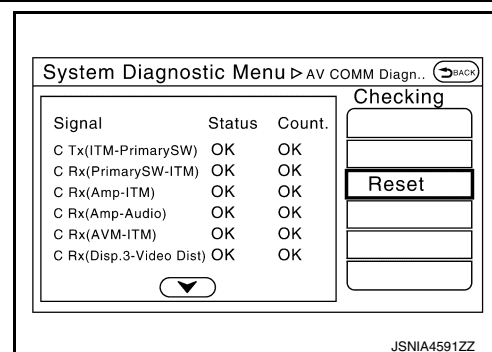
Items	Status (Current)	Counter (Past)
C Tx(ITM-PrimarySW)	OK / ???	OK / 0 – 39
C Rx(PrimarySW-ITM)	OK / ???	OK / 0 – 39
C Rx(Amp-ITM)	OK / ???	OK / 0 – 39
C Rx(Amp-Audio)	OK / ???	OK / 0 – 39
C Rx(AVM-ITM)	OK / ???	OK / 0 – 39
C Rx(Disp.3-Video Dist)	OK / ???	OK / 0 – 39
C Rx(Video Dist-ITM)	OK / ???	OK / 0 – 39

NOTE:

“???” indicates UNKWN

Hands-Free Phone

The hands-free phone reception volume adjustment and microphone and speaker test functions are also available.

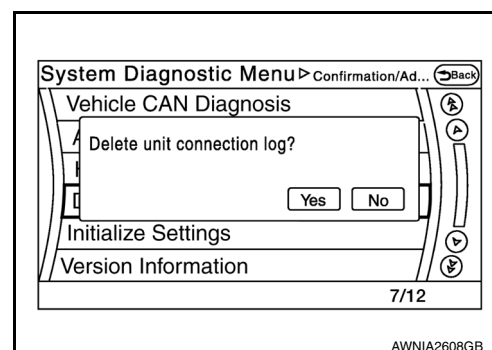


Camera Cont.

The three functions of “Alter/Confirm Configuration”, “Reset Configuration” and “Camera System Type” are available.

Delete Unit Connection Log

Deletes any unit connection records and error records from the AV control unit memory. (Clear the records of the unit that has been removed.)

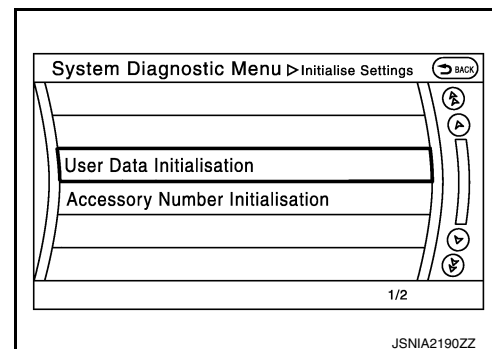


Initialize Settings

“User Data Initialization” and “Accessory Number Initialization” are possible.

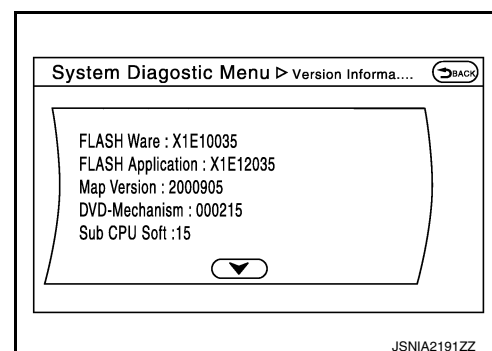
CAUTION:

- **Never perform Accessory Number Initialization except when configuration is unsuccessful.**
- **Accessory Number Initialization requires configuration. For details, refer to [AV-304, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).**



Version Information

Version information of the AV control unit is displayed.



INFOID:0000000011150358

CONSULT Function

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

CONSULT FUNCTIONS

CONSULT performs the following functions via communication with the AV control unit.

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing AV control unit.
CAN Diag Support Mntr	• The result of transmit/receive diagnosis of AV communication is displayed. • The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSTIC RESULT

Refer to [AV-236, "DTC Index"](#).

DATA MONITOR

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	Indicates vehicle speed signal received from combination meter on CAN communication line.
PKB SIG [On/Off]	Indicates condition of park brake signal.
ILLUM SIG [On/Off]	Indicates condition of illumination signal for the A/C and AV switch assembly.
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-304, "CONFIGURATION \(AV CONTROL UNIT\) : Description"](#).

CAN DIAG SUPPORT MNTR

Refer to [LAN-18, "CAN Diagnostic Support Monitor"](#).

AV

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

CONSULT Function

INFOID:0000000011150359

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

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	- The vehicle specification can be read and saved. - The vehicle specification can be written when replacing around view monitor control unit.
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-254, "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.
STEERING 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.
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/OFF setting of non-viewable area can be performed.
PREDICTIVE COURSE LINE DISPLAY	—	ON/OFF setting of non-viewable area can be performed.
INITIALIZE CAMERA IMAGE CALIBRATION	—	Factory image calibration restoration can be performed.
STEERING ANGLE SENSOR ADJUSTMENT	—	Steering angle sensor neutral position adjustment can be performed.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[PREMIUM AUDIO]

Support Item	Setting	Description
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 view 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-306, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Description"](#).

CAN DIAG SUPPORT MNTR

Refer to [LAN-18, "CAN Diagnostic Support Monitor"](#).

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

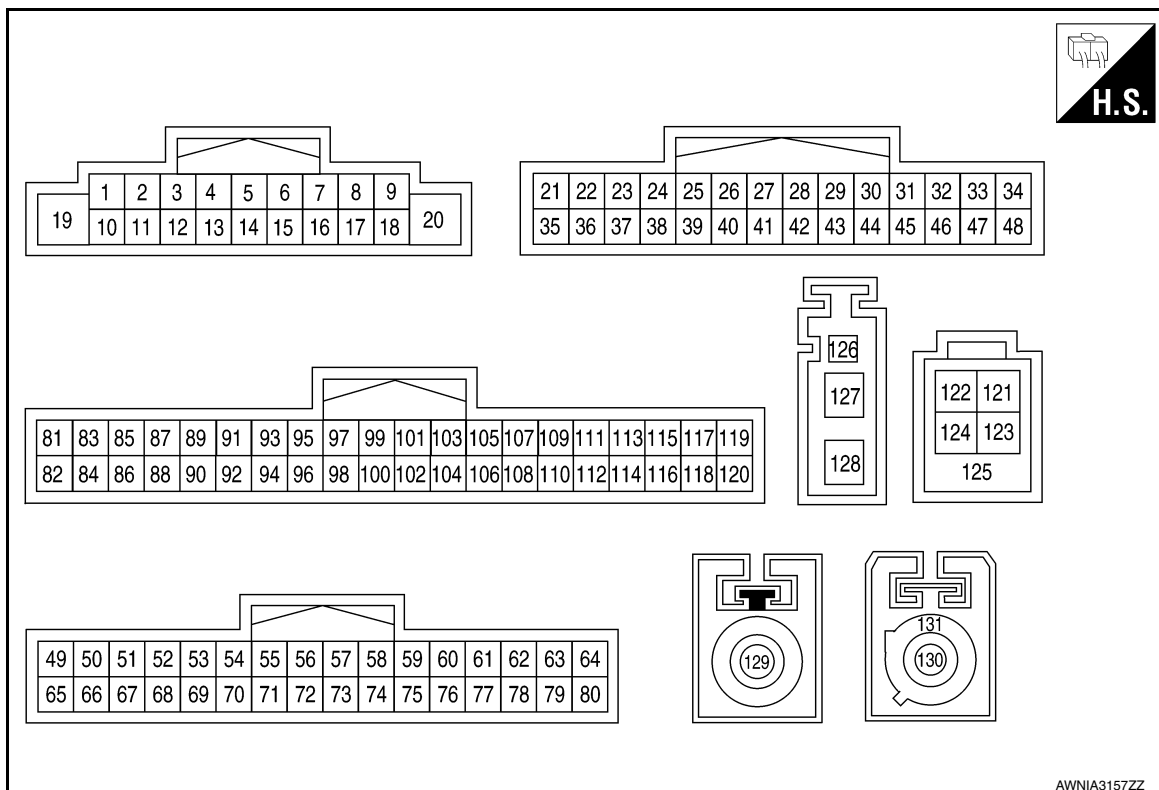
Reference Value

INFOID:0000000011150360

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
PKB SIG	Parking brake released.	Off
	Parking brake applied.	On
ILLUM SIG	Illumination signal is not received.	Off
	Illumination signal is received.	On
IGN SIG	Ignition switch OFF or ACC.	Off
	Ignition switch ON.	On
REV SIG	Selector lever in any position other than R.	Off
	Selector lever in R position.	On

TERMINAL LAYOUT



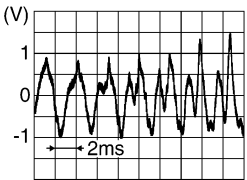
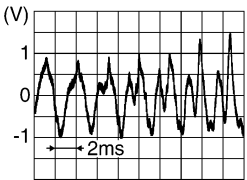
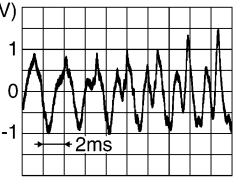
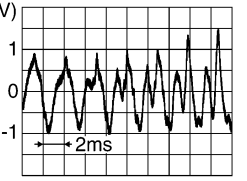
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PHYSICAL VALUES

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
1 (SB)	Ground	Bose Amp. ON signal	Output	Ignition switch ACC	—	Battery voltage
2 (B)	3 (W)	Sound signal front LH	Output	Ignition switch ON	Sound output	
4 (B)	5 (W)	Sound signal rear LH	Output	Ignition switch ON	Sound output	
6 (G)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch.	0 V
					Keep pressing Δ switch.	1.0 V
					Keep pressing ∇ switch.	2.0 V
					Keep pressing $\swarrow$ switch	3.0 V
					Keep pressing ENTER switch.	4.0 V
					Except for above.	5.0 V
7 (P)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
10 (BR)	—	Shield	—	—	—	—
11 (W)	12 (B)	Sound signal front RH	Output	Ignition switch ON	Sound output	
13 (B)	14 (W)	Sound signal rear RH	Output	Ignition switch ON	Sound output	

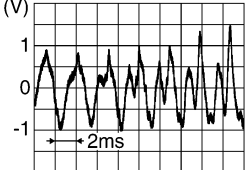
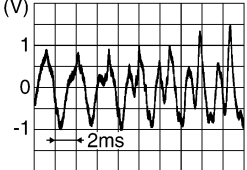
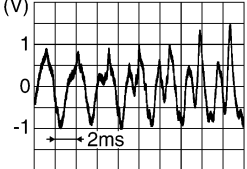
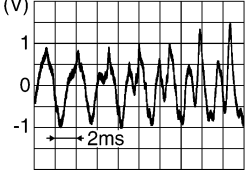
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AV

AV CONTROL UNIT

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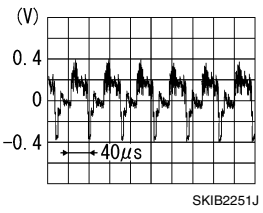
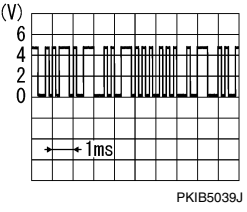
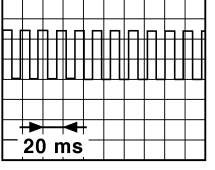
[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
16 (W)	15 (B)	Steering switch signal B	Input	Ignition switch ON	Keep pressing  switch.	0 V
					Keep pressing  switch.	1.0 V
					Keep pressing  switch.	2.0 V
					Keep pressing  switch.	3.0 V
					Keep pressing DISP switch.	4.0 V
					Except for above.	5.0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
24 (R)	39 (B)	AUX sound signal LH	Input	Ignition switch ON	When front AUX mode is selected.	 SKIB3609E
26 (W)	40 (R)	Sound signal LH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest dis- play unit LH or RH.	 SKIB3609E
27 (B)	41 (G)	Sound signal RH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest dis- play unit LH or RH.	 SKIB3609E
37	—	Shield	—	—	—	—
38 (W)	39 (B)	AUX sound signal RH	Input	Ignition switch ON	When front AUX mode is selected.	 SKIB3609E
42	—	Shield	—	—	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

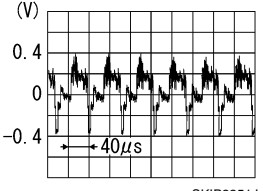
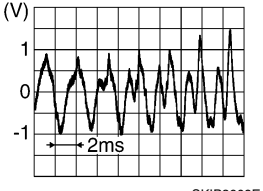
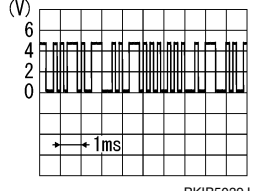
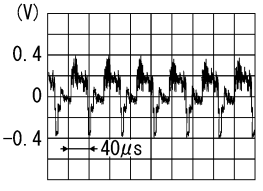
[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
53 (G)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is applied.	0 V
				Ignition switch ON	Parking brake is released.	12 V
55 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
56 (B)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	
57 (BG)	—	I-Key memory	—	—	—	—
60 (W)	Ground	Microphone VCC	Output	Ignition switch ON	—	5.0 V
61 (W)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	
62 (P)	—	CAN—L	Input/ Output	—	—	—
63 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
64 (LG)	—	M CAN—L TRM	—	—	—	—
67 (P)	—	MR output	—	—	—	—
68 (LG)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
69 (R)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever is in R position.	Battery voltage
					Selector lever is in other than R position.	0 V
70 (GR)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit). 

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

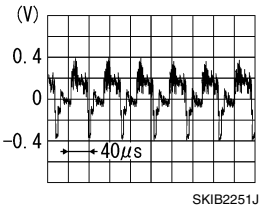
[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
71	—	Shield	—	—	—	—
72 (R)	Ground	Composite image synchro- nizing signal	Output	Ignition switch ON	At DVD image is displayed.	
75 (B)	59	Microphone signal	Input	Ignition switch ON	Give a voice.	
76	—	Shield	—	—	—	—
77 (B)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	
78 (L)	—	CAN-H	Input/ Output	—	—	—
79 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
80 (SB)	—	M CAN-H TRM	—	—	—	—
83 (R)	Ground	Camera power supply	Output	Ignition switch ON	Selector lever in "R" posi- tion	6.0 V
84 (W)	Ground	Camera ground	—	Ignition switch ON		0 V
91 (W)	Ground	AUX image signal	Input	Ignition switch ON	At front AUX image is dis- played.	
92 (B)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
94	—	Shield	—	—	—	—
97 (Y)	Ground	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.	0 V
					Except for above.	5.0 V

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
98 (V)	Ground	Switch ground	—	Ignition switch ON	—	0 V
105 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
106	—	Shield	—	—	—	—
107 (B)	Ground	Composite image signal	Output	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	
121 (W)	—	V BUS signal	—	—	—	—
122 (G)	—	USB ground	—	—	—	—
123 (L)	—	USB D+ signal	—	—	—	—
124 (R)	—	USB D— signal	—	—	—	—
125	—	Shield	—	—	—	—
126 (B)	Ground	Antenna amp. ON signal	Input	Ignition switch ON	—	Battery voltage
127 (B)	—	AM-FM main	Input	—	—	—
128 (B)	—	FM sub	Input	—	—	—
129 (B)	Ground	Satellite radio antenna sig- nal	Input	Ignition switch ON	Satellite antenna discon- nected.	5.0 V
130 (B)	131	GPS antenna signal	Input	Ignition switch ON	GPS antenna disconnect- ed.	5.0 V

Fail-Safe

INFOID:0000000011150361

When the ambient temperature becomes extremely low or extremely high, AV control unit displays a message and limits the function of the AV control unit.

FAIL-SAFE CONDITIONS

When the ambient temperature is -20°C (-4°F) or lower, or when it is 70°C (158°F) or higher.

Display

The following messages are displayed during fail-safe:

Fail-safe mode	Display
When HDD temperature is low	HDD system is experiencing problems due to extreme low temperature. Normal operation will resume when temperature rises.
When HDD temperature is high	HDD system is experiencing problems due to extreme high temperature. Normal operation will resume when temperature drops.

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

DESCRIPTION OF CONTROLS

Function		Fail-safe mode activated
Air conditioner	Operation	A/C and AV switch assembly can be operated.
	Display	• LEDs of A/C and AV switch assembly illuminate. • Temperature, mode and blower speed are displayed in a simplified mode.
Audio	Operation	Only ON/OFF and volume control operations of A/C and AV switch assembly are available.
	Display	"Fail-safe mode" is displayed.
Camera	Operation	Image tone cannot be controlled.
	Display	Cannot be superimposed. (warning display, tone control display)
Hands-free phone	Operation	Inoperative.
Navigation	Operation	Inoperative.
Self diagnosis		Displays in a simplified mode.
CONSULT diagnosis		Inoperative.

Ability Operation Mode

If HDD data can be read, "Fail-safe mode" is displayed and functions listed above can be operated.

DTC Index

INFOID:0000000011150362

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-313, "DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-314, "DTC Logic"
U1200: CONT UNIT	AV-315, "DTC Logic"
U1201: GYRO NO CONN	AV-316, "DTC Logic"
U1202: G-SENSOR NO CONN	AV-317, "DTC Logic"
U1204: GPS COMM	AV-318, "DTC Logic"
U1205: GPS ROM	AV-319, "DTC Logic"
U1206: GPS RAM	AV-320, "DTC Logic"
U1207: GPS RTC	AV-321, "DTC Logic"
U1216: CAN CONT	AV-322, "DTC Logic"
U1217: BLUETOOTH MODULE	AV-323, "DTC Logic"
U1218: HDD CONN	AV-324, "DTC Logic"
U1219: HDD READ	AV-325, "DTC Logic"
U121A: HDD WRITE	AV-326, "DTC Logic"
U121B: HDD COMM	AV-327, "DTC Logic"
U121C: HDD ACCESS	AV-328, "DTC Logic"
U121D: DSP CONN	AV-329, "DTC Logic"
U121E: DSP COMM	AV-330, "DTC Logic"
U1225: USB CONTROLLER	AV-331, "DTC Logic"
U1227: DVD COMM	AV-332, "DTC Logic"
U1228: SUB CPU CONN	AV-333, "DTC Logic"
U1229: iPod CERTIFICATION	AV-334, "DTC Logic"
U122A: CONFIG UNFINISH	AV-335, "DTC Logic"
U122E: Built-in AUDIO CONN	AV-336, "DTC Logic"
U1231: AMP TEMP	AV-337, "DTC Logic"

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

CONSULT Display	Reference Page	
U1232: ST ANGLE SEN CALIB	AV-338, "DTC Logic"	A
U1243: FRONT DISP CONN	AV-339, "DTC Logic"	
U1244: GPS ANTENNA CONN	AV-341, "DTC Logic"	B
U1258: XM ANTENNA CONN	AV-342, "DTC Logic"	
U125A: 3RD DISP CONN	AV-343, "DTC Logic"	
U1263: USB OVERCURRENT	AV-344, "DTC Logic"	C
U1264: ANTENNA AMP TERMINAL (OPEN or SHORT)	AV-345, "DTC Logic"	
U1265: AMP ON TERMINAL (GND-SHORT or VB-SHORT)	AV-346, "DTC Logic"	D
- U1300: AV COMM CIRCUIT - U1240: SWITCH CONN	AV-347, "Description"	
- U1300: AV COMM CIRCUIT - U124E: AMP CONN		E
- U1300: AV COMM CIRCUIT - U1246: VIDEO DIST CONN		F
- U1300: AV COMM CIRCUIT - U125B: AROUND CAMERA CONN		
- U1300: AV COMM CIRCUIT - U125C: SONAR CONN		G
- U1300: AV COMM CIRCUIT - U1240: SWITCH CONN - U125C: SONAR CONN - U125B: AROUND CAMERA CONN - U1246: VIDEO DIST CONN		H
- U1300: AV COMM CIRCUIT - U1240: SWITCH CONN - U124E: AMP CONN - U125C: SONAR CONN - U125B: AROUND CAMERA CONN - U1246: VIDEO DIST CONN		I
U1310: CONTROL UNIT (AV)	AV-356, "DTC Logic"	J
U1601: FL-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-357, "DTC Logic"	K
U1603: FL-DOOR WOOFER/TWEETER (VB-SHOR)		L
U1609: FR-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)		
U160B: FR-DOOR WOOFER/TWEETER (VB-SHOR)		M
U1627: F-INST L-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-358, "DTC Logic"	AV
U162F: F-INST R-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)		
U162A: F-INST C-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-359, "DTC Logic"	O
U1684: 2L-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-360, "DTC Logic"	
U168C: 2R-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)		P
U175D: R-LUGGAGE L-WOOFER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-361, "DTC Logic"	

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

CONSULT Display	Reference Page
U176A: R-ROOF L-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-362. "DTC Logic"
U1772: R-ROOF R-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	

DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

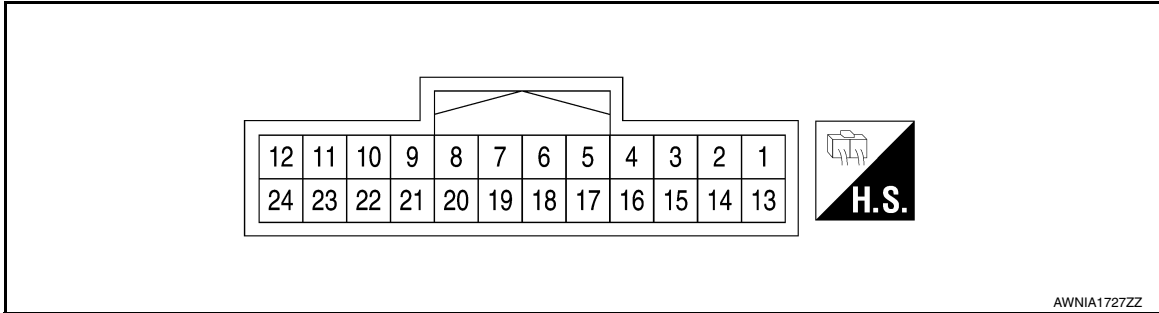
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DISPLAY UNIT

Reference Value

INFOID:0000000011150363

TERMINAL LAYOUT



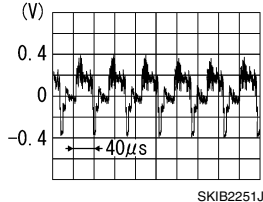
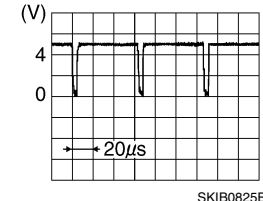
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
6	—	Shield	—	—	—	—
7	—	Shield	—	—	—	—
8 (B)	Ground	Camera image signal	Input	Ignition switch ON	At camera image is displayed.	
9 (B)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	
10 (W)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V

DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
18 (B)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	
19 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
20 (R)	Ground	Composite image synchro- nizing signal	Input	Ignition switch ON	—	
22	—	Shield	—	—	—	—
23 (P)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

BOSE AMP.

< ECU DIAGNOSIS INFORMATION >

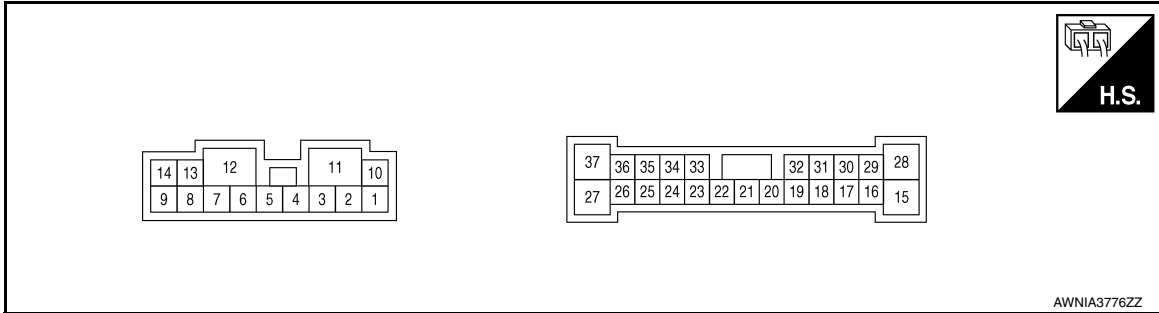
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BOSE AMP.

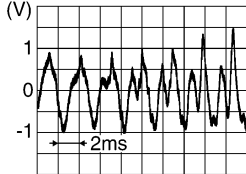
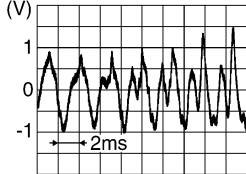
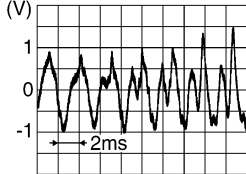
Reference Value

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TERMINAL LAYOUT



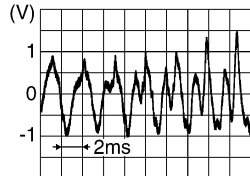
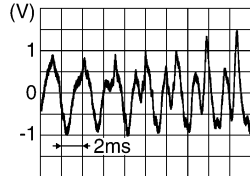
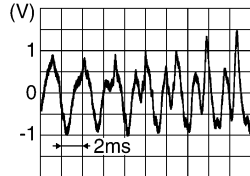
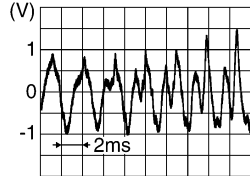
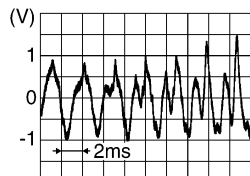
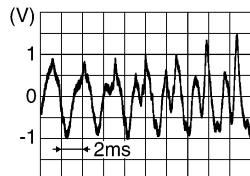
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output	Ignition switch	Operation	
1 (W)	2 (G)	Sound signal rear side speaker	Output	ON	Sound output	 SKIB3609E
4 (G)	3 (W)	Sound signal tweeter RH	Output	ON	Sound output	 SKIB3609E
5 (W)	6 (G)	Sound signal subwoofer 2	Output	ON	Sound output	 SKIB3609E
7 (B)	—	Ground	—	ON	—	0 V
10 (LG)	Ground	Battery power supply	Input	OFF	—	Battery voltage
11 (Y)	Ground	Battery power supply	Input	OFF	—	Battery voltage
12 (B)	—	Ground	—	ON	—	0 V

BOSE AMP.

< ECU DIAGNOSIS INFORMATION >

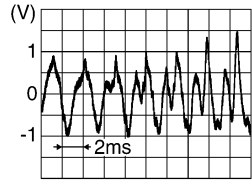
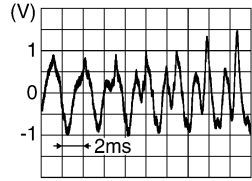
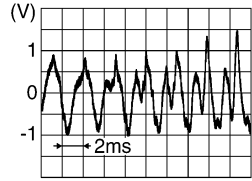
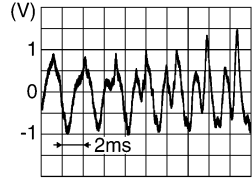
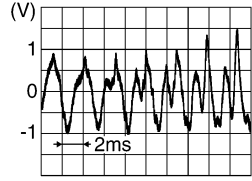
[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output	Ignition switch	Operation	
13 (W)	8 (B)	Sound signal subwoofer 1	Output	ON	Sound output	 SKIB3609E
14 (G)	9 (W)	Sound signal rear door speaker RH	Output	ON	Sound output	 SKIB3609E
17 (P)	18 (R)	Sound signal center speak- er	Output	ON	Sound output	 SKIB3609E
19 (G)	20 (R)	Sound signal front door speaker and front tweeter LH	Output	ON	Sound output	 SKIB3609E
21 (W)	Ground	BOSE amp. ON signal	Input	ON	—	Battery voltage
24 (B)	23 (W)	Pre amp sound signal rear LH	Input	ON	Sound output	 SKIB3609E
26 (B)	25 (W)	Pre amp sound signal rear RH	Input	ON	Sound output	 SKIB3609E

BOSE AMP.

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output	Ignition switch	Operation	
28 (P)	16 (R)	Sound signal rear door speaker LH	Output	ON	Sound output	 SKIB3609E
29 (R)	30 (G)	Sound signal tweeter LH	Output	ON	Sound output	 SKIB3609E
31 (W)	32 (P)	Sound signal front door speaker and front tweeter RH	Output	ON	Sound output	 SKIB3609E
33 (B)	34 (W)	Pre amp sound signal front RH	Input	ON	Sound output	 SKIB3609E
35 (B)	36 (W)	Pre amp sound signal front LH	Input	ON	Sound output	 SKIB3609E

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VIDEO DISTRIBUTOR

< ECU DIAGNOSIS INFORMATION >

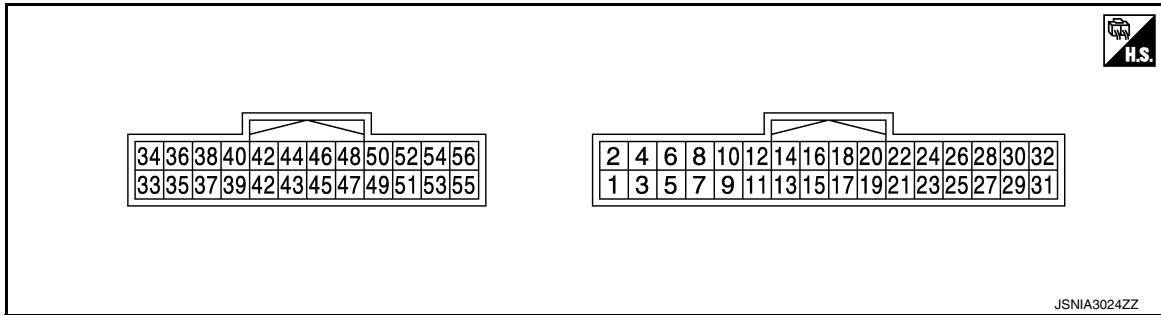
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VIDEO DISTRIBUTOR

Reference Value

INFOID:0000000011150365

TERMINAL LAYOUT



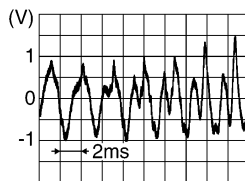
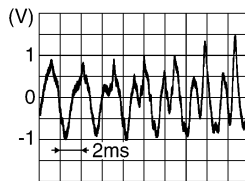
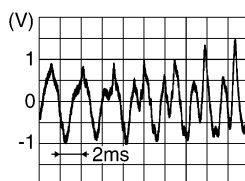
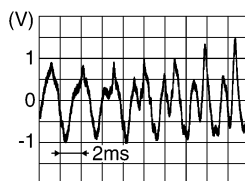
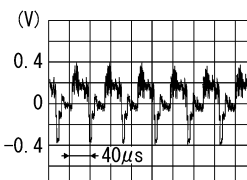
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
1 (B)	—	Ground	—	Ignition switch ON	—	0 V
2 (V)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
3 (B)	—	Ground	—	Ignition switch ON	—	0 V
4 (W)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
5 (BR)	Ground	Cont. ground for headrest display unit RH	—	Ignition switch ON	—	0 V
6 (L)	Ground	ACC signal for headrest display unit RH	Output	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
7 (SB)	Ground	Cont. ground for headrest display unit LH	—	Ignition switch ON	—	0 V
8 (BR)	Ground	ACC signal for headrest display unit LH	Output	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
9 (SB)	Ground	Image switch signal for headrest display unit RH	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit RH.	0.5 V
					When rear AUX image is displayed on headrest dis- play unit RH.	4.5 V

VIDEO DISTRIBUTOR

< ECU DIAGNOSIS INFORMATION >

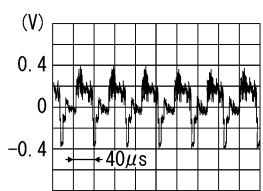
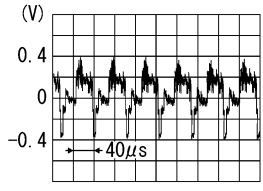
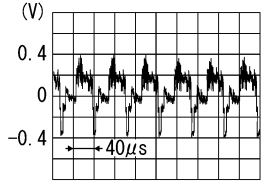
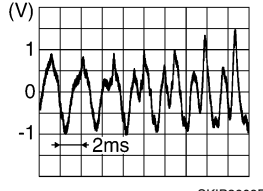
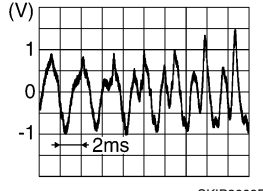
[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
10 (L)	Ground	Image switch signal for headrest display unit LH	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH.	0.5 V
					When rear AUX image is displayed on headrest dis- play unit LH.	4.5 V
14 (R)	15 (G)	Headphone sound signal RH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	 SKIB3609E
16 (B)	17 (W)	Headphone sound signal LH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	 SKIB3609E
18 (V)	Ground	AV ground for headrest dis- play unit RH	—	Ignition switch ON	—	0 V
19 (V)	Ground	AV ground for headrest dis- play unit LH	—	Ignition switch ON	—	0 V
20 (B)	21 (G)	Headphone sound signal RH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	 SKIB3609E
22 (W)	23 (R)	Headphone sound signal LH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	 SKIB3609E
27 (W)	Ground	Composite image signal ground for headrest display unit RH	—	Ignition switch ON	—	0 V
28 (B)	Ground	Composite image signal for headrest display unit RH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest dis- play unit RH.	 SKIB2251J

VIDEO DISTRIBUTOR

< ECU DIAGNOSIS INFORMATION >

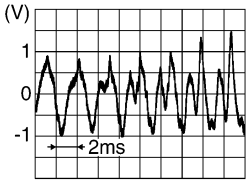
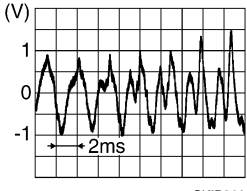
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Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
29	—	Shield	—	—	—	—
30	—	Shield	—	—	—	—
31 (P)	Ground	Composite image signal ground for headrest display unit LH	—	Ignition switch ON	—	0 V
32 (L)	Ground	Composite image signal for headrest display unit LH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest dis- play unit LH.	 SKIB2251J
33 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
34 (B)	Ground	Composite image signal	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	 SKIB2251J
35	—	Shield	—	—	—	—
40 (B)	39 (W)	AUX image signal	Input	Ignition switch ON	When rear AUX image is displayed on headrest dis- play unit LH or RH.	 SKIB2251J
41	—	Shield	—	—	—	—
45 (W)	46 (R)	Sound signal LH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E
47 (B)	48 (G)	Sound signal RH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E
49	—	Shield	—	—	—	—
53	—	Shield	—	—	—	—

VIDEO DISTRIBUTOR

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
54 (B)	56 (W)	AUX sound signal LH	Input	Ignition switch ON	When rear AUX mode is selected on headrest dis- play unit LH or RH.	
55 (R)	56 (W)	AUX sound signal RH	Input	Ignition switch ON	When rear AUX mode is selected on headrest dis- play unit LH or RH.	

