SECTION AV
AUDIO, VISUAL & NAVIGATION SYSTEM

CONTENTS

MID AUDIO

BOSE AUDIO WITH NAVIGATION

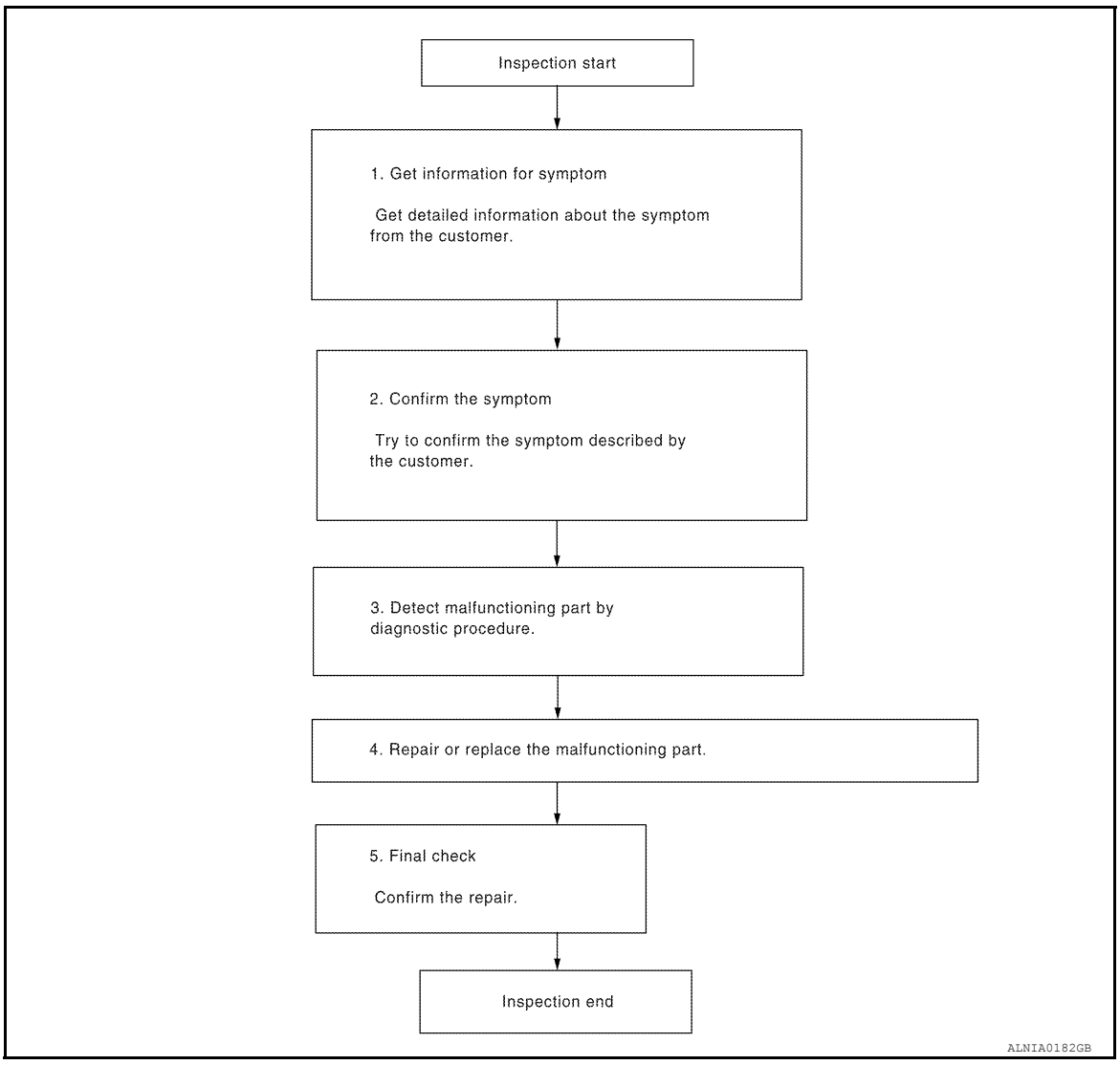
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000007347574

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.

Is malfunctioning part detected?

YES >> GO TO 4
NO >> GO TO 2

4. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 5

5. FINAL CHECK

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

Has the symptom been repaired?

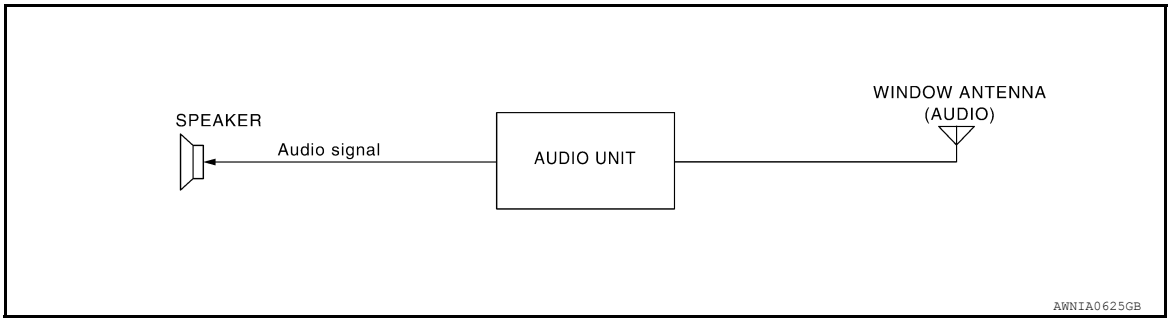
YES >> Inspection End.
NO >> GO TO 2

SYSTEM DESCRIPTION

AUDIO SYSTEM

System Diagram

INFOID:0000000007347575



System Description

INFOID:0000000007347576

AUDIO SYSTEM

The audio system consists of the following components

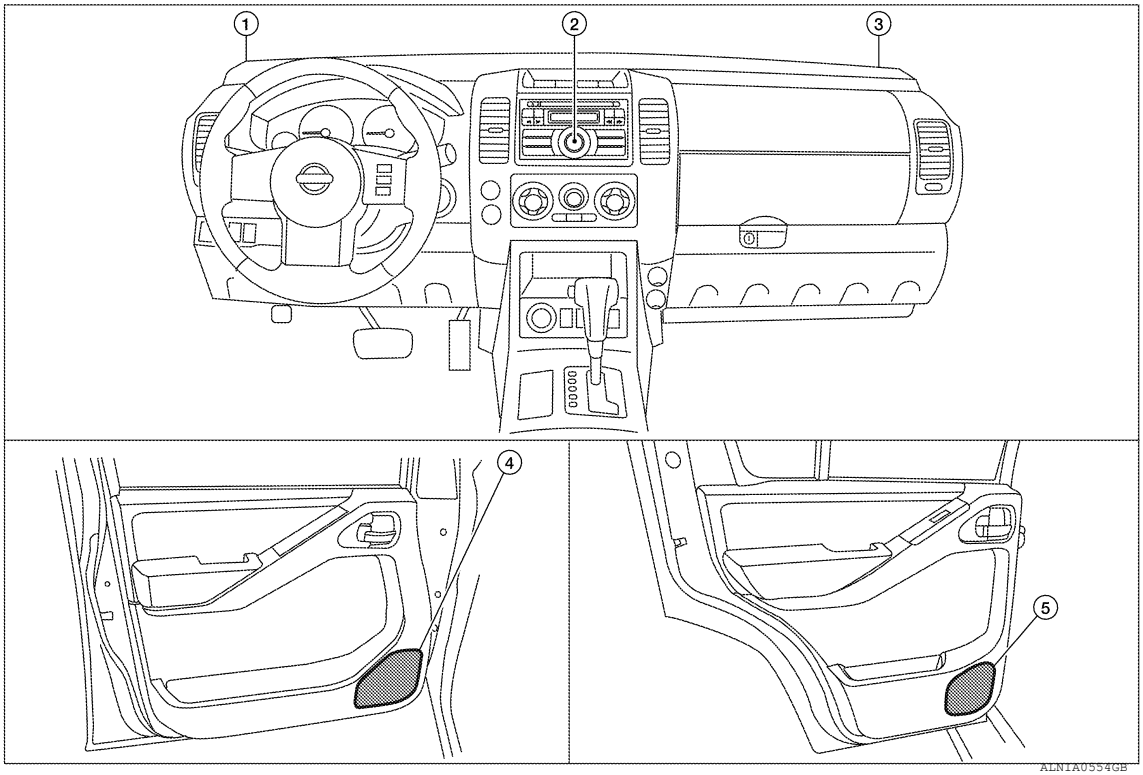
- Audio unit
- Window antenna (audio)
- Front door speakers
- Front tweeters
- Rear door speakers

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

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

Component Parts Location

INFOID:0000000007347577



1. Front tweeter LH M109
2. Audio unit M38, M60
3. Front tweeter RH M111
4. Front door speaker
   LH D12
   RH D112
5. Rear door speaker
   LH D209
   RH D309

Component Description

INFOID:0000000007347578

Part name	Description
Audio unit	Controls audio system functions
Front door speakers	• Outputs audio signal from audio unit • Outputs high, mid and low range sounds
Front tweeters	• Outputs audio signal from audio unit • Outputs high range sounds
Rear door speakers	• Outputs audio signal from audio unit • Outputs high, mid and low range sounds

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT
AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:0000000007347579

Regarding Wiring Diagram information, refer to AV-22, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Audio unit	19	Battery power	29
	7	Ignition switch ACC or ON	4

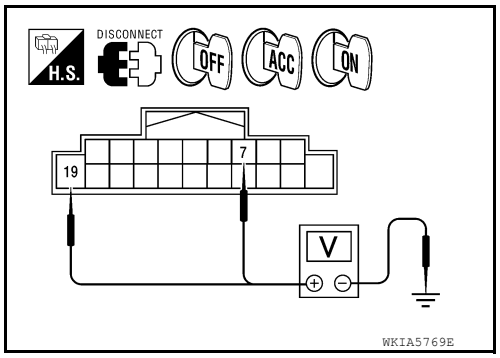
Are the fuses OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect audio unit connector M38.
2. Check voltage between the audio unit connector M38 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M38	19	Ground	Battery voltage	Battery voltage	Battery voltage
	7	Ground	0V	Battery voltage	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

Inspect audio unit case ground.

Does case ground pass inspection?

YES >> Inspection End.
NO >> Repair audio unit case ground.

FRONT DOOR SPEAKER

Description

INFOID:0000000007347580

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

Diagnosis Procedure

INFOID:0000000007347581

Regarding Wiring Diagram information, refer to AV-22, "Wiring Diagram".

1.CONNECTOR CHECK

Check the audio unit and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

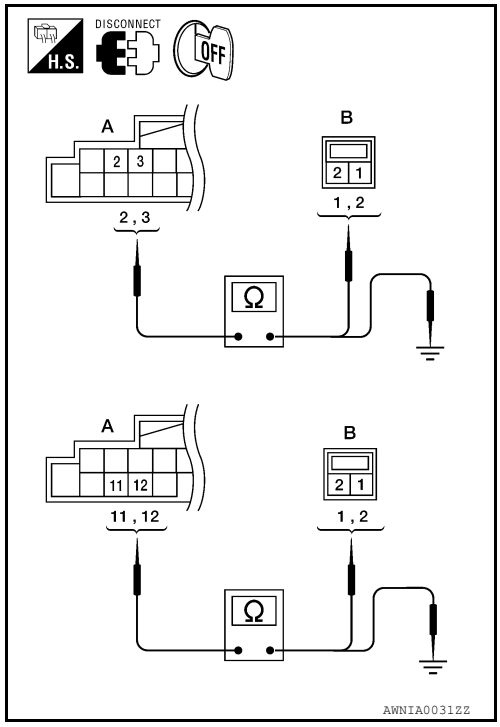
2.HARNESS CHECK

1. Disconnect audio unit connector M38 (A) and suspect speaker connector (B).
2. Check continuity between audio unit harness connector M38 (A) terminal and suspect speaker harness connector (B) terminal.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M38	2	D12	1	Yes
	3		2	
	11	D112	1	
	12		2	

3. Check continuity between audio unit harness connector M38 (A) terminal and ground.

A		—	Continuity
Connector	Terminal		
M38	2	Ground	No
	3		
	11		
	12		

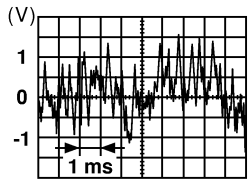


Are continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.FRONT SPEAKER SIGNAL CHECK

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

Connector	Terminal (+)	Terminal (-)	Condition	Reference signal
M38	2	3	Receive audio signal	
	11	12		

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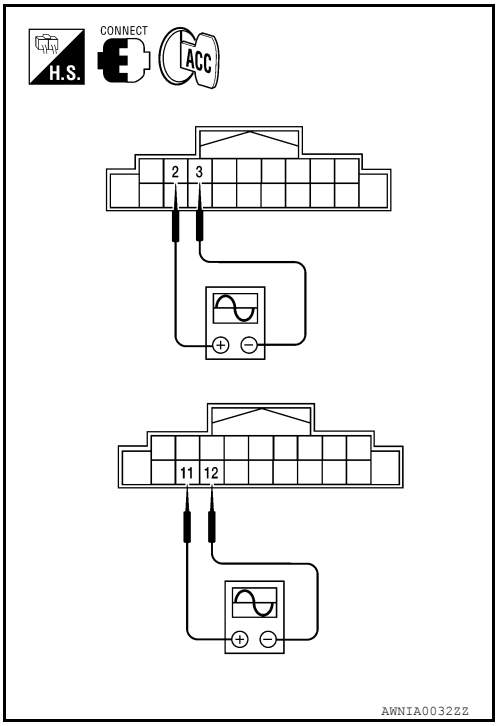
Is the audio signal voltage as specified?

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

NO >> Replace audio unit. Refer to AV-34, "Removal and Installation".



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FRONT TWEETER

Description

INFOID:0000000007347582

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

Diagnosis Procedure

INFOID:0000000007347583

Regarding Wiring Diagram information, refer to AV-22, "Wiring Diagram".

1.CONNECTOR CHECK

Check the audio unit and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

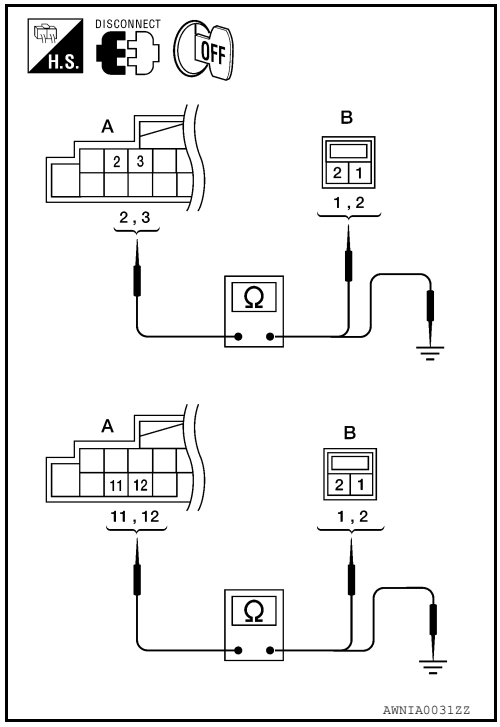
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect audio unit connector M38 (A) and suspect front tweeter connector (B).
2. Check continuity between audio unit harness connector M38 (A) and suspect front tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M38	2	M109	1	Yes
	3		2	
	11	M111	1	
	12		2	



3. Check continuity between audio unit harness connector M38 (A) and ground.

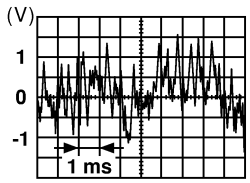
A		—	Continuity
Connector	Terminal		
M38	2	Ground	No
	3		
	11		
	12		

Are the continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.TWEETER SIGNAL CHECK

1. Connect audio unit connector and front tweeter connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between audio unit harness connector terminals with CONSULT or oscilloscope.

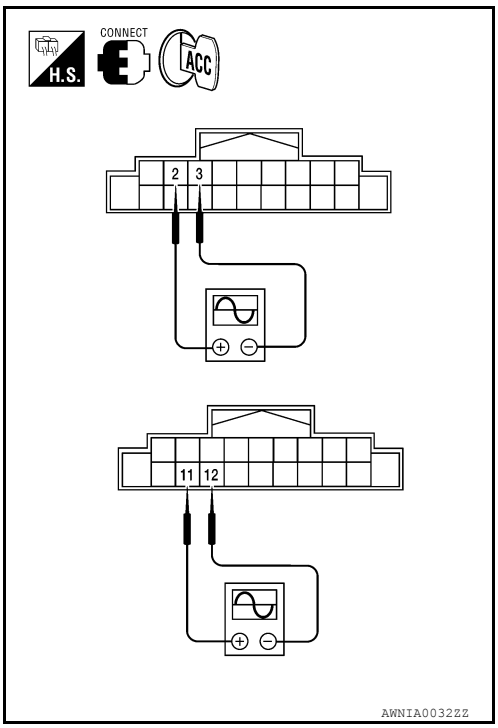
Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M38	2	3	Receive audio signal	
	11	12		

SKIA0177E

Is the audio signal voltage as specified?

YES >> Replace tweeter. Refer to AV-36, "Removal and Installation".

NO >> Replace audio unit. Refer to AV-34, "Removal and Installation".



AWNIA0032ZZ

REAR DOOR SPEAKER

Description

INFOID:0000000007347584

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

Diagnosis Procedure

INFOID:0000000007347585

Regarding Wiring Diagram information, refer to AV-22, "Wiring Diagram".

1.CONNECTOR CHECK

Check the audio unit and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

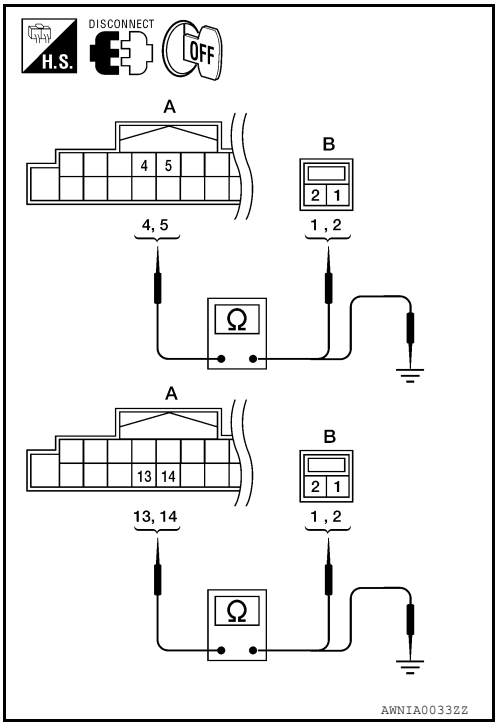
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect audio unit connector M38 (A) and suspect speaker connector.
2. Check continuity between audio unit harness connector M38 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M38	4	D207	1	Yes
	5		2	
	13	D307	1	
	14		2	



3. Check continuity between audio unit harness connector M38 (A) and ground.

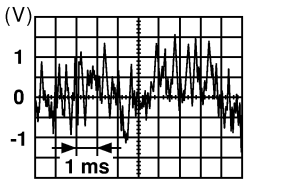
A		—	Continuity
Connector	Terminal		
M38	4	Ground	No
	5		
	13		
	14		

Are the continuity results as specified?

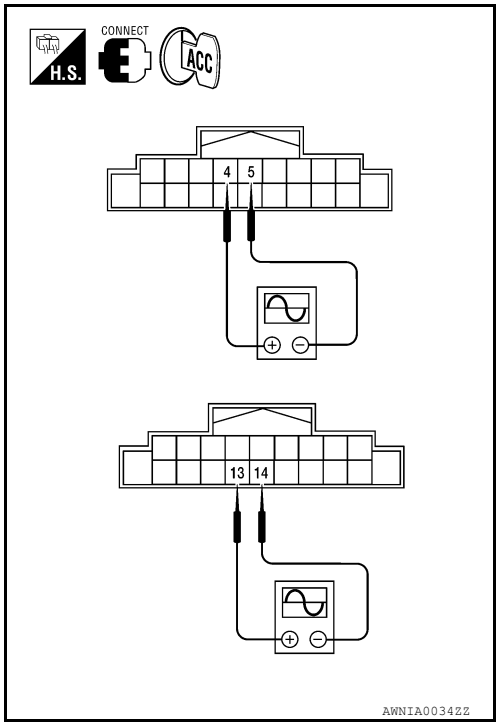
YES >> GO TO 3
NO >> Repair harness or connector.