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HEADREST DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

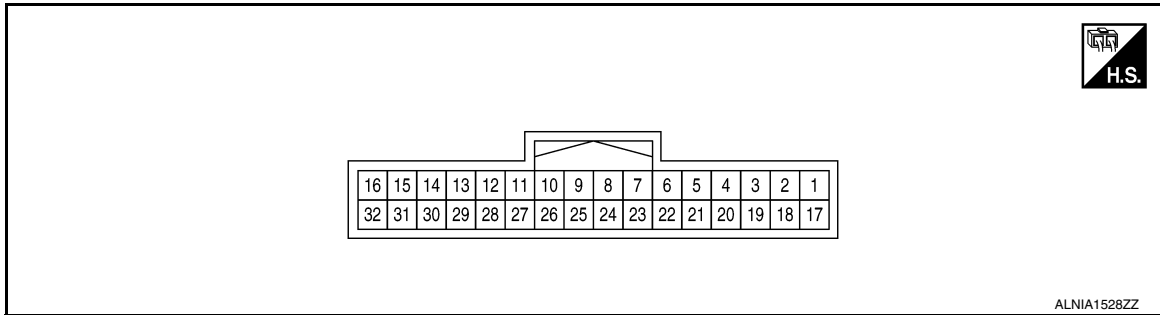
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HEADREST DISPLAY UNIT

Reference Value

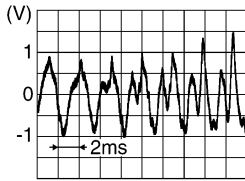
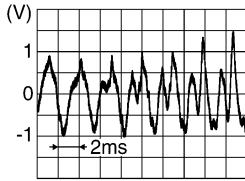
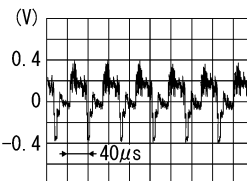
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TERMINAL LAYOUT



PHYSICAL VALUES

Driver Seat

Terminal (Wire color)		Description		Condi- tion		Reference value (Approx.)
+	–	Signal name	Input/ Output	Ignition switch	Operation	
1 (W)	17 (B)	Headphone sound signal LH	Input	ON	Headphone sound output	 SKIB3609E
2 (G)	18 (R)	Headphone sound signal RH	Input	ON	Headphone sound output	 SKIB3609E
3 (LG)	—	Headphone sound signal shield	—	—	—	—
5 (Y)	Ground	Composite image signal	Input	ON	When DVD, USB or front AUX image is displayed on headrest display unit	 SKIB2251J
7 (W)	Ground	Image switch signal	Output	ON	When DVD, USB or front AUX image is displayed on headrest display unit	0.5 V
					When rear AUX image is displayed on headrest dis- play unit	4.5 V
8 (G)	Ground	ACC signal	Input	OFF	—	3.3 V
				ACC	—	0 V

HEADREST DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condi- tion		Reference value (Approx.)	
+	—	Signal name	Input/ Output	Ignition switch	Operation		
10 (LG)	—	AV communication signal 1 (L)	Input/ Output	—	—	—	A
11 (P)	—	AV communication signal 1 (H)	Input/ Output	—	—	—	B
12 (G)	Ground	Ground	—	ON	—	0 V	C
13 (BR)	Ground	Illumination	Input	OFF	—	Battery voltage	D
15 (W)	Ground	Battery power supply	Input	OFF	—	Battery voltage	E
16 (W)	Ground	Battery power supply	Input	OFF	—	Battery voltage	
19 (V)	Ground	AV ground	—	ON	—	0 V	F
20 (P)	—	Composite image signal shield	—	—	—	—	G
21 (G)	Ground	Composite image signal ground	—	ON	—	0 V	
23 (Y)	Ground	Control ground	—	ON	—	0 V	H
24 (SB)	—	CON CK B	Input/ Output	—	—	—	I
26 (R)	—	AV communication signal 2 (L)	Input/ Output	—	—	—	
27 (LG)	—	AV communication signal 2 (H)	Input/ Output	—	—	—	J
29 (GR)	—	CON CK A	Input/ Output	—	—	—	K
31 (G)	Ground	Ground	—	ON	—	0 V	
32 (G)	Ground	Ground	—	ON	—	0 V	L

Passenger Seat

AV

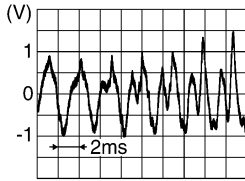
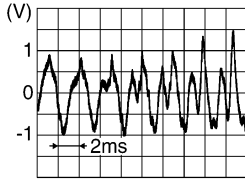
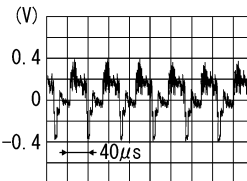
O

P

HEADREST DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condi- tion		Reference value (Approx.)
+	—	Signal name	Input/ Output	Ignition switch	Operation	
1 (W)	17 (B)	Headphone sound signal LH	Input	ON	Headphone sound output	 SKIB3609E
2 (G)	18 (R)	Headphone sound signal RH	Input	ON	Headphone sound output	 SKIB3609E
3 (LG)	—	Headphone sound signal shield	—	—	—	—
5 (Y)	Ground	Composite image signal	Input	ON	When DVD, USB or front AUX image is displayed on headrest display unit	 SKIB2251J
7 (W)	Ground	Image switch signal	Output	ON	When DVD, USB or front AUX image is displayed on headrest display unit	0.5 V
					When rear AUX image is displayed on headrest dis- play unit	4.5 V
8 (G)	Ground	ACC signal	Input	OFF	—	3.3 V
				ACC	—	0 V
10 (LG)	—	AV communication signal 1 (L)	Input/ Output	—	—	—
11 (P)	—	AV communication signal 1 (H)	Input/ Output	—	—	—
13 (BR)	Ground	Illumination	Input	OFF	—	Battery voltage
15 (W)	Ground	Battery power supply	Input	OFF	—	Battery voltage
16 (W)	Ground	Battery power supply	Input	OFF	—	Battery voltage
19 (V)	Ground	AV ground	—	ON	—	0 V
20 (P)	—	Composite image signal shield	—	—	—	—
21 (G)	Ground	Composite image signal ground	—	ON	—	0 V
23 (Y)	Ground	Control ground	—	ON	—	0 V

HEADREST DISPLAY UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condi- tion		Reference value (Approx.)
+	—	Signal name	Input/ Output	Ignition switch	Operation	
24 (SB)	—	CON CK B	Input/ Output	—	—	—
26 (R)	—	AV communication signal 2 (L)	Input/ Output	—	—	—
27 (LG)	—	AV communication signal 2 (H)	Input/ Output	—	—	—
28 (G)	Ground	Ground	—	ON	—	0 V
29 (GR)	—	CON CK A	Input/ Output	—	—	—
31 (G)	Ground	Ground	—	ON	—	0 V
32 (G)	Ground	Ground	—	ON	—	0 V

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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

AROUND VIEW MONITOR CONTROL UNIT

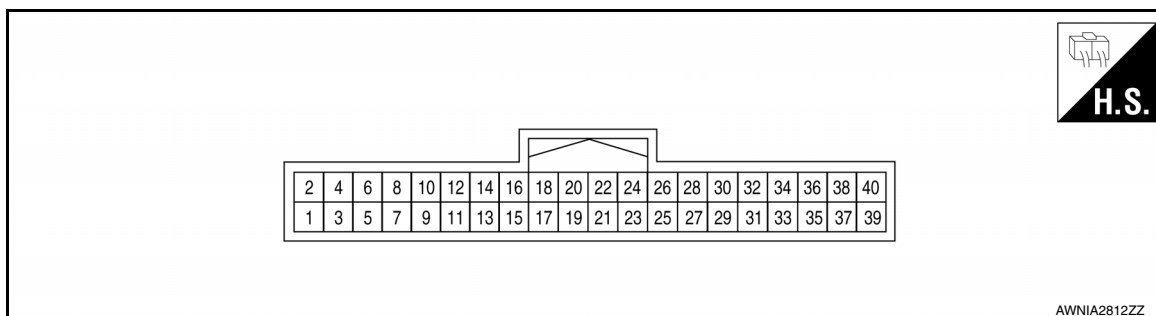
Reference Value

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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 view camera inoperative.	NG
	Rear view camera 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
STEERING 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

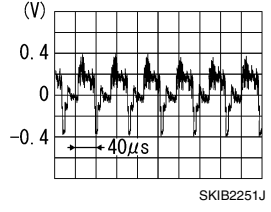
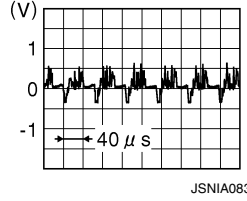


PHYSICAL VALUES

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

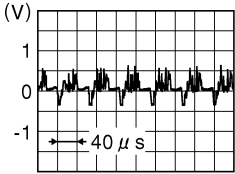
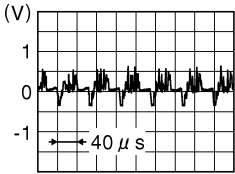
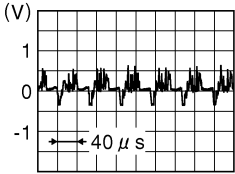
[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
2 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
3 (G)	—	Signal ground	—	—	—	—
4 (LG)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
5 (P)	—	RX	—	—	—	—
7 (BG)	—	TX	—	—	—	—
8 (LG)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
					Other than R position	0 V
10 (P)	—	V-CAN (L)	—	—	—	—
12 (L)	—	V-CAN (H)	—	—	—	—
19	—	Shield	—	—	—	—
20 (B)	—	External video output	—	—	—	—
23	—	Shield	—	—	—	—
24 (B)	Ground	Camera image signal	Output	Ignition switch ON	At camera image display	
25 (B)	Ground	Rear view camera ground	—	Ignition switch ON	—	0 V
26 (W)	Ground	Rear view camera power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
28 (R)	27	Rear view camera image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
29 (B)	Ground	Side camera driver side ground	—	Ignition switch ON	—	0 V

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[PREMIUM AUDIO]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	-	Signal name	Input/ Output			
30 (W)	Ground	Side camera driver side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
32 (R)	31	Side camera driver side image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	
33 (B)	Ground	Side camera passenger side ground	—	Ignition switch ON	—	0 V
34 (W)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
36 (R)	35	Side camera passenger side image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	
37 (B)	Ground	Front camera ground	—	Ignition switch ON	—	0 V
38 (R)	Ground	Front camera power supply	Output	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	6.0 V
40 (W)	39	Front camera image signal	Input	Ignition switch ON	"CAMERA" switch is ON or shift position is "R".	

DTC Index

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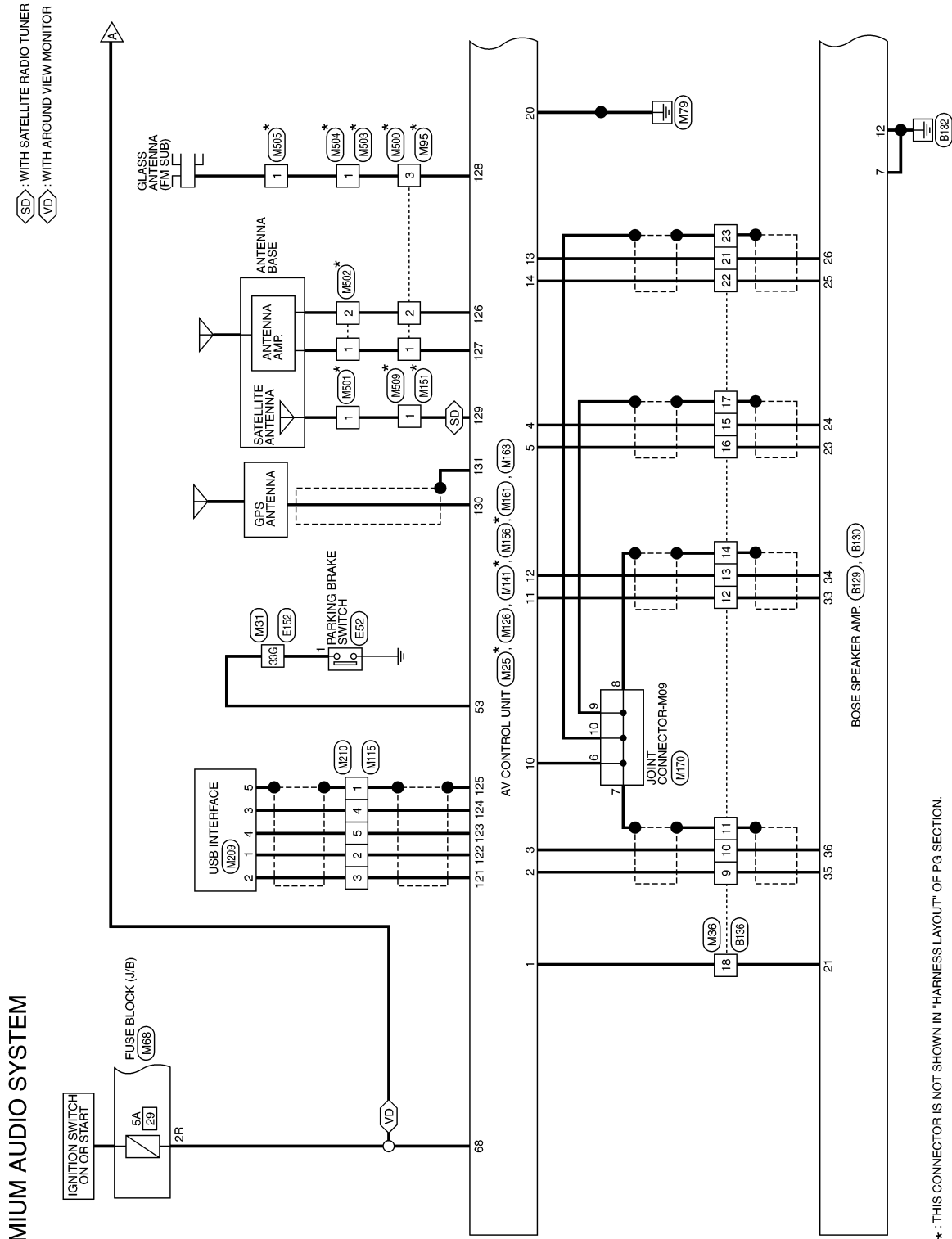
CONSULT Display	Reference Page
U1302: CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-348, "DTC Logic"
U1303: LED SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-352, "DTC Logic"
U1304: NON-COMPLETION OF THE CALIBRATION	AV-354, "DTC Logic"
U1305: NON-COMPLETION OF THE WRITE CONFIGURATION	AV-355, "DTC Logic"

WIRING DIAGRAM

PREMIUM AUDIO SYSTEM

Wiring Diagram

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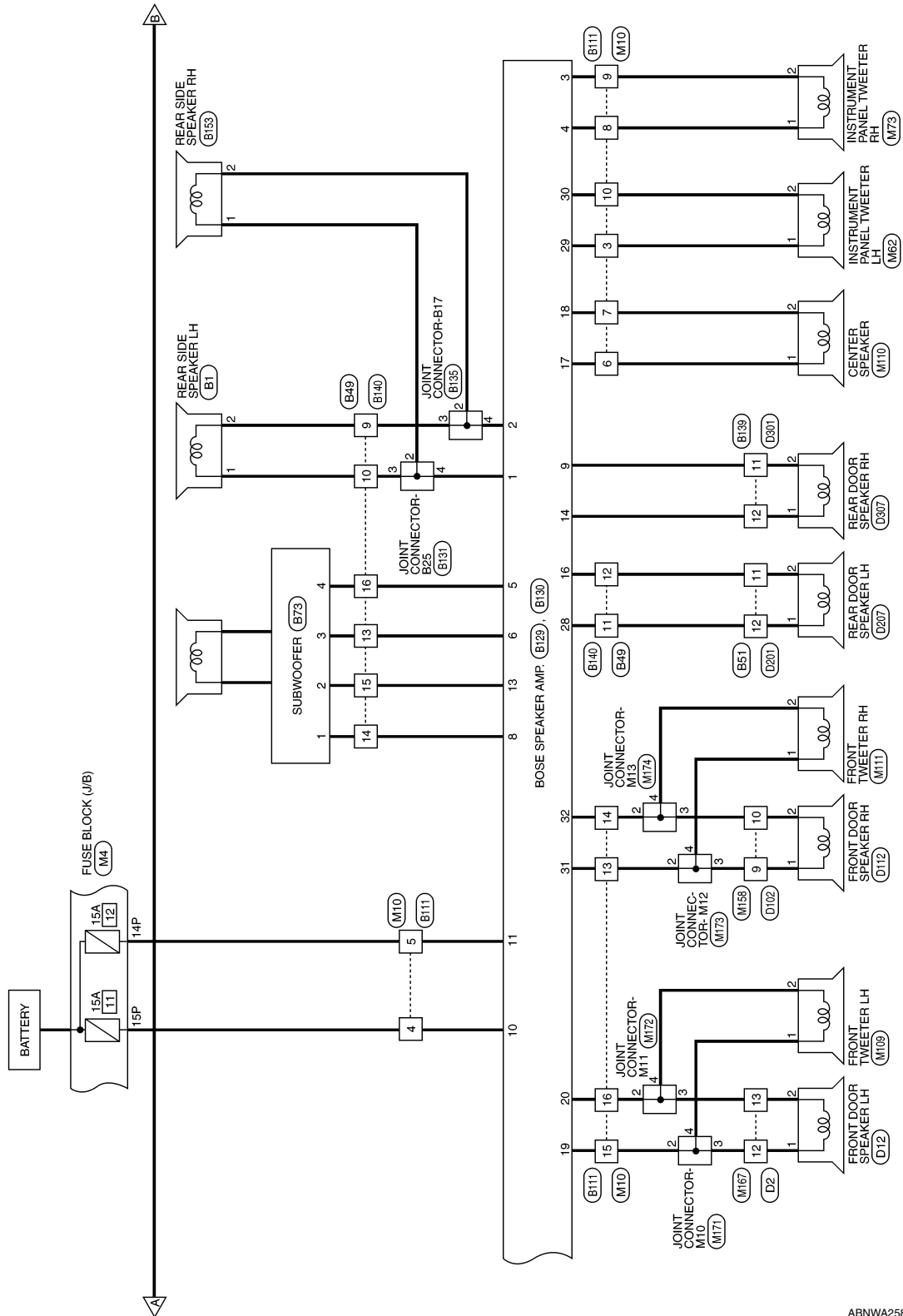


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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

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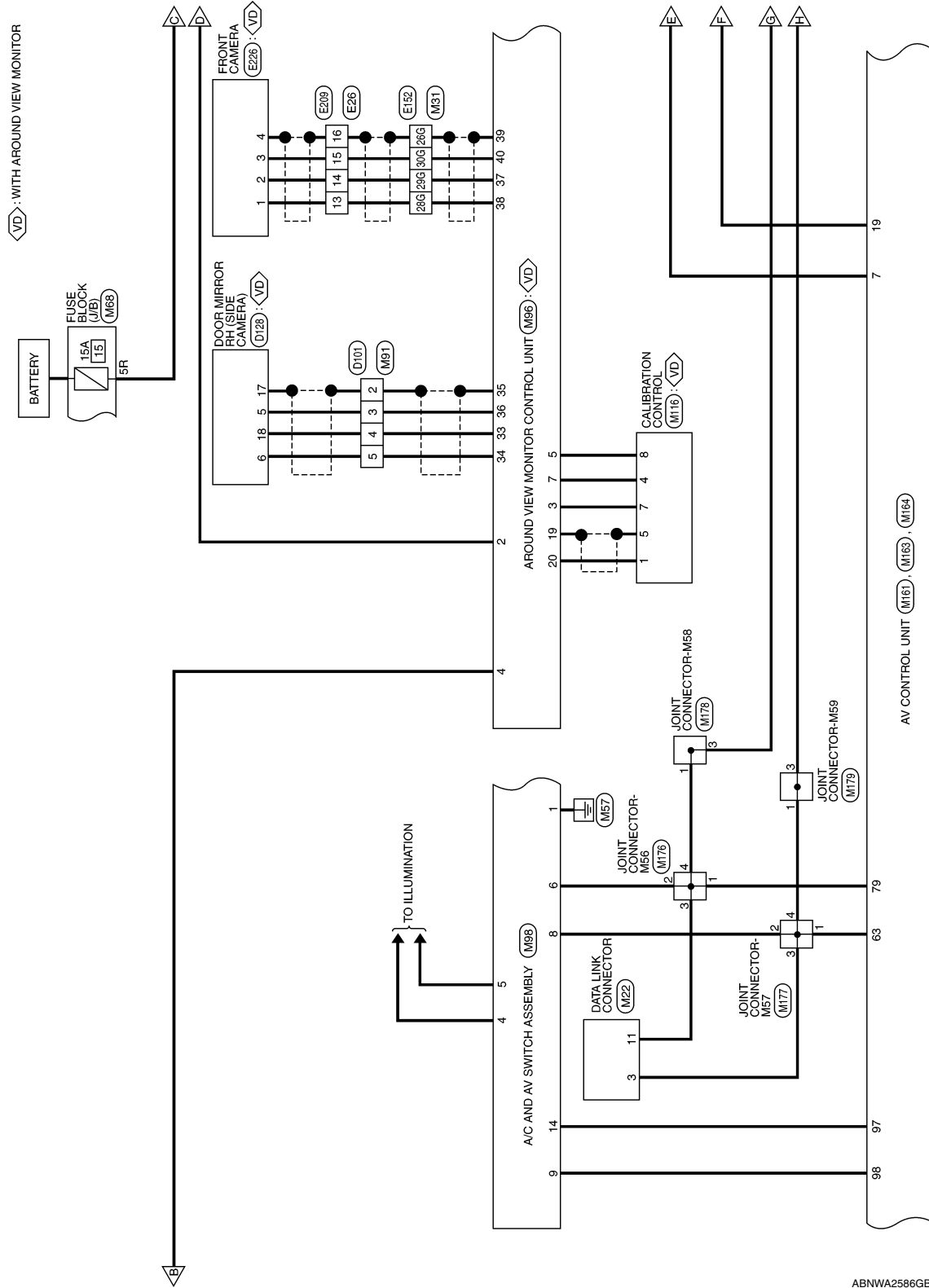


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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]



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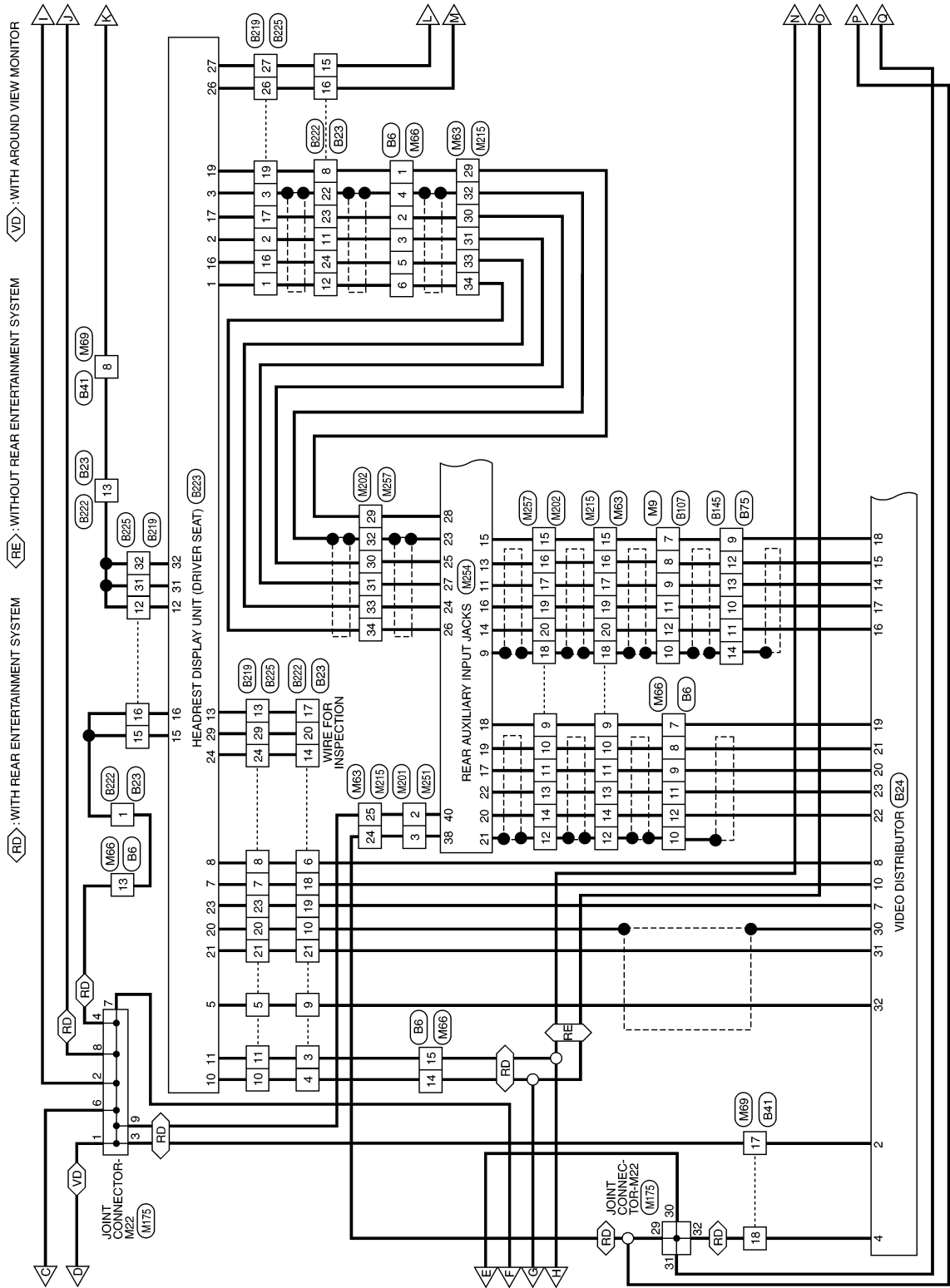
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PREMIUM AUDIO SYSTEM

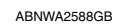
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[PREMIUM AUDIO]



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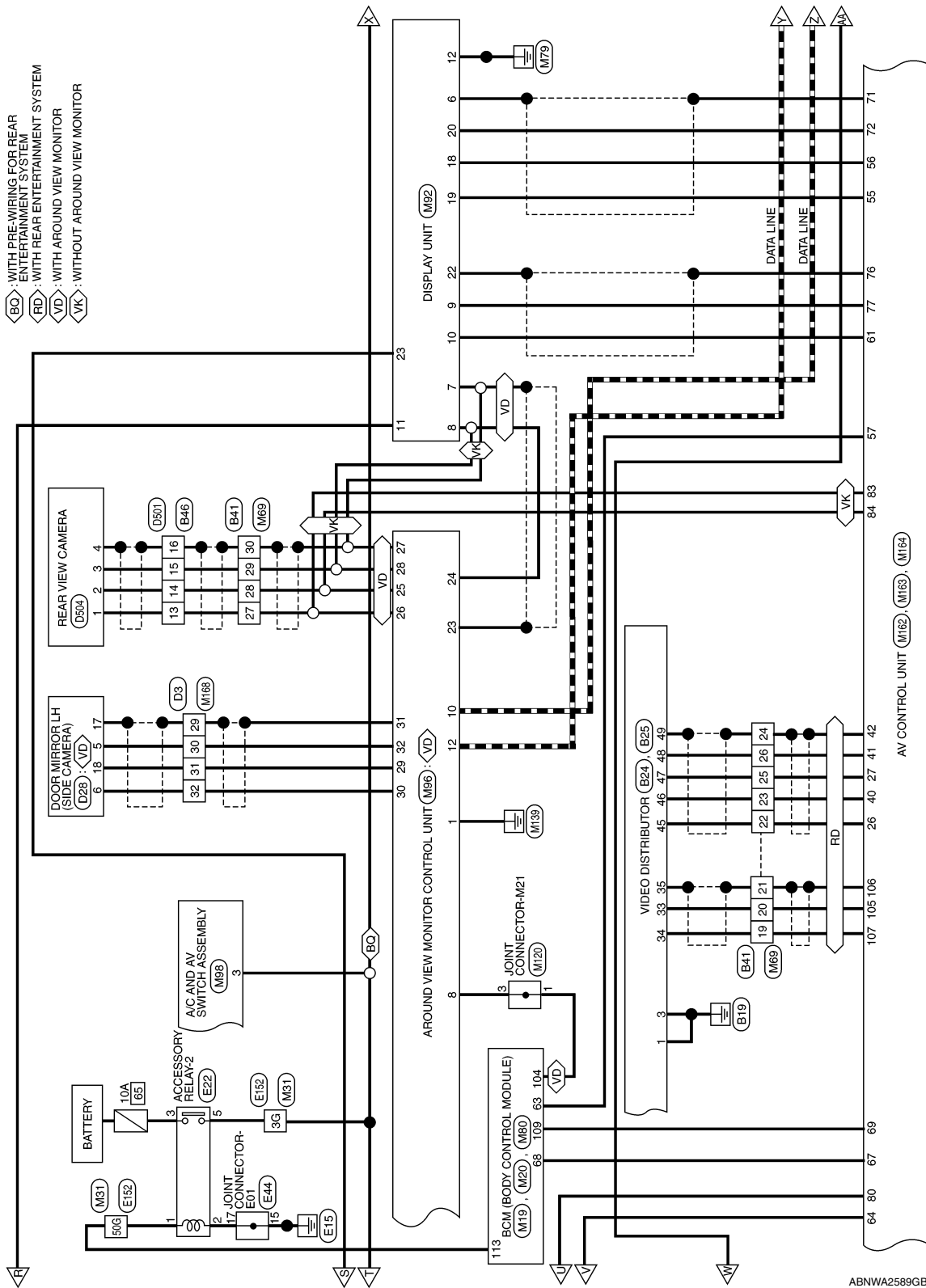


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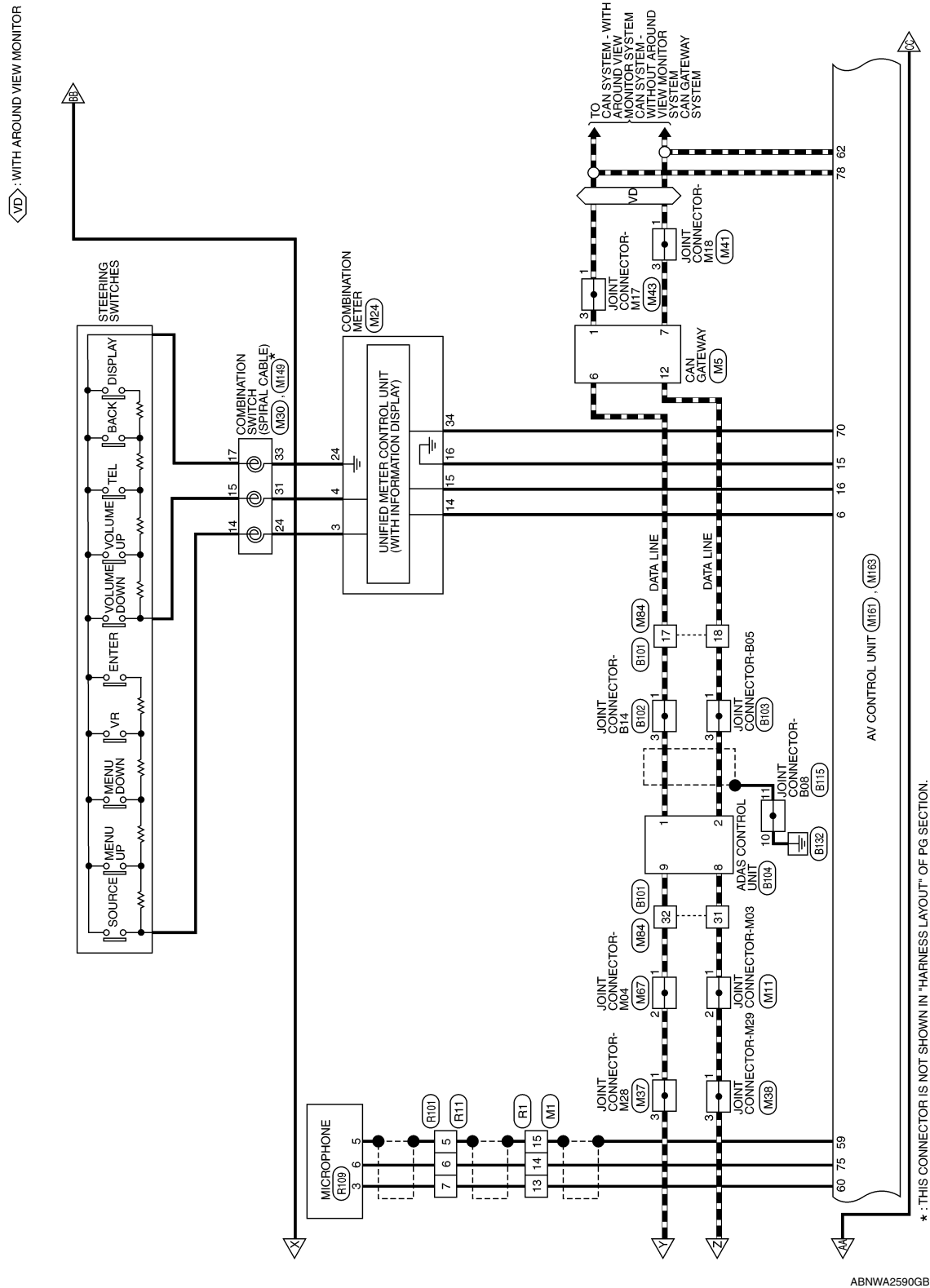
PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]



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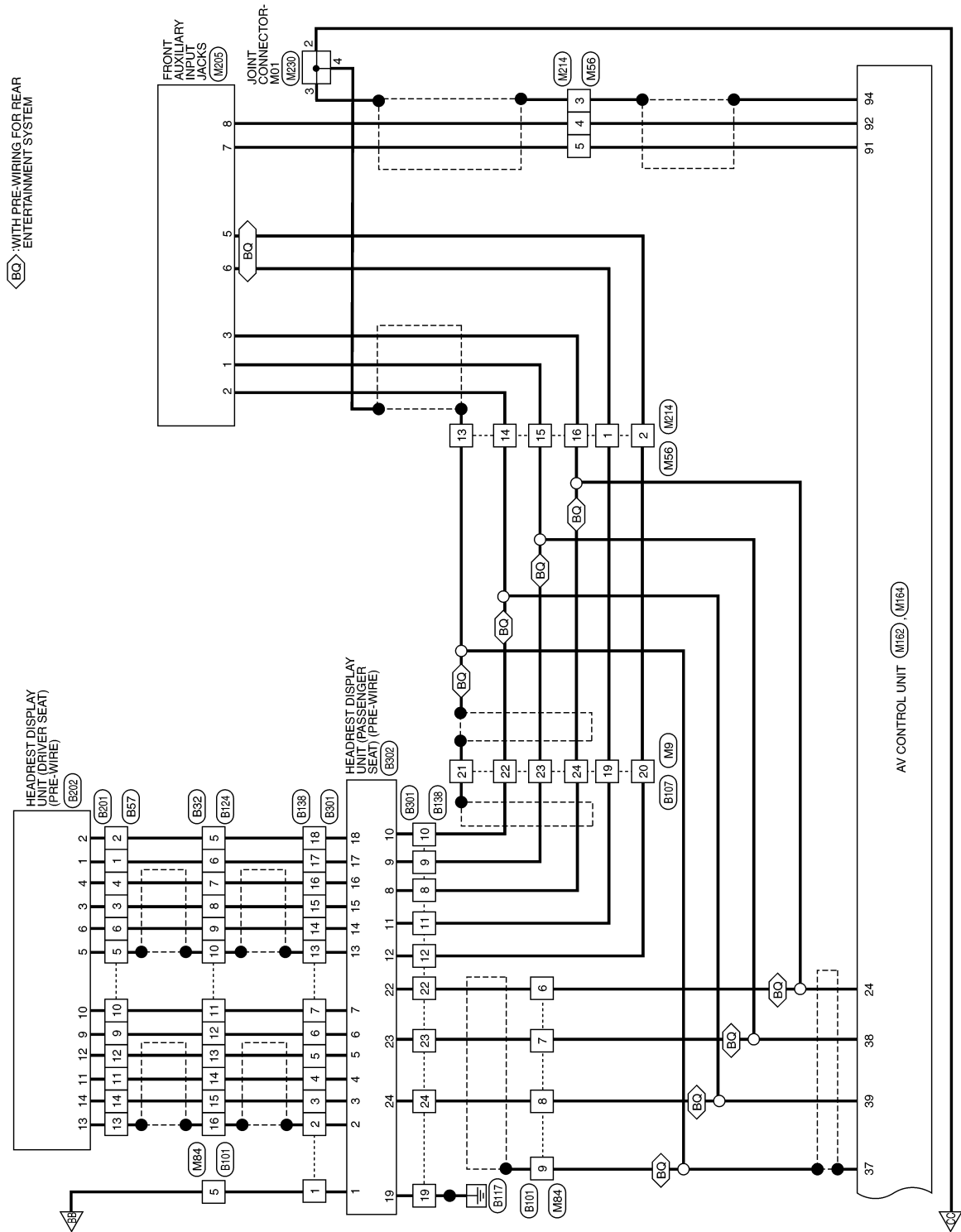


*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

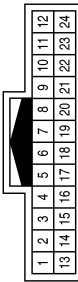
[PREMIUM AUDIO]



ABNWA2591GB

PREMIUM AUDIO SYSTEM CONNECTORS

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



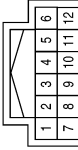
Terminal No.	Color of Wire	Signal Name
13	W	-
14	B	-
15	SHIELD	-

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



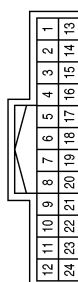
Terminal No.	Color of Wire	Signal Name
14P	Y	-
15P	L	-

Connector No.	M5
Connector Name	CAN GATEWAY
Connector Color	WHITE



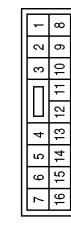
Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
6	L	CAN-H
7	P	CAN-L
12	P	CAN-L

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



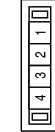
Terminal No.	Color of Wire	Signal Name
6	GR	-
7	V	-
8	G	-
9	R	-
10	SHIELD	-
11	W	-
12	B	-
19	P	-
20	G	-
21	SHIELD	-
22	B	-
23	R	-
24	W	-

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
3	G	-
4	L	-
5	Y	-
6	G	-
7	W	-
8	G	-
9	W	-
10	W	-
13	G	-
14	W	-
15	P	-
16	W	-

Connector No.	M11
Connector Name	JOINT CONNECTOR-M03
Connector Color	WHITE



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

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

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



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

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

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



92	91	90	89	88	87	86	85	84	83	82	81
104	103	102	101	100	99	98	97	96	95	94	93

Terminal No.	Color of Wire	Signal Name
104	LG	REVERSE LAMP OUT

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
63	BG	I-KEY LINK SIGNAL
68	P	MR OUTPUT

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



25	24	31	32	33

Connector No.	M25
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	PINK



Terminal No.	Color of Wire	Signal Name
24	P	—
31	BG	—
33	R	—

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT 1
4	BG	STRG SW INPUT 2
14	G	STRG SW OUTPUT 1 (EXCEPT BASE AUDIO)
15	W	STRG SW OUTPUT 2 (EXCEPT BASE AUDIO)
16	B	STRG SW OUTPUT GND (EXCEPT BASE AUDIO)
24	R	STRG SW GND
34	GR	SPEED 8 P/R

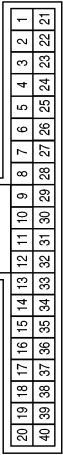
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Connector No.	M37
Connector Name	JOINT CONNECTOR-M28
Connector Color	WHITE



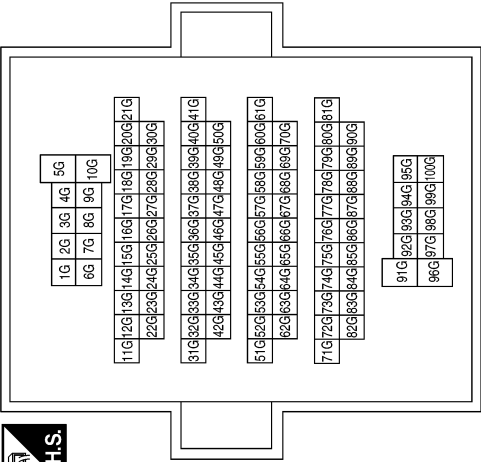
Terminal No.	Color of Wire	Signal Name
1	L	—
3	L	—

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



Terminal No.	Color of Wire	Signal Name
9	B	—
10	W	—
11	SHIELD	—
12	W	—
13	B	—
14	SHIELD	—
15	B	—
16	W	—
17	SHIELD	—
18	SB	—
19	LG	—
20	SB	—
21	B	—
22	W	—
23	SHIELD	—

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



Terminal No.	Color of Wire	Signal Name
3G	P	—
26G	SHIELD	—
28G	R	—
29G	B	—
30G	W	—
33G	G	—
50G	L	—

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Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	—
3	L	—

Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	—
3	P	—

Connector No.	M38
Connector Name	JOINT CONNECTOR-M29
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	Y	—
3	P	—

Connector No.	M62
Connector Name	INSTRUMENT PANEL TWEETER LH
Connector Color	BROWN



2	1

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

Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
1	P	—
2	G	—
3	SHIELD	—
4	B	—
5	W	—
13	SHIELD	—
14	B	—
15	R	—
16	W	—

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Terminal No.	Color of Wire	Signal Name
31	R	-
32	SHIELD	-
33	W	-
34	B	-
35	L	-
36	G	-
37	R	-
38	SHIELD	-
39	W	-
40	B	-

Terminal No.	Color of Wire	Signal Name
12	SHIELD	-
13	W	-
14	B	-
15	V	-
16	G	-
17	R	-
18	SHIELD	-
19	W	-
20	B	-
21	B	-
22	W	-
23	SHIELD	-
24	P	-
25	Y	-
29	L	-
30	G	-

Connector No.	M63
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	R	-
2	W	-
3	B	-
4	SHIELD	-
9	SB	-
10	G	-
11	R	-

Terminal No.	Color of Wire	Signal Name
6	B	-(WITH REAR ENTER-TAINMENT SYSTEM)
7	SB	-(WITH REAR ENTER-TAINMENT SYSTEM)
8	G	-(WITH REAR ENTER-TAINMENT SYSTEM)
9	R	-(WITH REAR ENTER-TAINMENT SYSTEM)
10	SHIELD	-
11	W	-(WITH REAR ENTER-TAINMENT SYSTEM)
12	B	-(WITH REAR ENTER-TAINMENT SYSTEM)
13	Y	-
14	SB	-
15	LG	-

Connector No.	M66
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
1	L	-
2	G	-
3	R	-(WITH REAR ENTER-TAINMENT SYSTEM)
4	SHIELD	-(WITH REAR ENTER-TAINMENT SYSTEM)
5	W	-(WITH REAR ENTER-TAINMENT SYSTEM)

Connector No.	M65
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	B	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	M67
Connector Name	JOINT CONNECTOR-M04
Connector Color	WHITE



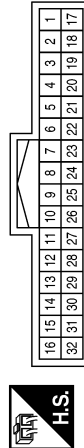
Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
2R	LG	-
5R	Y	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	-(WITH REAR ENTERTAINMENT SYSTEM)
2	W	-(WITH REAR ENTERTAINMENT SYSTEM)
3	B	-(WITH REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
4	SHIELD	-
5	B	-
6	W	-
7	SHIELD	-
8	B	-
17	Y	-(WITH REAR ENTERTAINMENT SYSTEM)
18	P	-(WITH REAR ENTERTAINMENT SYSTEM)
19	B	-(WITH REAR ENTERTAINMENT SYSTEM)
20	W	-(WITH REAR ENTERTAINMENT SYSTEM)
21	SHIELD	-(WITH REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
22	W	-(WITH REAR ENTERTAINMENT SYSTEM)
23	R	-(WITH REAR ENTERTAINMENT SYSTEM)
24	SHIELD	-
25	B	-
26	G	-
27	R	-(WITHOUT AROUND VIEW MONITOR)
27	W	-(WITH AROUND VIEW MONITOR)
28	W	-(WITHOUT AROUND VIEW MONITOR)
28	B	-(WITH AROUND VIEW MONITOR)
29	B	-(WITHOUT AROUND VIEW MONITOR)
29	R	-(WITH AROUND VIEW MONITOR)
30	SHIELD	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



118	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
109	R	REVERSE SIGNAL
113	L	ACC RELAY OUT

Connector No.	M73
Connector Name	INSTRUMENT PANEL TWEETER RH
Connector Color	BROWN



2	1

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

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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

Terminal No.	Color of Wire	Signal Name
7	W	– (WITH REAR ENTERTAINMENT SYSTEM)
7	R	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	R	– (WITH REAR ENTERTAINMENT SYSTEM)
8	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	–
10	G	–
11	L	–
17	L	–
18	P	–
31	Y	–
32	L	–

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	Y	– (WITH REAR ENTERTAINMENT SYSTEM)
5	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

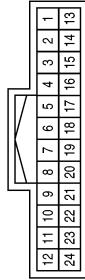
Connector No.	M95
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

Terminal No.	Color of Wire	Signal Name
9	B	FRONT DISP IT
10	W	IT FRONT DISP
11	Y	BATT
12	B	GND
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	B	FRONT COMP +
19	W	FRONT COMP -
20	R	FRONT COMP SYNC
21	-	-
22	SHIELD	DISP SHIELD
23	P	ACC
24	-	-

Connector No.	M92
Connector Name	DISPLAY UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	SHIELD	FRONT COMP SHIELD
7	SHIELD	SHIELD
8	B	R CAMERA COMP

Terminal No.	Color of Wire	Signal Name
24	B	COMP OUT+
25	B	RR CAM GND
26	W	RR CAM VCC
27	SHIELD	RR CAM COMP-
28	R	RR CAM COMP+
29	B	SIDE DR CAM GND
30	W	SIDE DR CAM VCC
31	SHIELD	SIDE DR CAM COMP-
32	R	SIDE DR CAM COMP+
33	B	SIDE AS CAM GND
34	W	SIDE AS CAM VCC
35	SHIELD	SIDE AS CAM COMP-
36	R	SIDE AS CAM COMP+
37	B	FR CAM GND
38	R	FR CAM VCC
39	SHIELD	FR CAM COMP-
40	W	FR CAM COMP+

Terminal No.	Color of Wire	Signal Name
8	LG	REV
9	-	-
10	P	CAN-L
11	-	-
12	L	CAN-H
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	SHIELD	VIDEO-
20	B	VIDEO+
21	-	-
22	-	-
23	SHIELD	COMP OUT-

Connector No.	M96
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	Y	+B
3	G	SERIAL GND
4	LG	IGN
5	P	RX TST
6	-	-
7	BG	TX TST

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	M110
Connector Name	CENTER SPEAKER
Connector Color	BROWN



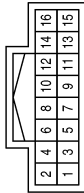
Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-

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



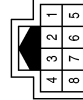
Terminal No.	Color of Wire	Signal Name
1	P	-
2	W	-

Connector No.	M98
Connector Name	A/C AND AV SWITCH ASSEMBLY
Connector Color	WHITE



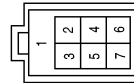
Terminal No.	Color of Wire	Signal Name
1	B	-
3	P	-
4	R	-
5	B	-
6	SB	-
8	LG	-
9	V	-
14	Y	-

Connector No.	M116
Connector Name	CALIBRATION CONTROL
Connector Color	WHITE



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

Connector No.	M115
Connector Name	WIRE TO WIRE
Connector Color	GRAY



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

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



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

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

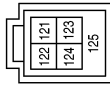
[PREMIUM AUDIO]

Connector No.	M141
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
126	B	ANT +B
127	B	ANT MAIN
128	B	ANT SUB

Connector No.	M126
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
121	W	VBUS
122	G	USB GND
123	L	USB D+
124	R	USB D-
125	SHIELD	SHIELD

Connector No.	M120
Connector Name	JOINT CONNECTOR-M21
Connector Color	WHITE



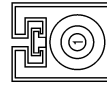
Terminal No.	Color of Wire	Signal Name
1	LG	-
3	LG	-

Connector No.	M156
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
129	B	SAT ANT

Connector No.	M151
Connector Name	WIRE TO WIRE
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M149
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14	B	-
15	GR	-
17	BR	-

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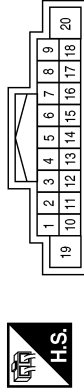
PREMIUM AUDIO SYSTEM

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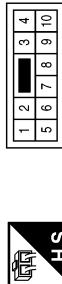
Terminal No.	Color of Wire	Signal Name
7	P	ACC
8	-	-
9	-	-
10	BR	SHIELD
11	W	FR RH PRE +
12	B	FR RH PRE -
13	B	RR RH PRE +
14	W	RR RH PRE -
15	B	STRG SW GND
16	W	STRG SW B
17	-	-
18	-	-
19	Y	(+) B
20	B	GND

Connector No.	M161
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	SB	AMP ON
2	B	FR LH PRE +
3	W	FR LH PRE -
4	B	RR LH PRE +
5	W	RR LH PRE -
6	G	STRG SW A

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE

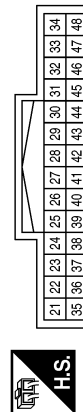


Terminal No.	Color of Wire	Signal Name
9	G	-(WITH BOSE AUDIO SYSTEM)
10	W	-(WITH BOSE AUDIO SYSTEM)

Terminal No.	Color of Wire	Signal Name
37	SHIELD	AUX SHIELD
38	W	AUX AUDIO RH
39	B	AUX AUDIO
40	R	HP 1 LH-
41	G	HP 1 RH-
42	SHIELD	HP 1 SHIELD
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-

Terminal No.	Color of Wire	Signal Name
25	-	-
26	W	HP 1 LH+
27	B	HP 1 RH+
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-

Connector No.	M162
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	-	-
22	-	-
23	-	-
24	R	AUX AUDIO LH

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PREMIUM AUDIO SYSTEM

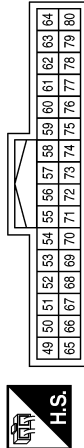
< WIRING DIAGRAM >

[PREMIUM AUDIO]

Terminal No.	Color of Wire	Signal Name
68	LG	IGN
69	R	REVERSE SIG
70	GR	SPEED 8P
71	SHIELD	NAVI COMP 1 SHIELD
72	R	NAVI COMP 1 SYNC
73	-	-
74	-	-
75	B	MIC SIG
76	SHIELD	DISP SHIELD
77	B	DISP IT
78	L	CAN-H
79	SB	M CAN-H
80	SB	M CAN-H TRM

Terminal No.	Color of Wire	Signal Name
54	-	-
55	W	NAVI COMP 1-
56	B	NAVI COMP 1+
57	BG	I-KEY MEMORY
58	-	-
59	SHIELD	MIC GND
60	W	MIC VCC
61	W	IT DISP
62	P	CAN-L
63	LG	M CAN-L
64	LG	M CAN-L TRM
65	-	-
66	-	-
67	P	MR OUTPUT

Connector No.	M163
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

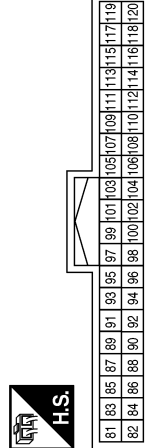


Terminal No.	Color of Wire	Signal Name
49	-	-
50	-	-
51	-	-
52	-	-
53	G	PKB SIG

Terminal No.	Color of Wire	Signal Name
104	-	-
105	W	NAVI COMP 2-
106	SHIELD	NAVI COMP 2 SHIELD
107	B	NAVI COMP 2+
108	-	-
109	-	-
110	-	-
111	-	-
112	-	-
113	-	-
114	-	-
115	-	-
116	-	-
117	-	-
118	-	-
119	-	-
120	-	-

Terminal No.	Color of Wire	Signal Name
87	-	-
88	-	-
89	-	-
90	-	-
91	W	AUX VIDEO+
92	B	AUX VIDEO-
93	-	-
94	SHIELD	VIDEO SHIELD
95	-	-
96	-	-
97	Y	DVD EJECT
98	V	EJECT GND
99	-	-
100	-	-
101	-	-
102	-	-
103	-	-

Connector No.	M164
Connector Name	AV CONTROL UNIT (WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
81	-	-
82	-	-
83	R	CAM V+
84	W	CAM GND
85	-	-
86	-	-

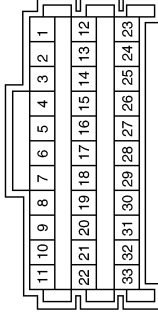
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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

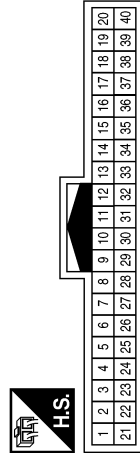
[PREMIUM AUDIO]

Connector No.	M170
Connector Name	JOINT CONNECTOR-M09
Connector Color	WHITE



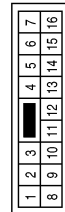
Terminal No.	Color of Wire	Signal Name
6	BR	-
7	SHIELD	-
8	SHIELD	-
9	SHIELD	-
10	SHIELD	-

Connector No.	M168
Connector Name	WIRE TO WIRE
Connector Color	WHITE



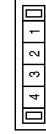
Terminal No.	Color of Wire	Signal Name
29	SHIELD	-
30	R	-
31	B	-
32	W	-

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
12	P	-(WITH BOSE AUDIO SYSTEM)
13	W	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M173
Connector Name	JOINT CONNECTOR-M12
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G	-(WITH BOSE AUDIO SYSTEM)
3	G	-(WITH BOSE AUDIO SYSTEM)
4	G	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M172
Connector Name	JOINT CONNECTOR-M11
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	W	-(WITH BOSE AUDIO SYSTEM)
3	W	-(WITH BOSE AUDIO SYSTEM)
4	W	-(WITH BOSE AUDIO SYSTEM)

Connector No.	M171
Connector Name	JOINT CONNECTOR-M10
Connector Color	WHITE



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

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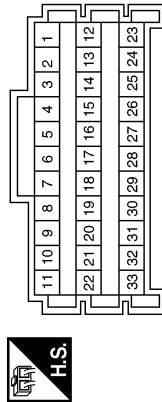
PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Terminal No.	Color of Wire	Signal Name
4	Y	–
6	Y	–
7	Y	–
8	Y	–
9	Y	–
29	P	–
30	P	–
31	P	–
32	P	–

Connector No.	M175
Connector Name	JOINT CONNECTOR-M22
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	–
2	Y	–
3	Y	–

Connector No.	M174
Connector Name	JOINT CONNECTOR-M13
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	W	– (WITH BOSE AUDIO SYSTEM)
3	W	– (WITH BOSE AUDIO SYSTEM)
4	W	– (WITH BOSE AUDIO SYSTEM)

Connector No.	M178
Connector Name	JOINT CONNECTOR-M58
Connector Color	WHITE



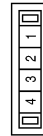
Terminal No.	Color of Wire	Signal Name
1	SB	–
3	SB	–

Connector No.	M177
Connector Name	JOINT CONNECTOR-M57
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	–
2	LG	–
3	LG	–
4	LG	–

Connector No.	M176
Connector Name	JOINT CONNECTOR-M56
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	SB	–
2	SB	–
3	SB	–
4	SB	–

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
2	Y	-
3	V	-

Connector No.	M179
Connector Name	JOINT CONNECTOR-M59
Connector Color	WHITE

4	3	2	1



Terminal No.	Color of Wire	Signal Name
1	LG	-
3	LG	-

Connector No.	M205
Connector Name	FRONT AUXILIARY INPUT JACKS
Connector Color	WHITE



1	2	3	4	5	6	7	8

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

Terminal No.	Color of Wire	Signal Name
18	SHIELD	-
19	W	-
20	B	-
24	B	-
25	SHIELD	-
26	B	-
27	R	-
28	W	-
29	L	-
30	G	-
31	R	-
32	SHIELD	-
33	W	-
34	B	-
35	L	-
36	G	-
37	R	-
38	SHIELD	-
39	W	-
40	B	-

Connector No.	M202
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

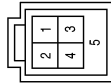
Terminal No.	Color of Wire	Signal Name
6	SHIELD	-
7	B	-
8	W	-
9	SB	-
10	G	-
11	R	-
12	SHIELD	-
13	W	-
14	B	-
15	V	-
16	G	-
17	R	-

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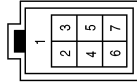
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Connector No.	M209
Connector Name	USB INTERFACE
Connector Color	GREEN



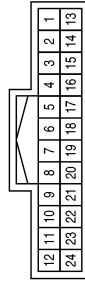
Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-
3	R	-
4	L	-
5	SHIELD	-

Connector No.	M210
Connector Name	WIRE TO WIRE
Connector Color	GRAY



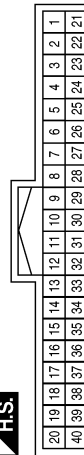
Terminal No.	Color of Wire	Signal Name
1	SHIELD	-
2	G	-
3	W	-
4	R	-
5	L	-

Connector No.	M214
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	G	-
3	SHIELD	-
4	B	-
5	W	-
13	SHIELD	-
14	B	-
15	R	-
16	W	-

Connector No.	M215
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	R	-
3	B	-
4	SHIELD	-
9	SB	-
10	G	-

Terminal No.	Color of Wire	Signal Name
11	R	-
12	SHIELD	-
13	W	-
14	B	-
15	V	-
16	G	-
17	R	-
18	SHIELD	-
19	W	-
20	B	-
21	W	-
22	B	-
23	SHIELD	-
24	V	-

Terminal No.	Color of Wire	Signal Name
25	Y	-
29	L	-
30	G	-
31	R	-
32	SHIELD	-
33	W	-
34	B	-
35	L	-
36	G	-
37	R	-
38	SHIELD	-
39	W	-
40	B	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	M251
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
2	Y	-
3	V	-

Connector No.	M230
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY

6	5	4	3	2	1



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

Connector No.	M217
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
10	B	-

Terminal No.	Color of Wire	Signal Name
24	W	-
25	G	-
26	B	-
27	R	-
28	L	-
29	P	-
30	W	-
31	G	-
32	B	-
33	R	-
35	SHIELD	-
38	V	-
39	B	-
40	Y	-

Terminal No.	Color of Wire	Signal Name
9	SHIELD	-
11	R	-
13	G	-
14	B	-
15	V	-
16	W	-
17	R	-
18	BG	-
19	G	-
20	B	-
21	SHIELD	-
22	W	-
23	SHIELD	-

Connector No.	M254
Connector Name	REAR AUXILIARY INPUT JACKS
Connector Color	WHITE

2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39



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

ABNIA7099GB

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Terminal No.	Color of Wire	Signal Name
37	R	—
38	SHIELD	—
39	W	—
40	B	—

Terminal No.	Color of Wire	Signal Name
16	G	—
17	R	—
18	SHIELD	—
19	W	—
20	B	—
24	B	—
25	SHIELD	—
26	R	—
27	B	—
28	W	—
29	L	—
30	G	—
31	R	—
32	SHIELD	—
33	W	—
34	B	—
35	P	—
36	G	—

Connector No.	M257
Connector Name	WIRE TO WIRE
Connector Color	WHITE



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
6	SHIELD	—
7	B	—
8	W	—
9	BG	—
10	G	—
11	R	—
12	SHIELD	—
13	W	—
14	B	—
15	V	—

Connector No.	M502
Connector Name	ANTENNA BASE
Connector Color	GRAY



Connector No.	M501
Connector Name	ANTENNA BASE
Connector Color	GREEN



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

Terminal No.	Color of Wire	Signal Name
1	B	—

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



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

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	M505
Connector Name	GLASS ANTENNA (FM SUB)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M504
Connector Name	WIRE TO WIRE
Connector Color	GRAY



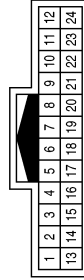
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	M503
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE



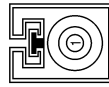
Terminal No.	Color of Wire	Signal Name
13	R	-
14	B	-
15	W	-
16	SHIELD	-

Connector No.	E22
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	B	-
3	R	-
5	P	-

Connector No.	M509
Connector Name	WIRE TO WIRE
Connector Color	GREEN



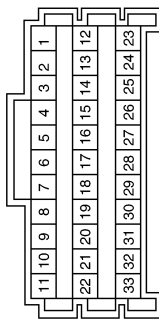
Terminal No.	Color of Wire	Signal Name
1	B	-

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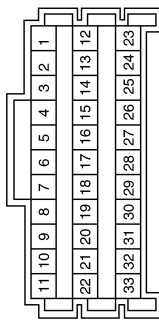
AV

Connector No.	E52
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



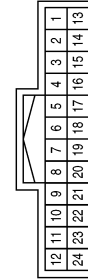
Terminal No.	Color of Wire	Signal Name
1	LG	-

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	GR	-
17	B	-

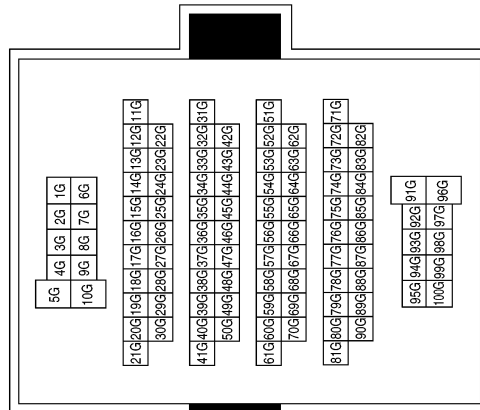
Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13	R	-
14	B	-
15	W	-
16	SHIELD	-

Terminal No.	Color of Wire	Signal Name
3G	P	-
26G	SHIELD	-
28G	R	-
29G	B	-
30G	W	-
33G	LG	-
50G	G	-

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



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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

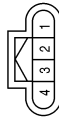
[PREMIUM AUDIO]

Connector No.	B1
Connector Name	REAR SIDE SPEAKER LH
Connector Color	BROWN



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

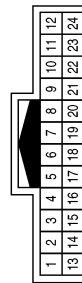
Connector No.	E226
Connector Name	FRONT CAMERA
Connector Color	BLACK



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

Terminal No.	Color of Wire	Signal Name
4	SHIELD	-(WITH REAR ENTERTAINMENT SYSTEM)
5	W	-(WITH REAR ENTERTAINMENT SYSTEM)
6	B	-(WITH REAR ENTERTAINMENT SYSTEM)
7	V	-(WITH REAR ENTERTAINMENT SYSTEM)

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



Terminal No.	Color of Wire	Signal Name
1	P	-
2	G	-
3	R	-(WITH REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
8	G	-(WITH REAR ENTERTAINMENT SYSTEM)
9	B	-(WITH REAR ENTERTAINMENT SYSTEM)
10	SHIELD	-
11	R	-(WITH REAR ENTERTAINMENT SYSTEM)
12	W	-
13	SB	-
14	SB	-
15	LG	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Terminal No.	Color of Wire	Signal Name
16	LG	
18	L	-
19	SB	-
21	P	-
22	SHIELD	-
23	G	-
24	W	-

Terminal No.	Color of Wire	Signal Name
8	P	-
9	L	-
10	SHIELD	-
11	R	-
12	B	-
13	B	-
15	SB	-

Connector No.	B23
Connector Name	WIRE TO WIRE
Connector Color	WHITE

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
1	SB	-
3	SB	-
4	LG	-
6	BR	-

Connector No.	B24
Connector Name	VIDEO DISTRIBUTOR
Connector Color	WHITE

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

Terminal No.	Color of Wire	Signal Name
14	R	-
15	G	-
16	B	-
17	W	-
18	V	-
19	V	-
20	B	-
21	G	-
22	W	-
23	R	-
27	W	-
28	B	-
29	SHIELD	-
30	SHIELD	-
31	P	-
32	L	-

Terminal No.	Color of Wire	Signal Name
1	B	-
2	V	-
3	B	-
4	W	-
5	BR	-
6	L	-
7	SB	-
8	BR	-
9	SB	-
10	L	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No. B25	Connector Name VIDEO DISTRIBUTOR	Connector Color WHITE
34 36 38 40 42 44 46 48 50 52 54 56	33 35 37 39 41 43 45 47 49 51 53 55	
H.S.		
Terminal No.	Color of Wire	Signal Name
33	W	-
34	B	-
35	SHIELD	-
39	W	-
40	B	-

Connector No. B32	Connector Name WIRE TO WIRE	Connector Color WHITE
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	
H.S.		
Terminal No.	Color of Wire	Signal Name
5	G	-
6	R	-
7	B	-
8	R	-
9	W	-
10	SHIELD	-
11	B	-
12	L	-
13	B	-
14	R	-
15	W	-
16	SHIELD	-

Terminal No.	Color of Wire	Signal Name
41	SHIELD	-
45	W	-
46	R	-
47	B	-
48	G	-
49	SHIELD	-
53	SHIELD	-
54	B	-
55	R	-
56	W	-

Connector No. B41	Connector Name WIRE TO WIRE	Connector Color WHITE
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	
H.S.		
Terminal No.	Color of Wire	Signal Name
1	R	-(WITH REAR ENTERTAINMENT SYSTEM)
2	W	-(WITH REAR ENTERTAINMENT SYSTEM)
3	B	-
4	SHIELD	-
5	B	-

Terminal No.	Color of Wire	Signal Name
6	W	-
7	SHIELD	-
8	B	-
17	V	-(WITH REAR ENTERTAINMENT SYSTEM)
18	W	-(WITH REAR ENTERTAINMENT SYSTEM)
19	B	-(WITH REAR ENTERTAINMENT SYSTEM)
20	W	-(WITH REAR ENTERTAINMENT SYSTEM)
21	SHIELD	-(WITH REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
22	W	-(WITH REAR ENTERTAINMENT SYSTEM)
23	R	-(WITH REAR ENTERTAINMENT SYSTEM)
24	SHIELD	-
25	B	-
26	G	-
27	W	-(WITH AROUND VIEW MONITOR)
27	R	-(WITHOUT AROUND VIEW MONITOR)
28	B	-
29	R	-(WITH AROUND VIEW MONITOR)
29	W	-(WITHOUT AROUND VIEW MONITOR)
30	SHIELD	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	B51
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
11	R	—
12	P	—

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
9	G	—
10	W	—
11	P	—
12	R	—
13	G	—
14	B	—
15	W	—
16	W	—

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
13	W	— (WITH AROUND VIEW MONITOR)
13	R	— (WITHOUT AROUND VIEW MONITOR)
14	B	—
15	R	— (WITH AROUND VIEW MONITOR)
15	W	— (WITHOUT AROUND VIEW MONITOR)
16	SHIELD	—