3.REAR SPEAKER SIGNAL CHECK

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

Connector	Terminal (+)	Terminal (-)	Condition	Reference signal
M38	4	5	Receive audio signal	
	13	14		

SKIA0177E



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Is the audio signal voltage as specified?

YES >> Replace rear speaker. Refer to AV-38, "Removal and Installation".

NO >> Replace audio unit. Refer to AV-34, "Removal and Installation".

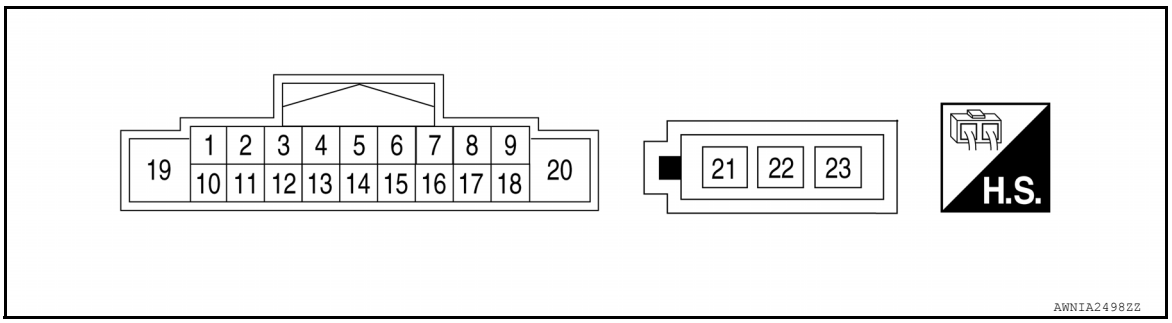
ECU DIAGNOSIS INFORMATION

AUDIO UNIT

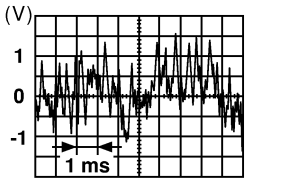
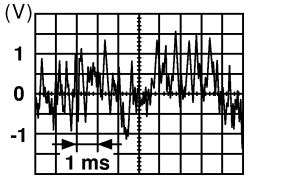
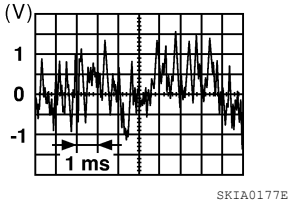
Reference Value

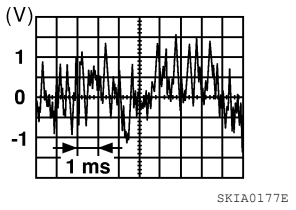
INFOID:0000000007347586

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color) +	Terminal (Wire color) –	Item	Signal input/ output	Condition		Reference value
2 (BR)	3 (L)	Audio signal front LH	Output	Ignition switch ON	Audio output	
4 (G)	5 (B)	Audio signal rear LH	Output	Ignition switch ON	Audio output	
7 (G/B)	Ground	ACC signal	Input	Ignition switch ON	Ignition switch ACC or ON	Battery voltage
8 (GR)	—	Illumination control	—	—	—	—
9 (R)	Ground	Illumination power	Input	Ignition switch ON	Lighting switch ON	Battery voltage
11 (LG)	12 (R)	Audio signal front RH	Output	Ignition switch ON	Audio output	

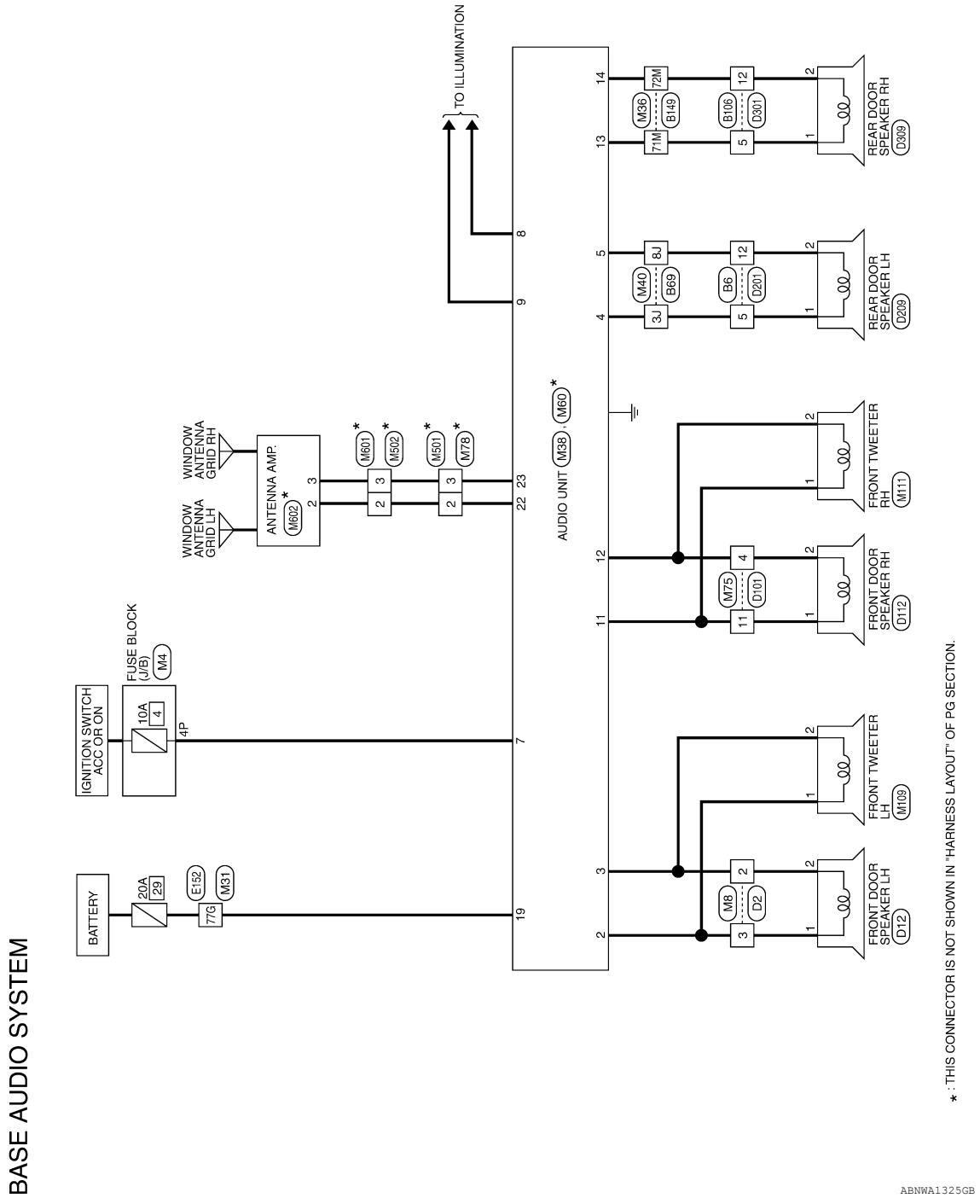
Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value
+	–					
13 (GR)	14 (O)	Audio signal rear RH	Output	Ignition switch ON	Audio output	
19 (Y)	Ground	Battery power	Input	–	–	Battery voltage
22	—	Antenna main	—	—	—	—
23	—	Antenna power	Output	Ignition switch ON	With AM/FM radio selected	Battery voltage

WIRING DIAGRAM

BASE AUDIO SYSTEM

Wiring Diagram

INFOID:0000000007347587



BASE AUDIO SYSTEM CONNECTORS

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

H.S.

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

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

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

H.S.

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

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

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

H.S.

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

21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G
	30G	29G	28G	27G	26G	25G	24G	23G	22G	
41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G
	50G	49G	48G	47G	46G	45G	44G	43G	42G	
61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G
	70G	69G	68G	67G	66G	65G	64G	63G	62G	

	75G	74G	73G	72G	71G
		80G	79G	78G	77G	76G

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

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

H.S.

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

21M	20M	19M	18M	17M	16M	15M	14M	13M	12M	11M
	30M	29M	28M	27M	26M	25M	24M	23M	22M	
41M	40M	39M	38M	37M	36M	35M	34M	33M	32M	31M
	50M	49M	48M	47M	46M	45M	44M	43M	42M	
61M	60M	59M	58M	57M	56M	55M	54M	53M	52M	51M
	70M	69M	68M	67M	66M	65M	64M	63M	62M	

	75M	74M	73M	72M	71M
		80M	79M	78M	77M	76M

Terminal No.	Color of Wire	Signal Name
71M	GR	–
72M	O	–

ABNIA3308GB

Connector No.	M38
Connector Name	AUDIO UNIT
Connector Color	WHITE

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
3J	G	– (WITHOUT BOSE AUDIO SYSTEM)
8J	B	– (WITHOUT BOSE AUDIO SYSTEM)

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

Connector No.	M60
Connector Name	AUDIO UNIT
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
21	–	–
22	–	ANT MAIN
23	–	ANT +B

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

H.S.

Terminal No.	Color of Wire	Signal Name
4	R	–
11	LG	– (WITHOUT BOSE AUDIO SYSTEM)

Connector No.	M78
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

ABNIA3309GB

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

H.S.

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

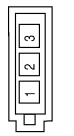
Connector No.	M111
Connector Name	FRONT TWEETER RH
Connector Color	BROWN

H.S.

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

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

H.S.



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

Connector No.	M502
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	M601
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	M602
Connector Name	ANTENNA AMP.
Connector Color	GRAY

H.S.

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

ABNIA3310GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
5	G	– (WITHOUT BOSE AUDIO SYSTEM)
12	B	– (WITHOUT BOSE AUDIO SYSTEM)

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

H.S.

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

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

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

H.S.

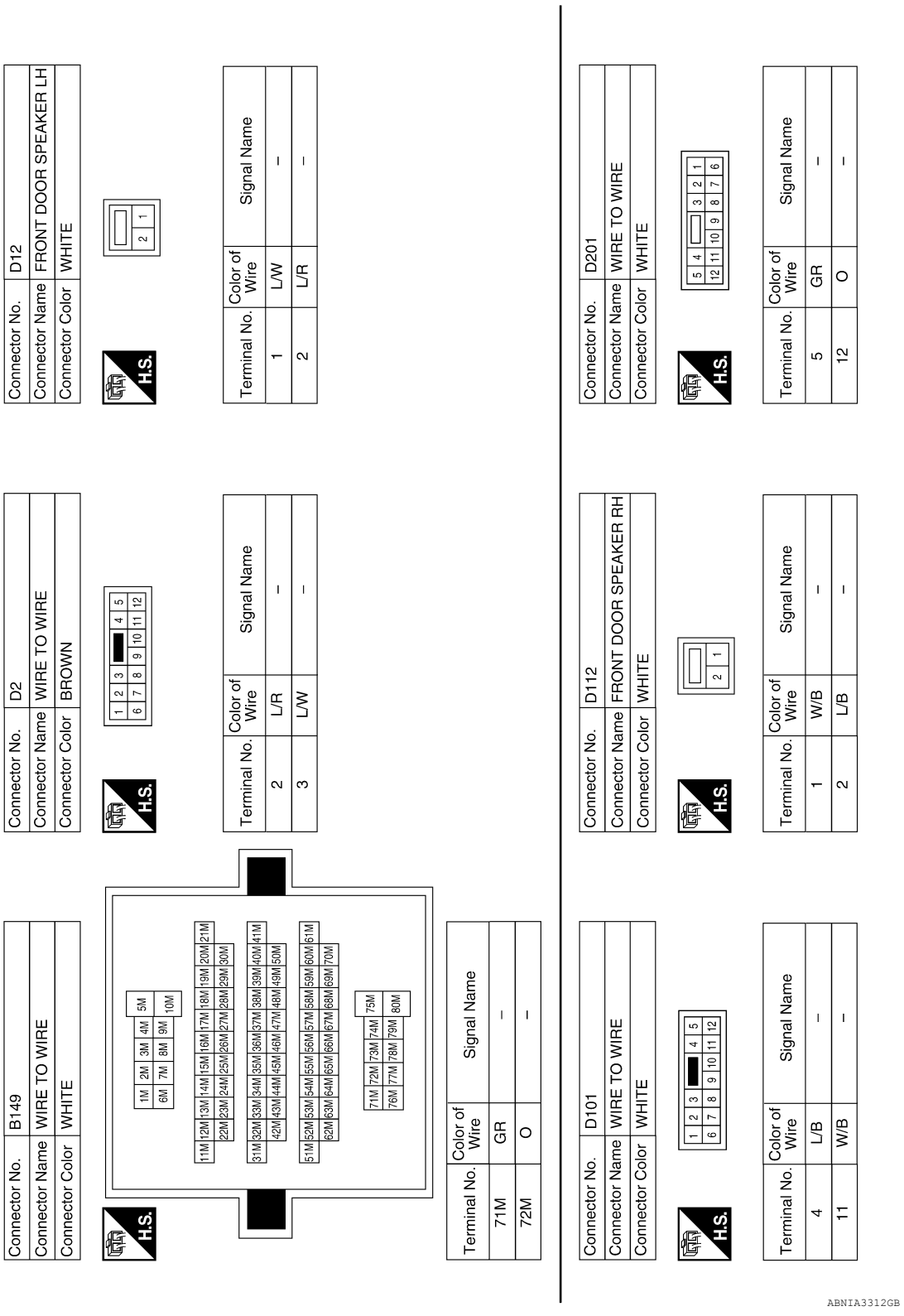
Terminal No.	Color of Wire	Signal Name
77G	Y	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
3J	G	– (WITHOUT BOSE AUDIO SYSTEM)
8J	B	– (WITHOUT BOSE AUDIO SYSTEM)

ABNIA3311GB


Connector No. B149
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1M 2M 3M 4M 5M
6M 7M 8M 9M 10M
11M 12M 13M 14M 15M 16M 17M 18M 19M 20M 21M
22M 23M 24M 25M 26M 27M 28M 29M 30M
31M 32M 33M 34M 35M 36M 37M 38M 39M 40M 41M
42M 43M 44M 45M 46M 47M 48M 49M 50M
51M 52M 53M 54M 55M 56M 57M 58M 59M 60M 61M
62M 63M 64M 65M 66M 67M 68M 69M 70M
71M 72M 73M 74M 75M
76M 77M 78M 79M 80M
Terminal No. Color of Wire Signal Name
71M GR –
72M O –
Connector No. D2
Connector Name WIRE TO WIRE
Connector Color BROWN
H.S.
1 2 3 4 5
6 7 8 9 10 11 12
Terminal No. Color of Wire Signal Name
2 L/R –
3 L/W –
Connector No. D12
Connector Name FRONT DOOR SPEAKER LH
Connector Color WHITE
H.S.
2 1
Terminal No. Color of Wire Signal Name
1 L/W –
2 L/R –
Connector No. D101
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1 2 3 4 5
6 7 8 9 10 11 12
Terminal No. Color of Wire Signal Name
4 L/B –
11 W/B –
Connector No. D112
Connector Name FRONT DOOR SPEAKER RH
Connector Color WHITE
H.S.
2 1
Terminal No. Color of Wire Signal Name
1 W/B –
2 L/B –
Connector No. D201
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5 4 3 2 1
12 11 10 9 8 7 6
Terminal No. Color of Wire Signal Name
5 GR –
12 O –
ABNIA3312GB

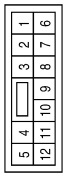
Connector No.	D209
Connector Name	REAR DOOR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

H.S.

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

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

H.S.



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

Connector No.	D309
Connector Name	REAR DOOR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

H.S.

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

ABNIA3313GB

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

AUDIO UNIT

AUDIO UNIT : Symptom Table

INFOID:0000000007347588

Symptom	Possible cause	Reference page
Inoperative	• Audio unit power supply and ground circuit • Audio unit	• AV-13 • AV-34
All speakers do not sound	• Speaker circuit shorted to ground • Audio unit	• AV-22 • AV-34
One or several speakers do not sound	• Front door speaker • Front tweeter • Rear door speaker	• AV-14 • AV-16 • AV-18
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.

NORMAL OPERATING CONDITION

Description

INFOID:0000000007347589

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

NOISE

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

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

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

NOTE:

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

Type of Noise and Possible Cause

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

PRECAUTION

PRECAUTIONS

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

INFOID:0000000007347590

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000007833551

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the ″LOCK″ position.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.
For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.
If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Use the Intelligent Key or mechanical key to turn the ignition switch to the ″ACC″ position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

5. When the repair work is completed, return the ignition switch to the ″LOCK″ position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT.

Precaution for Work

INFOID:0000000007347591

- 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 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, and wring the water out of the cloth to wipe the dirty area.
  Then rub with a soft and 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, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

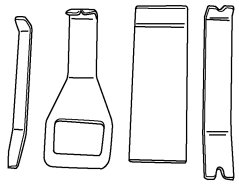
PREPARATION

PREPARATION

Special Service Tool

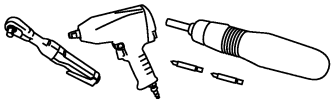
INFOID:0000000007347592

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

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

Commercial Service Tools

INFOID:0000000007347593

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

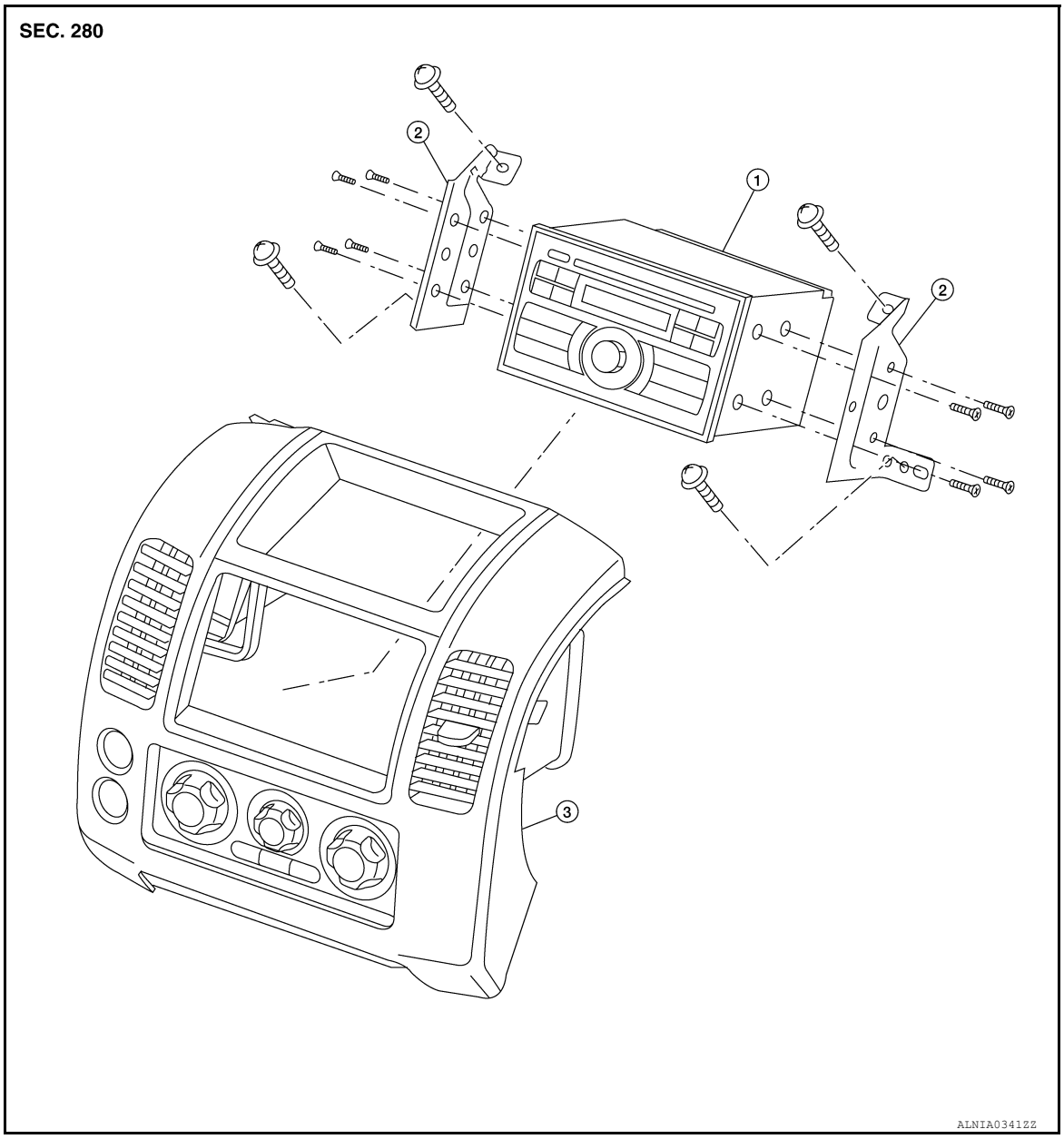
REMOVAL AND INSTALLATION

AUDIO UNIT

Removal and Installation

INFOID:0000000007347594

Removal and Installation



1. Audio unit
2. Audio unit brackets (LH) and (RH)
3. Cluster lid C

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the cluster lid C. Refer to IP-16, "Removal and Installation".
3. Remove the audio unit screws, using power tool.
4. Remove the audio unit and disconnect audio unit connectors.
5. Remove the audio unit brackets screws and remove the audio unit brackets.