Connector No.	B73
Connector Name	SUBWOOFER
Connector Color	GRAY



2	4	3	1

Terminal No.	Color of Wire	Signal Name
1	B	—
2	W	—
3	G	—
4	W	—

Terminal No.	Color of Wire	Signal Name
9	L	—
10	B	—
11	R	—
12	B	—
13	SHIELD	—
14	W	—

Connector No.	B57
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	B75
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	LG	—
2	SB	—
3	L	—
4	SB	—

Terminal No.	Color of Wire	Signal Name
5	BR	—
6	SHIELD	—
7	W	—
8	B	—
9	V	—
10	W	—
11	B	—
12	G	—
13	R	—
14	SHIELD	—

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	Y	— (WITH REAR ENTERTAINMENT SYSTEM)
5	V	— (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	— (WITH REAR ENTERTAINMENT SYSTEM)
6	W	— (WITHOUT REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
7	W	— (WITH REAR ENTERTAINMENT SYSTEM)
7	R	— (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	R	— (WITH REAR ENTERTAINMENT SYSTEM)
8	B	— (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	—
10	G	—
11	SB	—
17	L	—
18	P	—
31	Y	—
32	BG	—

Connector No.	B102
Connector Name	JOINT CONNECTOR-B14
Connector Color	WHITE



4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	—
3	B	—

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

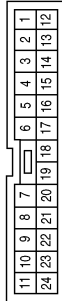
[PREMIUM AUDIO]

Connector No.	B103
Connector Name	JOINT CONNECTOR-B05
Connector Color	WHITE



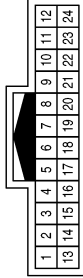
Terminal No.	Color of Wire	Signal Name
1	P	-
3	W	-

Connector No.	B104
Connector Name	ADAS CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	CAN-H
2	W	CAN-L
8	Y	ITS CAN-L
9	BG	ITS CAN-H

Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	B	-
7	V	-
8	G	-
9	R	-
10	SHIELD	-
11	B	-
12	W	-
19	V	-
20	Y	-
21	SHIELD	-
22	B	-
23	R	-
24	W	-

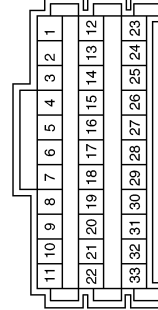
Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
3	R	-
4	LG	-
5	Y	-
6	P	-

Terminal No.	Color of Wire	Signal Name
7	R	-
8	G	-
9	W	-
10	G	-
13	W	-
14	P	-
15	G	-
16	R	-

Connector No.	B115
Connector Name	JOINT CONNECTOR-B08
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	GR	-
11	SHIELD	-

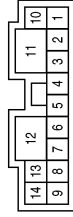
ABNIA7108GB

PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

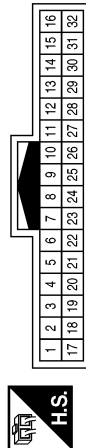
Connector No.	B129
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-
3	W	-
4	G	-
5	W	-
6	G	-
7	B	-
8	B	-
9	W	-
10	LG	-
11	Y	-
12	B	-
13	W	-
14	G	-

Terminal No.	Color of Wire	Signal Name
10	SHIELD	-
11	B	-
12	L	-
13	B	-
14	R	-
15	W	-
16	SHIELD	-

Connector No.	B124
Connector Name	WIRE TO WIRE
Connector Color	WHITE

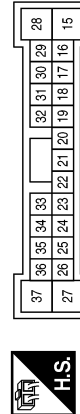


Terminal No.	Color of Wire	Signal Name
5	G	-
6	R	-
7	B	-
8	R	-
9	W	-

Terminal No.	Color of Wire	Signal Name
29	R	-
30	G	-
31	W	-
32	P	-
33	B	-
34	W	-
35	B	-
36	W	-

Terminal No.	Color of Wire	Signal Name
18	R	-
19	G	-
20	R	-
21	W	-
23	W	-
24	B	-
25	W	-
26	B	-
28	P	-

Connector No.	B130
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
16	R	-
17	P	-

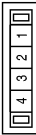
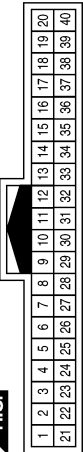
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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	B131	Connector No.	B135	Connector No.	B136
Connector Name	JOINT CONNECTOR-B25	Connector Name	JOINT CONNECTOR-B17	Connector Name	WIRE TO WIRE
Connector Color	WHITE	Connector Color	WHITE	Connector Color	WHITE

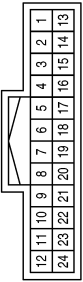
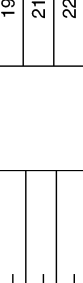
Terminal No.	Color of Wire	Signal Name
2	W	—
3	W	—
4	W	—

Terminal No.	Color of Wire	Signal Name
2	G	—
3	G	—
4	G	—

Terminal No.	Color of Wire	Signal Name
9	B	—
10	W	—
11	SHIELD	—
12	B	—
13	W	—
14	SHIELD	—
15	B	—
16	W	—
17	SHIELD	—
18	W	—
19	LG	—
20	SB	—
21	B	—
22	W	—
23	SHIELD	—

Terminal No.	Color of Wire	Signal Name
4	LG	—
6	SB	—
8	SB	—
9	O	—
10	SHIELD	—
11	R	—
12	B	—
13	B	—
15	SB	—

Connector No.	B137	Connector No.	B137	Connector No.	B137
Connector Name	WIRE TO WIRE	Connector Name	WIRE TO WIRE	Connector Name	WIRE TO WIRE
Connector Color	WHITE	Connector Color	WHITE	Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	Y	—
3	SB	—

Terminal No.	Color of Wire	Signal Name
16	LG	—
18	L	—
19	BR	—
21	Y	—
22	SHIELD	—
23	G	—
24	W	—

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
11	W	-(WITH BOSE AUDIO SYSTEM)
12	G	-(WITH BOSE AUDIO SYSTEM)

Terminal No.	Color of Wire	Signal Name
9	R	-
10	B	-
11	V	-
12	Y	-
13	SHIELD	-
14	W	-
15	R	-
16	B	-
17	R	-
18	G	-
19	B	-
22	W	-
23	R	-
24	B	-

Connector No.	B138
Connector Name	WIRE TO WIRE
Connector Color	WHITE

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24



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

Terminal No.	Color of Wire	Signal Name
8	O	-
9	V	-
10	B	-
11	W	-
12	G	-
13	R	-
14	SHIELD	-

Connector No.	B145
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	SB	-
3	SB	-
4	L	-
5	BR	-
6	SHIELD	-
7	Y	-

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



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

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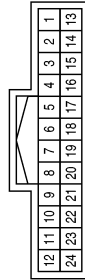
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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	B202
Connector Name	HEADREST DISPLAY UNIT (DRIVER SEAT) (PRE-WIRE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-

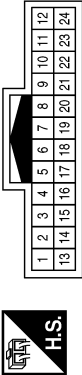
Connector No.	B153
Connector Name	REAR SIDE SPEAKER RH
Connector Color	BROWN



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

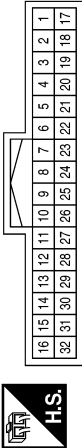
ABNIA7112GB

Connector No.	B222
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
3	P	-
4	LG	-
6	G	-
8	V	-
9	Y	-
10	P	-
11	G	-
12	W	-
13	G	-
14	SB	-
15	L	-
16	R	-
17	BG	-
18	W	-
19	Y	-
20	GR	-
21	G	-
22	LG	-
23	R	-
24	B	-

Connector No.	B219
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-
3	LG	-
5	Y	-
7	W	-
8	G	-
10	LG	-
11	P	-
12	G	-
13	BR	-
15	W	-
16	W	-
17	B	-
18	R	-
19	V	-
20	P	-
21	G	-
23	Y	-
24	SB	-
26	R	-
27	LG	-
29	GR	-
31	G	-
32	G	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Terminal No.	Color of Wire	Signal Name
20	P	REAR1 COMP SHIELD
21	G	REAR1 COMP-
22	-	-
23	Y	CONT GND
24	SB	CON CK B
25	-	-
26	R	M-CAN 2L
27	LG	M-CAN 2H
28	-	-
29	GR	CON CK A
30	-	-
31	G	GND
32	G	GND

Terminal No.	Color of Wire	Signal Name
7	W	AUX REQ OUT
8	G	ACC DET IN
9	-	-
10	LG	M-CAN 1L
11	P	M-CAN 1H
12	G	LOCATION DET LH (LH ONLY)
13	BR	ILL
14	-	-
15	W	BAT
16	W	BAT
17	B	REAR1 HP LH-
18	R	REAR1 HP RH-
19	V	AV GND

Connector No.	B223
Connector Name	HEADREST DISPLAY UNIT (DRIVER SEAT)
Connector Color	WHITE

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

Terminal No.	Color of Wire	Signal Name
1	W	REAR1 HP LH+
2	G	REAR1 HP RH+
3	LG	REAR1 HP SHIELD
4	-	-
5	Y	REAR1 COMP+
6	-	-

Terminal No.	Color of Wire	Signal Name
26	R	-
27	LG	-
29	GR	-
31	G	-
32	G	-

Terminal No.	Color of Wire	Signal Name
10	LG	-
11	P	-
12	G	-
13	BR	-
15	W	-
16	W	-
17	B	-
18	R	-
19	V	-
20	P	-
21	G	-
23	Y	-
24	SB	-

Connector No.	B225
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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

Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-
3	LG	-
5	Y	-
7	W	-
8	G	-

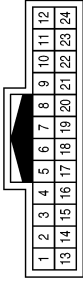
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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

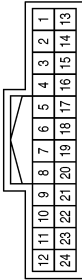
[PREMIUM AUDIO]

Connector No.	B316
Connector Name	WIRE TO WIRE
Connector Color	WHITE

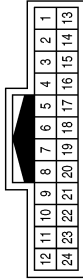
Terminal No.	Color of Wire	Signal Name
1	W	-
3	P	-
4	LG	-
6	G	-
8	V	-
9	Y	-
10	P	-
11	G	-
12	W	-
13	G	-
14	SB	-
15	L	-
16	R	-
17	BR	-
18	W	-
19	Y	-
20	GR	-
21	G	-
22	LG	-
23	R	-
24	B	-

Connector No.	B302
Connector Name	HEADREST DISPLAY UNIT (PASSENGER SEAT) (PRE-WIRE)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-

Connector No.	B301
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
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18	-	-
19	-	-
22	-	-
23	-	-
24	-	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Terminal No.	Color of Wire	Signal Name
20	P	REAR1 COMP SHIELD
21	G	REAR1 COMP-
22	-	-
23	Y	CONT GND
24	SB	CON CK B
25	-	-
26	R	M-CAN 2L
27	L	M-CAN 2H
28	G	LOCATION DET RH (RH ONLY)
29	GR	CON CK A
30	-	-
31	G	GND
32	G	GND

Terminal No.	Color of Wire	Signal Name
7	W	AUX REQ OUT
8	G	ACC DET IN
9	-	-
10	LG	M-CAN 1L
11	P	M-CAN 1H
12	-	-
13	BR	ILL
14	-	-
15	W	BAT
16	W	BAT
17	B	REAR1 HP LH-
18	R	REAR1 HP RH-
19	V	AV GND

Connector No.	B317
Connector Name	HEADREST DISPLAY UNIT (PASSENGER SEAT)
Connector Color	WHITE

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

Terminal No.	Color of Wire	Signal Name
1	W	REAR1 HP LH+
2	G	REAR1 HP RH+
3	LG	REAR1 HP SHIELD
4	-	-
5	Y	REAR1 COMP+
6	-	-

Terminal No.	Color of Wire	Signal Name
27	L	-
28	G	-
29	GR	-
31	G	-
32	G	-

Terminal No.	Color of Wire	Signal Name
10	LG	-
11	P	-
13	BR	-
15	W	-
16	W	-
17	B	-
18	R	-
19	V	-
20	P	-
21	G	-
23	Y	-
24	SB	-
26	R	-

Connector No.	B318
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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

Terminal No.	Color of Wire	Signal Name
1	W	-
2	G	-
3	LG	-
5	Y	-
7	W	-
8	G	-

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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Terminal No.	Color of Wire	Signal Name
27	LG	—
28	G	—
29	GR	—
31	G	—
32	G	—

Terminal No.	Color of Wire	Signal Name
10	LG	—
11	P	—
13	BR	—
15	W	—
16	W	—
17	B	—
18	R	—
19	V	—
20	P	—
21	G	—
23	Y	—
24	SB	—
26	R	—

Connector No.	B319
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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

Terminal No.	Color of Wire	Signal Name
1	W	—
2	G	—
3	LG	—
5	Y	—
7	W	—
8	G	—

Connector No.	R101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13



Terminal No.	Color of Wire	Signal Name
5	SHIELD	—
6	R	—
7	GR	—

Connector No.	R11
Connector Name	WIRE TO WIRE
Connector Color	WHITE

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24



Terminal No.	Color of Wire	Signal Name
5	SHIELD	—
6	B	—
7	W	—

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

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13



Terminal No.	Color of Wire	Signal Name
13	W	—
14	B	—
15	SHIELD	—

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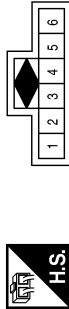
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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

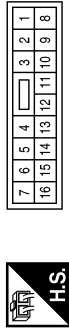
[PREMIUM AUDIO]

Connector No.	R109
Connector Name	MICROPHONE
Connector Color	WHITE



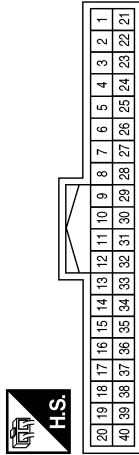
Terminal No.	Color of Wire	Signal Name
3	GR	-
5	SHIELD	-
6	R	-

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



Terminal No.	Color of Wire	Signal Name
12	G	-
13	W	-

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



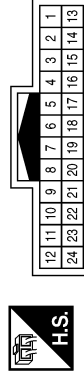
Terminal No.	Color of Wire	Signal Name
29	SHIELD	-
30	R	-
31	B	-
32	W	-

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



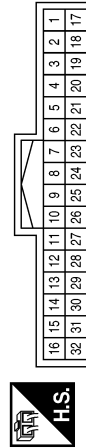
Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-

Connector No.	D28
Connector Name	DOOR MIRROR LH (WITH AROUND VIEW MONITOR SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R	-
6	W	-
17	SHIELD	-
18	B	-

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



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

PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

[PREMIUM AUDIO]

Connector No.	D128
Connector Name	DOOR MIRROR RH (WITH AROUND VIEW MONITOR SYSTEM)
Connector Color	WHITE



12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
5	R	-
6	W	-
17	SHIELD	-
18	B	-

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



2	1

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

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE



4	3	2	1
10	9	8	7
6	5		

Terminal No.	Color of Wire	Signal Name
9	G	-
10	W	-

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



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

Connector No.	D207
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



2	1

Terminal No.	Color of Wire	Signal Name
11	G	-
12	W	-

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



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

Terminal No.	Color of Wire	Signal Name
11	Y	-
12	LG	-

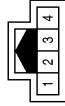
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PREMIUM AUDIO SYSTEM

< WIRING DIAGRAM >

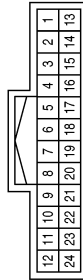
[PREMIUM AUDIO]

Connector No.	D504
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	– (WITH NAVI WITHOUT AROUND VIEW MONITOR)
1	W	– (WITHOUT NAVI OR WITH AROUND VIEW MONITOR)
2	B	–
3	W	– (WITH NAVI WITHOUT AROUND VIEW MONITOR)
3	R	– (WITHOUT NAVI OR WITH AROUND VIEW MONITOR)
4	SHIELD	–

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13	R	– (WITH NAVI WITHOUT AROUND VIEW MONITOR)
13	W	– (WITHOUT NAVI OR WITH AROUND VIEW MONITOR)
14	B	–
15	W	– (WITH NAVI WITHOUT AROUND VIEW MONITOR)
15	R	– (WITHOUT NAVI OR WITH AROUND VIEW MONITOR)
16	SHIELD	–

Connector No.	D307
Connector Name	REAR DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN



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

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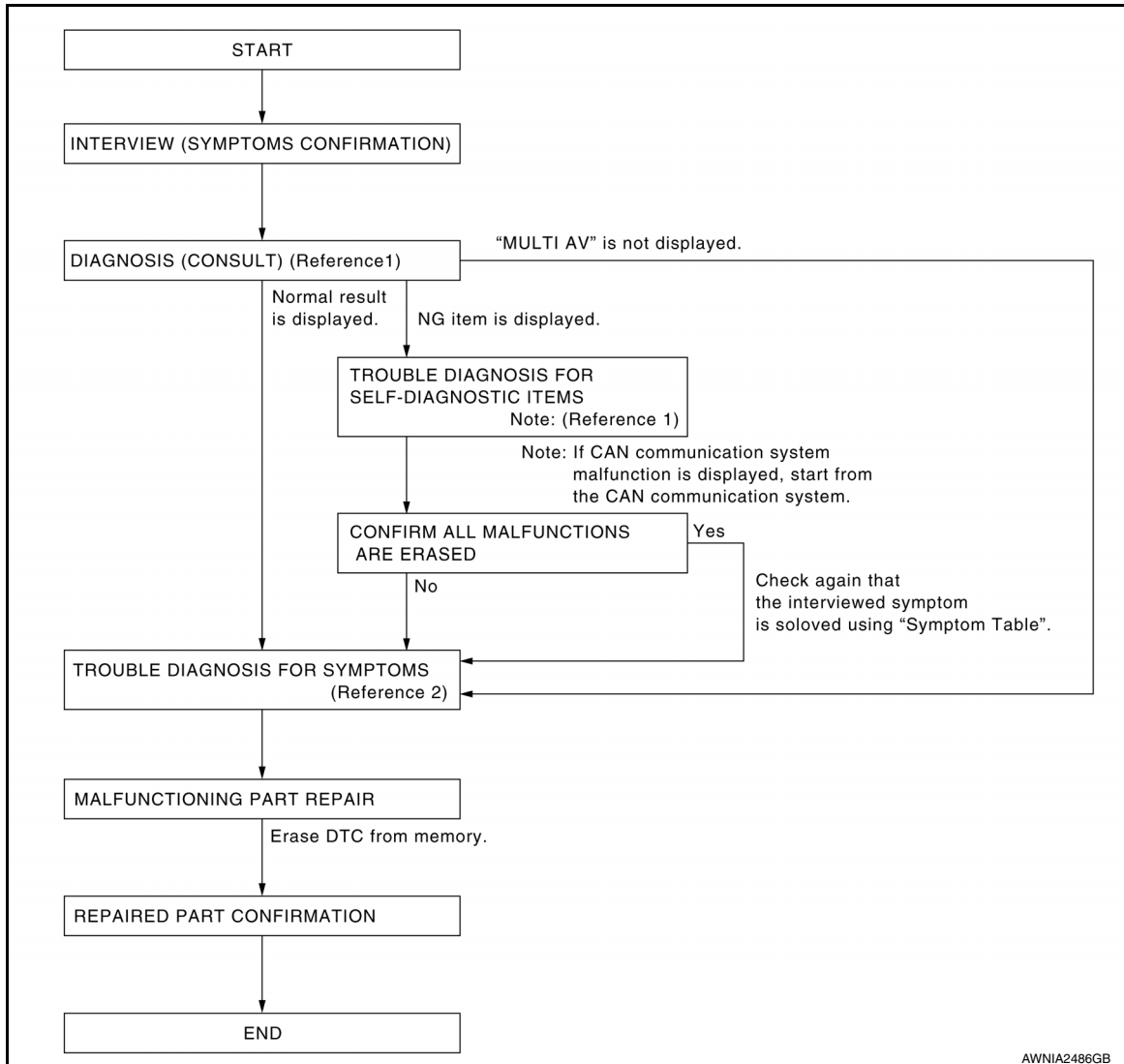
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000011150370

OVERALL SEQUENCE



Reference 1: Refer to [AV-226. "CONSULT Function"](#).

Reference 2: Refer to [AV-409. "Symptom Table"](#).

DETAILED FLOW

1. CHECK SYMPTOM

Check the malfunction symptoms by performing the following items.

- Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).
- Check the symptom.

>> GO TO 2

2. SELF-DIAGNOSIS (CONSULT)

1. Connect CONSULT and perform "SELF-DIAGNOSIS" for "MULTI AV".

NOTE:

Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.

2. Check if any DTC No. is displayed in the self-diagnosis results.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[PREMIUM AUDIO]

Is any DTC No. displayed?

YES >> GO TO 3

NO >> GO TO 4

3.CHECK SELF-DIAGNOSIS RESULTS (CONSULT)

1. Check the DTC No. indicated in the self-diagnosis results.

2. Perform the relevant diagnosis referring to the DTC No. list. Refer to [AV-236, "DTC Index"](#).

NOTE:

Start with the diagnosis for the CAN communication system if "CAN COMM CIRCUIT [U1000] or CONTROL UNIT (CAN) [U1010]" is displayed.

>> GO TO 5

4.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-409, "Symptom Table"](#).

>> GO TO 5

5.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

NOTE:

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC No. has been indicated in the self-diagnosis results.

>> GO TO 6

6.CHECK AFTER REPAIR

1. Perform self-diagnosis for "MULTI AV" with CONSULT after repairing or replacing the malfunctioning parts.

2. Check if any DTC No. is displayed in the self-diagnosis results.

Is any DTC No. displayed?

YES >> GO TO 3

NO >> GO TO 7

7.FINAL CHECK

Perform the operation check to confirm that the malfunction symptom is solved or that any other symptoms are present.

Are any symptoms present?

YES >> GO TO 4

NO >> Inspection End.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:0000000011150371

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:0000000011150372

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-425, "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

④ 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-304, "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-304, "CONFIGURATION \(AV CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 4.

4. OPERATION CHECK

Check that the operation of the AV control unit is normal.

>> Work End.

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:0000000011150373

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"	• Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:

- When replacing AV control unit, you must perform "Select Saved Data List" or "After Replace ECU" with CONSULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new AV control unit.

CONFIGURATION (AV CONTROL UNIT) : Work Procedure

INFOID:0000000011150374

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-305. "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:0000000011150375

CAUTION:

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

MANUAL SETTING ITEM	
Items	Setting value
ENGINE TYPE	NORMAL ⇄ HYBRID
SOUND SYSTEM	BOSE SURROUND ⇄ BOSE ⇄ BASE

⇄: Items which confirm vehicle specifications

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Description

INFOID:0000000011150376

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:0000000011150377

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.

>> GO TO 2.

2. REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to [AV-443. "Removal and Installation"](#).

>> 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

< BASIC INSPECTION >

specification. Refer to [AV-306. "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-306. "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Work Procedure"](#).

>> 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.

>> Work End.

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Description

INFOID:0000000011150378

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"	• Reads the vehicle configuration of current around view monitor control unit. • Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:

- When replacing 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:0000000011150379

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".

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[PREMIUM AUDIO]

- Identify the correct model and configuration list. Refer to [AV-307. "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:0000000011150380

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:0000000011150381

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:0000000011150382

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:0000000011150383

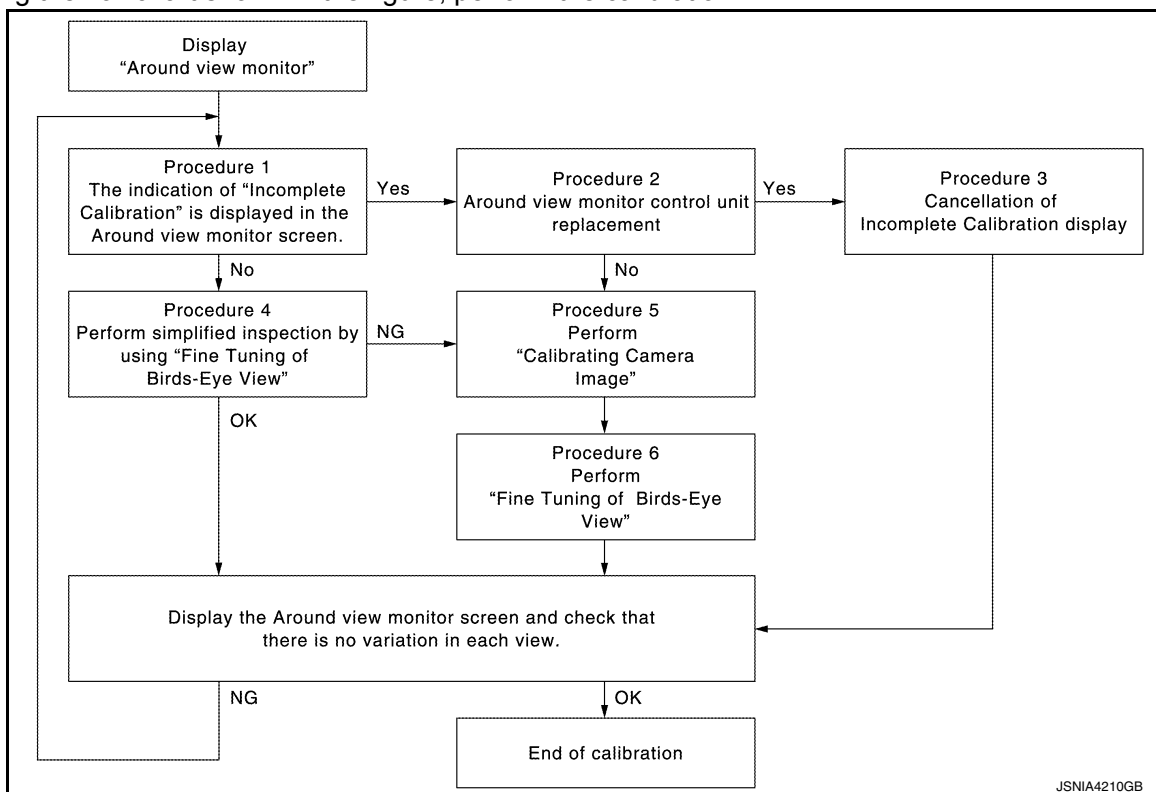
- Calibration must be performed after removing/replacing the cameras, removing parts (e.g. front grille, door mirror, and others) mounted on the cameras, or replacing the Around view monitor control unit.
- The use of CONSULT is required to perform calibration or writing of calibration results to the 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:0000000011150384

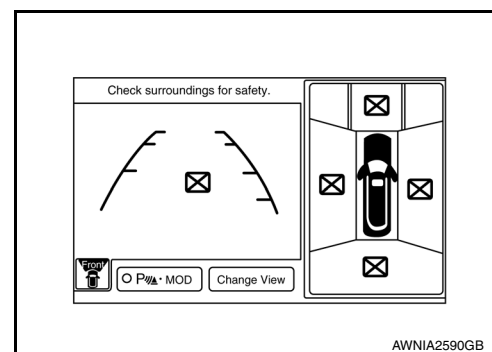
CALIBRATION FLOWCHART

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

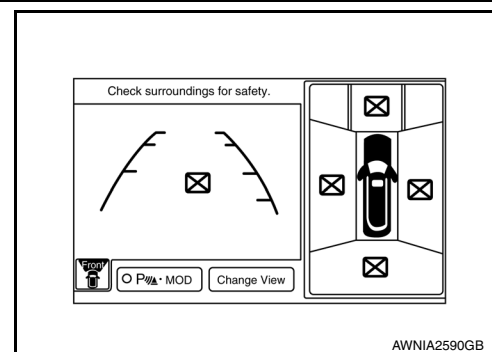
1. AROUND VIEW MONITOR SCREEN CONFIRMATION

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:

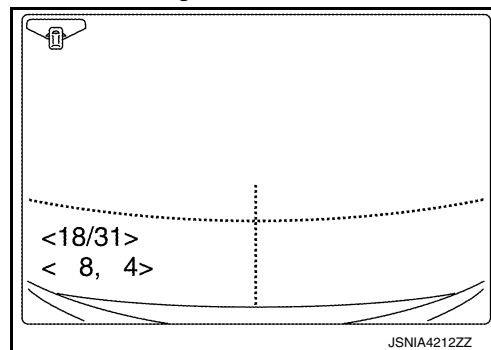
- Never perform operations other than those mentioned above.
- Never perform "Initialize Camera Image Calibration".

- 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

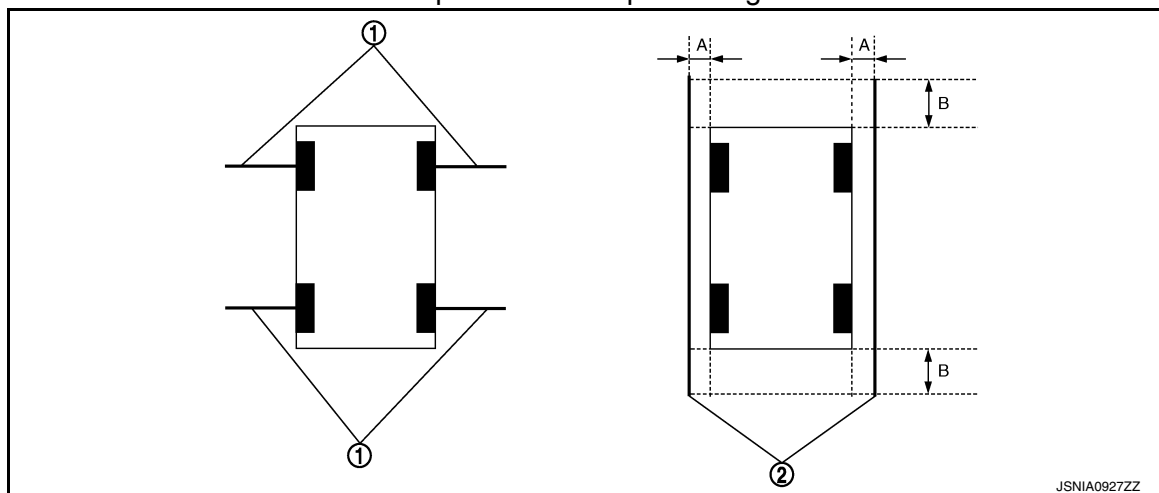
NO >> GO TO 1.



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)

-  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:

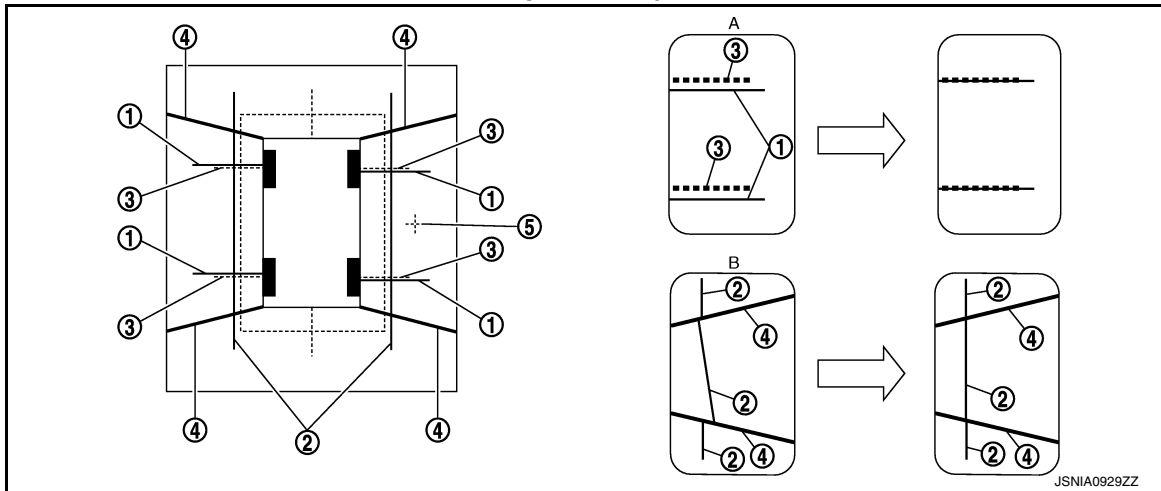
INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[PREMIUM AUDIO]

Never adjust the front camera and rear view 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.

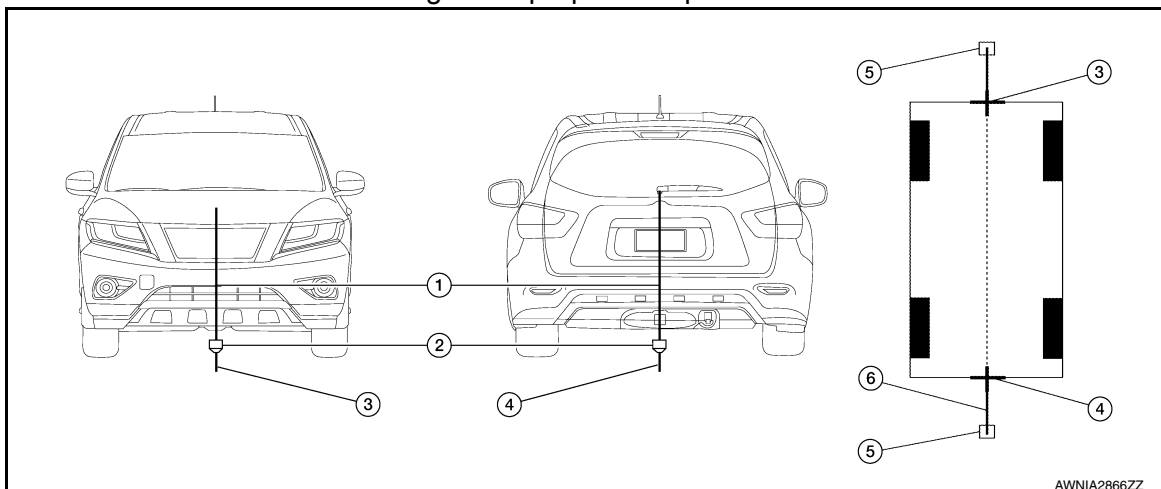
NO >> GO TO 5.

5.PERFORM "CALIBRATING CAMERA IMAGE"

Preparation of target line

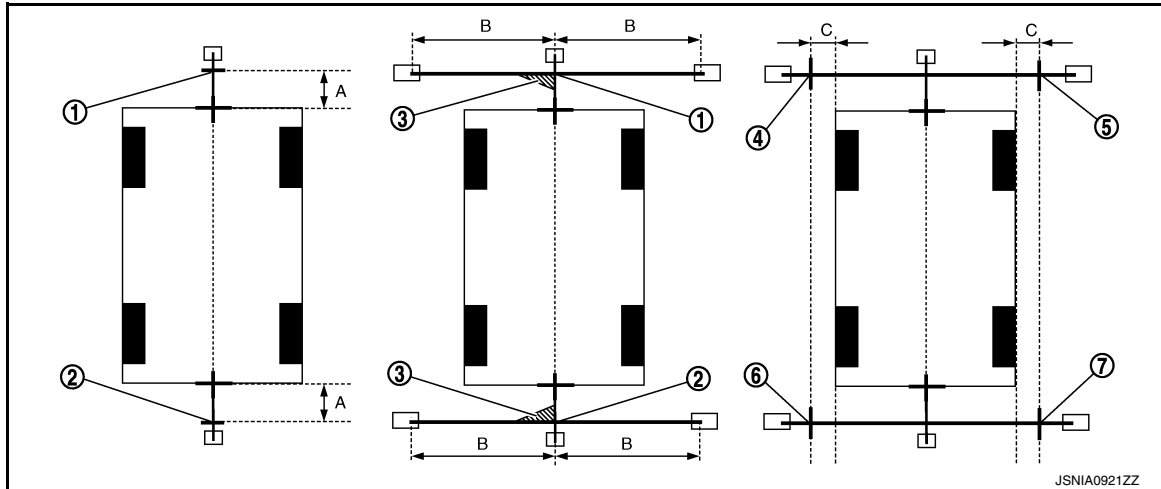
- Hang a string with a weight as shown in the figure. Put the points FM0, RM0 (mark) on the ground at the center of the vehicle front end and rear end with white packing tape or a pen.
- Route the vinyl string under the vehicle, and then pull and fix it on the point approximately 1.0 m (39.9 in) to the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

Target line preparation procedure 1



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.

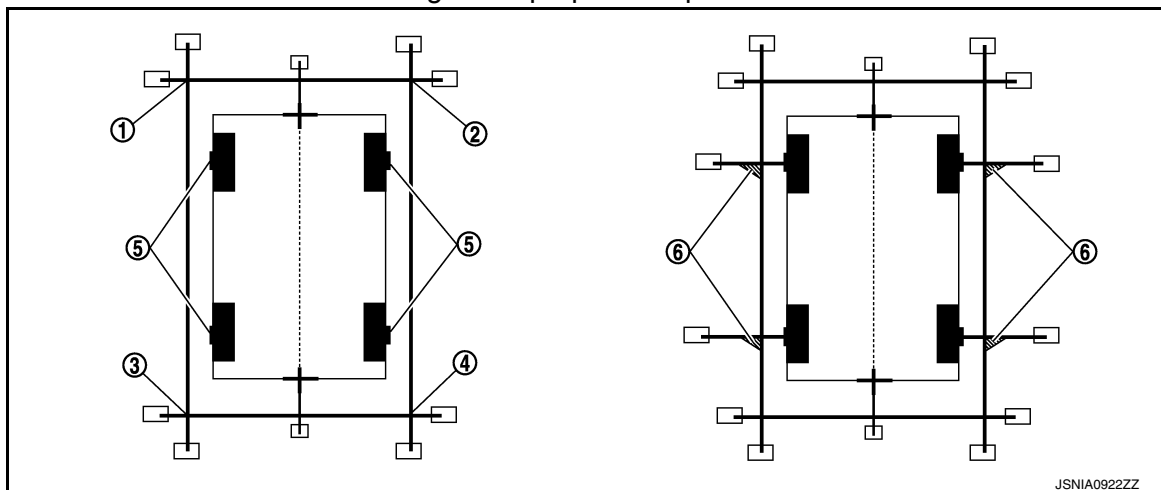
Target line preparation procedure 2



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 >

[PREMIUM AUDIO]

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.

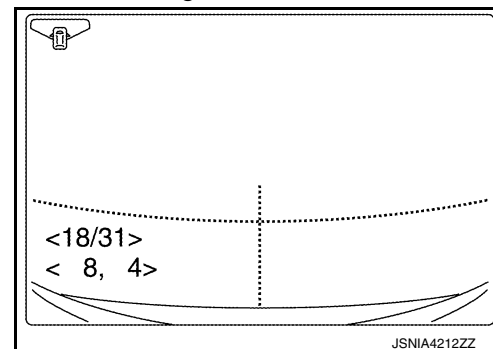
CAUTION:

Check that "PRCSNG" is displayed. Do 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. Do 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. Do never perform other operations while "PRCSNG" is displayed.

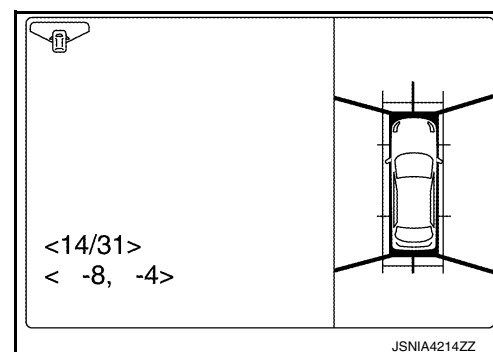
4. Touch "OK" button on the CONSULT screen. "PRCSNG" is displayed and adjustment results are written to the around view monitor control unit.

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

U1000 CAN COMM CIRCUIT

DTC Logic

INFOID:0000000011150385

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:0000000011150386

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-21, "Trouble Diagnosis Flow Chart"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

AV

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000011150387

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

U1200 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150388

CONSULT Display	DTC Detection Condition	Possible Cause
CONT UNIT [U1200]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

A
B
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D
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K
L
M
O
P

AV

U1201 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1201 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150389

CONSULT Display	DTC Detection Condition	Possible Cause
GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

U1202 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150390

CONSULT Display	DTC Detection Condition	Possible Cause
G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

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

AV

U1204 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150391

CONSULT Display	DTC Detection Condition	Possible Cause
GPS CONN [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011150392

1. PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1204 detected?

- YES >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).
- NO >> Refer to [GI-47, "Intermittent Incident"](#).

U1205 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150393

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ROM [U1205]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011150394

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1205 detected?

- YES >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

A
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P

AV

U1206 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150395

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RAM [U1206]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011150396

1. PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1206 detected?

- YES >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).
 NO >> Refer to [GI-47, "Intermittent Incident"](#).

U1207 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150397

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RTC [U1207]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011150398

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1207 detected?

- YES >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

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U1216 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1216 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150399

CONSULT Display	DTC Detection Condition	Possible Cause
CAN CONT [U1216]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

U1217 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150400

CONSULT Display	DTC Detection Condition	Possible Cause
BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

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U1218 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1218 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150401

CONSULT Display	DTC Detection Condition	Possible Cause
HDD CONN [U1218]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

U1219 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150402

CONSULT Display	DTC Detection Condition	Possible Cause
HDD READ [U1219]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-425 "Removal and Installation" .

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U121A AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U121A AV CONTROL UNIT

DTC Logic

INFOID:0000000011150403

CONSULT Display	DTC Detection Condition	Possible Cause
HDD WRITE [U121A]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

U121B AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U121B AV CONTROL UNIT

DTC Logic

INFOID:0000000011150404

CONSULT Display	DTC Detection Condition	Possible Cause
HDD COMM [U121B]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-425 "Removal and Installation" .

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U121C AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U121C AV CONTROL UNIT

DTC Logic

INFOID:0000000011150405

CONSULT Display	DTC Detection Condition	Possible Cause
HDD ACCESS [U121C]	AV control unit malfunction is detected.	If the hard disk drive (HDD) is functioning normally, there is a possibility of an intermittent malfunction. Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

U121D AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U121D AV CONTROL UNIT

DTC Logic

INFOID:0000000011150406

CONSULT Display	DTC Detection Condition	Possible Cause
DSP CONN [U121D]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011150407

1.CHECK CD PLAYBACK

Check the CD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the CD playback function of the AV control unit operating normally?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

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U121E AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U121E AV CONTROL UNIT

DTC Logic

INFOID:0000000011150408

CONSULT Display	DTC Detection Condition	Possible Cause
DSP COMM [U121E]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011150409

1. CHECK CD PLAYBACK

Check the CD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the CD playback function of the AV control unit operating normally?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

U1225 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150410

CONSULT Display	DTC Detection Condition	Possible Cause
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that connection to USB connector is normal.

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U1227 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1227 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150411

CONSULT Display	DTC Detection Condition	Possible Cause
DVD COMM [U1227]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-425, "Removal and Installation" .

Diagnosis Procedure

INFOID:0000000011150412

1. CHECK DVD PLAYBACK

Check the DVD playback operation of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the DVD playback function of the AV control unit operating normally?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

U1228 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150413

CONSULT Display	DTC Detection Condition	Possible Cause
SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

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U1229 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1229 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150414

CONSULT Display	DTC Detection Condition	Possible Cause
iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

U122A AV CONTROL UNIT

DTC Logic

INFOID:0000000011150415

CONSULT Display	DTC Detection Condition	Possible Cause
CONFIG UNFINISH [U122A]	Configuration data is incomplete.	Write configuration data. Refer to AV-306, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure" .

Diagnosis Procedure

INFOID:0000000011150416

1.PERFORM CONFIGURATION

When U122A is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to [AV-306, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Work Procedure"](#).

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U122E AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U122E AV CONTROL UNIT

DTC Logic

INFOID:0000000011150417

CONSULT Display	DTC Detection Condition	Possible Cause
Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

U1231 BOSE AMP.

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1231 BOSE AMP.

DTC Logic

INFOID:0000000011150418

CONSULT Display	DTC Detection Condition	Possible Cause
AMP TEMP [U1231]	BOSE speaker amp. malfunction is detected.	Replace BOSE speaker amp. if malfunction occurs constantly. Refer to AV-432, "Removal and Installation" .

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U1232 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000011150419

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of steering angle sensor is incomplete.	Adjust predictive course line center position of steering angle sensor.

Diagnosis Procedure

INFOID:0000000011150420

1. ADJUST PREDICTIVE COURSE LINE CENTER POSITION OF STEERING ANGLE SENSOR

When U1232 is detected, the predictive course line center position of the steering angle sensor needs to be adjusted.

>> Adjust the predictive course line center position of steering angle sensor. Refer to [AV-307, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure"](#).

U1243 DISPLAY UNIT

DTC Logic

INFOID:0000000011150421

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT DISP CONN [U1243]	When any of the following is detected. - display unit power supply or ground circuit malfunction. - serial communication circuit malfunction between front display unit and AV control unit.	- Display unit power supply and ground circuits. - Serial communication circuits between front display unit and AV control unit.

Diagnosis Procedure

INFOID:0000000011150422

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuits. Refer to [AV-363, "DISPLAY UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK COMMUNICATION CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect display unit connector M92 and AV control unit connector M163.
- Check continuity between display unit connector M92 terminals 9, 10 and AV control unit connector M163 terminals 77, 61.

Display unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M92	9	M163	77	Yes
	10		61	

- Check continuity between display unit connector M92 terminals 9, 10 and ground.

Display unit		Ground	Continuity
Connector	Terminal		
M92	9	—	No
	10		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK COMMUNICATION SIGNAL (CONT→DISP)

- Connect display unit connector M92 and AV control unit connector M163.
- Turn ignition switch ON.
- Check signal between display unit connector M92 terminal 9 and ground.

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U1243 DISPLAY UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

Display unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M92	9	—	When adjusting display brightness.	(V) </

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

4.CHECK COMMUNICATION SIGNAL (DISP→CONT)

Check signal between display unit connector M92 terminal 10 and ground.

Display unit		Ground	Condition	Reference value
(+)		(-)		
Connector	Terminal			
M92	10	—	When adjusting display brightness.	(V) </

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace display unit. Refer to [AV-429. "Removal and Installation"](#).

U1244 GPS ANTENNA

DTC Logic

INFOID:0000000011150423

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna disconnection.

Diagnosis Procedure

INFOID:0000000011150424

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. GPS ANTENNA INSPECTION

Visually inspect the GPS antenna and antenna feeder. Refer to [AV-451, "Removal and Installation"](#).

Is inspection result normal?

YES >> GO TO 2.

NO >> Replace malfunctioning parts.

2. CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect GPS antenna connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M25 and ground.

AV control unit		Ground	Voltage
(+) (–)		(–)	
Connector	Terminal		
M25	130	—	5.0 V

Is inspection result normal?

YES >> Inspection End.

NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

U1258 SATELLITE RADIO ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1258 SATELLITE RADIO ANTENNA

DTC Logic

INFOID:0000000011150425

CONSULT Display	DTC Detection Condition	Possible Cause
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.

Diagnosis Procedure

INFOID:0000000011150426

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. SATELLITE RADIO ANTENNA INSPECTION

Visually inspect the satellite radio antenna and antenna feeder. Refer to [AV-449, "Location of Antennas"](#).

Is inspection result normal?

- YES >> GO TO 2.
NO >> Replace malfunctioning parts.

2. CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect AV control unit connector M156.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector and ground.

AV control unit		Ground	Voltage
(+) (–)		(–)	
Connector	Terminal		
M156	129	—	5.0 V

Is inspection result normal?

- YES >> Inspection End.
NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

U125A HEADREST DISPLAY UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U125A HEADREST DISPLAY UNIT

DTC Logic

INFOID:0000000011150427

CONSULT Display	DTC Detection Condition	Possible Cause
3RD DISP CONN [U125A]	When any of the following is detected. - headrest display unit power supply or ground circuit malfunction. - AV communication circuit malfunction between headrest display units.	- Headrest display unit power supply and ground circuits. - AV communication circuits between headrest display units.

Diagnosis Procedure

INFOID:0000000011150428

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK HEADREST DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check headrest display unit power supply and ground circuits. Refer to [AV-367, "HEADREST DISPLAY UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK AV COMMUNICATION CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect headrest display unit connectors.
- Check continuity between headrest display unit (driver seat) connector B223 and headrest display unit (passenger seat) connector B317.

Headrest display unit (driver seat)		Headrest display unit (passenger seat)		Continuity
Connector	Terminal	Connector	Terminal	
B223	26	B317	11	Yes
	27		10	

- Check continuity between headrest display unit (driver seat) connector B223 and ground.

Headrest display unit (driver seat)		Ground	Continuity
Connector	Terminal		
B223	26	—	No
	27		

Is the inspection result normal?

YES >> Replace headrest display unit (passenger seat). Refer to [AV-430, "Removal and Installation"](#).

NO >> Repair or replace harness or connectors.

U1263 USB

DTC Logic

INFOID:0000000011150429

CONSULT Display	DTC Detection Condition	Possible Cause
USB OVERCURRENT [U126]	Overcurrent in USB connector is detected.	Check USB harness between the AV control unit and USB connector.

Diagnosis Procedure

INFOID:0000000011150430

1.CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace USB interface harness. Refer to [AV-440, "Removal and Installation"](#).

2.CHECK USB INTERFACE HARNESS CONTINUITY

Check USB interface harness continuity. Refer to [AV-402, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

NO >> Replace USB interface harness. Refer to [AV-440, "Removal and Installation"](#).

U1264 ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1264 ANTENNA AMP.

DTC Logic

INFOID:0000000011150431

CONSULT Display	DTC Detection Condition	Possible Cause
ANTENNA AMP TERMINAL [U1264]	Antenna amp. ON signal circuit open or short circuited.	Antenna amp. ON signal circuit between AV control unit and antenna amp.

Diagnosis Procedure

INFOID:0000000011150432

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA BASE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M141 and antenna base connector M502.
3. Check continuity between AV control unit connector M141 and antenna base connector M502.

AV control unit		Antenna base		Continuity
Connector	Terminal	Connector	Terminal	
M141	126	M502	2	Yes

4. Check continuity between AV control unit connector M141 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M141	126	—	No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M141.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M141 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(–)	
Connector	Terminal		
M141	126	—	Battery voltage

Is the inspection result normal?

YES >> Replace antenna base. Refer to [AV-449, "Location of Antennas"](#).

NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

U1265 BOSE AMP.

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1265 BOSE AMP.

DTC Logic

INFOID:0000000011150433

CONSULT Display	DTC Detection Condition	Possible Cause
AMP ON TERMINAL [U1265]	BOSE amp. ON signal circuit open or short circuited.	BOSE amp. ON signal circuit between AV control unit and BOSE speaker amp.

Diagnosis Procedure

INFOID:0000000011150434

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND BOSE SPEAKER AMP.

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M161 and Bose speaker amp. connector B130.
3. Check continuity between AV control unit connector M161 and Bose speaker amp. connector B130.

AV control unit		Bose speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M161	1	B130	21	Yes

4. Check continuity between AV control unit connector M161 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	1	—	No

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M161.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M161 and ground.

AV control unit		Ground	Voltage (Approx.)
(+) (V)		(–)	
Connector	Terminal		
M161	1	—	Battery voltage

Is the inspection result normal?

YES >> Replace Bose speaker amp. Refer to [AV-432, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

U1300 AV COMM CIRCUIT

Description

INFOID:0000000011150435

U1300 is indicated when a malfunction occurs in the communication signal of the multi AV system. Indicated simultaneously, without fail, the malfunction of control units connected to the AV control unit through communication circuits. Determine the possible malfunction cause from the table below.

SELF DIAGNOSTIC RESULT DISPLAY ITEM

CONSULT Display	DTC Detection Condition	Possible Cause
- AV COMM CIRCUIT [U1300] - SWITCH CONN [U1240]	When any of the following is detected: - A/C and AV switch assembly power supply or ground circuit malfunction. - AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	- A/C and AV switch assembly power supply and ground circuits. Refer to AV-365. "A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure". - AV communication circuits between AV control unit and A/C and AV switch assembly.
- AV COMM CIRCUIT [U1300] - AMP CONN [U124E]	When any of the following is detected: - BOSE speaker amp. power supply or ground circuit malfunction. - AV communication circuits between AV control unit and BOSE speaker amp. are malfunctioning.	- BOSE speaker amp. power supply and ground circuits. Refer to AV-364. "BOSE AMP. : Diagnosis Procedure". - AV communication circuits between AV control unit and BOSE speaker amp.
- AV COMM CIRCUIT [U1300] - VIDEO DIST CONN [U1246]	When any of the following is detected: - video distributor power supply or ground circuit malfunction. - headrest display unit (driver seat) power supply or ground circuit malfunction. - AV communication circuit malfunction between AV control unit and headrest display unit (driver seat).	- Video distributor power supply and ground circuits. Refer to AV-366. "VIDEO DISTRIBUTOR : Diagnosis Procedure". - Headrest display unit (driver seat) power supply and ground circuits. Refer to AV-367. "HEADREST DISPLAY UNIT : Diagnosis Procedure". - AV communication circuits between AV control unit and headrest display unit (driver seat).
- AV COMM CIRCUIT [U1300] - AROUND CAMERA CONN [U125B]	When any of the following is detected: - around view monitor control unit power supply or ground circuit malfunction. - AV communication circuit malfunction between AV control unit and around view monitor control unit.	- Around view monitor control unit power supply and ground circuits. Refer to AV-368. "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure". - AV communication circuits between AV control unit and around view monitor control unit.
- AV COMM CIRCUIT [U1300] - SWITCH CONN [U1240] - AROUND CAMERA CONN [U125B] - VIDEO DIST CONN [U1246]	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.
- AV COMM CIRCUIT [U1300] - SWITCH CONN [U1240] - AMP CONN [U124E] - AROUND CAMERA CONN [U125B] - VIDEO DIST CONN [U1246]		

U1302 CAMERA POWER VOLT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1302 CAMERA POWER VOLT

DTC Logic

INFOID:0000000011150436

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY [U1302]	Short in camera power circuit.	• Harness or connectors. • Camera. • Around view monitor control unit.

Diagnosis Procedure

INFOID:0000000011150437

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CHECK CAMERA DATA MONITOR

Check "REAR CAMERA IMAGE SIGNAL", "F-CAMERA IMAGE SIGNAL", "DR-SIDE CAMERA IMAGE SIG", "PA-SIDE CAMERA IMAGE SIG" in "DATA MONITOR" of "AVM".

Is "OK" displayed for all cameras?

YES >> Refer to [GI-47. "Intermittent Incident"](#).

NO-1 (Front camera)>>GO TO 2.

NO-2 (Rear view camera)>>GO TO 4.

NO-3 (LH side camera)>>GO TO 6.

NO-4 (RH side camera)>>GO TO 8.

2.CHECK FRONT CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96 and camera connectors.
3. Check continuity between around view monitor control unit connector M96 and front camera connector E226.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	38	E226	1	Yes
	37		2	

4. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	38	—	No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M96 and front camera connector E226.
2. Turn ignition switch ON.
3. Check the voltage between the terminals of around view monitor control unit connector M96.

U1302 CAMERA POWER VOLT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(-)		
Terminal	Terminal		
38	37	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace front camera. Refer to [AV-444, "Removal and Installation"](#).

NO >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).

4. CHECK REAR VIEW CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector M96 and rear view camera connector D504.
- Check continuity between around view monitor control unit connector M96 and rear view camera connector D504.

Around view monitor control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	25	D504	2	Yes
	26		1	

- Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	26	—	No

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

- Connect around view monitor control unit connector M96 and rear view camera connector D504.
- Turn ignition switch ON.
- Check the voltage between the terminals of around view monitor control unit connector M96.

Around view monitor control unit M96		Condition	Voltage (Approx.)
(+)	(-)		
Terminal	Terminal		
26	25	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace rear view camera. Refer to [AV-445, "Removal and Installation"](#).

NO >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).

6. CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

- Turn ignition switch OFF.
- Disconnect around view monitor control unit connector M96 and LH side camera connector D28.
- Check continuity between around view monitor control unit connector M96 and LH side camera connector D28.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	

U1302 CAMERA POWER VOLT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

M96	30	D28	6	Yes
	29		18	

4. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	30	—	No

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness or connectors.

7.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M96 and LH side camera connector D28.
2. Turn ignition switch ON.
3. Check the voltage between the terminals of around view monitor control unit connector M96.

Around view monitor control unit M96		Condition	Voltage (Approx.)
(+)	(-)		
Terminal	Terminal		
30	29	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace LH side camera. Refer to [AV-446, "Removal and Installation"](#).

NO >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).

8.CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96 and RH side camera connector D128.
3. Check continuity between around view monitor control unit connector M96 and RH side camera connector D128.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	34	D128	6	Yes
	33		18	

4. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	34	—	No

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness or connectors.

9.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M96 and RH side camera connector D128.
2. Turn ignition switch ON.
3. Check the voltage between the terminals of around view monitor control unit connector M96.

U1302 CAMERA POWER VOLT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

Around view monitor control unit M96		Condition	Voltage (Approx.)
(+)	(-)		
Terminal	Terminal		
34	33	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace RH side camera. Refer to [AV-446, "Removal and Installation"](#).

NO >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).

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AV

U1303 LED POWER SUPPLY VOLT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1303 LED POWER SUPPLY VOLT

DTC Logic

INFOID:0000000011150438

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
LED SUPPLY POWER SUPPLY VOLTAGE ABNORMAL-ITY [U1303]	Short in camera power circuit.	• Harness or connectors. • Camera. • Around view monitor control unit.

Diagnosis Procedure

INFOID:0000000011150439

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CHECK CAMERA DATA MONITOR

Check "DR-SIDE CAMERA IMAGE SIG", "PA-SIDE CAMERA IMAGE SIG" in "DATA MONITOR" of "AVM".

Is "OK" displayed for all cameras?

YES >> Refer to [GI-47. "Intermittent Incident"](#).

NO-1 (LH side camera)>>GO TO 2.

NO-2 (RH side camera)>>GO TO 4.

2.CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96 and LH side camera connector D28.
3. Check continuity between around view monitor control unit connector M96 and LH side camera connector D28.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	30	D28	6	Yes
	29		18	

4. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	30	—	No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M96 and LH side camera connector D28.
2. Turn ignition switch ON.
3. Check the voltage between the terminals of around view monitor control unit connector M96.

U1303 LED POWER SUPPLY VOLT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

Around view monitor control unit M96		Condition	Voltage (Approx.)
(+)	(-)		
Terminal	Terminal		
30	29	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace LH side camera. Refer to [AV-446, "Removal and Installation"](#).

NO >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).

4.CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96 and RH side camera connector D128.
3. Check continuity between around view monitor control unit connector M96 and RH side camera connector D128.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	34	D128	6	Yes
	33		18	

4. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	34	—	No

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M96 and RH side camera connector D128.
2. Turn ignition switch ON.
3. Check the voltage between around the terminals of view monitor control unit connector M96.

Around view monitor control unit M96		Condition	Voltage (Approx.)
(+)	(-)		
Terminal	Terminal		
34	33	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace RH side camera. Refer to [AV-446, "Removal and Installation"](#).

NO >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).

U1304 CAMERA IMAGE CALIBRATION

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1304 CAMERA IMAGE CALIBRATION

DTC Logic

INFOID:0000000011150440

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE CALIBRATION [U1304]	Camera calibration malfunction.	Cameras are not calibrated. Refer to AV-308, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure" .

U1305 CONFIG UNFINISH

DTC Logic

INFOID:0000000011150441

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE WRITE CONFIGURATION [U1305]	Around view monitor control unit configuration malfunction.	Around view monitor control unit not configured. Refer to AV-306. "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure" .

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U1310 AV CONTROL UNIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1310 AV CONTROL UNIT

DTC Logic

INFOID:0000000011150442

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit if malfunction occurs constantly. Refer to AV-425. "Removal and Installation" .

U1601, U1603, U1609, U160B FRONT DOOR SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1601, U1603, U1609, U160B FRONT DOOR SPEAKER/TWEETER

DTC Logic

INFOID:0000000011150443

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FL-DOOR WOOFER (OPEN, SHORT, GND- SHORT) [U1601] FL-DOOR WOOFER (VB-SHOR) [U1603]	When any of the following is detected: • Sound signal circuit malfunction between BOSE speaker amp. and front door speaker LH. • Sound signal circuit malfunction between BOSE speaker amp. and front tweeter LH.	• Sound signal circuits between BOSE speaker amp. and front door speaker LH. Refer to AV-378, "Diagnosis Procedure". • Sound signal circuits between BOSE speaker amp. and front tweeter LH. Refer to AV-375, "Diagnosis Procedure".
FR-DOOR WOOFER (OPEN, SHORT, GND- SHORT) [U1609] FR-DOOR WOOFER (VB-SHOR) [U160B]	When any of the following is detected: • Sound signal circuit malfunction between BOSE speaker amp. and front door speaker RH. • Sound signal circuit malfunction between BOSE speaker amp. and front tweeter RH.	• Sound signal circuits between BOSE speaker amp. and front door speaker RH. Refer to AV-378, "Diagnosis Procedure". • Sound signal circuits between BOSE speaker amp. and front tweeter RH. Refer to AV-375, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011150444

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1601, U1603, U1609 or U160B detected?

- YES >> Refer to [AV-378, "Diagnosis Procedure"](#) (front door speaker) or [AV-375, "Diagnosis Procedure"](#) (front tweeter).
- NO >> Refer to [GI-47, "Intermittent Incident"](#).

U1627, U162F TWEETER

DTC Logic

INFOID:0000000011150445

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST L-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR) [U1627]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter LH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter LH. Refer to AV-372, "Diagnosis Procedure" .
F-INST R-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR) [U162F]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter RH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter RH. Refer to AV-372, "Diagnosis Procedure" .

Diagnosis Procedure

INFOID:0000000011150446

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1627 or U162F detected?

- YES >> Refer to [AV-372, "Diagnosis Procedure"](#).
 NO >> Refer to [GI-47, "Intermittent Incident"](#).

U162A CENTER SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U162A CENTER SPEAKER

DTC Logic

INFOID:0000000011150447

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST C-SQUAWK (OPEN, SHORT, GND- SHORT, or VB-SHORT) [U162A]	Sound signal circuit malfunction between BOSE speaker amp. and center speaker.	Sound signal circuits between BOSE speaker amp. and center speaker. Refer to AV-370, "Diagnosis Procedure" .

Diagnosis Procedure

INFOID:0000000011150448

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U162A detected?

- YES >> Refer to [AV-370, "Diagnosis Procedure"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

AV

U1684, U168C REAR DOOR SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U1684, U168C REAR DOOR SPEAKER/TWEETER

DTC Logic

INFOID:0000000011150449

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
2L-DOOR SPEAKER (OPEN, SHORT, GND- SHORT) [U1684]	Sound signal circuit malfunction between BOSE speaker amp. and rear door speaker LH is detected:	Sound signal circuits between BOSE speaker amp. and rear door speaker LH. Refer to AV-381, "Diagnosis Procedure" .
2R-DOOR SPEAKER (OPEN, SHORT, GND- SHORT) [U168C]	Sound signal circuit malfunction between BOSE speaker amp. and rear door speaker RH is detected:	Sound signal circuits between BOSE speaker amp. and rear door speaker RH. Refer to AV-381, "Diagnosis Procedure" .

Diagnosis Procedure

INFOID:0000000011150450

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1684 or U168C detected?

- YES >> Refer to [AV-381, "Diagnosis Procedure"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

U175D WOOFER

DTC Logic

INFOID:0000000011150451

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-LUGGAGE L-WOOFER (OPEN, SHORT, GND- SHORT or VB-SHOR) [U175D]	Sound signal circuit malfunction between BOSE speaker amp. and subwoofer.	Sound signal circuits between BOSE speaker amp. and subwoofer. Refer to AV-387, "Diagnosis Procedure" .

Diagnosis Procedure

INFOID:0000000011150452

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U175D detected?

- YES >> Refer to [AV-387, "Diagnosis Procedure"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

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U176A, U1772 ROOF SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

U176A, U1772 ROOF SPEAKER

DTC Logic

INFOID:0000000011150453

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-ROOF L-SQAWK (OPEN, SHORT, GND- SHORT or VB-SHOR) [U176A]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker LH.	Sound signal circuits between BOSE speaker amp. and rear side speaker LH. Refer to AV-384, "Diagnosis Procedure" .
R-ROOF R-SQAWK (OPEN, SHORT, GND- SHORT or VB-SHOR) [U1772]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker RH.	Sound signal circuits between BOSE speaker amp. and rear side speaker RH. Refer to AV-384, "Diagnosis Procedure" .

Diagnosis Procedure

INFOID:0000000011150454

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U176A or U1772 detected?

- YES >> Refer to [AV-384, "Diagnosis Procedure"](#).
NO >> Refer to [GI-47, "Intermittent Incident"](#).

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000011150455

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
68	Ignition signal	29 (5A)
19	Battery power supply	15 (15A)
7	ACC power supply	65 (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 M161 and M163.
3. Check voltage between AV control unit connectors and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M163	68	—	Ignition switch: ON	Battery voltage
M161	7		Ignition switch: ACC	
	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. Check continuity between AV control unit connector M161 terminal 20 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	20	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000011150456

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK FUSE

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
11	Battery power supply	15 (15A)
23	ACC power supply	65 (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 display unit connector.
3. Check voltage between display connector M92 and ground.

Display unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M92	23	—	Ignition switch: ACC	Battery voltage
	11		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. Check continuity between display unit connector M92 terminal 12 and ground.

Display unit		Ground	Continuity
Connector	Terminal		
M92	12	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

BOSE AMP.

BOSE AMP. : Diagnosis Procedure

INFOID:0000000011150457

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
10	Battery power supply	11 (15A)
11		12 (15A)

Are the fuses blown?

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

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect BOSE speaker amp. connector B129.
2. Check voltage between BOSE speaker amp. connector B129 and ground.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

BOSE speaker amp.		Ground	Voltage (Approx.)
Connector	Terminal		
B129	10	—	Battery voltage
	11		

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 BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B129	7	—	Yes
	12		

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:0000000011150459

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
3	ACC power supply	65 (10A)

Is the fuse 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 A/C and AV switch assembly connector.
3. Check voltage between A/C and AV switch assembly connector M98 terminal 3 and ground.

A/C and AV switch assembly		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M98	3	—	Ignition switch: ACC	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK CONTROL UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M164.
3. Check continuity between A/C and AV switch assembly connector M98 terminal 9 and AV control unit connector M164 terminal 98.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

A/C and AV switch assembly		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M98	9	M164	98	Yes

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

4.CHECK SWITCH GROUND CIRCUIT

Check continuity between A/C and AV switch assembly connector M98 terminal 1 and ground.

A/C and AV switch assembly		Ground	Continuity
Connector	Terminal		
M98	1	—	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

VIDEO DISTRIBUTOR

VIDEO DISTRIBUTOR : Diagnosis Procedure

INFOID:0000000011150460

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
4	ACC power supply	65 (10A)
2	Battery power supply	15 (15A)

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 video distributor connector B24.
3. Check voltage between video distributor connector B24 and ground.

Video distributor		Ground	Condition	Voltage (Approx.)
Connector	Terminal			Battery voltage
B24	4	—	Ignition switch: ACC	
	2		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. Check continuity between video distributor connector B24 and ground.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

Video distributor		Ground	Continuity
Connector	Terminal		
B24	1	—	Yes
	3		

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

HEADREST DISPLAY UNIT

HEADREST DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000011150461

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
15	Battery power supply	15 (15A)
16		

Are the fuses blown?

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

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect headrest display unit connector.
2. Check voltage between headrest display unit connector and ground.

Headrest displayl unit		Ground	Voltage (Approx.)
Connector	Terminal		
B223 (driver seat)	15	—	Battery voltage
	16		
B317 (passenger seat)	15		
	16		

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 headrest display unit connector and ground.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

Headrest display unit		Ground	Continuity
Connector	Terminal		
B223 (driver seat)	12	—	Yes
	31		
	32		
B317 (passenger seat)	28		
	31		
	32		

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:0000000011150462

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
4	Ignition signal	29 (5A)
2	Battery power supply	15 (15A)

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 M96.
3. Check voltage between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M96	4	—	Ignition switch: ON	Battery voltage
	2		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. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	1	—	Yes

Is the inspection result normal?