INSTALLATION

Installation is in the reverse order of removal.

FRONT TWEETER

Removal and Installation

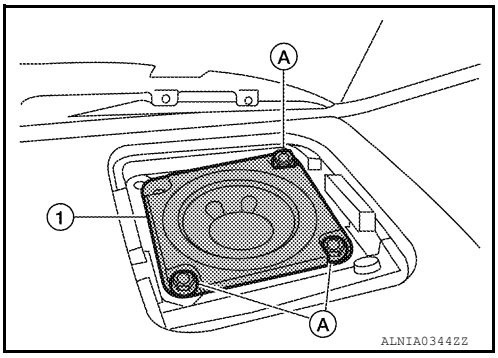
INFOID:0000000007347595

REMOVAL

CAUTION:

Use a suitable tool to prevent damage to the front tweeter speaker grille trim and the instrument panel.

1. Remove the front tweeter grille.
2. Remove the front tweeter screws (A).
3. Pull out the front tweeter speaker (1) and disconnect front tweeter connector, then remove the front tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

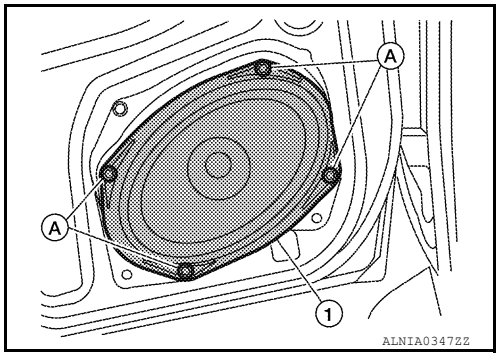
FRONT DOOR SPEAKER

Removal and Installation

INFOID:0000000007347596

REMOVAL

1. Remove the front door finisher. Refer to INT-15, "Removal and Installation".
2. Remove the front door speaker screws (A).
3. Pull out the front door speaker (1), and disconnect the front door speaker connector and remove the front door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

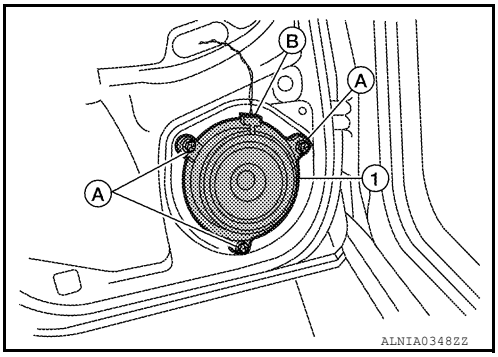
REAR DOOR SPEAKER

Removal and Installation

INFOID:0000000007347597

REMOVAL

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



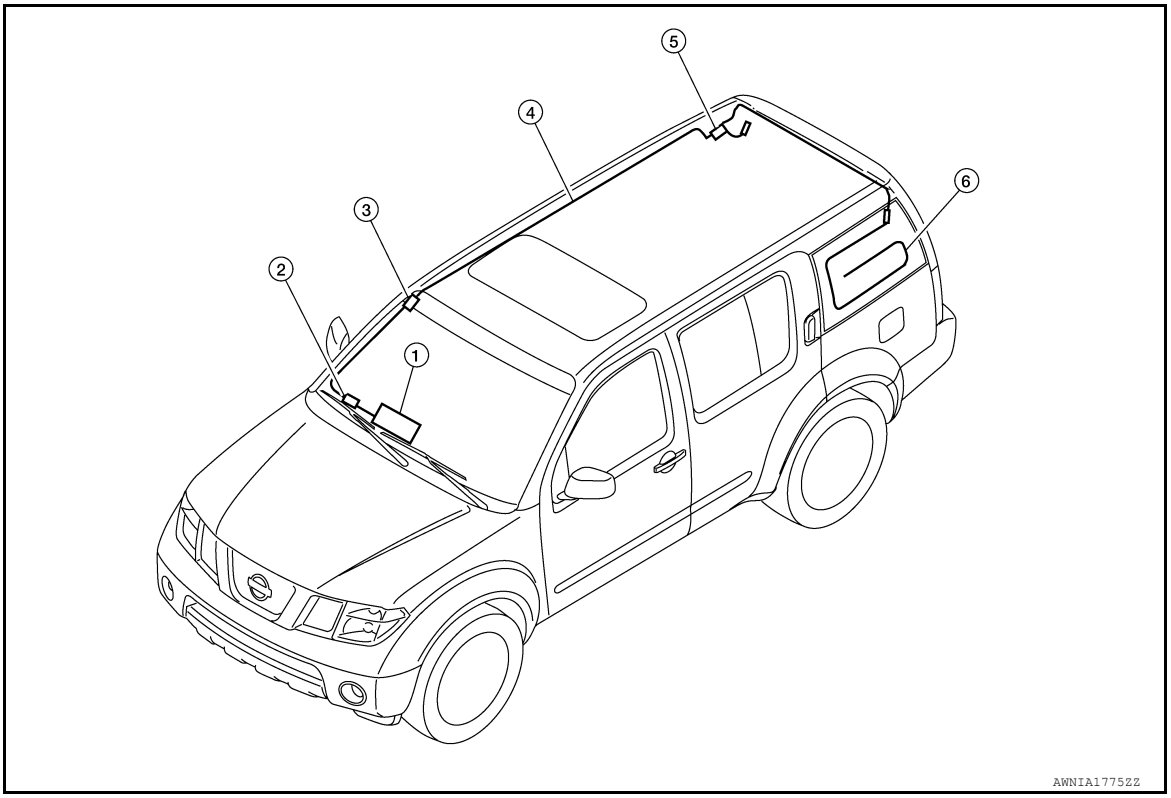
INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antenna

INFOID:0000000007347598



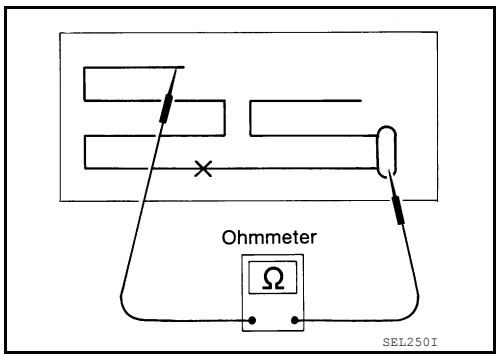
1. Audio unit M38, M60
2. Harness connector M78, M501
3. Harness connector M502, M601
4. Antenna feeder
5. Antenna amp. M602
6. Window antenna grid

Window Antenna Repair

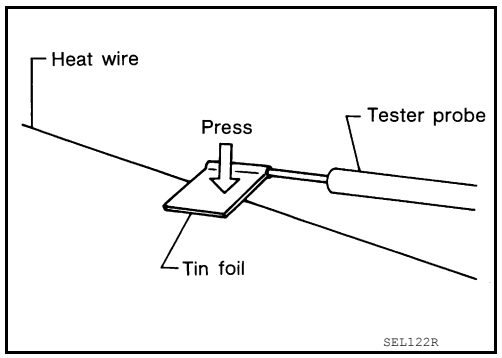
INFOID:0000000007347599

ELEMENT CHECK

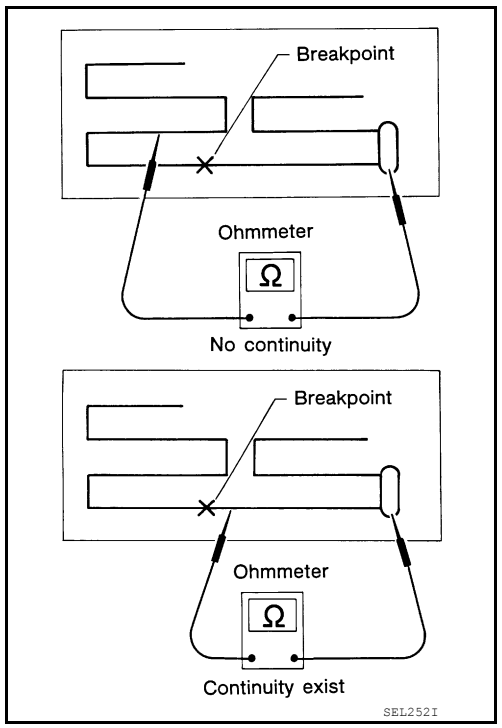
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



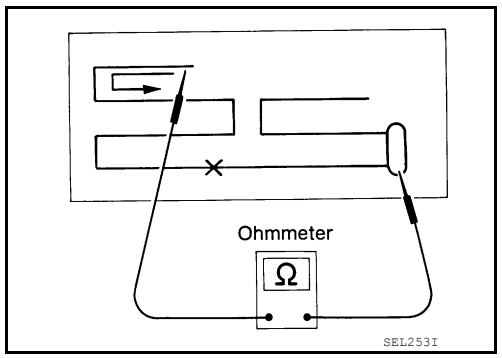
- **When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.**



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.



ELEMENT REPAIR

Refer to DEF-45, "Filament Repair".

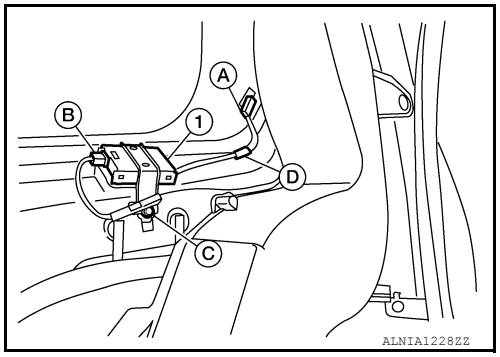
ANTENNA AMP.

Removal and Installation

INFOID:0000000007347600

REMOVAL

1. Remove the luggage side upper and lower RH finishers. Refer to INT-25, "Removal and Installation".
2. Detach the antenna amp. harness clip (D), disconnect the antenna amp. connector (A), harness connector (B), then remove the antenna amp. screw (C) and remove the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

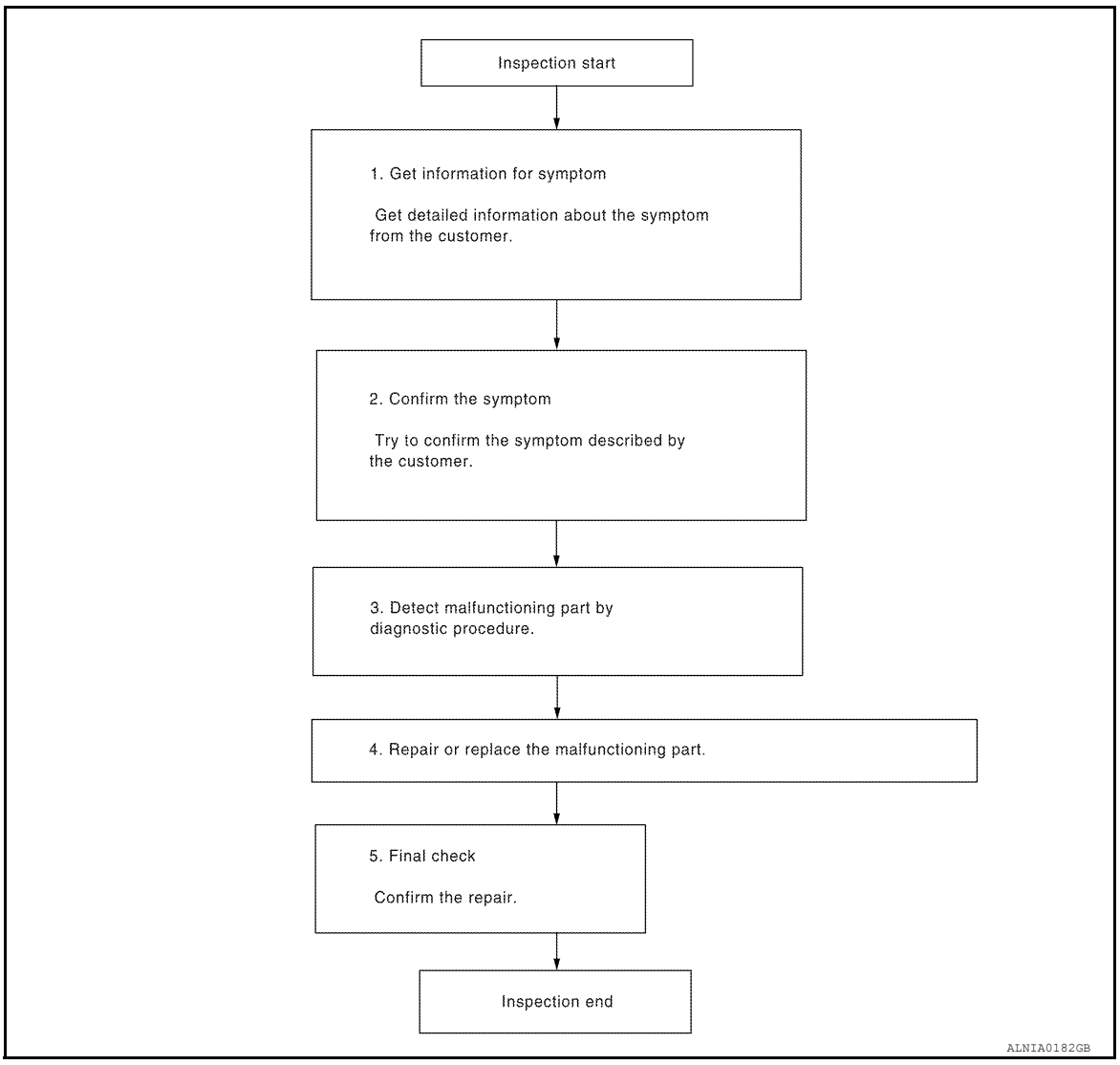
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000007347601

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.

Is malfunctioning part detected?

YES >> GO TO 4
NO >> GO TO 2

4. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 5

5. FINAL CHECK

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

Has the symptom been repaired?

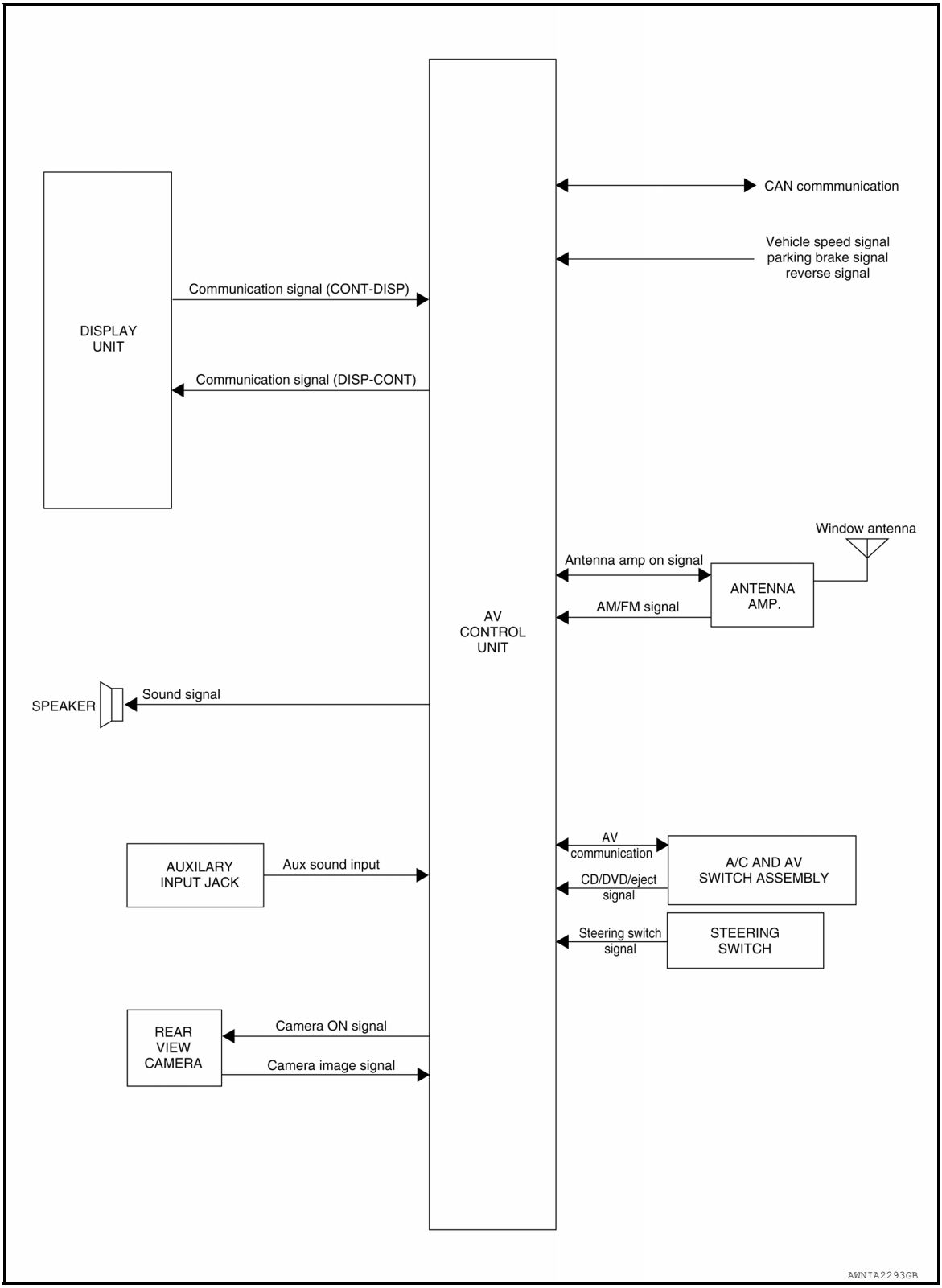
YES >> Inspection End.
NO >> GO TO 2

SYSTEM DESCRIPTION

AUDIO SYSTEM

System Diagram

INFOID:0000000007347602



System Description

INFOID:0000000007347603

AUDIO SYSTEM

The audio system consists of the following components
- AV control unit
- Display unit
- Window antenna
- Steering wheel audio control switches
- A/C and AV switch assembly
- Front door speakers
- Front tweeters
- Rear door speakers