YES >> Inspection End.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

NO >> Repair or replace harness or connectors.

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AV

CENTER SPEAKER

Diagnosis Procedure

INFOID:0000000011150463

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminals or connectors.

2.CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B130 and center speaker connector.
2. Check continuity between BOSE speaker amp. connector B130 and center speaker connector.

BOSE speaker amp.		Center speaker		Continuity
Connector	Terminal	Connector	Terminal	
B130	17	M110	1	Yes
	18		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	17	—	No
	18		

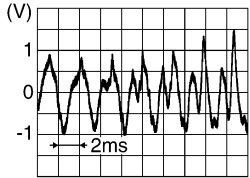
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK CENTER SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B130 and center speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of BOSE speaker amp. connector B130.

BOSE speaker amp. connector B130		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
17	18	Audio signal output	

Is the inspection result normal?

CENTER SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

- YES >> Replace center speaker. Refer to [AV-436. "Removal and Installation"](#).
NO >> GO TO 4.

4.CHECK PRE-AMP SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Check continuity between AV control unit connector M161 and BOSE speaker amp. connector B130.

AV control unit		BOSE speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M161	2	B130	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit connector M161 and ground.

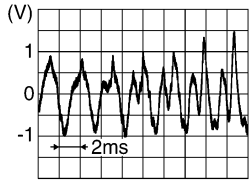
AV control unit		Ground	Continuity
Connector	Terminal		
M161	2	—	No
	3		
	11		
	12		

Is the inspection result normal?

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

5.CHECK PRE-AMP SIGNAL

1. Connect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M161.

AV control unit connector M161		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
2	3	Audio signal output	
11	12		

Is the inspection result normal?

- YES >> Replace BOSE speaker amp. Refer to [AV-432. "Removal and Installation"](#).
NO >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

INSTRUMENT PANEL SPEAKER/TWEETER

Diagnosis Procedure

INFOID:0000000011150464

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminals or connectors.

2.CHECK INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector and suspect instrument panel tweeter connector.
2. Check continuity between BOSE speaker amp. connector and suspect instrument panel tweeter connector.

BOSE speaker amp.		Instrument panel tweeter		Continuity
Connector	Terminal	Connector	Terminal	
B130	29	M62 (LH)	1	Yes
	30		2	
B129	4	M73 (RH)	1	
	3		2	

3. Check continuity between BOSE speaker amp. connector and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	29	—	No
	30		
B129	4		
	3		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK INSTRUMENT PANEL TWEETER SIGNAL

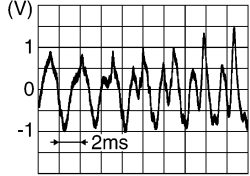
1. Connect BOSE speaker amp. connector and suspect instrument panel tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of BOSE speaker amp. connector.

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

INSTRUMENT PANEL SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

29	30	Audio signal output	 SKIB3609E
4	3		

Is the inspection result normal?

YES >> Replace instrument panel tweeter. Refer to [AV-435. "Removal and Installation"](#).

NO >> GO TO 4.

4.CHECK PRE-AMP SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Check continuity between AV control unit connector M161 and BOSE speaker amp. connector B130.

AV control unit		BOSE speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M161	2	B130	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit connector M161 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	2	—	No
	3		
	11		
	12		

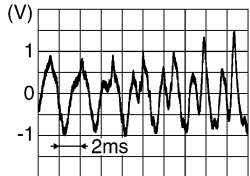
Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK PRE-AMP SIGNAL

1. Connect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M161.

AV control unit connector M161		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	 SKIB3609E
2	3		
11	12		

Is the inspection result normal?

YES >> Replace BOSE speaker amp. Refer to [AV-432. "Removal and Installation"](#).

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AV

INSTRUMENT PANEL SPEAKER/TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

NO >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

FRONT TWEETER

Diagnosis Procedure

INFOID:0000000011150465

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminals or connectors.

2.CHECK FRONT TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B130 and suspect front tweeter connector.
2. Check continuity between BOSE speaker amp. connector B130 and suspect front tweeter connector.

BOSE speaker amp.		Front tweeter		Continuity
Connector	Terminal	Connector	Terminal	
B130	19	M109 (LH)	1	Yes
	20		2	
	31	M111 (RH)	1	
	32		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	19	—	No
	20		
	31		
	32		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK FRONT TWEETER SIGNAL

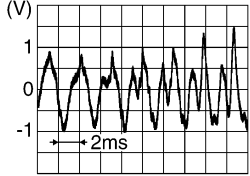
1. Connect BOSE speaker amp. connector B130 and suspect front tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of BOSE speaker amp. connector B130.

BOSE speaker amp. connector B130		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

19	20	Audio signal output	
31	32		

SKIB3609E

Is the inspection result normal?

YES >> Replace front tweeter. Refer to [AV-434. "Removal and Installation"](#).

NO >> GO TO 4.

4.CHECK PRE-AMP SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Check continuity between AV control unit connector M161 and BOSE speaker amp. connector B130.

AV control unit		BOSE speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M161	2	B130	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit connector M161 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	2	—	No
	3		
	11		
	12		

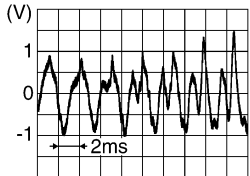
Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK PRE-AMP SIGNAL

1. Connect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M161.

AV control unit connector M161		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	
2	3		
11	12		

SKIB3609E

Is the inspection result normal?

YES >> Replace BOSE speaker amp. Refer to [AV-432. "Removal and Installation"](#).

FRONT TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

NO >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

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AV

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000011150466

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminals or connectors.

2.CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B130 and suspect front door speaker connector.
2. Check continuity between BOSE speaker amp. connector B130 and suspect front door speaker connector.

BOSE speaker amp.		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B130	19	D12 (LH)	1	Yes
	20		2	
	31	D112 (RH)	1	
	32		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	19	—	No
	20		
	31		
	32		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK FRONT DOOR SPEAKER SIGNAL

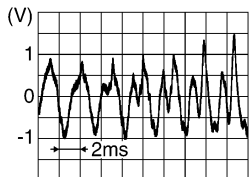
1. Connect BOSE speaker amp. connector B130 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of BOSE speaker amp. connector B130.

BOSE speaker amp. connector B130		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

19	20	Audio signal output	
31	32		

Is the inspection result normal?

YES >> Replace front door speaker. Refer to [AV-433. "Removal and Installation"](#).

NO >> GO TO 4.

4.CHECK PRE-AMP SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Check continuity between AV control unit connector M161 and BOSE speaker amp. connector B130.

AV control unit		BOSE speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M161	2	B130	35	Yes
	3		36	
	11		33	
	12		34	

3. Check continuity between AV control unit connector M161 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	2	—	No
	3		
	11		
	12		

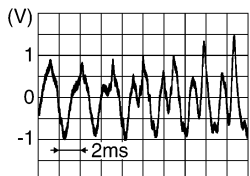
Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK PRE-AMP SIGNAL

1. Connect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M161.

AV control unit connector M161		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	
2	3		
11	12		

Is the inspection result normal?

YES >> Replace BOSE speaker amp. Refer to [AV-432. "Removal and Installation"](#).

FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

NO >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

REAR DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000011150467

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminals or connectors.

2.CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B129 or B130 and suspect rear door speaker connector.
2. Check continuity between BOSE speaker amp. connector B129 or B130 and suspect rear door speaker connector.

BOSE speaker amp.		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B130	28	D207 (LH)	1	Yes
	16		2	
B129	14	D307 (RH)	1	
	9		2	

3. Check continuity between BOSE speaker amp. connector B129 or B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	28	—	No
	16		
B129	14		
	9		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK REAR DOOR SPEAKER SIGNAL

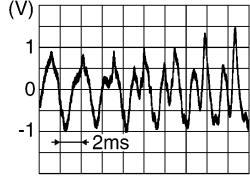
1. Connect BOSE speaker amp. connector B129 or B130 and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of BOSE speaker amp. connectors.

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

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

B130	28	16	Audio signal output	 SKIB3609E
B129	14	9		

Is the inspection result normal?

YES >> Replace rear door speaker. Refer to [AV-437. "Removal and Installation"](#).

NO >> GO TO 4.

4.CHECK PRE-AMP SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Check continuity between AV control unit connector M161 and BOSE speaker amp. connector B130.

AV control unit		BOSE speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M161	4	B130	24	Yes
	5		23	
	13		26	
	14		25	

3. Check continuity between AV control unit connector M161 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	4	—	No
	5		
	13		
	14		

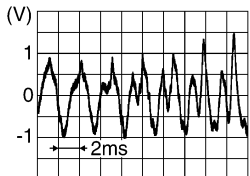
Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK PRE-AMP SIGNAL

1. Connect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M161.

AV control unit connector M161		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	 SKIB3609E
4	5		
13	14		

Is the inspection result normal?

YES >> Replace BOSE speaker amp. Refer to [AV-432. "Removal and Installation"](#).

REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

NO >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

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REAR SPEAKER

Diagnosis Procedure

INFOID:0000000011150468

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminals or connectors.

2.CHECK REAR SIDE SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B129 and suspect rear side speaker connector.
2. Check continuity between BOSE speaker amp. connector B129 and suspect rear side speaker connector.

BOSE speaker amp.		Rear side speaker		Continuity
Connector	Terminal	Connector	Terminal	
B129	1	B1 (LH)	1	Yes
		B153 (RH)		
	2	B1 (LH)	2	
		B153 (RH)		

3. Check continuity between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B129	1	—	No
	2		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

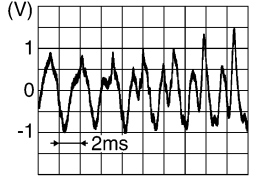
3.CHECK REAR SIDE SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B129 and suspect rear side speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of BOSE speaker amp. connector B129.

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

BOSE speaker amp. connector B129		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
1	2	Audio signal output	 SKIB3609E

Is the inspection result normal?

- YES >> Replace rear side speaker. Refer to [AV-438, "Removal and Installation"](#).
 NO >> GO TO 4.

4.CHECK PRE-AMP SIGNAL CIRCUIT CONTINUITY

- Disconnect AV control unit connector M161 and BOSE speaker amp. connector B130.
- Check continuity between AV control unit connector M161 and BOSE speaker amp. connector B130.

AV control unit		BOSE speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M161	4	B130	24	Yes
	5		23	
	13		26	
	14		25	

- Check continuity between AV control unit connector M161 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	4	—	No
	5		
	13		
	14		

Is the inspection result normal?

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

5.CHECK PRE-AMP SIGNAL

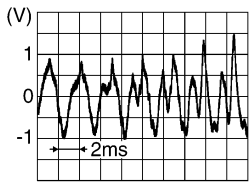
- Connect AV control unit connector M161 and BOSE speaker amp. connector B130.
- Turn ignition switch to ACC.
- Push AV control unit POWER switch.
- Check signal between the terminals of AV control unit connector M161.

AV control unit connector M161		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

4	5	Audio signal output	
13	14		

Is the inspection result normal?

- YES
- >> Replace BOSE speaker amp. Refer to [AV-432. "Removal and Installation"](#).
- NO
- >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

SUBWOOFER

Diagnosis Procedure

INFOID:00000000111150469

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and subwoofer connectors for the following:

- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2.CHECK SUBWOOFER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector and subwoofer connector.
2. Check continuity between BOSE speaker amp. connector and subwoofer connector.

BOSE speaker amp.		Subwoofer		Continuity
Connector	Terminal	Connector	Terminal	
B129	8	B73	1	Yes
	13		2	
	6		3	
	5		4	

3. Check continuity between BOSE speaker amp. connector and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B129	8	—	No
	13		
	6		
	5		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK SUBWOOFER SIGNAL

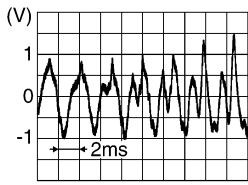
1. Connect BOSE speaker amp. connector and subwoofer connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check the signal between the terminals of BOSE speaker amp. connector.

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

SUBWOOFER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

13	8	Audio signal output	 SKIB3609E
5	6		

Is the inspection result normal?

YES >> Replace subwoofer. Refer to [AV-439. "Removal and Installation"](#).

NO >> GO TO 4.

4.CHECK PRE-AMP SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Check continuity between AV control unit connector M161 and BOSE speaker amp. connector B130.

AV control unit		BOSE speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M161	4	B130	24	Yes
	5		23	
	13		26	
	14		25	

3. Check continuity between AV control unit connector M161 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	4	—	No
	5		
	13		
	14		

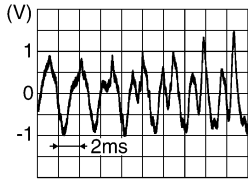
Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connectors.

5.CHECK PRE-AMP SIGNAL

1. Connect AV control unit connector M161 and BOSE speaker amp. connector B130.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between the terminals of AV control unit connector M161.

AV control unit connector M161		Condition	Reference value
(+)	(-)		
Terminal	Terminal	Audio signal output	 SKIB3609E
4	5		
13	14		

Is the inspection result normal?

YES >> Replace BOSE speaker amp. Refer to [AV-432. "Removal and Installation"](#).

SUBWOOFER

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

NO >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

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FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011150470

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1. CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY

1. Turn ignition OFF.
2. Disconnect AV control unit connector M162 and front auxiliary input jacks connector.
3. Check continuity between AV control unit connector M162 and front auxiliary input jacks connector.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M162	24	M205	3	Yes
	38		1	

4. Check continuity between AV control unit connector M162 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M162	24	—	No
	38		

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M162 and front auxiliary input jacks connector M205.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M162	39	M205	2	Yes

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK AUX SOUND SIGNAL

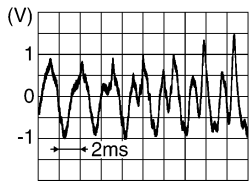
1. Connect AV control unit connector M162 and front auxiliary input jacks connector.
2. Turn ignition switch to ACC.
3. Select AUX mode.
4. Check the signal between the terminals of AV control unit connector M162.

AV control unit connector M162		Condition	Reference value
(+)	(-)		
Terminal	Terminal		

FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

24	39	AUX mode selected	
38	39		

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).
 NO >> Replace front auxiliary input jacks. Refer to [AV-441. "Removal and Installation"](#).

AV

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000011150471

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M163 and display unit connector M92.
3. Check continuity between AV control unit connector M163 and display unit connector M92.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M163	56	M92	18	Yes
	55		19	

4. Check continuity between AV control unit connector M163 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M163	56	—	No

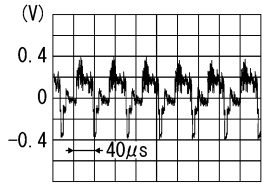
Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector M163 and display unit connector M92.
2. Turn ignition switch ON.
3. Check the signal between the terminals of AV control unit connector M163.

AV control unit connector M163		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
56	55	DVD image is displayed.	

Is the inspection result normal?

YES >> Replace display unit. Refer to [AV-429. "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIBUTOR)

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIBUTOR)

Diagnosis Procedure

INFOID:0000000011150472

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M164 and video distributor connector B25.
3. Check continuity between AV control unit connector M164 and video distributor connector B25.

AV control unit		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	
M164	107	B25	34	Yes
	105		33	

4. Check continuity between AV control unit connector M164 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M164	107	—	No

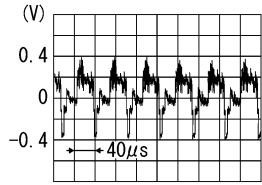
Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector M164 and video distributor connector B25.
2. Turn ignition switch ON.
3. Check the signal between the terminals of video distributor connector B25.

Video distributor connector B25		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
34	33	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	

Is the inspection result normal?

YES >> Replace video distributor. Refer to [AV-447, "Removal and Installation"](#).

NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEADREST DISPLAY UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEADREST DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000011150473

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect video distributor connector B24 and headrest display unit connectors.
3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video distributor		Headrest display unit		Continuity
Connector	Terminal	Connector	Terminal	
B24	32	B223 (driver seat)	5	Yes
	31		21	
	28	B317 (passenger seat)	5	Yes
	27		21	

4. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal		
B24	32	—	No
	28		

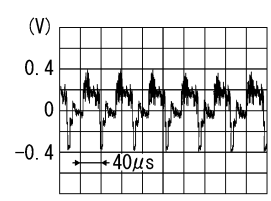
Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK COMPOSITE IMAGE SIGNAL

1. Connect video distributor connector B24 and headrest display unit connectors.
2. Turn ignition switch ON.
3. Check the signal between the terminals of headrest display unit connectors.

Headrest display unit			Condition	Reference value
Connector	(+) Terminal	(-) Terminal		
B223 (driver seat)	5	21	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	 SKIB2251J
B317 (passenger seat)	5	21		

Is the inspection result normal?

YES >> Replace headrest display unit. Refer to [AV-430, "Removal and Installation"](#).

NO >> Replace video distributor. Refer to [AV-447, "Removal and Installation"](#).

AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV CONTROL UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV CONTROL UNIT)

Diagnosis Procedure

INFOID:0000000011150474

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CHECK AUX IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M164 and front auxiliary input jacks connector M205.
3. Check continuity between AV control unit connector M164 and front auxiliary input jacks connector M205.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M164	91	M205	7	Yes
	92		8	

4. Check continuity between AV control unit connector M164 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M164	91	—	No

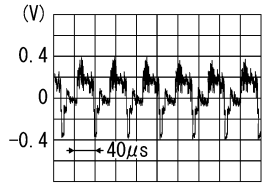
Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK AUX IMAGE SIGNAL

1. Connect AV control unit connector M164 and front auxiliary input jacks connector M205.
2. Turn ignition switch ON.
3. Check the signal between the terminals of front auxiliary input jacks connector M205.

Front auxiliary input jacks connector M205		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
7	8	Front auxiliary input jacks image is displayed.	

Is the inspection result normal?

YES >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

NO >> Replace front auxiliary input jacks. Refer to [AV-441. "Removal and Installation"](#).

IMAGE SWITCH SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011150475

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK CONTINUITY IMAGE SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector B24 and headrest display unit connectors.
3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video distributor		Headrest display unit		Continuity
Connector	Terminal	Connector	Terminal	
B24	10	B223 (driver seat)	7	Yes
	7		23	
	9	B317 (passenger seat)	7	
	5		23	

4. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal		
B24	10	—	No
	9		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK VIDEO DISTRIBUTOR VOLTAGE

1. Connect video distributor connector B24 and headrest display unit connectors.
2. Turn ignition switch ON.
3. Check the voltage between the terminals of video distributor connector B24.

Video distributor connector B24		Condition	Voltage (Approx.)
(+)	(-)		
Terminal	Terminal		
10	7	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0.5 V
		DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V
9	5	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0.5 V
		DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V

Is the inspection result normal?

YES >> Replace video distributor. Refer to [AV-447, "Removal and Installation"](#).

NO >> Replace headrest display unit. Refer to [AV-430, "Removal and Installation"](#).

DISK EJECT SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

DISK EJECT SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011150476

Regarding Wiring Diagram information, refer to [AV-255. "Wiring Diagram"](#).

1.CHECK DISK EJECT SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M164 and A/C and AV switch assembly connector.
3. Check continuity between AV control unit connector M164 terminal 97 and A/C and AV switch assembly connector M98 terminal 14.

AV control unit		A/C and AV switch assembly		Continuity
Connector	Terminal	Connector	Terminal	
M164	97	M98	14	Yes

4. Check continuity between AV control unit connector M164 terminal 97 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M164	97		No

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M164 and A/C and AV switch assembly connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M164 terminal 97 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(-)		
Connector	Terminal			
M164	97	—	Pressing eject switch	0 V
			Except above	5.0 V

Is the inspection result normal?

YES >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).

NO >> Replace A/C and AV switch assembly. Refer to [AV-427. "Removal and Installation"](#).

AV

MICROPHONE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011150477

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M163 and microphone connector.
3. Check continuity between AV control unit connector M163 and microphone connector R109.

AV control unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M163	59	R109	5	Yes
	60		3	
	75		6	

4. Check continuity between AV control unit connector M163 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M163	59	—	No
	60		
	75		

Is inspection result normal?

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

2. CHECK MICROPHONE VCC VOLTAGE

1. Connect AV control unit connector M163.
2. Turn ignition switch ON.
3. Check voltage between terminals of AV control unit connector M163.

AV control unit connector M163		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
60	59	5.0 V

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

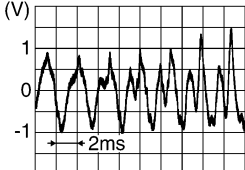
3. CHECK MICROPHONE SIGNAL

1. Connect microphone connector.
2. Check signal between terminals of AV control unit connector M163.

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

AV control unit connector M163		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
75	59	Speak into microphone.	 (V) 1 0 -1 2ms SKIB3609E

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-425. "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-442. "Removal and Installation"](#).

AV

STEERING SWITCH

Diagnosis Procedure

INFOID:0000000011150478

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK STEERING SWITCHES RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M149.
3. Check the resistance between the terminals of combination switch connector M149.

Combination switch connector M149		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress △ switch.	121
		Depress ▽ switch.	321
		Depress ↙ switch.	723
		Depress ENTER switch.	2023
15		Depress - □ switch.	1
		Depress □+ switch.	121
		Depress ↶ switch.	321
		Depress ↷ switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace steering switches. Refer to [AV-428, "Removal and Installation"](#).

2. CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

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

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

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

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

Is the inspection result normal?

STEERING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

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

3.CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M149.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M149	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

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

4.CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

1. Disconnect AV control unit connector M161.
2. Check continuity between combination meter connector M24 and AV control unit connector M161.

Combination meter		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	14	M161	6	Yes
	15		16	
	16		15	

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

Combination meter		Ground	Continuity
Connector	Terminal		
M24	14	—	No
	15		
	16		

Is the inspection result normal?

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

5.CHECK AV CONTROL UNIT VOLTAGE

1. Connect combination meter connector M24 and AV control unit connector M161.
2. Turn ignition switch ON.
3. Check the voltage between the terminals of AV control unit connector M161.

AV control unit M161		Voltage (Approx.)
(+)	(-)	
Terminal	Terminal	
6	15	5.0 V
16		

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).
NO >> Replace combination meter. Refer to [MWI-85, "Removal and Installation"](#).

USB CONNECTOR

Diagnosis Procedure

INFOID:0000000011150479

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M126 and USB interface connector M209.
3. Check continuity between AV control unit connector M126 and USB interface connector M209.

AV control unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M126	121	M209	2	Yes
	122		1	
	123		4	
	124		3	
	125		5	

4. Check continuity between AV control unit connector M126 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M126	121	Ground	No
	123		

Is the inspection result normal?

- YES >> Replace the USB interface. Refer to [AV-440, "Removal and Installation"](#).
 NO >> Repair or replace harness or connectors.

FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

FRONT CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011150480

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK FRONT CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96 and front camera connector E226.
3. Check continuity between around view monitor control unit connector M96 and front camera connector E226.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	40	E226	3	Yes
	39		4	

4. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	40	—	No

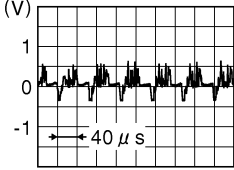
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK FRONT CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M96 and front camera connector E226.
2. Turn ignition switch ON.
3. Check the signal between the terminals of around view monitor control unit connector M96.

Around view monitor control unit connector M96		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
40	39	CAMERA switch is ON or shift position is R.	 JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).

NO >> Replace front camera. Refer to [AV-444, "Removal and Installation"](#).

REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

REAR CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011150481

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

WITH AROUND VIEW MONITOR

1.CHECK REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96 and rear view camera connector D504.
3. Check continuity between around view monitor control unit connector M96 and rear view camera connector D504.

Around view monitor control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	28	D504	3	Yes
	27		4	

4. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	28	—	No

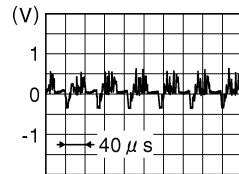
Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK REAR VIEW CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M96 and rear view camera connector D504.
2. Turn ignition switch ON.
3. Check the signal between the terminals of around view monitor control unit connector M96.

Around view monitor control unit connector M96		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
28	27	CAMERA switch is ON or shift position is R.	 JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).

NO >> Replace rear view camera. Refer to [AV-445, "Removal and Installation"](#).

WITHOUT AROUND VIEW MONITOR

1.CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M164 and rear view camera connector.
3. Check continuity between AV control unit connector M164 and rear view camera connector D504.

REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M164	83	D504	1	Yes

4. Check continuity between AV control unit connector M164 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M164	83		No

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2.CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M164 and rear view camera connector D504.

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M164	84	D504	2	Yes

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3.CHECK CAMERA POWER SUPPLY VOLTAGE

1. Connect AV control unit connector M164 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to "R".
4. Check voltage between AV control unit connector M164 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(−)		
Connector	Terminal			
M164	83	—	Selector lever is in “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 4.

NO >> Replace AV control unit. Refer to [AV-425, "Removal and Installation"](#).

4.CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and rear view camera connector.
3. Check continuity between display unit connector M92 and rear view camera connector D504.

Display unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M92	8	D504	3	Yes

4. Check continuity between display unit connector M92 and ground.

Display unit		Ground	Continuity
Connector	Terminal		
M92	8		No

Is inspection result normal?

REAR CAMERA IMAGE SIGNAL CIRCUIT

[PREMIUM AUDIO]

< DTC/CIRCUIT DIAGNOSIS >

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

5. CHECK CAMERA IMAGE SIGNAL

1. Connect display unit connector M92 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to "R".
4. Check signal between display unit connector M92 and ground.

Display unit		Ground	Condition	Reference value
(+) (V)		(-) (V)		
Connector	Terminal			
M92	8	—	Camera image displayed.	(V) <

Is inspection result normal?

- YES >> Replace display unit. Refer to [AV-429, "Removal and Installation"](#).
NO >> Replace rear view camera. Refer to [AV-445, "Removal and Installation"](#).

SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011150482

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK LH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96 and LH side camera connector D28.
3. Check continuity between around view monitor control unit connector M96 and LH side camera connector D28.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	32	D28	5	Yes
	31		17	

4. Check continuity between around view monitor control unit connector M96 and ground.

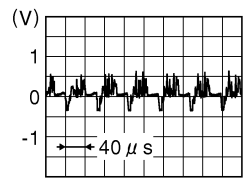
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	32	—	No

Is inspection result normal?

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

2. CHECK LH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M96 and LH side camera connector D28.
2. Turn ignition switch ON.
3. Check the signal between the terminals of around view monitor control unit connector M96.

Around view monitor control unit connector M96		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
32	31	CAMERA switch is ON or shift position is R.	

Is inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).
NO >> Replace LH side camera. Refer to [AV-446, "Removal and Installation"](#).

SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[PREMIUM AUDIO]

SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000011150483

Regarding Wiring Diagram information, refer to [AV-255, "Wiring Diagram"](#).

1. CHECK RH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96 and RH side camera connector D128.
3. Check continuity between around view monitor control unit connector M96 and RH side camera connector D128.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M96	36	D128	5	Yes
	35		17	

4. Check continuity between around view monitor control unit connector M96 and ground.

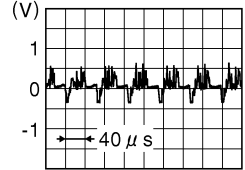
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	36	—	No

Is inspection result normal?

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

2. CHECK RH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M96 and RH side camera connector D128.
2. Turn ignition switch ON.
3. Check the signal between the terminals of around view monitor control unit connector M96.

Around view monitor control unit connector M96		Condition	Reference value
(+)	(-)		
Terminal	Terminal		
36	35	CAMERA switch is ON or shift position is R.	

Is inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-443, "Removal and Installation"](#).
NO >> Replace RH side camera. Refer to [AV-446, "Removal and Installation"](#).

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:0000000011150484

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	AV control unit	Malfunction in AV control unit. Refer to AV-216, "On Board Diagnosis Function" .

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MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

Symptoms	Check items	Probable malfunction location
No sound comes out or the level of the sound is low.	No sound from all speakers.	• Speaker circuit shorted to ground. Refer to AV-255, "Wiring Diagram". • Bose amp. ON signal circuit malfunction. Refer to AV-346, "Diagnosis Procedure". • Bose speaker amp. power supply and ground circuits malfunction. Refer to AV-364, "BOSE AMP. : Diagnosis Procedure".
	Only a certain speaker (front door speaker LH, front door speaker RH, front tweeter LH, front tweeter RH, instrument panel tweeter LH, instrument panel tweeter RH, center speaker, rear door speaker LH, rear door speaker RH, rear side speaker LH, rear side speaker RH, subwoofer) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and Bose speaker amp. Refer to: - AV-378, "Diagnosis Procedure" (front door speaker). - AV-375, "Diagnosis Procedure" (front tweeter). - AV-372, "Diagnosis Procedure" (instrument panel tweeter). - AV-370, "Diagnosis Procedure" (center speaker). - AV-381, "Diagnosis Procedure" (rear door speaker). - AV-384, "Diagnosis Procedure" (rear side speaker). - AV-387, "Diagnosis Procedure" (subwoofer). • Sound signal circuit malfunction between Bose speaker amp. and speaker. Refer to: - AV-378, "Diagnosis Procedure" (front door speaker). - AV-375, "Diagnosis Procedure" (front tweeter). - AV-372, "Diagnosis Procedure" (instrument panel tweeter). - AV-370, "Diagnosis Procedure" (center speaker). - AV-381, "Diagnosis Procedure" (rear door speaker). - AV-384, "Diagnosis Procedure" (rear side speaker). - AV-387, "Diagnosis Procedure" (subwoofer). • Malfunction in speaker. Refer to: - AV-433, "Removal and Installation" (front door speaker). - AV-434, "Removal and Installation" (front tweeter). - AV-435, "Removal and Installation" (instrument panel tweeter). - AV-436, "Removal and Installation" (center speaker). - AV-437, "Removal and Installation" (rear door speaker). - AV-438, "Removal and Installation" (rear side speaker). - AV-439, "Removal and Installation" (subwoofer). • Malfunction in AV control unit. Refer to AV-216, "On Board Diagnosis Function". • Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-432, "Removal and Installation".

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	- Malfunction in AV control unit. Refer to AV-216, "On Board Diagnosis Function". - Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-432, "Removal and Installation".
	Noise comes out only from a certain speaker (front door speaker LH, front door speaker RH, front tweeter LH, front tweeter RH, instrument panel tweeter LH, instrument panel tweeter RH, center speaker, rear door speaker LH, rear door speaker RH, rear side speaker LH, rear side speaker RH, subwoofer).	- Poor connector connection of speaker. - Sound signal circuit malfunction between AV control unit and Bose speaker amp. Refer to: AV-378, "Diagnosis Procedure" (front door speaker). AV-375, "Diagnosis Procedure" (front tweeter). AV-372, "Diagnosis Procedure" (instrument panel tweeter). AV-370, "Diagnosis Procedure" (center speaker). AV-381, "Diagnosis Procedure" (rear door speaker). AV-384, "Diagnosis Procedure" (rear side speaker). AV-387, "Diagnosis Procedure" (subwoofer). - Sound signal circuit malfunction between Bose speaker amp. and speaker. Refer to: AV-378, "Diagnosis Procedure" (front door speaker). AV-375, "Diagnosis Procedure" (front tweeter). AV-372, "Diagnosis Procedure" (instrument panel tweeter). AV-370, "Diagnosis Procedure" (center speaker). AV-381, "Diagnosis Procedure" (rear door speaker). AV-384, "Diagnosis Procedure" (rear side speaker). AV-387, "Diagnosis Procedure" (subwoofer). - Malfunction in speaker. - Poor Installation of speaker (e.g. backlash and looseness). Refer to: AV-433, "Removal and Installation" (front door speaker). AV-434, "Removal and Installation" (front tweeter). AV-435, "Removal and Installation" (instrument panel tweeter). AV-436, "Removal and Installation" (center speaker). AV-437, "Removal and Installation" (rear door speaker). AV-438, "Removal and Installation" (rear side speaker). AV-439, "Removal and Installation" (subwoofer). - Malfunction in AV control unit. Refer to AV-216, "On Board Diagnosis Function". - Malfunction in Bose speaker amp. Replace Bose speaker amp. Refer to AV-432, "Removal and Installation".
	Noise is mixed with radio only (when the vehicle hits a bump or while driving over bad roads)	Poor connector connection of antenna or antenna feeder. Refer to AV-449, "Location of Antennas".
No radio reception or poor reception.	- Other audio sounds are normal. - Any radio station cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	- Antenna amp. ON signal circuit malfunction. Refer to AV-345, "Diagnosis Procedure". - Poor connector connection of antenna or antenna feeder. Refer to AV-449, "Location of Antennas".

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MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

Symptoms	Check items	Probable malfunction location
No satellite radio reception.	There is malfunction in the CONSULT self diagnosis result. Refer to AV-226, "CONSULT Function" .	- Malfunction in antenna, antenna feeder or AV control unit. Perform DTC diagnosis. Refer to AV-226, "CONSULT Function". - Poor continuity in antenna feeder. - Poor connector connection of antenna or antenna feeder. Refer to AV-449, "Location of Antennas".
	There is no malfunction in the CONSULT self diagnosis result. Refer to AV-226, "CONSULT Function" .	- Poor continuity in antenna feeder. - Poor connector connection of antenna or antenna feeder. - Loose satellite radio antenna mounting nut. Refer to AV-449, "Location of Antennas".
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

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 AV control unit. Replace AV control unit. Refer to AV-425, "Removal and Installation" .
Hands-free phone cannot be established.	- Hands-free phone operation can be made, but the communication cannot be established. - Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.	
The other party's voice cannot be heard by hands-free phone.	Check the "microphone speaker" in Inspection & Adjustment Mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	Microphone signal circuit malfunction. Refer to AV-398, "Diagnosis Procedure" .
	Sound operation function does not work.	
The system cannot be operated.	- The voice recognition can be controlled. - Steering switch's +, - , and  switch works, but  does not work.	Steering switch malfunction. Replace steering switch. Refer to AV-428, "Removal and Installation" .
	Steering switch's  ,  +, -  , and  switches do not work.	Steering switch signal circuit malfunction. Refer to AV-400, "Diagnosis Procedure" .
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-400, "Diagnosis Procedure" .

RELATED TO NAVIGATION

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

Symptoms	Check items	Probable malfunction location
Navigation system is inoperative.	Navigation malfunction.	- Malfunction in hard disk drive (HDD). - Malfunction in AV control unit. Refer to AV-216, "On Board Diagnosis Function" .
	Steering switches malfunction.	Steering switch signal circuit malfunction. Refer to AV-400, "Diagnosis Procedure" .
	Voice activated control malfunction.	Microphone signal circuit malfunction. Refer to AV-398, "Diagnosis Procedure" . Steering switch signal circuit malfunction. Refer to AV-400, "Diagnosis Procedure" .

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 AV-368, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure" .
	AV communication circuits malfunction.	AV communication circuits malfunction between around view monitor control unit and AV control unit. Refer to AV-252, "Reference Value" .
	Camera image signal circuit (output) malfunction.	Camera image signal circuit (output) malfunction between around view monitor control unit and display unit. Refer to AV-252, "Reference Value" .
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: AV-403, "Diagnosis Procedure" (front camera). AV-404, "Diagnosis Procedure" (rear view camera). AV-407, "Diagnosis Procedure" (side camera LH). AV-408, "Diagnosis Procedure" (side camera RH).
	Camera communication signal circuits malfunction.	Camera communication circuits malfunction between camera and around view monitor control unit. Refer to: AV-403, "Diagnosis Procedure" (front camera). AV-404, "Diagnosis Procedure" (rear view camera). AV-407, "Diagnosis Procedure" (side camera LH). AV-408, "Diagnosis Procedure" (side camera RH).
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 AV-252, "Reference Value" .
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 AV-252, "Reference Value" .
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 AV-307, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure" .
Front view and front of birds-eye view is not displayed.	Front camera malfunction.	Front camera power supply and ground circuits malfunction. Refer to AV-348, "Diagnosis Procedure" .
	Front camera image signal circuit malfunction.	Front camera image signal circuit malfunction between front camera and around view monitor control unit. Refer to AV-403, "Diagnosis Procedure" .

MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

Symptoms	Check items	Probable malfunction location
Rear view and rear of birds-eye view is not displayed.	Rear view camera malfunction.	Rear view camera power supply and ground circuits malfunction. Refer to AV-348, "Diagnosis Procedure" .
	Rear view camera image signal circuit malfunction.	Rear view camera image signal circuit malfunction between rear view camera and around view monitor control unit. Refer to AV-404, "Diagnosis Procedure" .
Front-side and driver side of birds-eye view is not displayed.	Side camera LH malfunction.	Side camera LH power supply and ground circuits malfunction. Refer to AV-348, "Diagnosis Procedure" .
	Side camera LH image signal circuit malfunction.	Side camera LH image signal circuit malfunction between side camera LH and around view monitor control unit. Refer to AV-407, "Diagnosis Procedure" .
Front-side and passenger side of birds-eye view is not displayed.	Side camera RH malfunction.	Side camera RH power supply and ground circuits malfunction. Refer to AV-348, "Diagnosis Procedure" .
	Side camera RH image signal circuit malfunction.	Side camera RH image signal circuit malfunction between side camera RH and around view monitor control unit. Refer to AV-408, "Diagnosis Procedure" .
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 LAN-21, "Trouble Diagnosis Flow Chart" .

RELATED TO REAR DISPLAY (HEADREST-MOUNTED)

Perform diagnosis of the Power supply and ground circuit before starting diagnosis by symptom. Refer to [AV-367, "HEADREST DISPLAY UNIT : Diagnosis Procedure"](#).

Symptom	Check item		Possible malfunction location/Action to take
Video is not shown on the headrest display unit screen.	Use the touch button in front display to switch video images on the headrest display unit.	Video is shown.	Operate with the remote to see if videos can be switched.
		Video is not shown.	Replace headrest display unit. Refer to AV-430, "Removal and Installation" .
Video is not shown on the headrest display unit (passenger seat). Headrest display unit (driver seat) is normal.	Perform "AV Comm Diagnosis" within "On Board Diagnosis Function". Refer to AV-216, "On Board Diagnosis Function" .		- AV communication circuits between headrest display unit (driver seat) and headrest display unit (passenger seat). - Replace headrest display unit. Refer to AV-430, "Removal and Installation".
Headrest display unit inoperative with the remote.	All keys inoperative.	- Check battery polarity. - Replace battery.	- Check with a remote from the same vehicle family. - Check infrared* of the luminescent part (LED) of the remote.
	Some keys inoperative.	- Check with a remote from the same vehicle family. - Check infrared* of the luminescent part (LED) of the remote.	The function corresponding to the remote operation is not included (this is not a malfunction).
Headrest display unit screen is black.	Play a DVD.	Video is not shown.	Switch from AUX mode to DVD mode and check video.
		Screen is dark.	Adjust screen for image quality (this is not a malfunction).
		Screen is black.	Replace headrest display unit. Refer to AV-430, "Removal and Installation" .

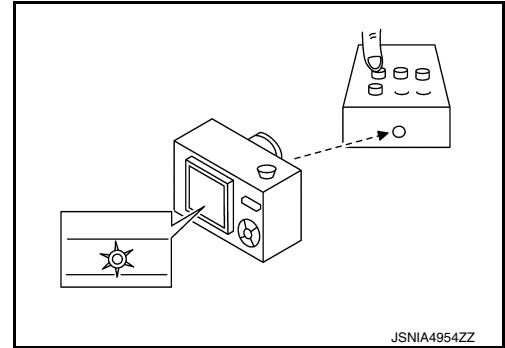
MULTI AV SYSTEM

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

Symptom	Check item	Possible malfunction location/Action to take
Video shown on headrest display unit screen becomes distorted or rolls up/down	Adjust the color settings using the display screen menu items.	If the symptom does not change, replace headrest display unit. Refer to AV-430, "Removal and Installation" .
Headrest display unit screen is blue.	—	Replace headrest display unit. Refer to AV-430, "Removal and Installation" .

*: To check infrared, check light of the luminescent part (LED) through the lens of digital camera when operating the remote.



RELATED TO HEADPHONES (HEADREST-MOUNTED)

Symptom	Check item		Possible malfunction location/Action to take
Audio cannot be heard from headphones.	- Turn ON the headrest display unit. - Switch the slide switch on the left side of the headphones.	Audio cannot be heard.	Check power supply of headphones.
Headphones cannot be turned ON.	- Battery polarity. - Battery poor contact. - Battery replacement.	Power is ON (power indicator lamp: ON).	This is not a malfunction.
		Power cannot be turned ON (power indicator lamp: OFF).	Replace headphones.

AV

NORMAL OPERATING CONDITION

Description

INFOID:0000000011150485

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.	• Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		• Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	• Relay malfunction, AV control unit malfunction
	The noise occurs when various motors are operating.	• Motor case ground • Motor
The noise occurs constantly, not just under certain conditions.		• Rear defogger coil malfunction • Open circuit in printed heater • Poor ground of antenna feeder line
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		• Ground wire of body parts • Ground due to improper part installation • Wiring connections or a short circuit

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® enabled cellular phones may not be recognized by the in-vehicle phone module. Refer to "RELATED TO HANDS-FREE PHONE (Check Compatibility)" in AV-409, "Symptom Table".
Cannot use hands-free phone.	Customer will not be able to use a hands-free phone under the following conditions: • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. NOTE: 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.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[PREMIUM 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.

RELATED TO NAVIGATION

Basic Operation

Symptom	Cause	Remedy
No image is shown.	Display brightness adjustment is set fully to DARK side.	Adjust the display brightness.
No guide sound is heard. Audio guide volume is too low or too high.	Volume control is set to OFF, MIN or MAX.	Adjust the audio guide volume.
	Audio guidance is not available while the vehicle is driving on a dark pink route.	System is not malfunctioning.
Screen is too dark. Motion of the image is too slow.	Temperature inside the vehicle is low.	Wait until the temperature inside the vehicle reaches the proper temperature.
Small black or bright spots appear on the screen.	Symptom peculiar to a liquid crystal display (display unit).	System is not 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 >

[PREMIUM AUDIO]

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 >

[PREMIUM AUDIO]

Symptom	Cause	Remedy
Voice guide will not operate.	Note: Voice guide is only available at intersections that satisfy certain conditions (indicated by ● on the map). Therefore, guidance may not be given even when the route on the map changes direction.	System is not malfunctioning.
	The vehicle is not on the recommended route.	Return to the recommended route or re-search the route.
	Voice guide is turned OFF.	Turn voice guide ON.
	Route guide is turned OFF.	Turn route guide ON.
Voice guide does not match the actual road pattern.	Voice guide may vary with the direction to which the vehicle is turn and the connection of the road to other roads.	Drive in conformity to the actual traffic rules.

Route Search

Symptom	Cause	Remedy
No route is shown.	No road to be searched is found around the destination.	Find wider road (orange road or wider) nearby and reset the destination and passing points onto it. Take care of the traveling direction when there are separate up and down roads.
	Starting point and the destination are too close.	Set the destination at more distant point.
	Conditional traffic regulation (day of the week/ time of the day) is set at the area around the current location or the destination.	Turn the time-regulating search conditions OFF. Turn "Avoid regulation time" in the search conditions OFF.
Indicated route is intermittent.	In some areas, highways (gray routes) are not used for the search ^(Note) . Therefore, the route to the current location or the passing points may be intermittent.	System is not malfunctioning.
When the vehicle has passed the recommended route, it is deleted from the screen.	A recommended route is controlled by each section. When the vehicle has passed the passing point 1, then the map data from the starting point up to the passing point 1 will be deleted. (The data may remain undeleted in some area.)	System is not malfunctioning.
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, etc.) is set at the area around the starting point or the destination.	Slightly move the starting point or the destination, or set the passing point on the route of your choice.
	In the area where highways (gray routes) are used for the search, left turn has priority around the current location and the destination (passing points). For this reason, the recommended route may be detouring.	System is not malfunctioning.
Landmarks on the map do not match the actual ones.	This can be happen due to omission or error in the map data.	As a rule, an updated map DVD-ROM will be released once a year. Wait until the latest map has become available.
Recommended route is far from the starting point, passing points, and destination.	Starting point, passing points, and destination of the route guide were set far from the desired points because route searching data around these area were not stored.	Reset the destination onto the road nearby. If this road is one of the highways (gray routes), an ordinary road nearby may be displayed as the recommended route.

NOTE:

Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

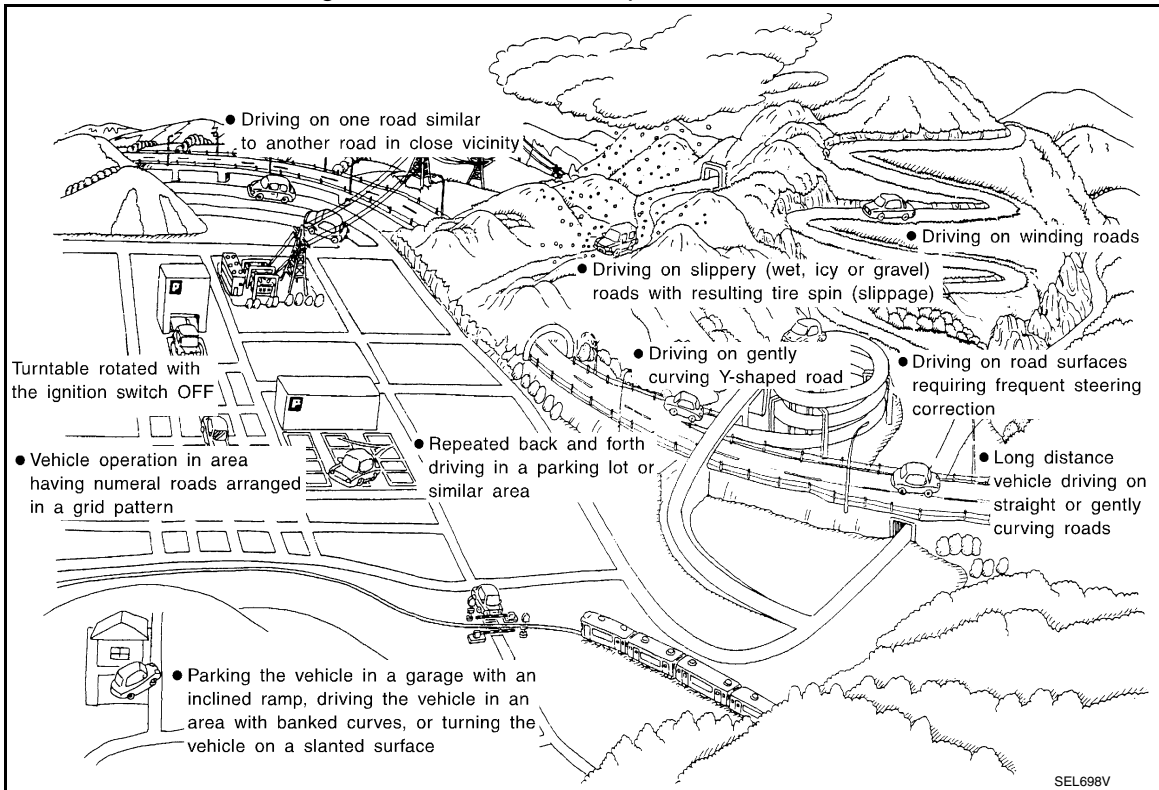
Examples of Current-Location Mark Displacement

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

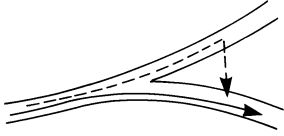
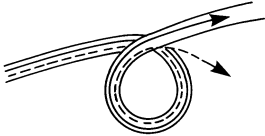
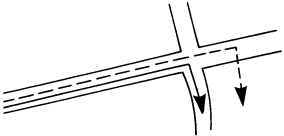
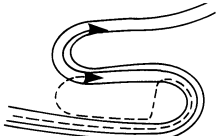
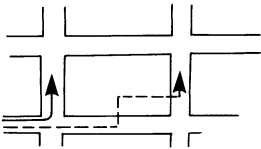
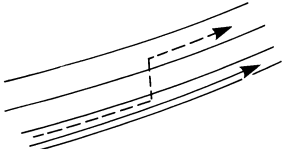
Vehicle's travel amount is calculated by reading its travel distance and turning angle. Therefore, if the vehicle is driven in the following manner, an error will occur in the vehicle's current location display. If correct location has not been restored after driving the vehicle for a while, perform location correction.



NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

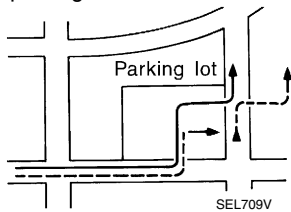
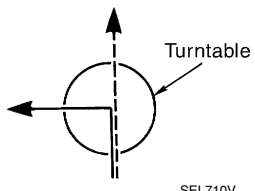
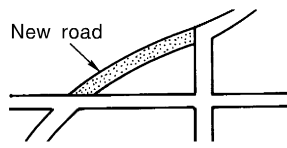
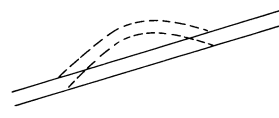
Cause (condition) –: While driving ooo: Display		Driving condition	Remarks (correction, etc.)
Road configuration	Y-intersections  ELK0192D	At a Y intersection or similar gradual division of roads, an error in the direction of travel deduced by the sensor may result in the current-location mark appearing on the wrong road.	
	Spiral roads  ELK0193D	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  ELK0194D	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.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
	Zigzag roads  ELK0195D	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  ELK0196D	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  ELK0197D	When two roads are running in parallel (such as highway and sideways), the map may be matched to the other road by mistake and the vehicle mark may deviate from the correct location.	

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

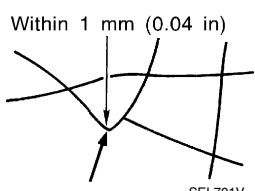
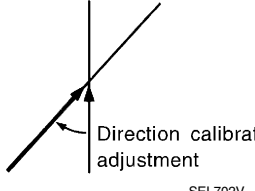
[PREMIUM AUDIO]

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 >

[PREMIUM AUDIO]

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  SEL701V	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  SEL702V	If the accuracy of location settings during correction is poor, accuracy may be reduced afterwards.	Perform direction correction.

Location Correction by Map-Matching is Slow

- The map-matching function needs to refer to the data of the surrounding area. It is necessary to drive some distance for the function to work.
- Because map-matching operates on this principle, when there are many roads running in similar directions in the surrounding area, no matching determination may be made. The location may not be corrected until some special feature is found.

Name of Road is Not Displayed

The current road name may not be displayed if there are no road names displayed on the map screen.

Contents of Display Differ for Birdview™ and the (Flat) Map Screen

Difference of the BIRDVIEW™ screen from the flat map screen are as follows.

- The current place name displays names which are primarily in the direction of vehicle travel.
- The amount of time before the vehicle travel or turn angle is updated on the screen is longer than for the (flat) map display.
- The conditions for display of place names, roads, and other data are different for nearby areas and for more distant areas.
- Some thinning of the character data is done to prevent the display becoming too complex. In some cases and in some locations, the display contents may differ.
- The same place name, street name, etc. may be displayed multiple times.

Vehicle Mark Shows a Position Which is Completely Wrong

In the following cases, the vehicle mark may appear on completely different position in the map depending on the GPS satellite signal receiving conditions. In this case, perform location correction and direction correction.

- When location correction has not been done
- If the receiving conditions of the GPS satellite signal is poor, if the vehicle mark becomes out of place, it may move to a completely different location and not come back if location correction is not done. The position will be corrected if the GPS signal can be received.
- When the vehicle has traveled by ferry, or when the vehicle has been being towed

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[PREMIUM AUDIO]

- 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.

RELATED TO SONAR

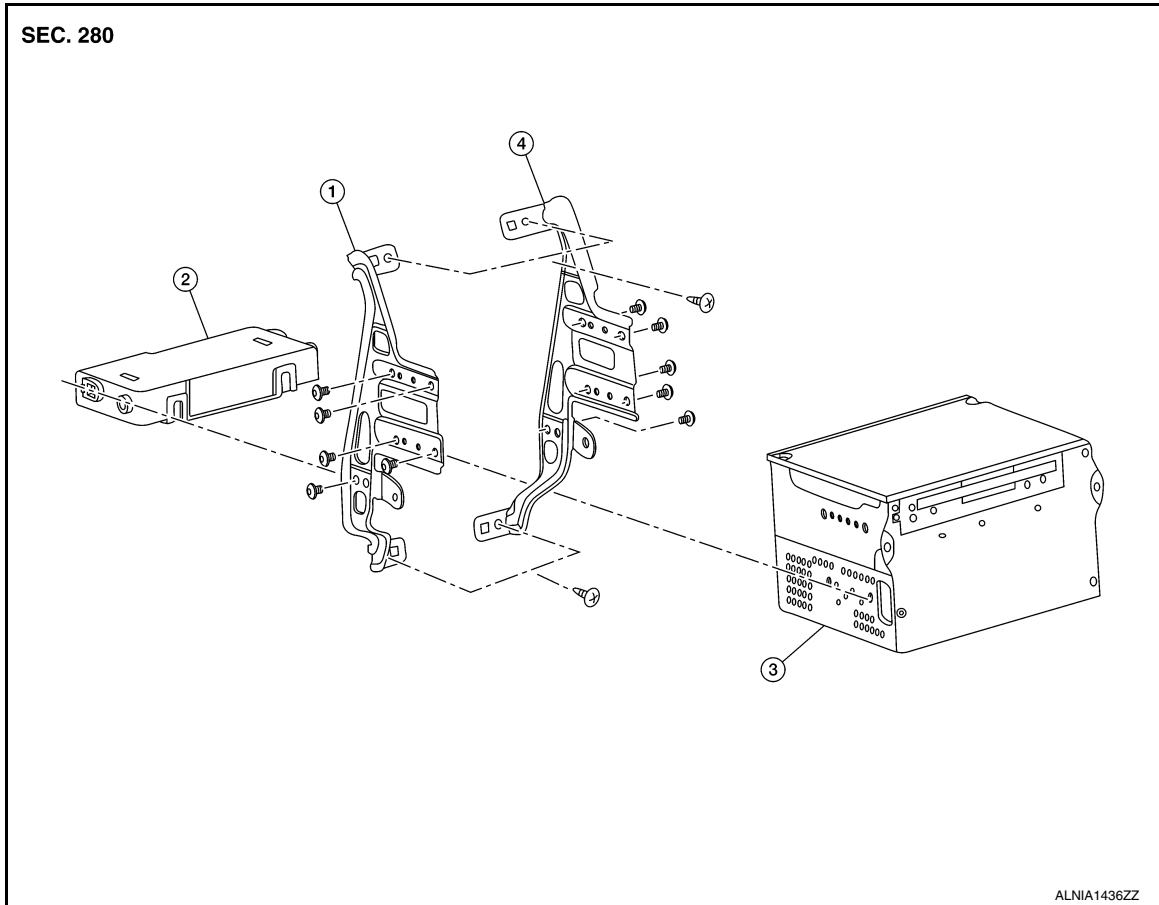
Symptom	Possible cause
Unstable object detection	• The vehicle is on a rough surface, such as stone or gravel. • When used in poor weather conditions, such as heavy snow/rain strong wind. • When subjected to an ultrasonic noise generated from exhaust muffler or brakes. • When left standing in the hot sun or in a cold climate. • When the surface of the sensor is frozen or covered with snow/dirt/moisture. • When a retrofitted xenon lamp, lighted license plate, or harness is close to the sensor body or sensor harness. • When subjected to loop coil noises generated from a vehicle detector placed at an intersection or coin parking area.
Object undetectable	• Air-containing objects, such as cloth, cotton, glass wool, dust, and snow. • Thin objects, such as rope, chain and wire. • Smooth-faced objects placed in a slanting direction. • Fast-moving small animals. • A corner of an angular object. NOTE: If the sensor detection part is scratched, obstacles cannot be detected.

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

INFOID:0000000011150486



1. AV control unit bracket (LH)	2. A/C auto amp.	3. AV control unit
4. AV control unit bracket (RH)		

Removal and Installation

INFOID:0000000011150487

REMOVAL

CAUTION:

- Remove battery terminal and AV control unit after a lapse of 30 seconds or more after turning the ignition switch OFF.
- Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to [AV-305, "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-95, "Removal and Installation"](#).
2. Remove cluster lid C. Refer to [IP-22, "CLUSTER LID C : Removal and Installation"](#).
3. Remove the screws, then pull out the AV control unit.
4. Disconnect the harness connectors from the AV control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

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AV CONTROL UNIT

< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

- When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to [AV-305, "CONFIGURATION \(AV CONTROL UNIT\) : Configuration List"](#).

A/C AND AV SWITCH ASSEMBLY

Removal and Installation

INFOID:0000000011150488

REMOVAL

1. Remove cluster lid C lower. Refer to [IP-22. "CLUSTER LID C LOWER : Removal and Installation"](#).
2. Remove the A/C and AV switch assembly lower screws.
3. Release upper pawls and remove A/C and AV switch assembly.

INSTALLATION

Installation is in the reverse order of removal.

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AV

STEERING SWITCH

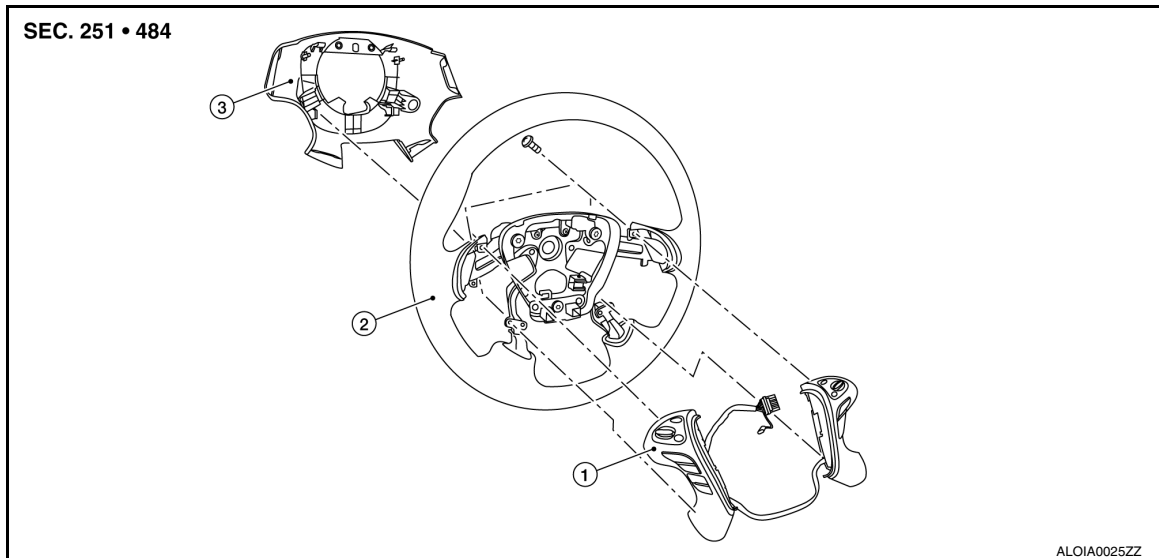
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

STEERING SWITCH

Exploded View

INFOID:0000000011150489



1. Steering switches

2. Steering wheel

3. Steering wheel rear finisher

Removal and Installation

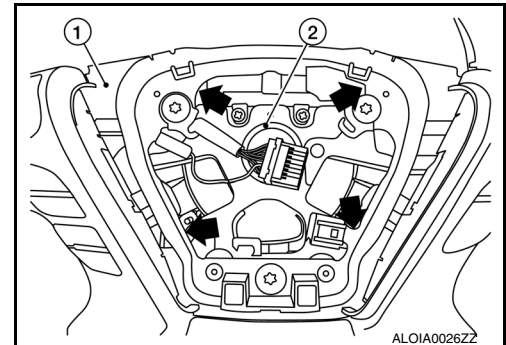
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REMOVAL

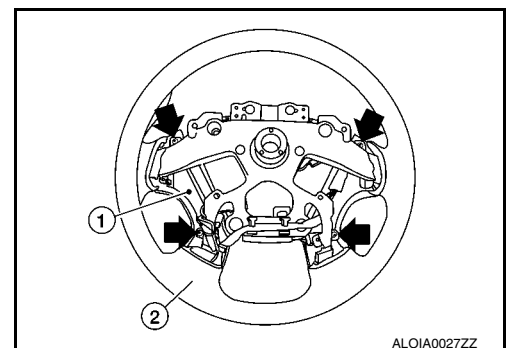
NOTE:

The steering switches are serviced as an assembly.

1. Remove steering wheel. Refer to [ST-45, "Removal and Installation"](#).
2. Release pawls and remove steering wheel rear finisher (1) from steering wheel (2).



3. Remove steering switches screws.
4. Remove steering switches (1) from steering wheel (2).



INSTALLATION

Installation is in the reverse order of removal.

DISPLAY UNIT

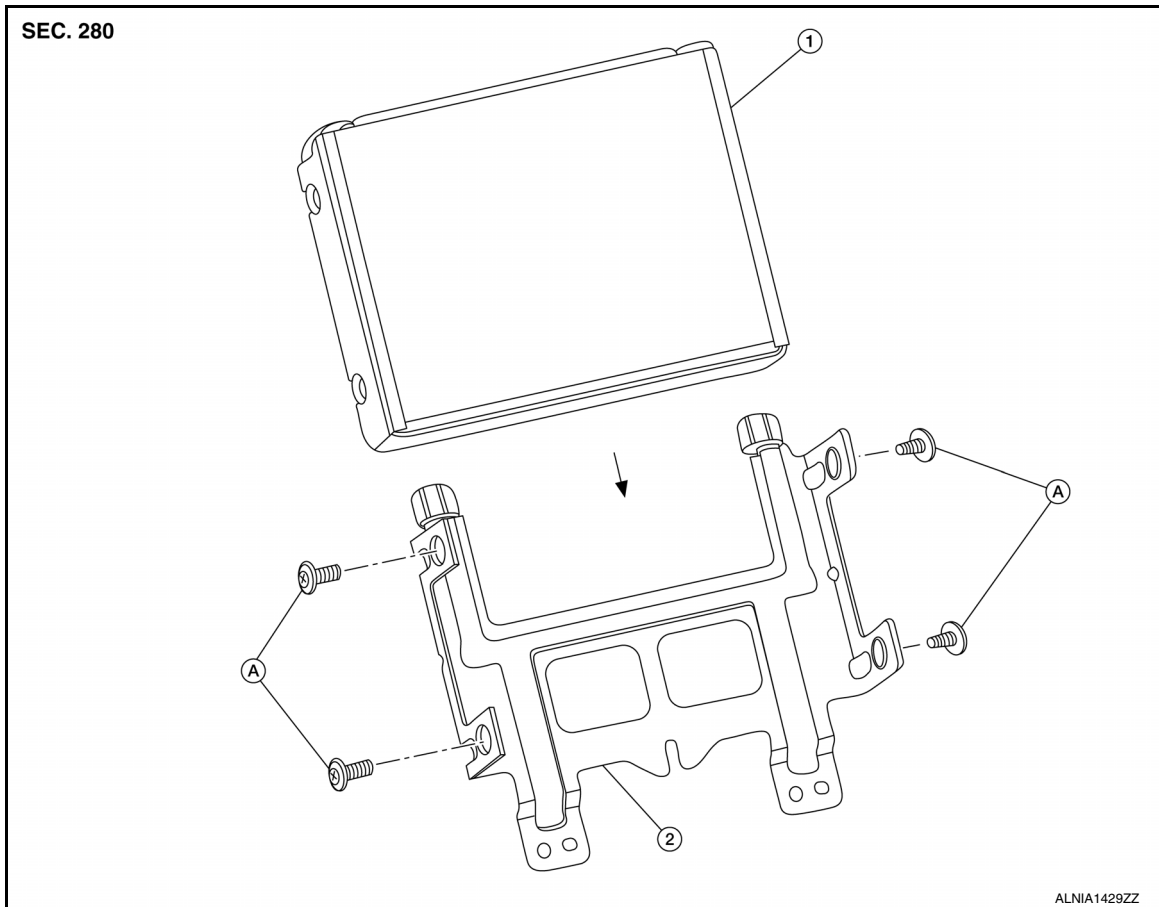
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

DISPLAY UNIT

Exploded View

INFOID:0000000011150491



1. Display unit

2. Display unit bracket

A. Display unit bracket screws

Removal and Installation

INFOID:0000000011150492

REMOVAL

1. Remove the cluster lid D. Refer to [IP-24. "Removal and Installation"](#).
2. Remove the display unit screws, then pull out the display unit and bracket.
3. Disconnect the harness connector from the display unit, then remove the display unit and bracket.
4. Remove the display unit brackets screws and the display unit from the display unit bracket.

INSTALLATION

Installation is in the reverse order of removal.

HEADREST DISPLAY UNIT

Removal and Installation

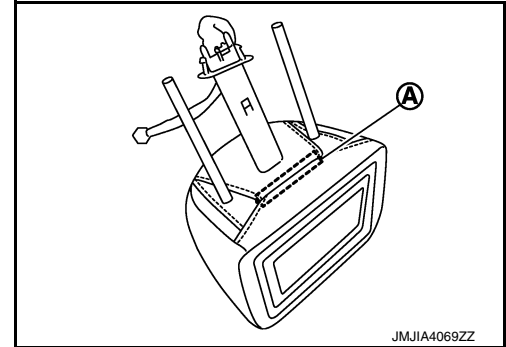
INFOID:000000011150493

REMOVAL

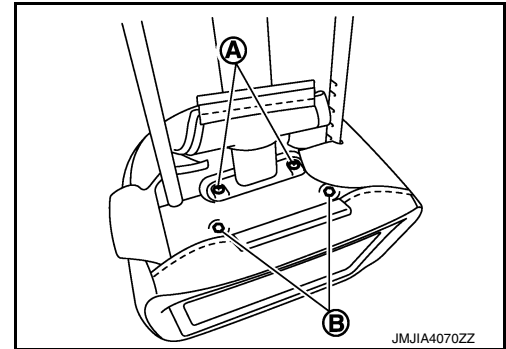
CAUTION:

- Do not press on the panel surface of display (glass area).
- Do not press or pull out the movable part of display.

1. Remove the headrest trim retainer (A).

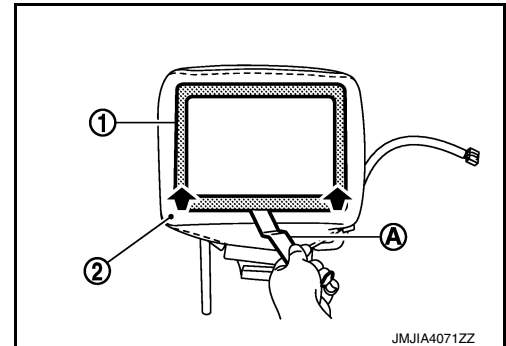


2. Remove the headrest display harness and upper tube screws (A), then remove headrest display unit bolts (B).



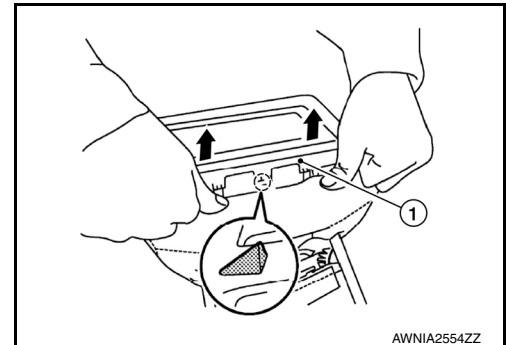
3. Remove the headrest display escutcheon and headrest display.

a. Insert a suitable tool (A) between lower side of headrest display escutcheon (1) and headrest trim (2) and pull out lower side of escutcheon.



b. Pull out headrest display escutcheon (1) to the position that pawl is visible and disengage pawl.