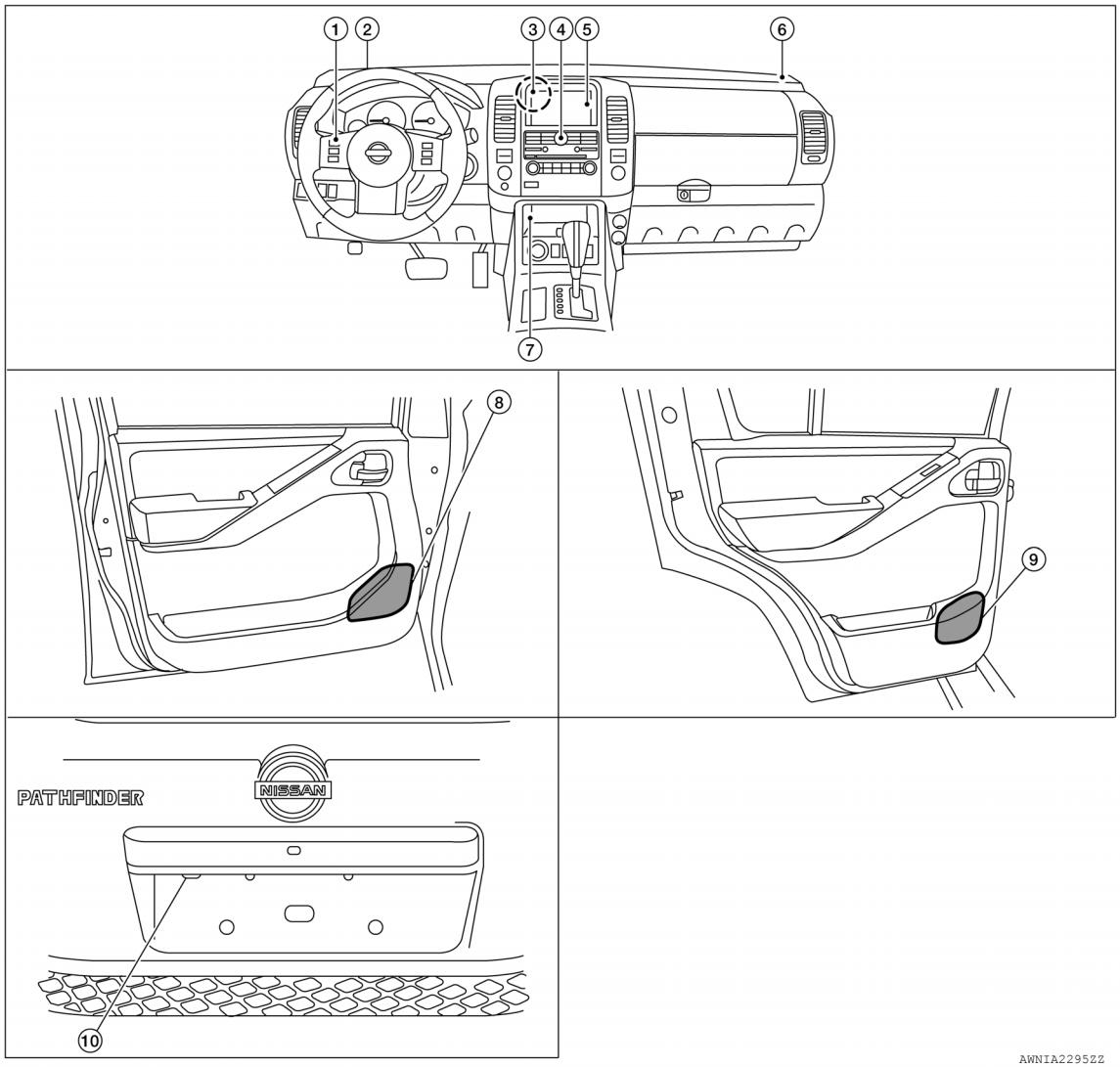
When the audio system is on, radio signals are received by the window antenna. The AV control unit then sends audio signals to the front door speakers, front tweeters and rear door speakers.
Refer to Owner's Manual for audio system operating instructions.

SPEED SENSITIVE VOLUME SYSTEM

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

Component Parts Location

INFOID:0000000007347604



AWNIA2295ZZ

1. Steering wheel audio control switches
2. Front tweeter LH M109
3. AV control unit M131, M132, M133, M134, M135
4. A/C and AV switch assembly M98
5. Display unit M93
6. Front tweeter RH M111

7. Aux. jack M85
8. Front door speaker
   LH D12
   RH D112
9. Rear door speaker
   LH D209
   RH D309
10. Rear view camera D551

Component Description

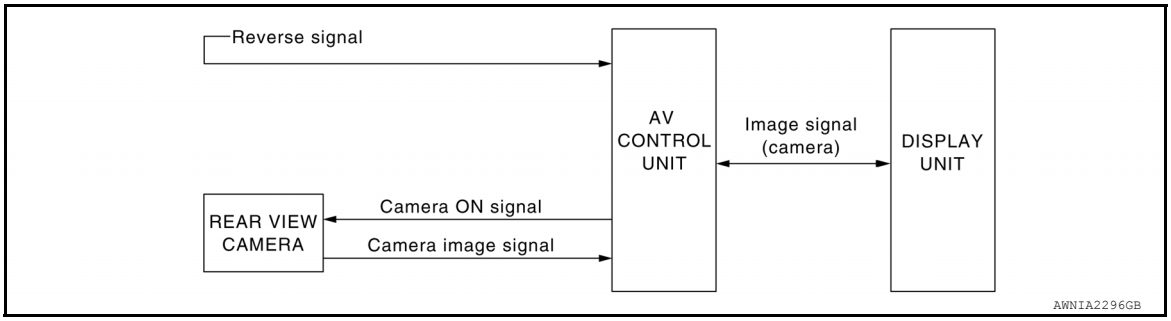
INFOID:0000000007347605

Part name	Description
AV control unit	Controls audio system functions
Display unit	Displays audio and climate control related information
A/C and AV switch assembly	• All audio and A/C operations can be operated • switch signal is output to the AV control unit and A/C auto amp
Steering wheel audio control switches	• Audio operation can be operated • Steering switch signal (operation signal) is output to AV control unit
Front door speakers	• Outputs audio signal from AV control unit • Outputs high, mid and low range sounds
Front tweeters	• Outputs audio signal from AV control unit • Outputs high range sounds
Rear door speakers	• Outputs audio signal from AV control unit • Outputs high, mid and low range sounds
Antenna amp.	• Radio signal received by window antenna is amplified and sent to AV control unit • Power (antenna amp. ON signal) is supplied from AV control unit

REAR VIEW MONITOR SYSTEM

System Diagram

INFOID:0000000007347606



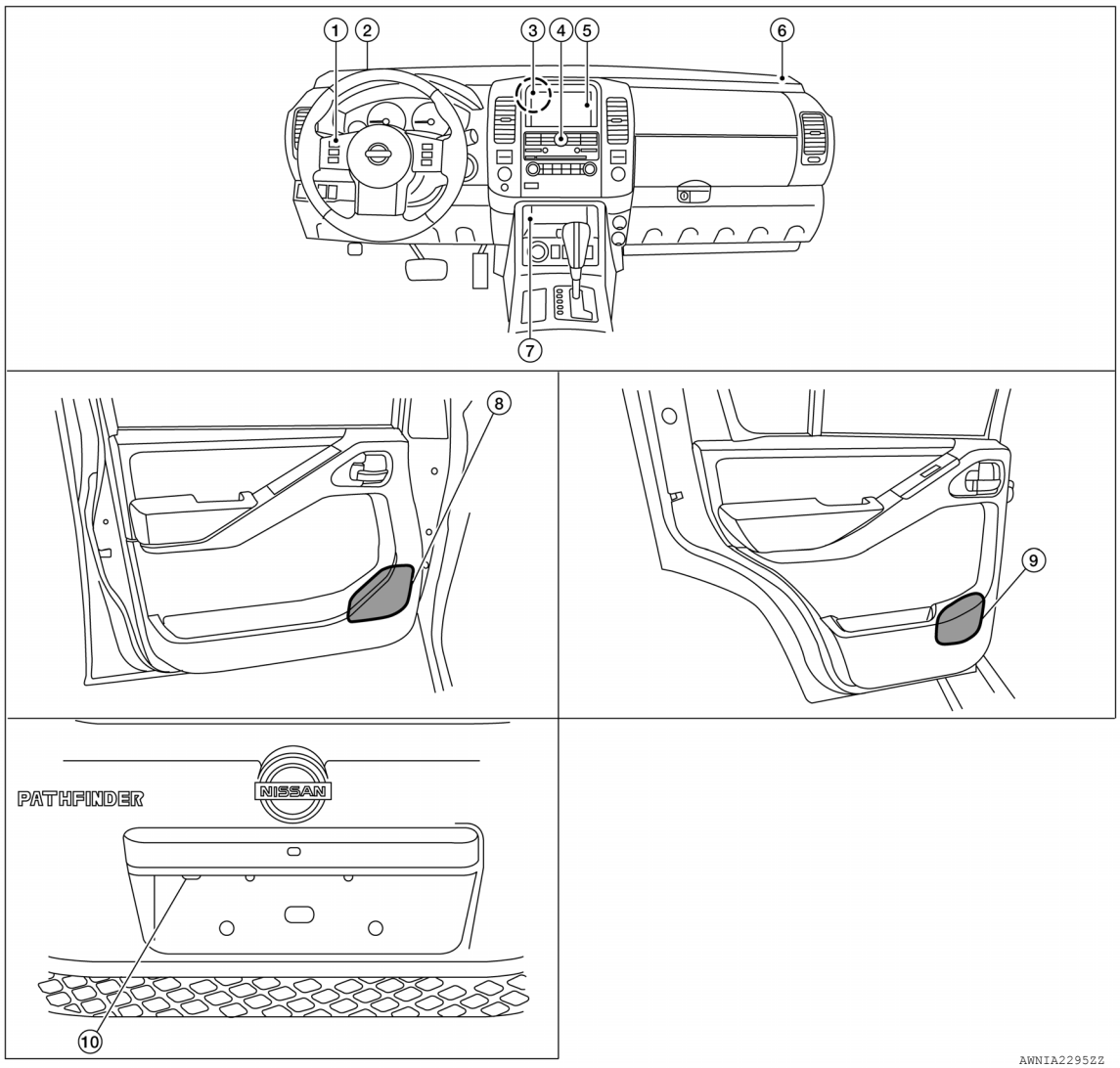
System Description

INFOID:0000000007347607

When the shift selector is in the R position, the AV control unit receives camera image signals from the rear view camera and sends the camera image signals to the display unit which shows a view to the rear of the vehicle. Lines which indicate the vehicle clearance and distances are also displayed.

Component Parts Location

INFOID:0000000007347608



1. Steering wheel audio control switches
2. Front tweeter LH M109
3. AV control unit M131, M132, M133, M134, M135
4. A/C and AV switch assembly M98
5. Display unit M93
6. Front tweeter RH M111
7. Aux. jack M85
8. Front door speaker LH D12 RH D112
9. Rear door speaker LH D209 RH D309
10. Rear view camera D551

Component Description

INFOID:0000000007347609

Part name	Description
AV control unit	• Receives reverse signal from back-up lamp relay • Sends camera ON signal to rear view camera • Receives image signal from rear view camera • Sends camera image signal to display unit
Rear view camera	• Receives camera ON signal from AV control unit • Sends image signal to the AV control unit
Display unit	• Receives camera image signal from AV control unit

DIAGNOSIS SYSTEM (AV CONTROL UNIT)
AV CONTROL UNIT
AV CONTROL UNIT : Diagnosis Description

INFOID:0000000007347610

DESCRIPTION

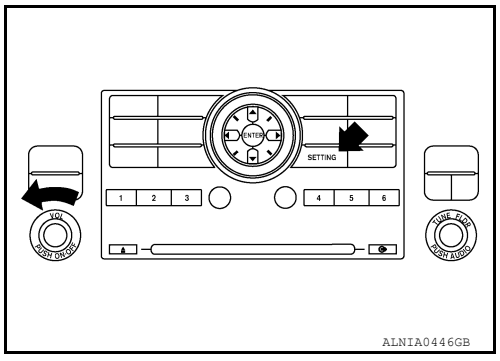
- Diagnosis function consists of the "Self-Diagnosis" mode performed automatically and the "Confirmation/ Adjustment" mode operated manually.
- "Self-Diagnosis" mode checks for connections between the units constituting this system, analyzes each individual unit at the same time, and displays the results on the LCD screen.
- "Confirmation/Adjustment" mode is used to perform trouble diagnosis that requires operation and judgment by an operator (trouble that cannot be automatically judged by the system), to check/change the set value, and to display the error history of the AV control unit.

DIAGNOSIS ITEM

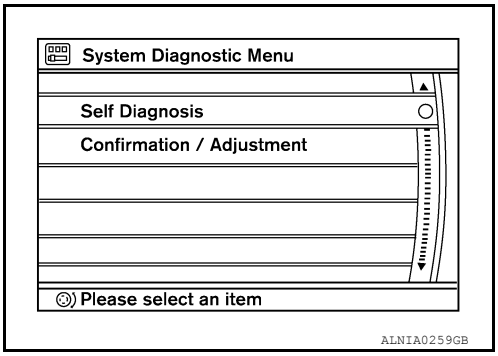
Mode			Description
Self-diagnosis			• AV control unit diagnosis • Analyzes connection between the AV control unit, front display and switches.
CONFIRMATION/ ADJUSTMENT	Display diagnosis	Color spectrum bar	Color tone of the screen can be checked by the display of a color bar.
		Gradation bar	Shading of the screen can be checked by the display of a gray scale.
	Vehicle signals		The following vehicle signals are analyzed: Vehicle speed signal, parking brake signal, light signal, ignition switch signal, and reverse signal.
	Speaker test		Connection can be checked by sending a test tone to each speaker.
	Climate control		Start automatic air conditioner self-diagnosis
	Error history		Diagnosis results previously stored in the memory are displayed in this mode.
	Vehicle CAN diagnosis		The transmitting/receiving of CAN communication can be monitored.
	AV COMM diagnosis		The transmitting/receiving of AV communication can be monitored.
	Delete connection log		Erase the error history and connection history of the unit.
	Initialize settings		All audio settings are reset to default levels.

OPERATION PROCEDURE

1. Start the engine.
2. Turn the audio system off.
3. While pressing the “SETTING” button, turn the volume control dial counterclockwise 30 clicks or more.



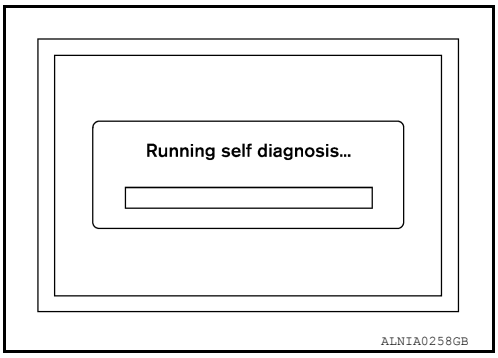
4. The initial trouble diagnosis screen will be displayed, and items “Self-Diagnosis” and “Confirmation/Adjustment” can be selected.



SELF-DIAGNOSIS

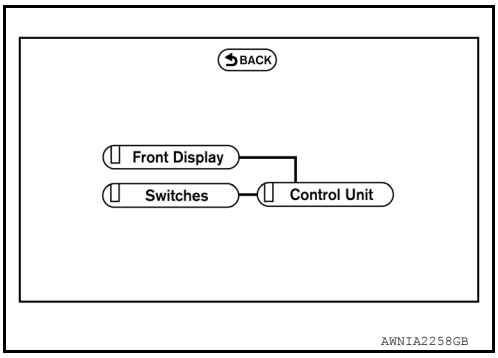
1. Perform self-diagnosis by selecting “Self-Diagnosis”.
   - Self-diagnosis subdivision screen is displayed, and the self-diagnosis mode starts.
   - A bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.

   NOTE:
   Self-diagnosis requires approximately 10 seconds to complete.



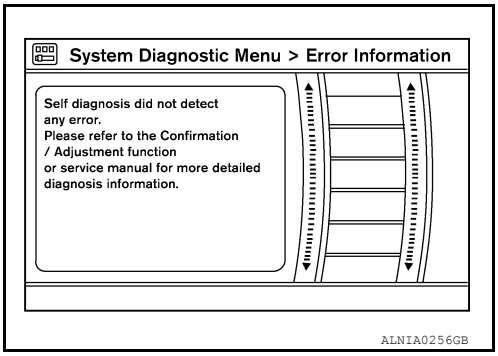
2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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

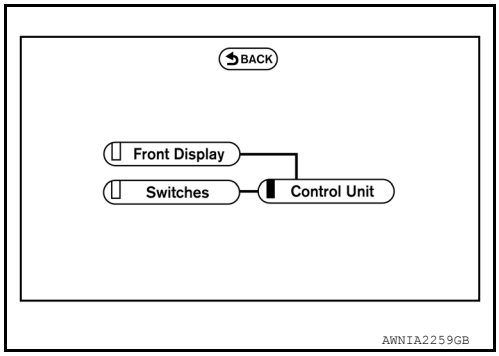
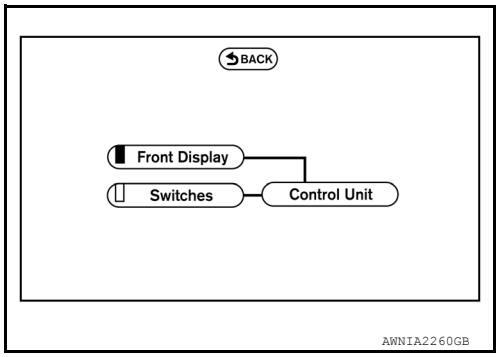
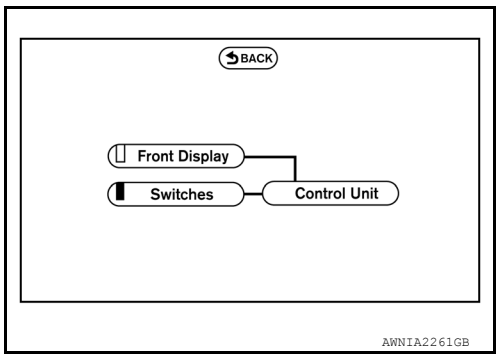


Note:
- Only the AV control unit is displayed in red.
- If multiple malfunctions occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > yellow > gray.

3. Select a component on the “Self Diagnosis” screen and comments for the diagnosis results will be shown.

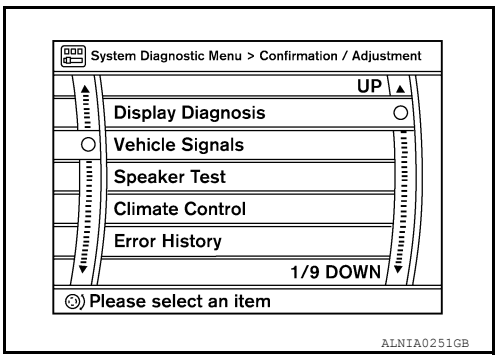


Self-Diagnosis Results

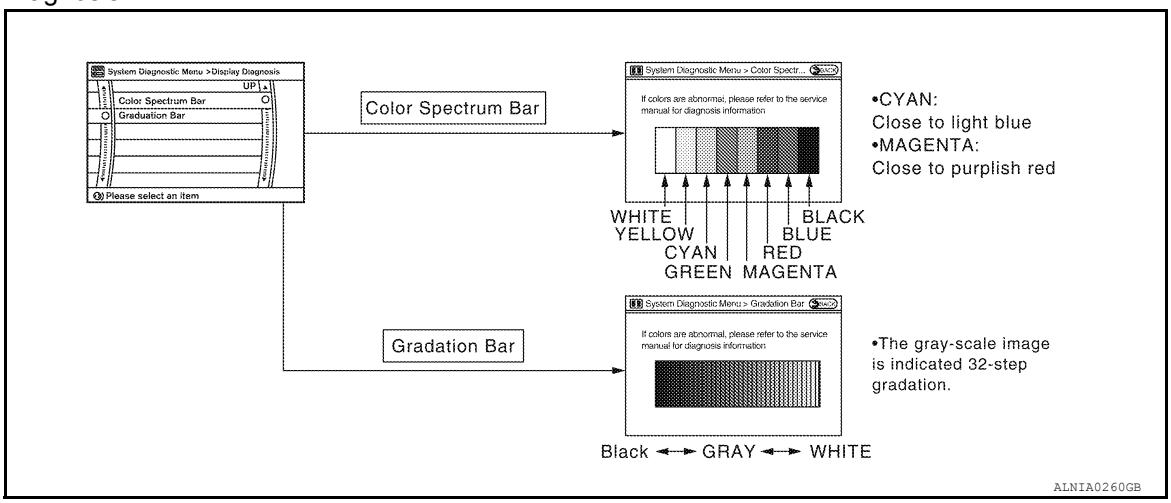
Area with yellow connection lines	Description	Possible malfunction location / Action to take
	AV control unit malfunction is detected	Replace the AV control unit. Refer to AV-114, "Removal and Installation".
	Poor connection is detected for the display unit	• Harness or connector • AV control unit • Display unit
	Switch malfunction is detected	Perform A/C and AV switch assembly diagnostics. Refer to AV-55, "A/C AND AV SWITCH ASSEMBLY : Component Function Check".

CONFIRMATION/ADJUSTMENT MODE

1. Start the diagnosis function and select “Confirmation/Adjustment”. The confirmation/adjustment mode indicates where each item can be checked or adjusted.
2. Select each item on the “Confirmation/Adjustment” mode screen to display the relevant trouble diagnosis screen. Press the “BACK” button or touch "BACK" on the touch screen to return to the initial Confirmation/Adjustment Mode screen.

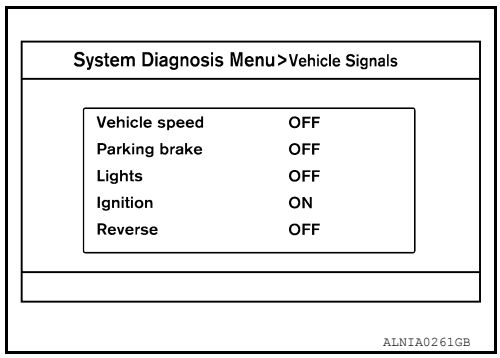


Display Diagnosis



Vehicle Signals

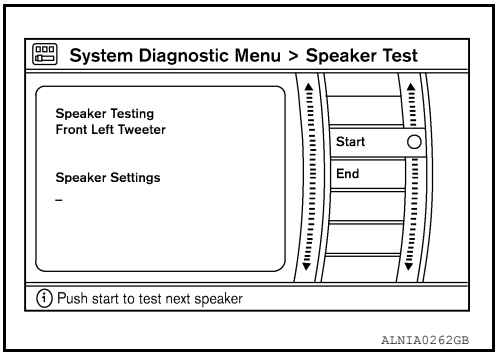
A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



Diagnosis item	Display	Vehicle status	Remarks
Vehicle speed	ON	Vehicle speed > 0 km/h	Changes in indication may be delayed by approximately 1.5 seconds. This is normal.
	OFF	Vehicle speed = 0 km/h	
	–	Ignition switch in ACC position	
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Lights	ON	Light switch ON	Block the light beam from the auto light optical sensor.
	OFF	Light switch OFF	
Ignition	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
Reverse	ON	Selector lever in R position	Changes in indication may be delayed by approximately 1.5 seconds. This is normal.
	OFF	Selector lever in any position other than R	
	–	Ignition switch in ACC position	

Speaker Test

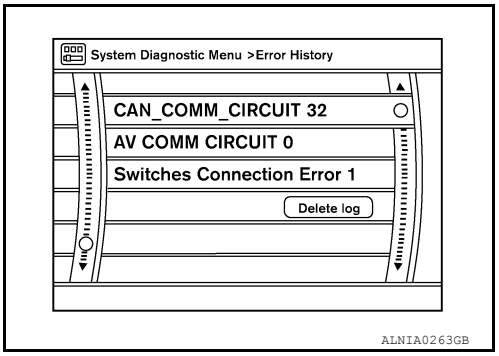
Select “Speaker Test” to display the speaker diagnosis screen. Press “Start” to generate a test tone in speakers. Touch “End” to stop the test tones.



Error History

The self-diagnosis results are judged depending on whether any error occurs from when "Self-diagnosis" isselected until the self-diagnosis results are displayed.

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



Count up method A

- The counter resets to 0 if an error occurs when IGN switch is turned ON. The counter increases by 1 if the condition is normal at a next IGN 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.

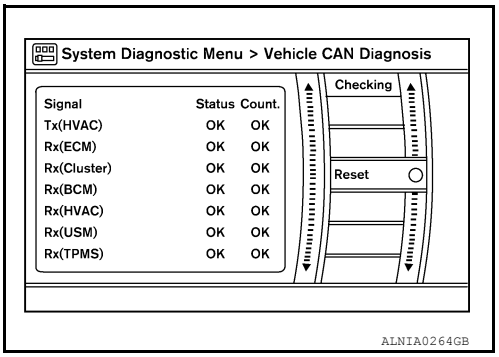
Count up method B

- The counter increases by 1 if an error occurs when IGN switch is ON. The counter will not decrease even ifthe condition is normal at the next IGN 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 method of occurrence frequency	Error history diplay item
Count up method A	CAN communication line, control unit (CAN), AV communication line, control unit (AV communication)
Count up method B	Other than above

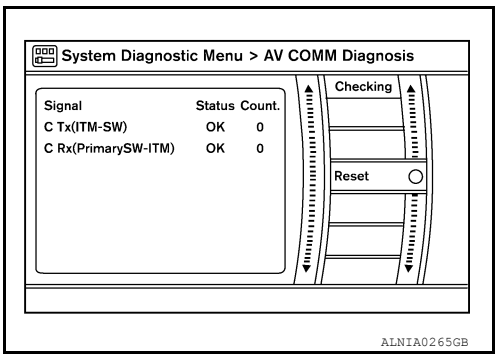
Vehicle CAN Diagnosis

- 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.



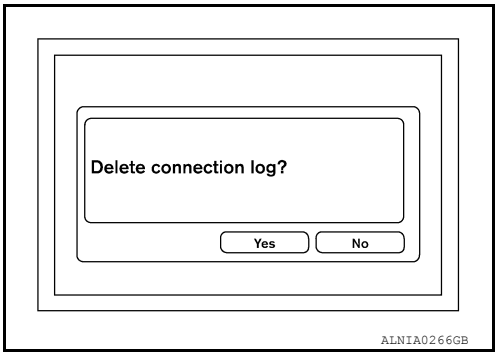
AV COMM Diagnosis

- AV 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.



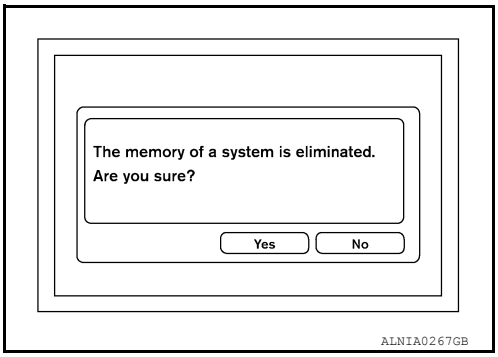
Delete Unit Connection Log

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



Inititialize Settings

Initializes the AV control unit memory.



AV CONTROL UNIT : CONSULT Function

INFOID:0000000007347611

CONSULT can display each diagnostic item using the diagnostic test modes shown following.

MULTI AV diagnosis mode	Description
ECU IDENTIFICATION	The part number of AV control unit can be checked.
SELF-DIAGNOSTIC RESULT	Displays AV control unit self-diagnosis results.
DATA MONITOR	Displays AV control unit input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.

DATA MONITOR

Display Item List

Display item [unit]	ALL SIGNALS	SELECTION FROM MENU	Description
VHCL SPD SIG [ON/OFF]	X	X	Displays “ON” when vehicle speed > 0 km/h. Displays “OFF” when vehicle speed = 0 km/h.
PKB SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of parking brake switch.
ILLUM SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of lighting switch.

Display item [unit]	ALL SIGNALS	SELECTION FROM MENU	Description
IGN SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of ignition switch.
REV SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of back-up lamp switch.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Component Function Check

INFOID:0000000007347612

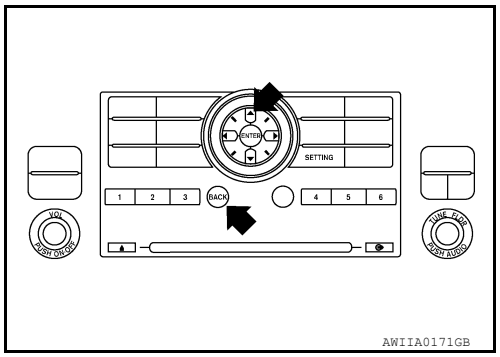
A/C and AV switch assembly self-diagnosis function

Description

The ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly can be checked.

Self-diagnosis mode

- Press the “BACK” button and the “UP” button within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more. When the self-diagnosis mode starts, a beep will sound and all LED indicators of the switch will illuminate.
- The continuity of each switch and control dial of the A/C and AV switch assembly can be checked. If the switch is operating normally, the system will beep and the LED's will illuminate when each switch is operated.



Finishing self-diagnosis mode

Self-diagnosis mode is canceled when the ignition switch is turned OFF.

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000007347613

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart. Refer to LAN-53, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000007347614

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	Diagnostic item is detected when ...	Probable malfunction location
U1000	CAN COMM CIRCUIT	When AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system

Diagnosis Procedure

INFOID:0000000007347615

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “MULTI AV”.

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to “LAN system”. Refer to LAN-14, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI section. Refer to GI-37, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000007347616

Initial diagnosis of AV control unit.

DTC Logic

INFOID:0000000007347617

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	Diagnostic item is detected when ...	Probable malfunction location
U1010	CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected	AV control unit

Diagnosis Procedure

INFOID:0000000007347618

1.REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit. Refer to AV-114, "Removal and Installation".

>> Inspection End.

U1200 AV CONTROL UNIT

Description

INFOID:0000000007347619

Replace the AV control unit if this DTC is displayed. Refer to AV-114, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347620

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1200	Control Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit. Refer to AV-114, "Removal and Installation".

U1216 AV CONTROL UNIT

Description

INFOID:0000000007347621

Replace the AV control unit if this DTC is displayed. Refer to AV-114, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347622

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit. Refer to AV-114, "Removal and Installation".

U1240 SWITCH CONN

Description

INFOID:0000000007347623

U1240 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

Self-diagnosis results display item

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1240	• SWITCH CONN [U1240]	• A/C and AV switch assembly power supply and ground circuit malfunction is detected • A malfunction is detected in communication circuit between AV control unit and A/C and AV switch assembly • A malfunction is detected in communication signal between AV control unit and A/C and AV switch assembly	• A/C and AV switch assembly power supply and ground circuits • Communication circuit between AV control unit and A/C and AV switch assembly

U1243 DISPLAY UNIT

Description

INFOID:0000000007347624

Part name	Description
DISPLAY UNIT	• Display image is controlled by the serial communication from AV control unit. • Inputs the RGB image signal (RGB, RGB area and RGB synchronizing) from AV control unit and the auxiliary image signal from the auxiliary input jacks. • Outputs the synchronizing signals (HP and VP) to the AV control unit.

DTC Logic

INFOID:0000000007347625

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	• Display unit power supply and ground circuit malfunction is detected • Malfunction is detected on communication circuit between display unit and AV control unit • Malfunction is detected on communication signal between display unit and AV control unit	• Display unit power supply and ground circuit • Communication circuit between display unit and AV control unit

Diagnosis Procedure

INFOID:0000000007347626

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

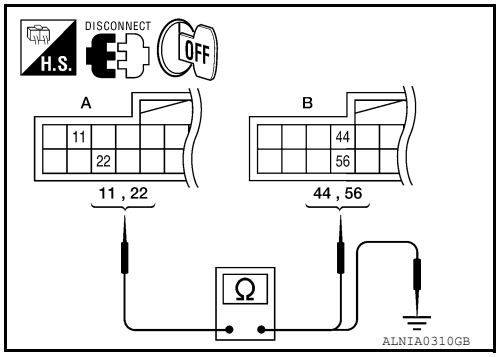
Check display unit power supply and ground circuit. Refer to AV-66, "DISPLAY UNIT : Diagnosis Procedure".

Is inspection result OK?

YES >> GO TO 2
NO >> Repair malfunctioning parts.

2.CHECK CONTINUITY OF COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector and AV control unit connector.
3. Check continuity between display unit harness connector M93 (A) terminals 11, 22 and AV control unit harness connector M133 (B) terminals 56, 44.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	11	M133	56	Yes
	22		44	

4. Check continuity between display unit harness connector M93 (A) terminals 11, 22 and ground.

A		—	Continuity
Connector	Terminal		
M93	11	Ground	No
	22		

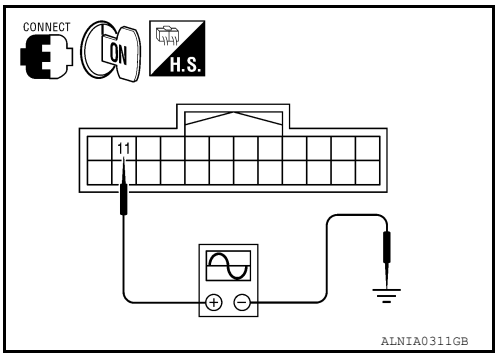
Are continuity results as specified?

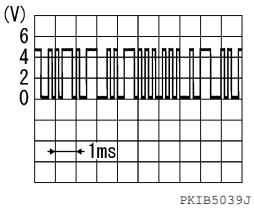
YES >> GO TO 3

NO >> Repair harness or connector.

3.CHECK COMMUNICATION SIGNAL

1. Connect display unit connector and AV control unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 11 and ground with an oscilloscope or CONSULT.



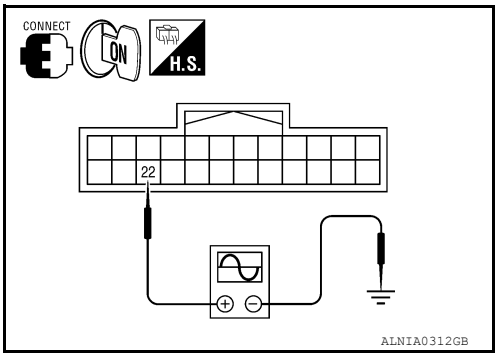
(+)		(-)	Reference signal
Connector	Terminal		
M93	11	Ground	

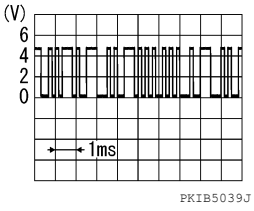
Are voltage readings as specified?

YES >> GO TO 4
NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

4.CHECK COMMUNICATION SIGNAL

Check signal between display unit harness connector M93 terminal 22 and ground with an oscilloscope or CONSULT.



(+)		(-)	Reference signal
Connector	Terminal		
M93	22	Ground	

Are voltage readings as specified?

YES >> Inspection End.
NO >> Replace display unit. Refer to AV-116, "Removal and Installation".

U1300 AV COMM CIRCUIT

Description

INFOID:0000000007347627

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

Self-diagnosis results display item

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	• A/C and AV switch assembly power supply and ground circuit malfunction is detected • A malfunction is detected in communication circuit between AV control unit and A/C and AV switch assembly • A malfunction is detected in communication signal between AV control unit and A/C and AV switch assembly	• A/C and AV switch assembly power supply and ground circuits • Communication circuit between AV control unit and A/C and AV switch assembly

U1310 AV CONTROL UNIT

Description

INFOID:0000000007347628

Replace the AV control unit if this DTC is displayed. Refer to AV-114, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347629

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. Refer to AV-114, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT
AV CONTROL UNIT
AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000007347630

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK FUSES

Check that the following fuses of the AV control unit are not are not blown.

Unit	Terminals	Signal name	Fuse No.
AV control unit	19	Battery power	29
	7	Ignition switch ACC or ON	4
	104	Ignition switch ON or START	12

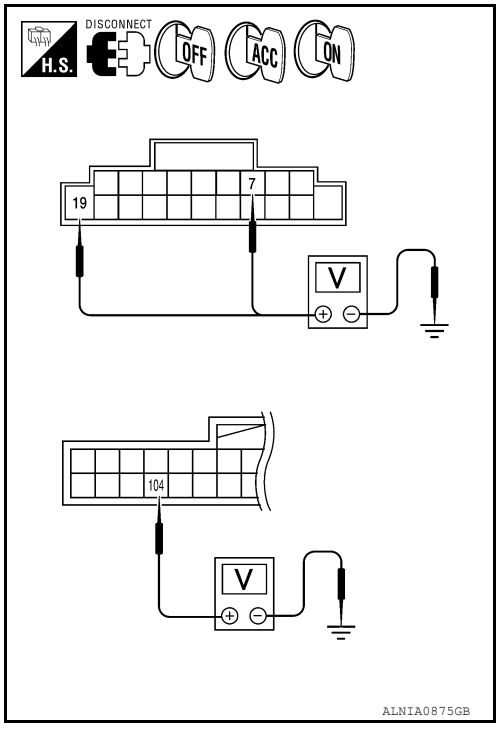
Are the fuses OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect AV control unit connectors M131 and M135.
2. Check voltage between the AV control unit connectors M131 and M135 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M131	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M135	104	Ground	0V	0V	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between AV control unit harness connectors M131, M133, M134, M135 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M131	20	Ground	Yes
M133	54		
M134	68		
M135	85		

Are the continuity results as specified?

YES >> Inspection End.
NO >> Repair AV control unit ground.

DISPLAY UNIT

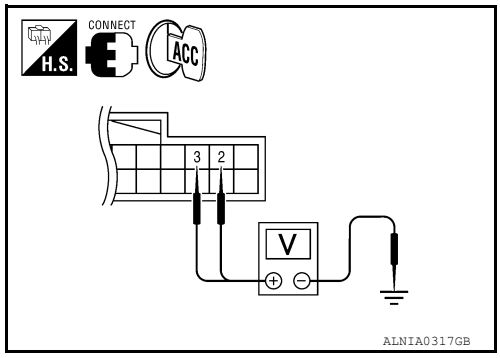
DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000007347631

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch to ACC.
2. Check voltage between display unit harness connector M93 and ground.



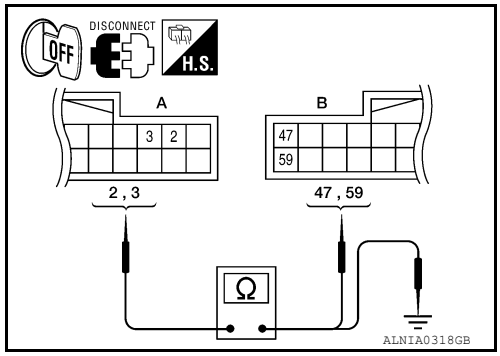
Signal name	Connector	Terminal	Ignition switch position	Value (Approx.)
Inverter VCC	M93	2	ACC	9V
Signal VCC		3		

Does specified voltage exist?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the display unit connector M93 and the AV control unit connector M133.
3. Check continuity between the display unit harness connector M93 (A) and the AV control unit connector M133 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	2	M133	59	Yes
	3		47	

4. Check continuity between the display unit harness connector M93 (A) and ground.

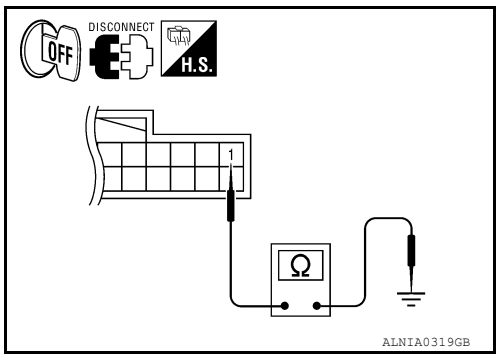
A		—	Continuity
Connector	Terminal		
M93	2	Ground	No
	3		

Are continuity results as specified?

YES >> Check AV control unit power and ground supply. Refer to AV-65, "AV CONTROL UNIT : Diagnosis Procedure".
NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check continuity between display unit harness connector and ground.



Connector	Terminal	—	Continuity
M93	1	Ground	Yes

Does continuity exist?

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

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:0000000007347632

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK FUSE

Check that the fuse of the AC and AV switch assembly is not blown.

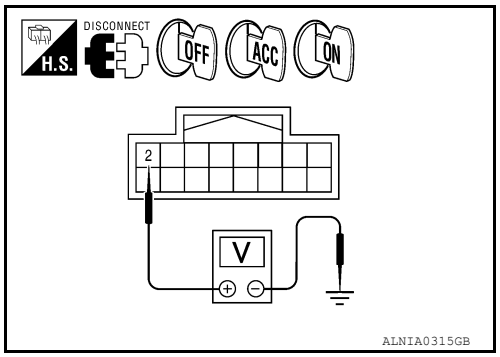
Unit	Terminal	Signal name	Fuse No.
A/C and AV switch assembly	2	Ignition switch ACC or ON	4

Is the fuse OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect A/C and AV switch assembly connector M98.
2. Check voltage between the A/C and AV switch assembly connector M98 and ground.