○: Pawl



c. Pull out lower side of headrest display escutcheon from headrest.

HEADREST DISPLAY UNIT

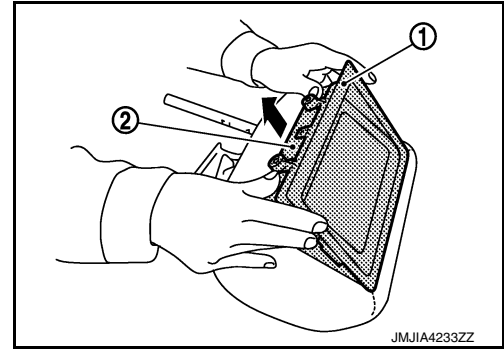
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

CAUTION:

Be careful not to damage pawls on upper side headrest display escutcheon.

- d. Pull downward and remove headrest display escutcheon (1) and headrest display unit (2) by pulling them out and removing pins on upper side of display.



- e. Disconnect inner harness connector.
f. Press headrest display escutcheon to the headrest display unit side. Disconnect pawls on upper side and remove headrest display escutcheon.
4. Remove the headrest display harness upper tube from headrest trim.

INSTALLATION

Installation is in the reverse order of removal.

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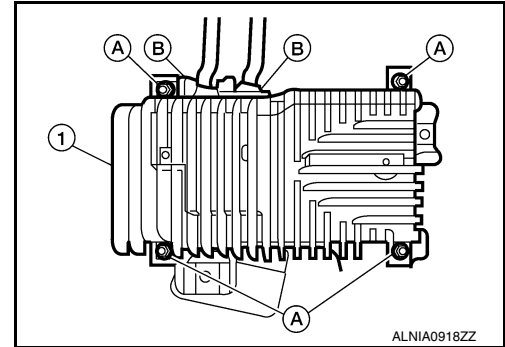
AV

BOSE SPEAKER AMP**Removal and Installation**

INFOID:0000000011150494

REMOVAL

1. Disconnect the negative battery terminal. Refer to [PG-95, "Removal and Installation"](#)
2. Remove third row seat. Refer to [SE-113, "Removal and Installation"](#).
3. Remove Bose speaker amp screws (A).
4. Disconnect the harness connectors (B) from the Bose speaker amp. and remove.

**INSTALLATION**

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

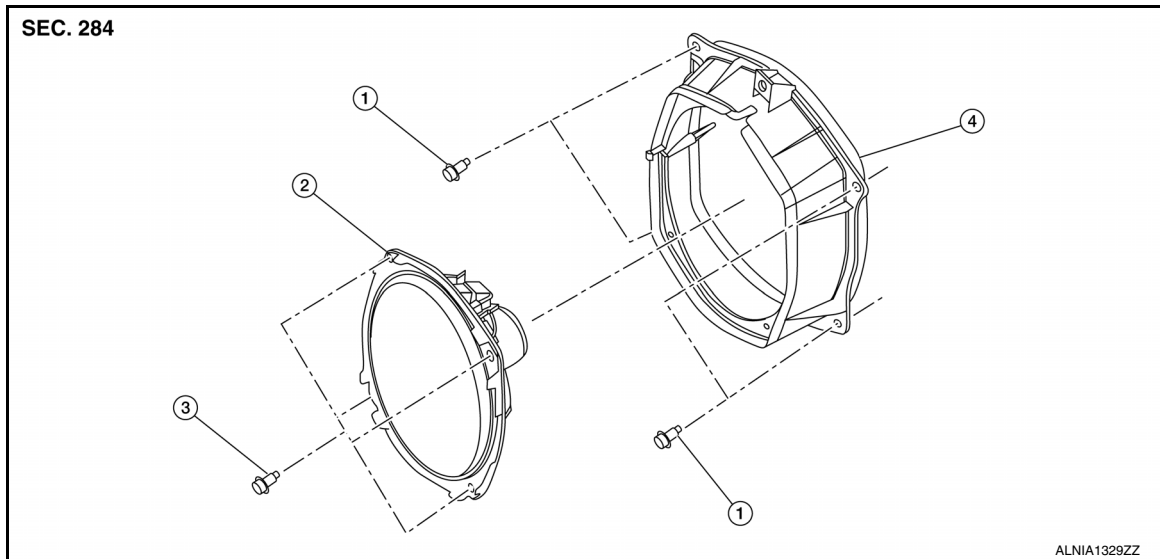
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

FRONT DOOR SPEAKER

Exploded View

INFOID:00000000111150495



1. Speaker bracket bolt	2. Front door speaker	3. Speaker bolt
4. Speaker bracket		

Removal and Installation

INFOID:00000000111150496

REMOVAL

1. Remove the front door finisher. Refer to [INT-15, "Removal and Installation"](#).
2. Remove the front door speaker bolts.
3. Pull out the front door speaker from the speaker bracket.
4. Disconnect the harness connector from front door speaker and remove.
5. Remove the speaker bracket bolts and the speaker bracket from front door (if necessary).

INSTALLATION

Installation is in the reverse order of removal.

AV

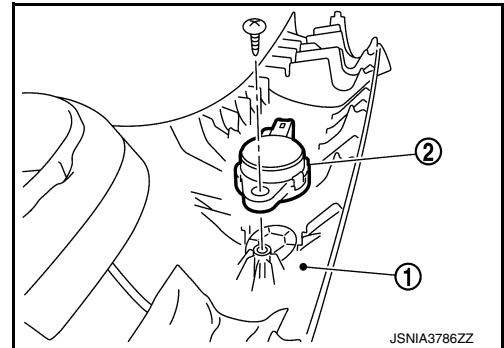
FRONT TWEETER

Removal and Installation

INFOID:0000000011150497

REMOVAL

1. Remove the front pillar finisher (1). Refer to [INT-19. "FRONT PILLAR FINISHER : Removal and Installation"](#)
2. Remove the two screws and the front tweeter (2).



INSTALLATION

Installation is in the reverse order of removal.

INSTRUMENT PANEL SPEAKER/TWEETER

< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

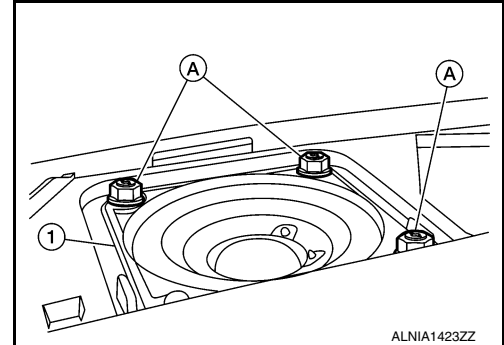
INSTRUMENT PANEL SPEAKER/TWEETER

Removal and Installation

INFOID:0000000011150498

REMOVAL

1. Remove instrument panel tweeter grille. Refer to [IP-14, "Exploded View"](#).
2. Remove the bolts (A), then pull out the instrument panel tweeter (1).
3. Disconnect the harness connector from the instrument panel tweeter (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

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AV

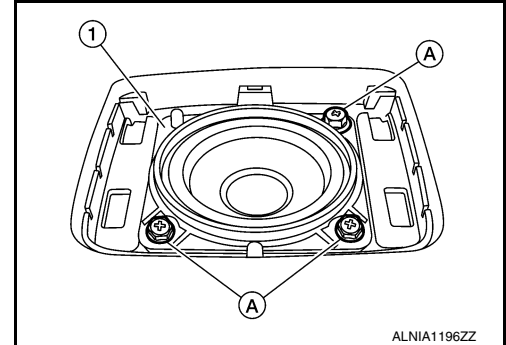
CENTER SPEAKER

Removal and Installation

INFOID:0000000011150499

REMOVAL

1. Remove center speaker grille. Refer to [IP-14, "Exploded View"](#).
2. Remove the center speaker bolts (A).
3. Pull out the center speaker (1).
4. Disconnect the harness connector from the center speaker and remove.



INSTALLATION

Installation is in the reverse order of removal.

REAR DOOR SPEAKER

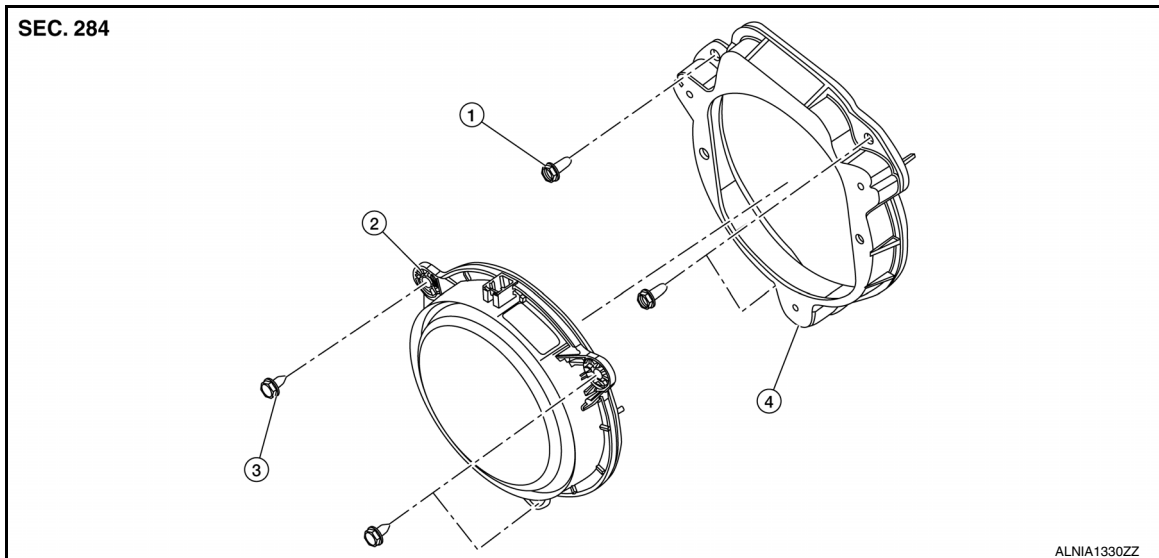
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

REAR DOOR SPEAKER

Exploded View

INFOID:0000000011150500



1. Speaker bracket bolt	2. Rear door speaker	3. Speaker bolt
4. Speaker bracket		

Removal and Installation

INFOID:0000000011150501

REMOVAL

1. Remove the rear door finisher. Refer to [INT-17, "Removal and Installation"](#).
2. Remove the rear door speaker bolts.
3. Disconnect the harness connector from the rear door speaker and remove.
4. Remove the speaker bracket bolts and the speaker bracket from the rear door (if necessary).

INSTALLATION

Installation is in the reverse order of removal.

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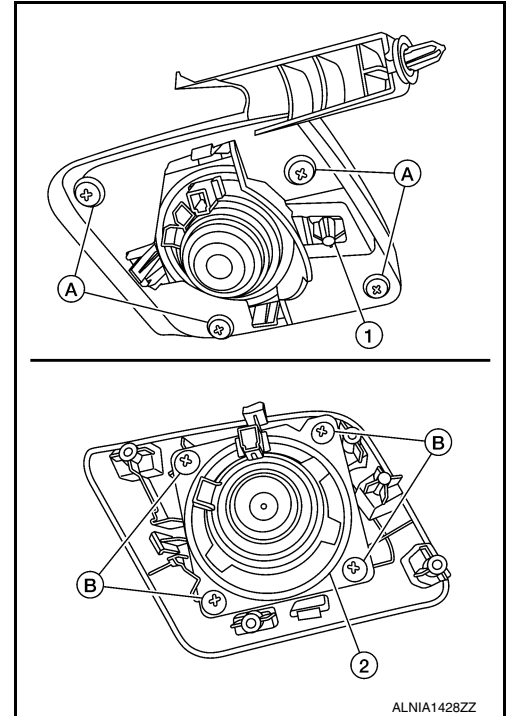
REAR SPEAKERS

Removal and Installation

INFOID:0000000011150502

REMOVAL

1. Remove the luggage side lower finisher. Refer to [INT-31, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).
2. Remove rear side speaker screws (A), then remove the rear side and grille assembly (1) from the luggage side lower finisher.
3. Remove the screws (B) from the rear side speaker grille, then remove the rear side speaker (2).



ALNIA1428ZZ

INSTALLATION

Installation is in the reverse order of removal.

SUBWOOFER

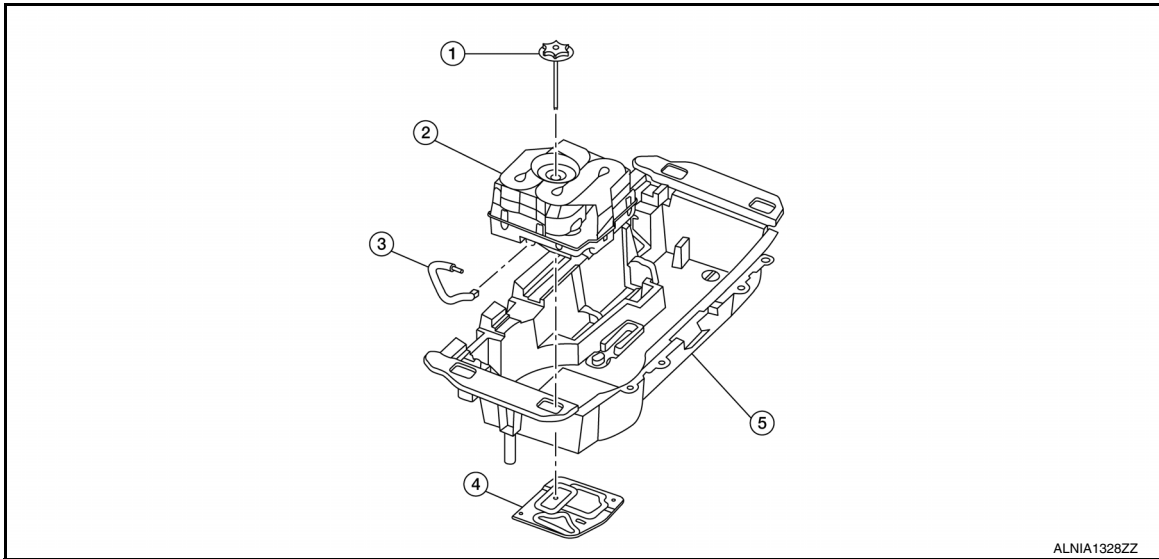
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

SUBWOOFER

Exploded View

INFOID:00000000111150503



- 1. Spare tire clamp
- 4. Bracket

- 2. Subwoofer
- 5. Rear storage box

- 3. Harness

Removal and Installation

INFOID:00000000111150504

REMOVAL

1. Open the storage box lid.
2. Remove the spare tire clamp.
3. Lift subwoofer to disconnect the harness connector and remove.

INSTALLATION

Installation is in the reverse order of removal.

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AV

USB INTERFACE

Removal and Installation

INFOID:0000000011150505

REMOVAL

1. Remove shift selector finisher. Refer to [JP-18. "Exploded View"](#).
2. Disconnect the harness connector from the USB interface.
3. Release the pawl from the back of USB interface, then remove USB interface.

INSTALLATION

Installation is in the reverse order of removal.

FRONT AUXILIARY INPUT JACKS

Removal and Installation

INFOID:00000000111150506

REMOVAL

1. Remove shift selector finisher. Refer to [IP-18. "Exploded View"](#).
2. Disconnect the harness connector from the front auxiliary input jack.
3. Remove front auxiliary input jack screws and the front auxiliary input jack.

INSTALLATION

Installation is in the reverse order of removal.

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MICROPHONE

Removal and Installation

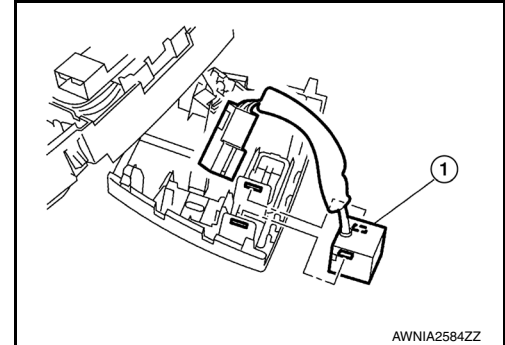
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REMOVAL

1. Remove the front room/map lamp assembly. Refer to [INL-59. "Removal and Installation"](#).
2. Remove the microphone (1) from the front room/map lamp assembly.

CAUTION:

Carefully handle the pawls that retain the microphone to avoid damaging.



AWNIA2584ZZ

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Make sure the microphone is firmly secure after installation.

AROUND VIEW MONITOR CONTROL UNIT

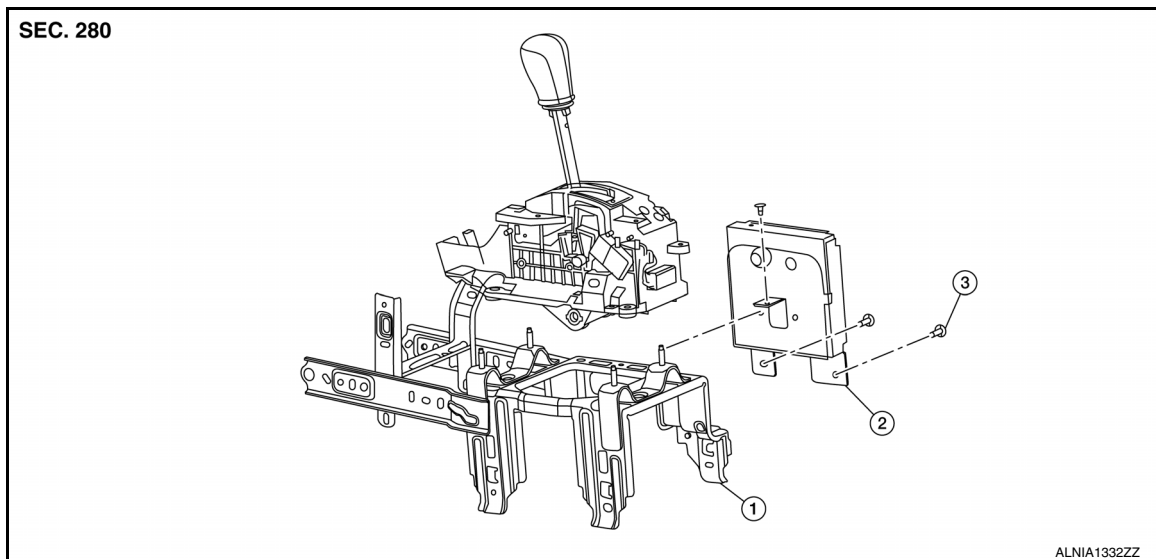
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

AROUND VIEW MONITOR CONTROL UNIT

Exploded View

INFOID:0000000011150508



1. Bracket

2. Around view monitor control unit

3. Screw

Removal and Installation

INFOID:0000000011150509

REMOVAL

1. Remove the center console. Refer to [IP-18, "Removal and Installation"](#).
2. Remove the around view monitor control unit screws.
3. Disconnect the harness connector from around view monitor control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

AV

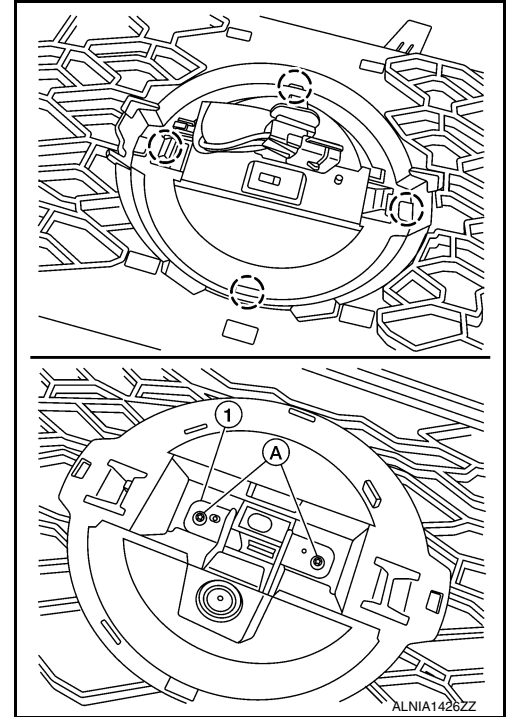
FRONT CAMERA

Removal and Installation

INFOID:0000000011150510

REMOVAL

1. Remove the front grille. Refer to [EXT-23. "Removal and Installation"](#).
2. Release the emblem pawls and remove.
○: Pawl
3. Remove the front camera screws (A) and the front camera (1) from the front grille.



INSTALLATION

Installation is in the reverse order of removal.

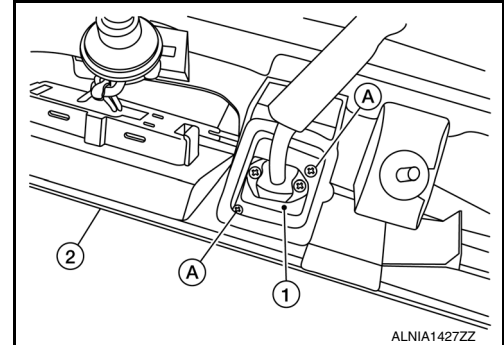
REAR VIEW CAMERA

Removal and Installation

INFOID:0000000011150511

REMOVAL

1. Remove the back door outer finisher. Refer to [EXT-43. "Removal and Installation"](#).
2. Remove rear view camera screws (A), then remove rear view camera (1) from the back door outer finisher (2).



INSTALLATION

Installation is in the reverse order of removal.

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AV

SIDE CAMERA

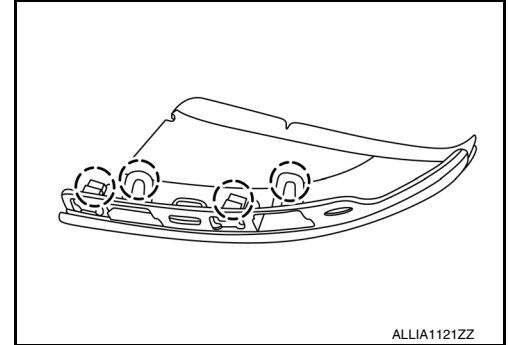
Removal and Installation

INFOID:000000011150512

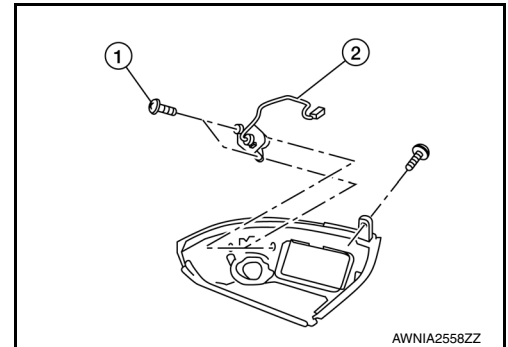
REMOVAL

1. Remove the door mirror. Refer to [MIR-17, "Removal and Installation"](#).
2. Remove the door mirror rear finisher. Refer to [MIR-19, "Removal and Installation"](#).
3. Release the side camera finisher pawls using a suitable tool, disconnect the harness connector from the side camera, then remove the side camera finisher.

○: Pawl



4. Remove the screws (1) and the side camera (2).



INSTALLATION

Installation is in the reverse order of removal.

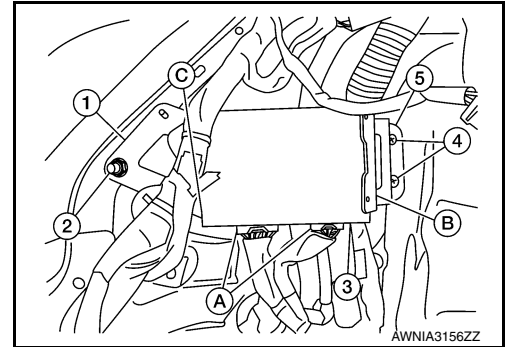
VIDEO DISTRIBUTOR

Removal and Installation

INFOID:0000000011150513

REMOVAL

1. Remove the luggage side lower finisher (LH). Refer to [INT-31. "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).
2. Disconnect the video distributor harness connectors (A).
3. Remove the video distributor nut (2) and bolts (4).
4. Remove the video distributor (3) and brackets (1, 5) from the vehicle as a single unit.
5. Remove screws (B, C), then remove video distributor (3).



INSTALLATION

Installation is in the reverse order of removal.

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P

AV

REAR AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000011150514

REMOVAL

1. Remove rear center ventilator duct. Refer to [VTL-12. "REAR CENTER VENTILATOR DUCT : Removal and Installation"](#).
2. Remove rear auxiliary input jack screws and the rear auxiliary input jack.

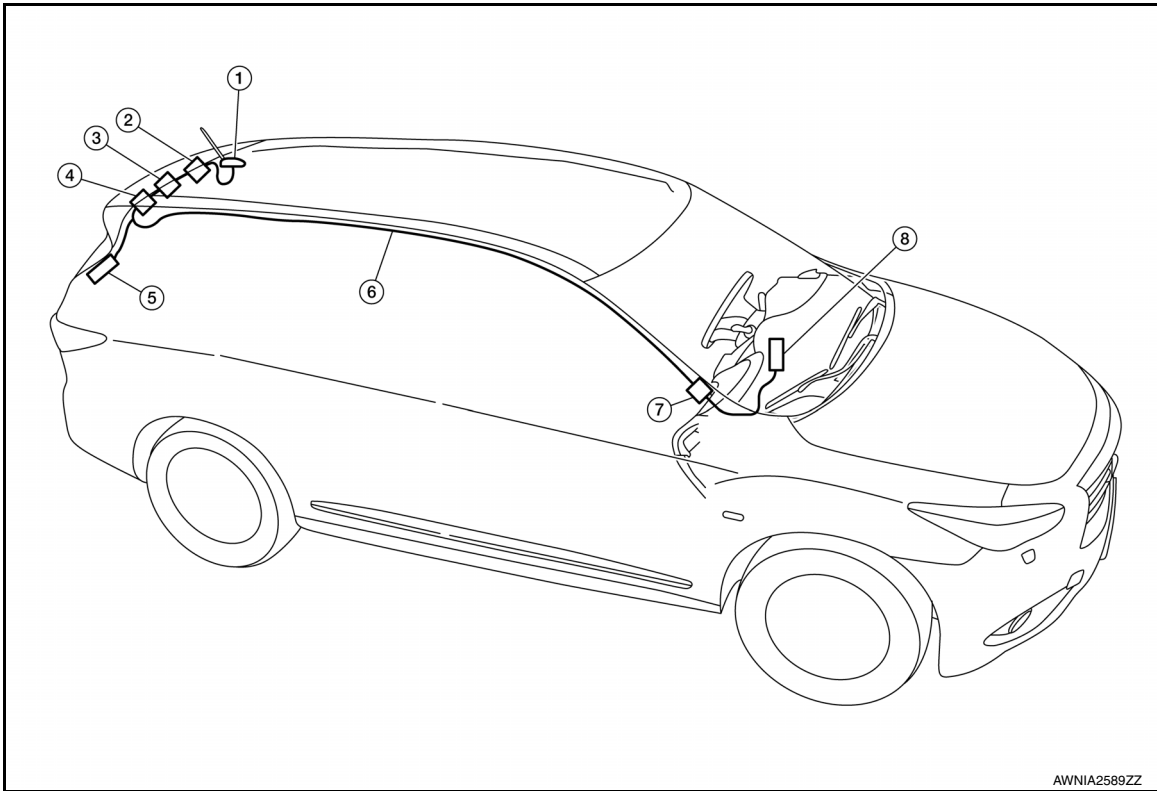
INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antennas

INFOID:00000000111150515



AWNIA2589ZZ

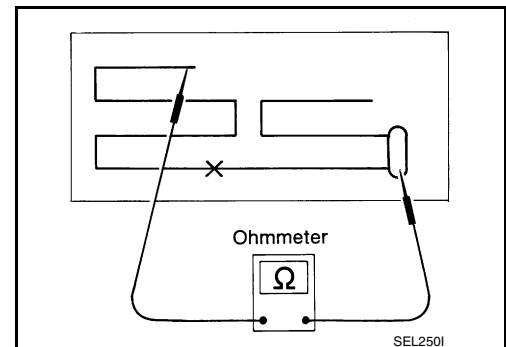
1. Antenna base (satellite antenna and antenna amp)	2. M502	3. M501
4. M503, M504	5. M505	6. Antenna Feeder
7. M95, M151, M500, M509	8. AV control unit M155, M156	

Window Antenna Repair

INFOID:00000000111150516

ELEMENT CHECK

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

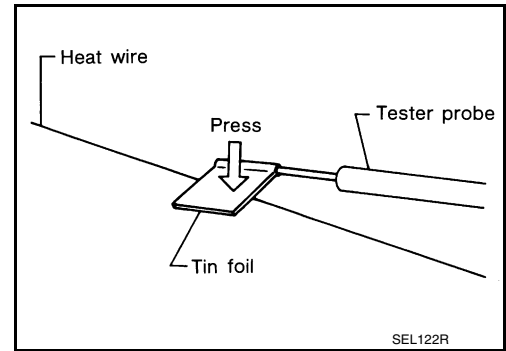


AUDIO ANTENNA

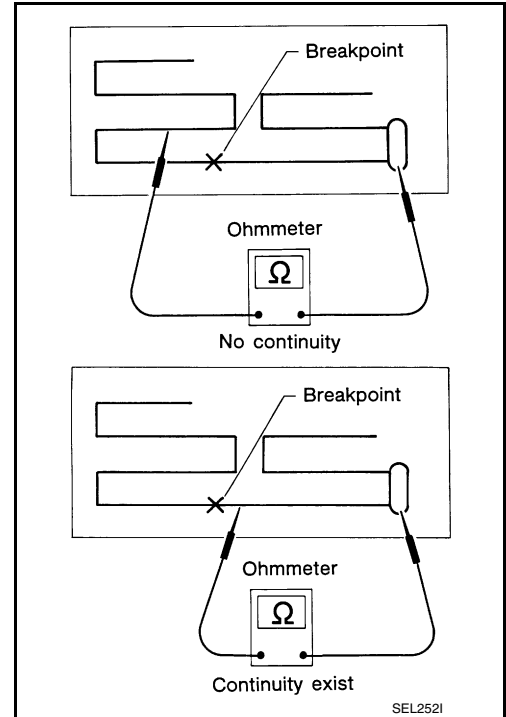
< REMOVAL AND INSTALLATION >

[PREMIUM AUDIO]

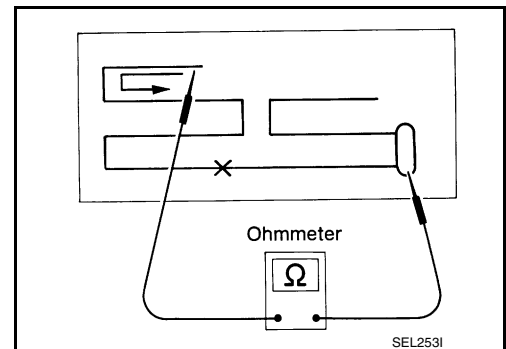
- When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.



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



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



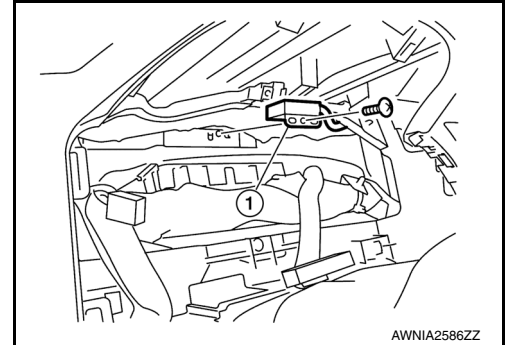
GPS ANTENNA

Removal and Installation

INFOID:0000000011150517

REMOVAL

1. Remove the combination meter. Refer to [MWI-85. "Removal and Installation"](#).
2. Disconnect the harness connector from AV control unit.
3. Release the harness feeder clips.
4. Remove GPS antenna screw and the GPS antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

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AV

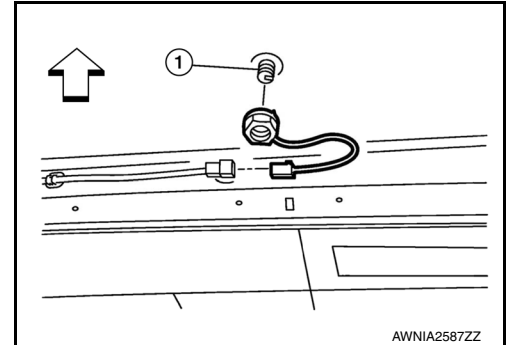
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:0000000011150518

REMOVAL

1. Lower headlining (rear). Refer to [INT-27, "Removal and Installation"](#).
2. Disconnect harness connector from antenna feeder.
3. Remove nut from satellite antenna (1) and remove.
: Front



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

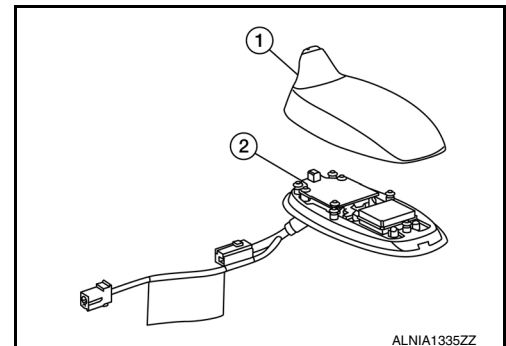
If the satellite antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. If the nut is tightened tighter than the specified torque, this will deform the roof panel.

Disassembly and Assembly

INFOID:0000000011150519

DISASSEMBLY

Insert a suitable tool into gaps between satellite antenna (2) and the cover (1), then remove the cover (1) from satellite antenna (2).



ASSEMBLY

Assembly is in the reverse order of disassembly.