(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M98	2	Ground	0V	Battery voltage	Battery voltage

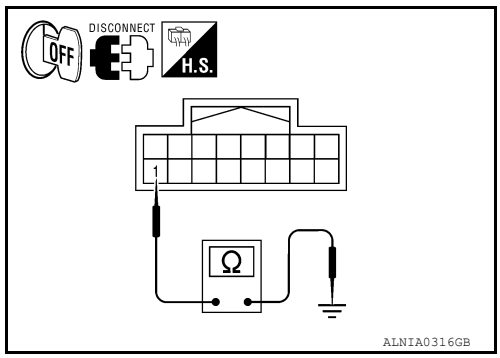
Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between A/C and AV switch assembly harness connector M98 and ground.

Connector	Terminal	—	Continuity
M98	1	Ground	Yes



Are the continuity results as specified?

YES >> Inspection End.
NO >> Repair harness or ground.

REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:0000000007347633

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

NOTE:
Apply parking brakes before proceeding.
1. Turn ignition switch ON.
2. Shift transmission into reverse.
3. Check voltage between rear view camera harness connector D551 terminal 2 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
D551	2	Ground	Reverse	12V

Is voltage reading approximately 12 volts?

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

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect rear view camera and AV control unit connectors.
3. Check continuity between rear view camera harness connector D551 terminal 2 and AV control unit harness connector M134 terminal 105.

Connector	Terminal	Connector	Terminal	Continuity
D551	2	M134	105	Yes

4. Check continuity between rear view camera harness connector D551 terminal 2 and ground.

Connector	Terminal	—	Continuity
D551	2	Ground	No

Are continuity test results as specified?

YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK REVERSE POSITION INPUT SIGNAL

1. Turn ignition switch ON.
2. Shift transmission into reverse.
3. Check voltage between AV control unit harness connector M134 terminal 105 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M134	105	Ground	Reverse	12V

Is voltage reading approximately 12 volts?

YES >> Replace AV control unit. Refer to AV-114, "Removal and Installation".
NO >> Check harness for open or short between AV control unit and back-up lamp relay.

4. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera harness connector.
3. Check continuity between rear view camera harness connector D551 terminal 1 and ground.

Connector	Terminal	—	Continuity
D551	1	Ground	Yes

Does continuity exist?

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

RGB (R: RED) SIGNAL CIRCUIT

Description

INFOID:0000000007347634

Transmit the image displayed with AV control unit with RGB signal to the display unit.

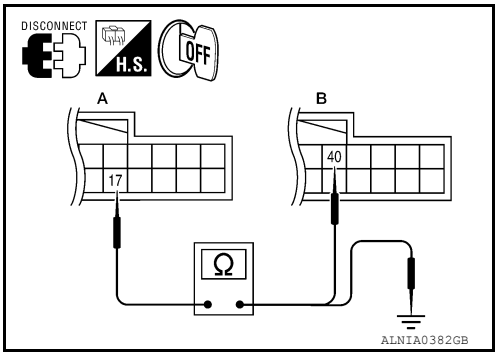
Diagnosis Procedure

INFOID:0000000007347635

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M133.
3. Check continuity between display unit harness connector M93 (A) terminal 17 and AV control unit harness connector M133 (B) terminal 40.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	17	M133	40	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 17 and ground.

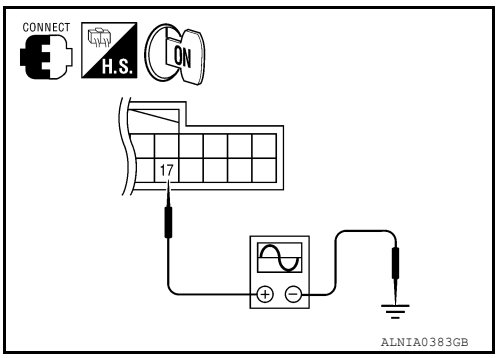
A		—	Continuity
Connector	Terminal		
M93	17	Ground	No

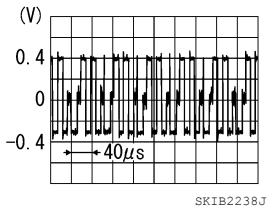
Are the continuity results as specified?

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

2.CHECK RGB (R: RED) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M133.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 17 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	17	Ground	Receive audio signal	

Are the voltage readings as specified?

YES >> Replace display unit. Refer to AV-116, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

RGB (G: GREEN) SIGNAL CIRCUIT

Description

INFOID:0000000007347636

Transmit the image displayed with AV control unit with RGB signal to the display unit.

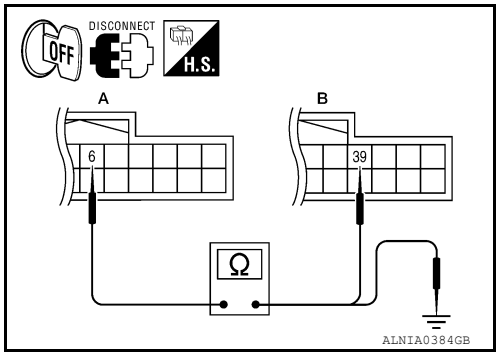
Diagnosis Procedure

INFOID:0000000007347637

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M133.
3. Check continuity between display unit harness connector M93 (A) terminal 6 and AV control unit harness connector M133 (B) terminal 39.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	6	M133	39	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 6 and ground.

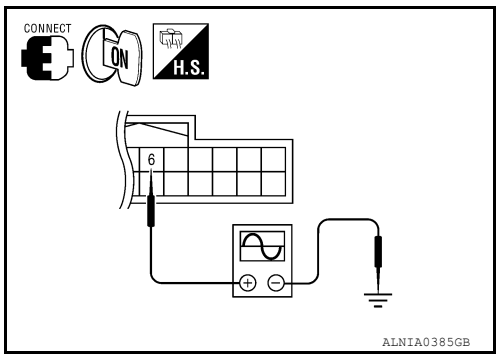
A		—	Continuity
Connector	Terminal		
M93	6	Ground	No

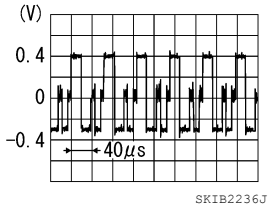
Are the continuity results as specified?

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

2.CHECK RGB (G: GREEN) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M133.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 6 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	6	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-116, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

RGB (B: BLUE) SIGNAL CIRCUIT

Description

INFOID:0000000007347638

Transmit the image displayed with AV control unit with RGB signal to the display unit.

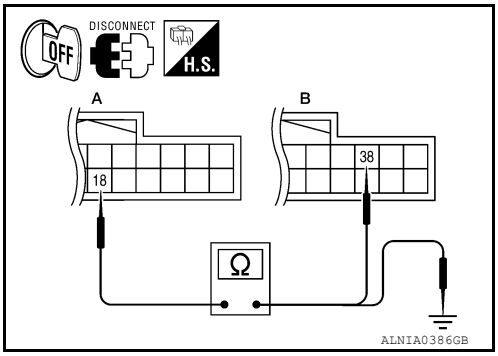
Diagnosis Procedure

INFOID:0000000007347639

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M133.
3. Check continuity between display unit harness connector M93 (A) terminal 18 and AV control unit harness connector M133 (B) terminal 38.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	18	M133	38	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 18 and ground.

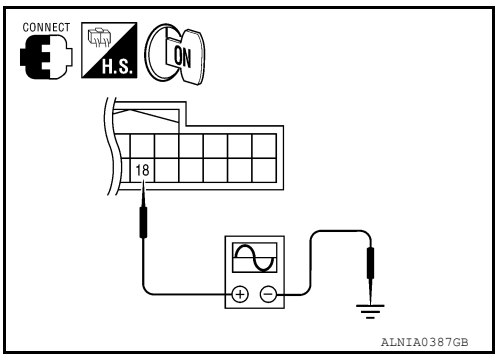
A		—	Continuity
Connector	Terminal		
M93	18	Ground	No

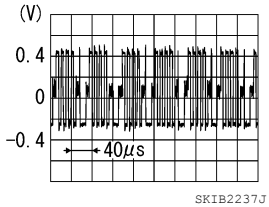
Are continuity results as specified?

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

2.CHECK RGB (B: BLUE) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M133.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 18 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	18	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-116, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

RGB SYNCHRONIZING SIGNAL CIRCUIT

Description

INFOID:0000000007347640

Transmit the RGB synchronizing signal to the display unit so as to synchronize the RGB image displayed with AV control unit.

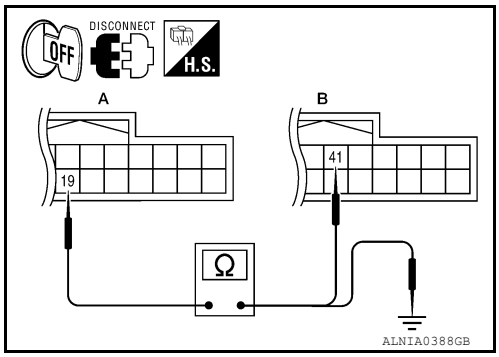
Diagnosis Procedure

INFOID:0000000007347641

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M133.
3. Check continuity between display unit harness connector M93 (A) terminal 19 and AV control unit harness connector M133 (B) terminal 41.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	19	M133	41	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 19 and ground.

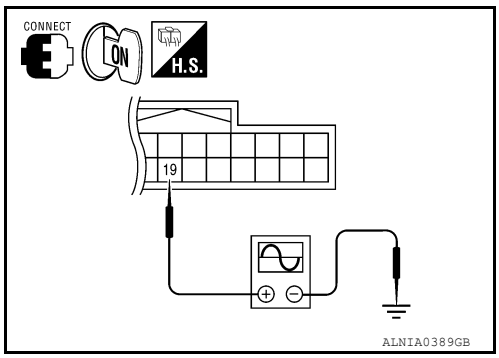
A		—	Continuity
Connector	Terminal		
M93	19	Ground	No

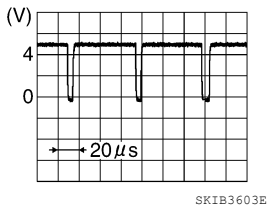
Are continuity results as specified?

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

2.CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M93 and AV control unit connector M133.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 19 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	19	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-116, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

RGB AREA (YS) SIGNAL CIRCUIT

Description

INFOID:0000000007347642

Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to display unit.

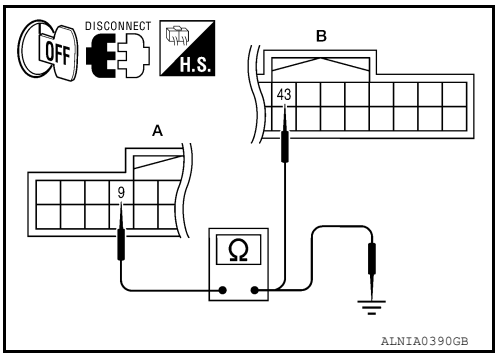
Diagnosis Procedure

INFOID:0000000007347643

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M133.
3. Check continuity between display unit harness connector M93 (A) terminal 9 and AV control unit harness connector M133 (B) terminal 43.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	9	M133	43	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 9 and ground.

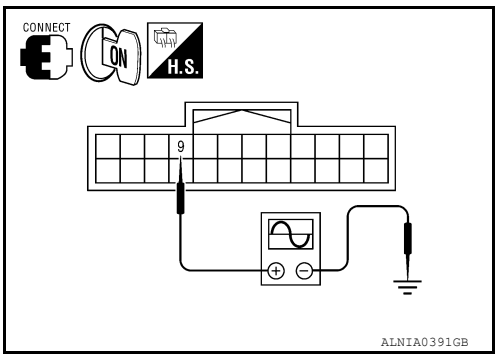
A		—	Continuity
Connector	Terminal		
M93	9	Ground	No

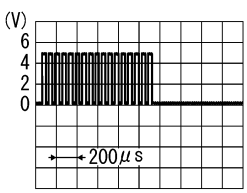
Are continuity results as specified?

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

2.CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M93 and AV control unit connector M133.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 9 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	9	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-116, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description

INFOID:0000000007347644

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

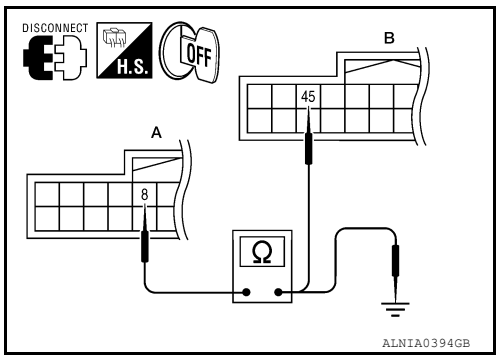
Diagnosis Procedure

INFOID:0000000007347645

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M133.
3. Check continuity between display unit harness connector M93 (A) terminal 8 and AV control unit harness connector M133 (B) terminal 45.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	8	M133	45	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 8 and ground.

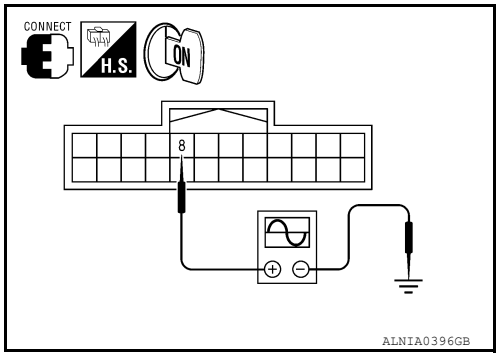
A		—	Continuity
Connector	Terminal		
M93	8	Ground	No

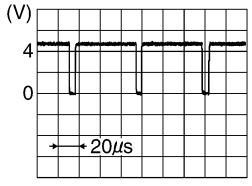
Are continuity results as specified?

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

2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M133.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 8 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	8	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-114, "Removal and Installation".
NO >> Replace display unit. Refer to AV-116, "Removal and Installation".

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

INFOID:0000000007347646

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

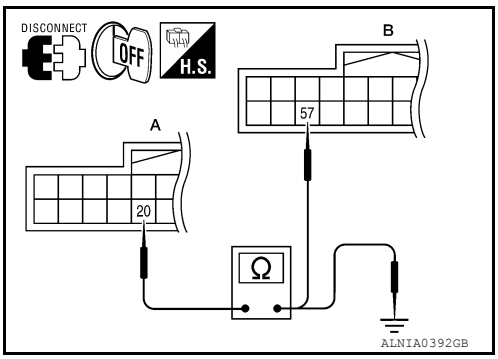
Diagnosis Procedure

INFOID:0000000007347647

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK CONTINUITY VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M133.
3. Check continuity between display unit harness connector M93 (A) terminal 20 and AV control unit harness connector M133 (B) terminal 57.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	20	M133	57	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 20 and ground.

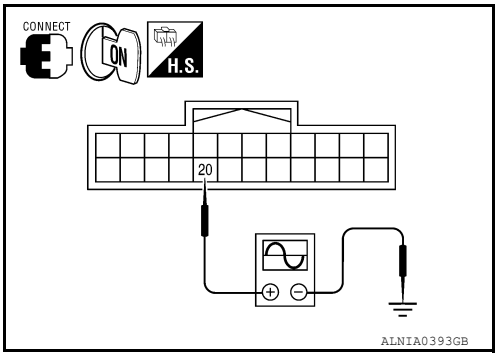
A		—	Continuity
Connector	Terminal		
M93	20	Ground	No

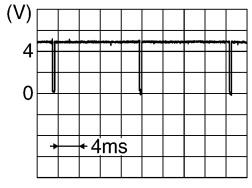
Are continuity results as specified?

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

2.CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M133.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 20 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	20	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-114, "Removal and Installation".
NO >> Replace display unit. Refer to AV-116, "Removal and Installation".

FRONT DOOR SPEAKER

Description

INFOID:0000000007347648

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

Diagnosis Procedure

INFOID:0000000007347649

Regarding Wiring Diagram information, refer to AV-95, "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 terminal and connector.

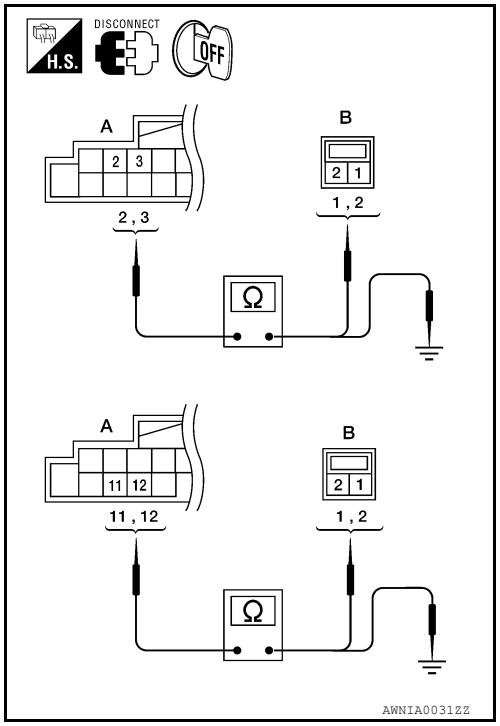
2.HARNESS CHECK

1. Disconnect AV control unit connector M131 and suspect speaker connector.
2. Check continuity between AV control unit harness connector M131 (A) terminal and suspect speaker harness connector (B) terminal.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	2	D12	1	Yes
	3		2	
	11	D112	1	
	12		2	

3. Check continuity between AV control unit harness connector M131 (A) terminal and ground.

A		—	Continuity
Connector	Terminal		
M131	2	Ground	No
	3		
	11		
	12		

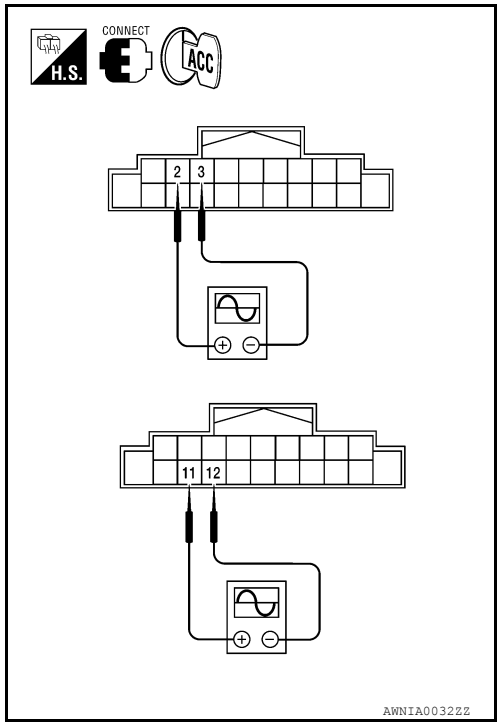


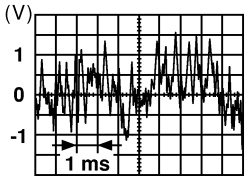
Are continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.FRONT SPEAKER SIGNAL CHECK

1. Connect AV control unit connector M131 and front speaker connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M131 terminals with CONSULT or oscilloscope.



(+)		(-)	Condition	Reference signal
Connector	Terminal	Terminal		
M131	2	3	Receive audio signal	
	11	12		

Is the audio signal voltage as specified?

YES >> Replace speaker. Refer to AV-118, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

FRONT TWEETER

Description

INFOID:0000000007347650

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

Diagnosis Procedure

INFOID:0000000007347651

Regarding Wiring Diagram information, refer to AV-95, "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 terminal and connector.

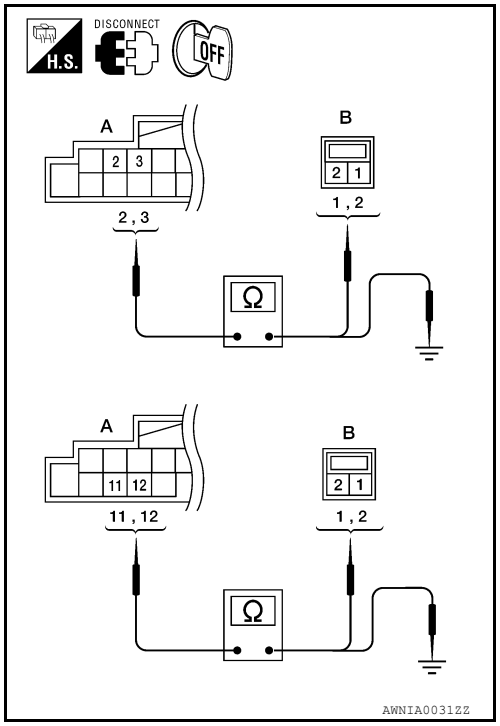
2.HARNESS CHECK

1. Disconnect AV control unit connector M131 and suspect front tweeter connector.
2. Check continuity between AV control unit harness connector M131 (A) and suspect front tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	2	M109	1	Yes
	3		2	
	11	M111	1	
	12		2	

3. Check continuity between AV control unit harness connector M131 (A) and ground.

A		—	Continuity
Connector	Terminal		
M131	2	Ground	No
	3		
	11		
	12		

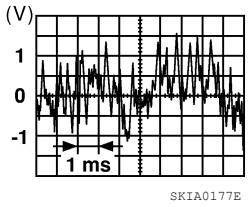


Are the continuity results as specified?

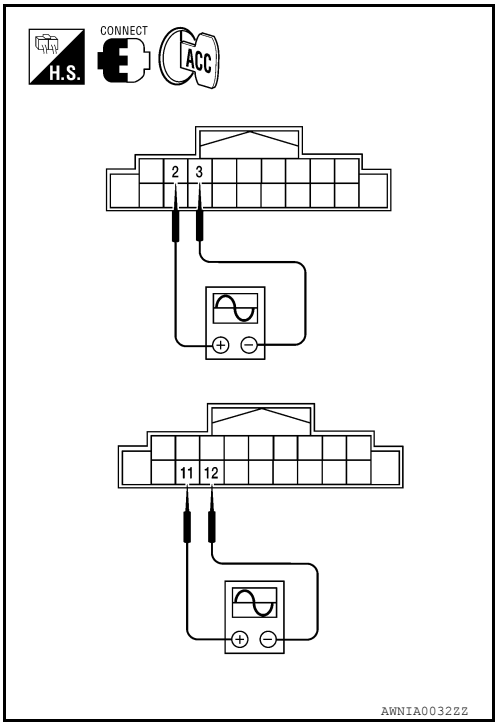
YES >> GO TO 3
NO >> Repair harness or connector.

3.FRONT TWEETER SIGNAL CHECK

1. Connect AV control unit connector M131 and front tweeter connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M131 terminals with CONSULT or oscilloscope.

(+)		(-)	Condition	Reference signal
Connector	Terminal	Terminal		
M131	2	3	Receive audio signal	
	11	12		

SKIA0177E



AWNIA0032ZZ

Is the audio signal voltage as specified?

YES >> Replace the suspect front tweeter. Refer to AV-117, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

REAR DOOR SPEAKER

Description

INFOID:0000000007347652

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

Diagnosis Procedure

INFOID:0000000007347653

Regarding Wiring Diagram information, refer to AV-95, "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 terminal and connector.

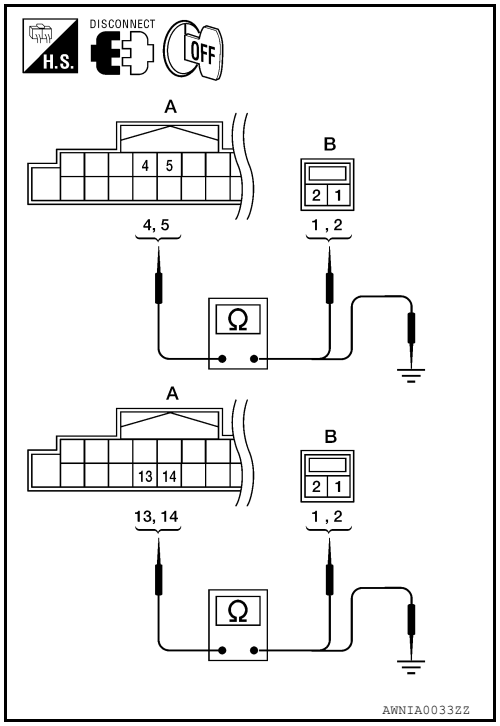
2.HARNESS CHECK

1. Disconnect AV control unit connector M131 and suspect rear speaker connector.
2. Check continuity between AV control unit harness connector M131 (A) and suspect rear speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	4	D209	1	Yes
	5		2	
	13	D309	1	
	14		2	

3. Check continuity between AV control unit harness connector M131 (A) and ground.

A		—	Continuity
Connector	Terminal		
M131	4	Ground	No
	5		
	13		
	14		

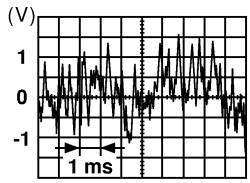


Are the continuity results as specified?

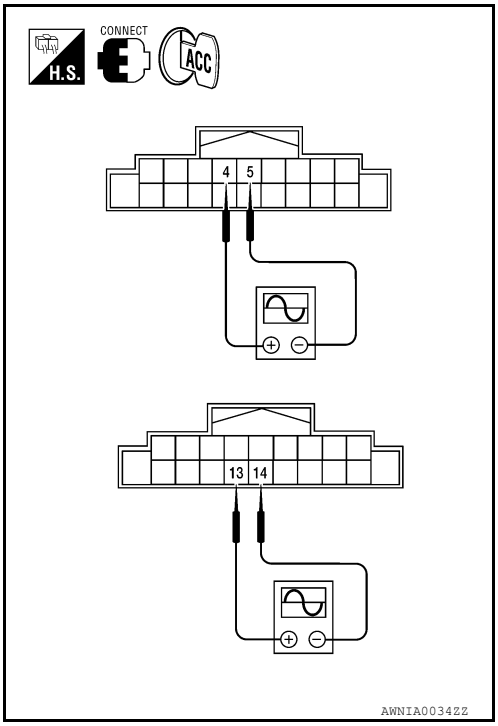
YES >> GO TO 3
NO >> Repair harness or connector.

3.REAR SPEAKER SIGNAL CHECK

1. Connect AV control unit connector and rear speaker connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M131 terminals with CONSULT or oscilloscope.

(+)		(-)	Condition	Reference signal
Connector	Terminal	Terminal		
M131	4	5	Receive audio signal	
	13	14		

SKIA0177E



AWNIA0034ZZ

Is the audio signal voltage as specified?

YES >> Replace the suspect rear door speaker. Refer to AV-119, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-114, "Removal and Installation".

STEERING SWITCH

Description

INFOID:0000000007347654

When one of the steering wheel AV control switches is pushed, the resistance in the steering wheel AV control switch circuit changes depending on which button is pushed.

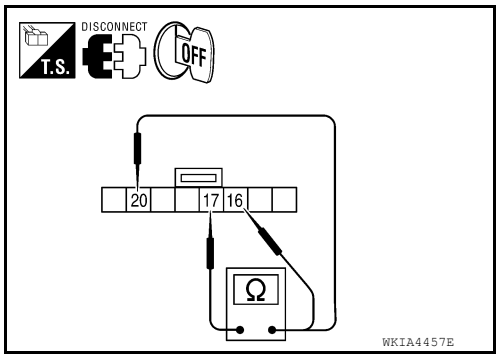
Diagnosis Procedure

INFOID:0000000007347655

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Disconnect steering wheel audio control switch connector M102.
2. Check resistance between steering switch connector terminals.



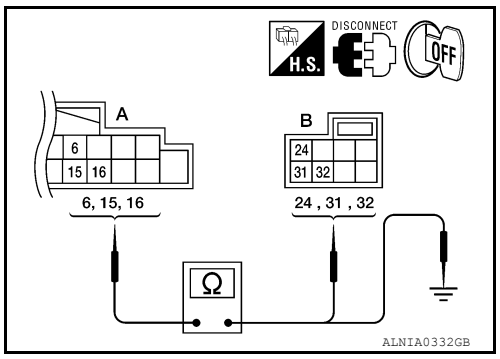
Terminal		Signal name	Condition	Resistance (Ω) (Approx.)
16	17	Seek (down)	Depress ▽ switch.	165
		Volume (down)	Depress VOL down switch.	652
		Power	Depress PWR switch.	0
20	17	Seek (up)	Depress △ switch.	165
		Volume (up)	Depress VOL up switch.	652
		Mode	Depress MODE switch.	0

Do the steering wheel audio control switches check OK?

YES >> GO TO 2
NO >> Replace steering wheel audio control switch. Refer to AV-120, "Removal and Installation".

2.CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M131 and spiral cable connector M30.
3. Check continuity between AV control unit harness connector M131 (A) and spiral cable harness connector M30 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M131	6	M30	24	Yes
	15		31	
	16		32	

4. Check continuity between AV control unit connector 1312 (A) and ground.

A		—	Continuity
Connector	Terminal		
M131	6	Ground	No
	15		
	16		

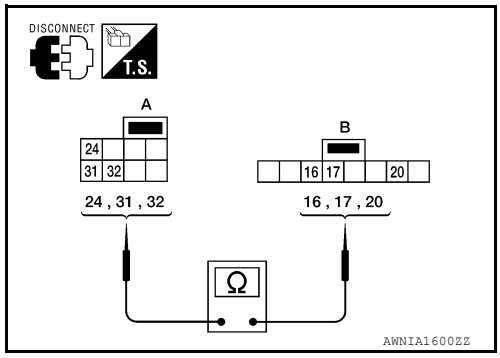
Are the continuity results as specified?

YES >> GO TO 3

NO >> Repair harness.

3. SPIRAL CABLE CHECK

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



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

Is continuity present?

YES >> Inspection End.
NO >> Replace spiral cable. Refer to SR-7, "Removal and Installation".

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000007347656

Rear view camera signals are transmitted from the rear view camera to the AV control unit using the camera signal circuits.

Diagnosis Procedure

INFOID:0000000007347657

Regarding Wiring Diagram information, refer to AV-95, "Wiring Diagram".

1.CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

NOTE:
Apply parking brakes before proceeding.

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M134 and rear view camera connector D551.
3. Check continuity between AV control unit harness connector M134 terminals 64, 65, 72 and rear view camera harness connector D551 terminals 3, 5 and 6.

64 - 5	**: Continuity should exist.**
65 - 6	**: Continuity should exist.**
72 - 3	**: Continuity should exist.**

4. Check continuity between AV control unit harness connector M134 terminals 64, 65, 72 and ground.

64, 65, 72 - Ground	**: Continuity should not exist.**

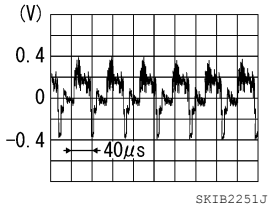
Is inspection result OK?

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

2.CHECK CAMERA IMAGE SIGNAL

1. Connect AV control unit connector M134 and rear view camera connector D551.
2. Turn ignition switch ON.
3. Shift transmission into reverse.
4. Check signal between AV control unit harness connector M134 terminals 64 and 65.

64 - 65 **:**



Is inspection result OK?

YES >> Replace AV control unit. Refer to AV-114, "Removal and Installation".
NO >> Replace rear view camera. Refer to AV-125, "Removal and Installation".

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

Reference Value

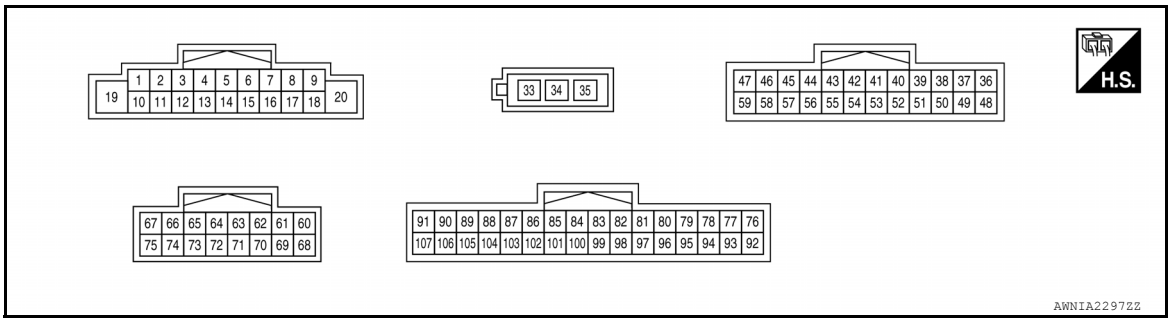
INFOID:0000000007347658

VALUES ON THE DIAGNOSIS TOOL

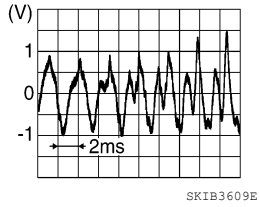
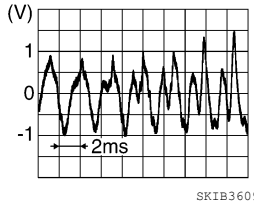
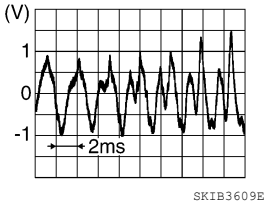
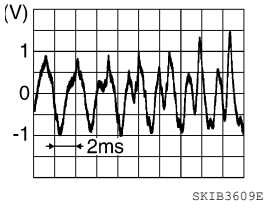
CONSULT data monitor item

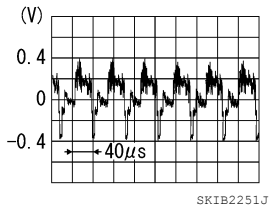
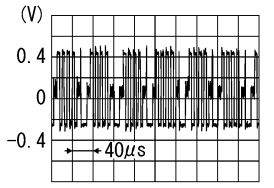
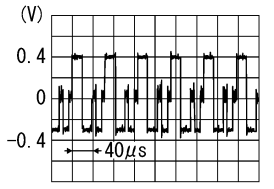
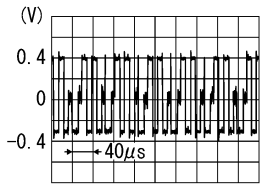
Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed =0 km/h (0 MPH)	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
	OFF	Parking brake is released.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON .	—
	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.	
IGN SIG	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
REV SIG	ON	Selector lever in R position	Changes in indication may be delayed. This is normal.
	OFF	Selector lever in any position other than R	

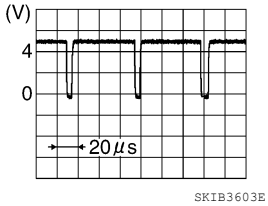
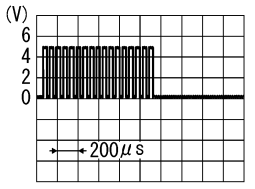
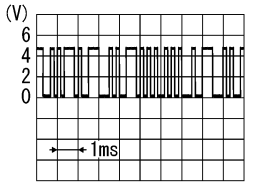
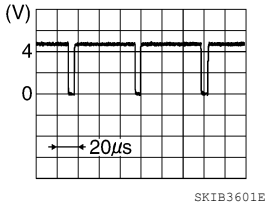
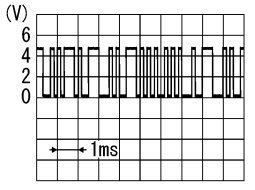
TERMINAL LAYOUT

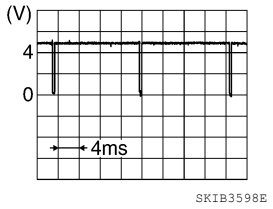
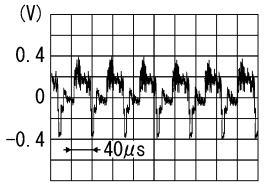
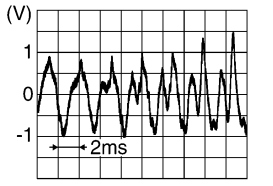


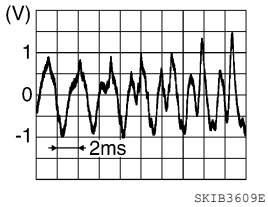
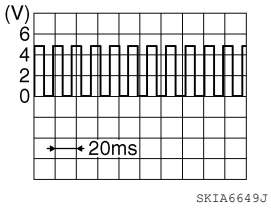
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
2 (BR)	3 (L)	Sound signal front door speaker and front tweeter LH	Output	Ignition switch ON	Audio output	 SKIB3609E
4 (G)	5 (B)	Sound signal rear door speaker and rear tweeter LH	Output	Ignition switch ON	Audio output	 SKIB3609E
6 (Y)	15 (L)	Steering switch signal A	Input	Ignition switch ON	Press and hold MODE switch.	0V
					Press and hold △ switch.	0.75V
					Press and hold VOL up switch	2V
					Except for above.	5V
7 (G/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
9 (V)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0V
					Lighting switch is ON.	Battery voltage
11 (LG)	12 (R)	Sound signal front door speaker and front tweeter RH	Output	Ignition switch ON	Voice output	 SKIB3609E
13 (GR)	14 (O)	Sound signal rear door speaker and rear tweeter RH	Output	Ignition switch ON	Voice output	 SKIB3609E
15 (L)	Ground	Steering switch signal GND	—	Ignition switch ON	—	0V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
16 (G)	15 (L)	Steering switch signal B	Input	Ignition switch ON	Press and hold POWER switch	0V
					Press and hold ▽ switch	0.75V
					Press and hold VOL down switch	2V
					Except for above	5V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0V
34	—	Antenna main	—	—	—	—
35	—	Antenna power	Output	Ignition switch ON	With AM/FM radio selected	12V
36 (G)	Ground	AUX image signal	Output	Ignition switch ON	When AUX mode is selected	 SKIB2251J
37 (R)	Ground	AUX image ground	—	Ignition switch ON	—	0V
38 (R)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2237J
39 (B)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2236J
40 (W)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2238J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
41 (R)	Ground	RGB synchronizing signal	Output	Ignition switch ON	—	 SKIB3603E
42	—	RGB synchronizing ground	—	Ignition switch ON	—	0V
43 (G)	Ground	RGB area (YS) signal	Output	Ignition switch ON	RGB image	5V
					AUX image	 PKIB4948J
44 (LG)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness	 PKIB5039J
45 (B)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	—	 SKIB3601E
46 (BR)	Ground	Signal ground	—	Ignition switch	—	0V
47 (R)	Ground	Signal VCC	Output	Ignition switch ACC	—	9V
54 (B)	Ground	Ground	—	Ignition switch ON	—	0V
56 (V)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness	 PKIB5039J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
57 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch On	—	 SKIB3598E
58 (SB)	Ground	Inverter ground	—	Ignition switch ON	—	0V
59 (O)	Ground	Inverter VCC	Output	Ignition switch ACC	—	9V
64 (W)	Ground	Rear view camera video signal ground	—	Ignition switch ON	—	0V
65 (B)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	 SKIB2251J
68 (B)	Ground	Rear view camera signal (ground)	—	Ignition switch ON	—	0V
72	—	Shield	—	—	—	—
85 (B)	Ground	Ground	—	Ignition switch ON	—	0V
86 (L)	—	CAN–H	Input/ Output	—	—	—
87 (P)	—	CAN–L	Input/ Output	—	—	—
88 (L)	—	AV communication signal 1 (H)	Input/ Output	—	—	—
89 (P)	—	AV communication signal 1 (L)	Input/ Output	—	—	—
90 (L)	—	AV communication signal 2 (H)	Input/ Output	—	—	—
91 (P)	—	AV communication signal 2 (L)	Input/ Output	—	—	—
95 (W)	97 (R)	AUX audio signal RH	Input	Ignition switch ON	When AUX mode is selected	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
96 (B)	97 (R)	AUX audio signal LH	Input	Ignition switch ON	When AUX mode is selected	 SKIB3609E
101 (GR)	Ground	A/C and AV switch assembly ground	—	Ignition switch ON	—	0V
103 (SB)	Ground	CD eject signal	Input	—	Pressing the eject switch	0V
					Except for above	3.3V
104 (W/G)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
105 (W)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
					Other than R position	0V
106 (G)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake ON	0V
					Parking brake OFF	Battery voltage
107 (LG)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	 SKIA6649J

DTC Index

INFOID:0000000007347659

Self-diagnosis results display item

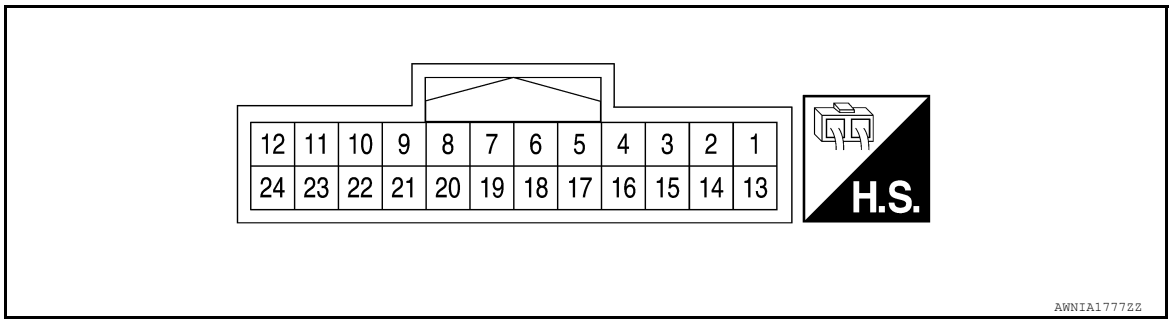
Error item	Refer to
CAN COMM CIRCUIT [U1000]	AV-56, "DTC Logic"
CONTROL UNIT (CAN) [U1010]	AV-57, "DTC Logic"
Control Unit FLASH-ROM [U1200]	AV-58, "DTC Logic"
CAN CONT [U1216]	AV-59, "DTC Logic"
SWITCH CONN [U1240]	AV-60, "Description"
FRONT DISP CONN [U1243]	AV-61, "DTC Logic"
AV COMM CIRCUIT [U1300]	AV-63, "Description"
CONTROL UNIT (AV) [U1310]	AV-64, "DTC Logic"

DISPLAY UNIT

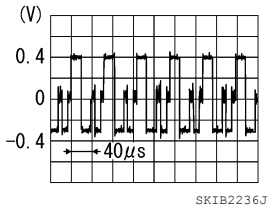
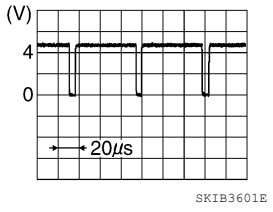
Reference Value

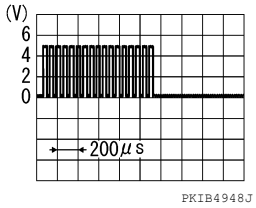
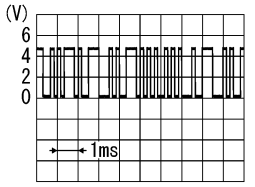
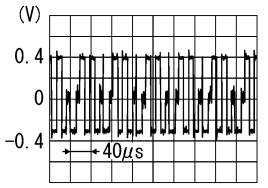
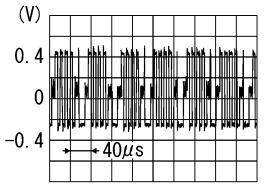
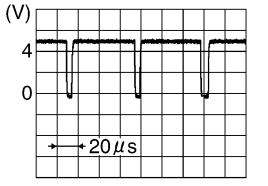
INFOID:0000000007347660

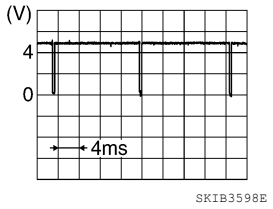
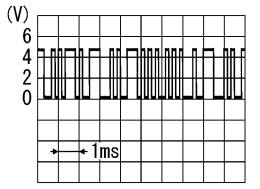
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0V
2 (O)	Ground	Inverter VCC	Input	Ignition switch ACC	—	9V
3 (R)	Ground	Signal VCC	Input	Ignition switch ACC	—	9V
4 (R)	Ground	AUX image ground	—	Ignition switch ON	—	0V
6 (B)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting“Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	
8 (B)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	—	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (G)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image displayed	5V
					At rear view camera image displayed	 PKIB4948J
11 (V)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display-brightness	 PKIB5039J
13 (SB)	Ground	Inverter ground	—	Ignition switch ON	—	0V
14 (BR)	Ground	Signal ground	—	Ignition switch ON	—	0V
15 (G)	—	AUX image synchronizing signal	Input	—	—	—
17 (W)	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.	 SKIB2238J
18 (R)	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.	 SKIB2237J
19 (R)	Ground	RGB synchronizing signal	Input	Ignition switch ON	—	 SKIB3603E

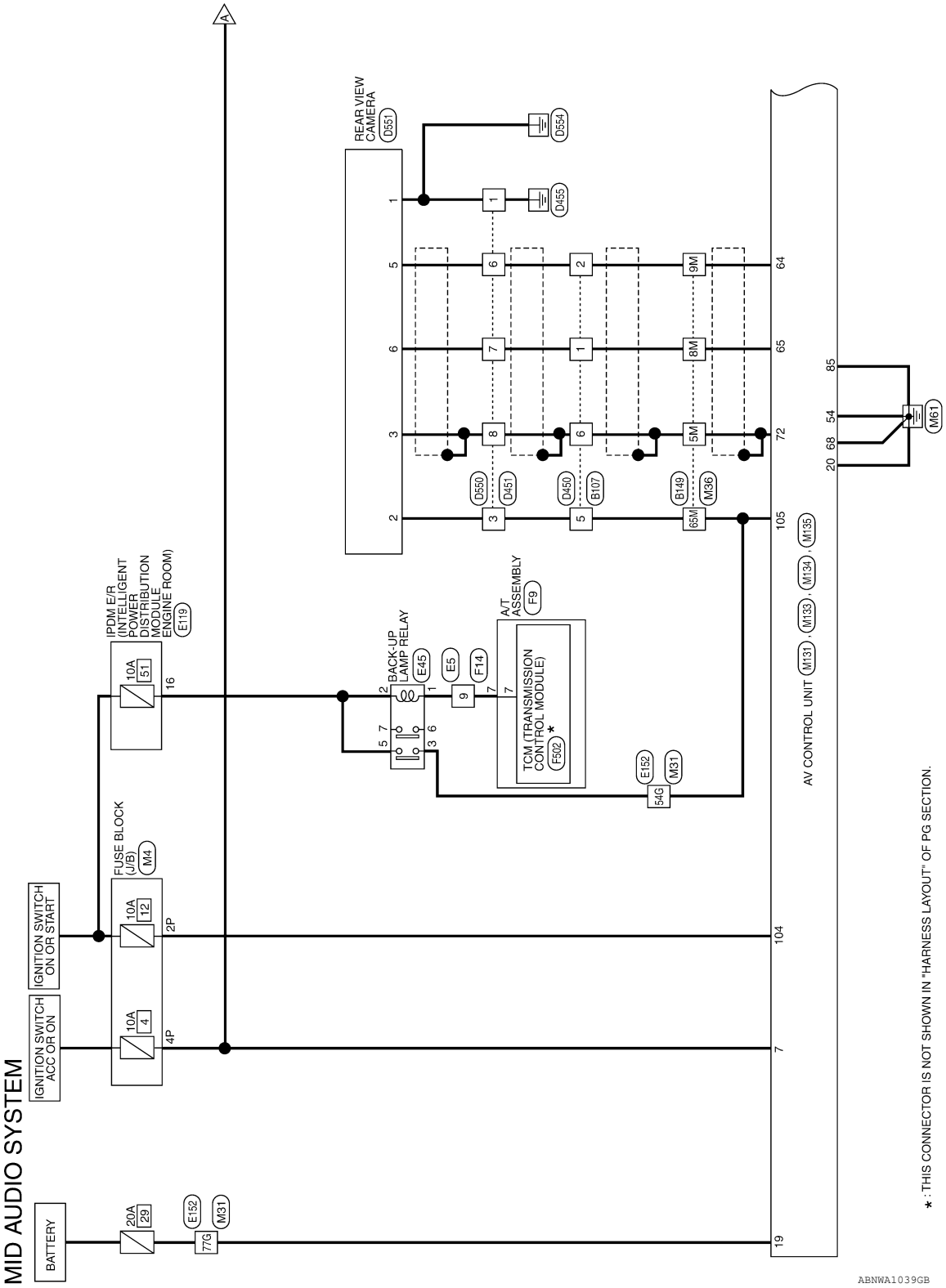
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	—	 SKIB3598E
22 (LG)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display-brightness	 PKIB5039J

WIRING DIAGRAM

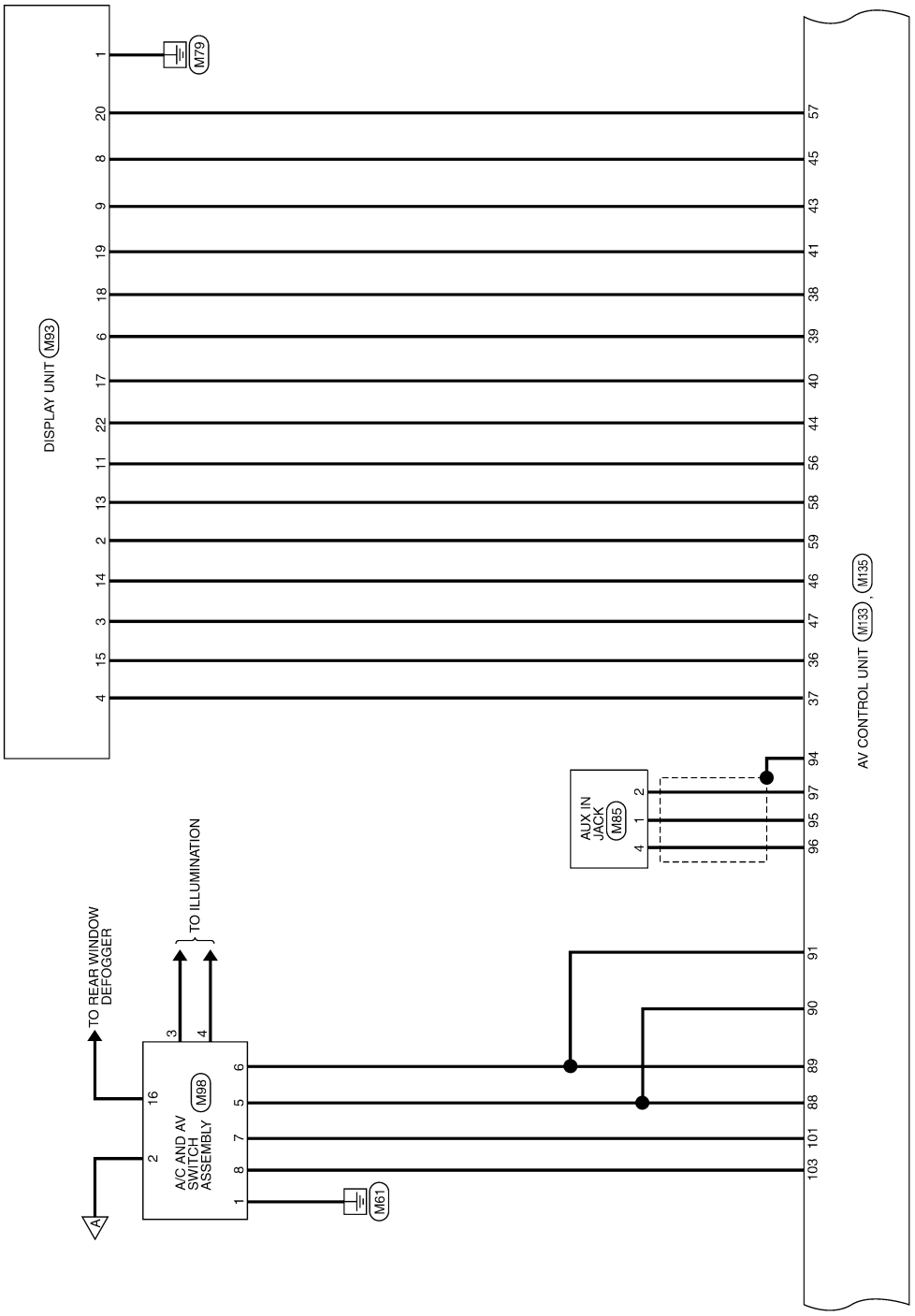
MID AUDIO SYSTEM

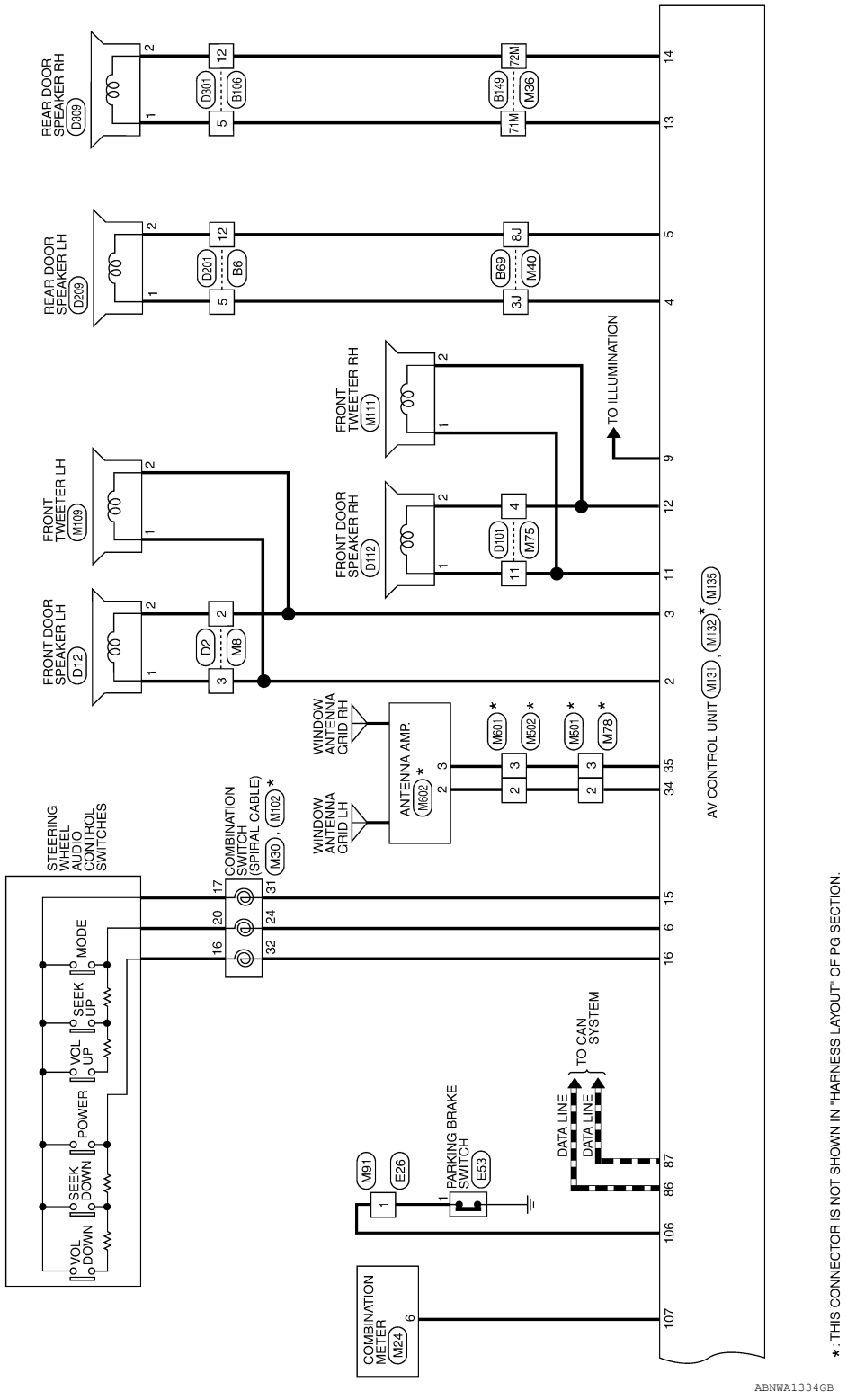
Wiring Diagram

INFOID:0000000007347661



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

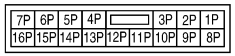

DISPLAY UNIT M93
M79
AV CONTROL UNIT M133, M135
AUX IN JACK M85
A/C AND AV SWITCH ASSEMBLY M98
M61
TO REAR WINDOW DEFOGGER
TO ILLUMINATION
ABNWA1344GB


REAR DOOR SPEAKER RH D309
REAR DOOR SPEAKER LH D209
FRONT TWEETER LH M109
FRONT DOOR SPEAKER LH D12
FRONT TWEETER RH M111
FRONT DOOR SPEAKER RH D112
TO ILLUMINATION
WINDOW ANTENNA GRID RH
WINDOW ANTENNA GRID LH
ANTENNA AMP. M602 *
COMBINATION SWITCH (SPIRAL CABLE) M30, M102 *
STEERING WHEEL AUDIO CONTROL SWITCHES
MODE
SEEK UP
VOL UP
POWER
SEEK DOWN
VOL DOWN
AV CONTROL UNIT M131, M132 *, M135
DATA LINE
DATA LINE
TO CAN SYSTEM
PARKING BRAKE SWITCH E53
COMBINATION METER M24
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
ABNWA1334GB

MID AUDIO SYSTEM CONNECTORS

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

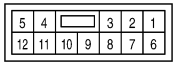
H.S.



Terminal No.	Color of Wire	Signal Name
2P	W/G	–
4P	G/B	–

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

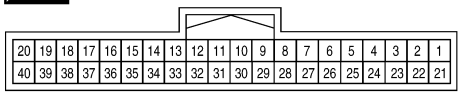
H.S.



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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

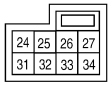
H.S.



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

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

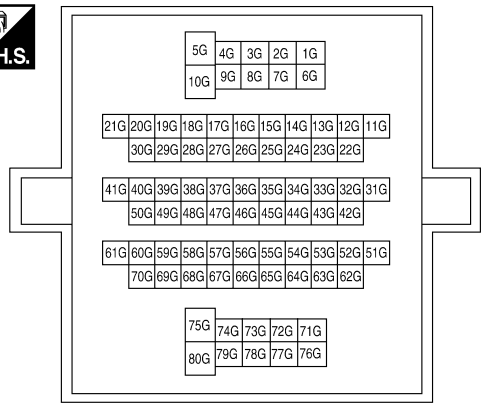
H.S.



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

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

H.S.



Terminal No.	Color of Wire	Signal Name
54G	SB	–
77G	Y	–

ABNIA2655GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
3J	G	– (WITHOUT BOSE AUDIO SYSTEM)
8J	B	– (WITHOUT BOSE AUDIO SYSTEM)

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	AUX AUDIO RH+
2	R	AUX GND
4	B	AUX AUDIO LH+

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

H.S.

Terminal No.	Color of Wire	Signal Name
5M	SHIELD	–
8M	B	–
9M	W	–
65M	G/Y	–
71M	GR	–
72M	O	–

Connector No.	M78
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
4	R	–
11	LG	– (WITHOUT BOSE AUDIO SYSTEM)

ABNIA3334GB

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	M93
Connector Name	DISPLAY UNIT (WIHTOUT NAVI)
Connector Color	WHITE

H.S.

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	B	GND
2	O	INV VCC
3	R	SIG VCC
4	R	COMP IN-
5	–	–
6	B	G
7	–	–
8	B	HP

Terminal No.	Color of Wire	Signal Name
9	G	YS
10	–	–
11	V	IT DISP
12	–	–
13	SB	INV GND
14	BR	SIG GND
15	G	COMP IN SYNC
16	–	–
17	W	R
18	R	B
19	R	RGB SYNC
20	W	VP
21	–	–
22	LG	DISP IT
23	–	–
24	–	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	G/Y	ACC
3	LG	ILL
4	BR	ILL CONT GND
5	L	M CAN1-H
6	P	M CAN1-L
7	GR	SW GND
8	SB	CD DVD EJECT

Terminal No.	Color of Wire	Signal Name
9	–	–
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	–	–
16	Y	RR DEFOG

Connector No.	M102
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

14	15	16	17	18	19	20	21

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

ABNIA3335GB

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

H.S.

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

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

H.S.

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

Connector No.	M131
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–
2	BR	FR SP LH (+)
3	L	FR SP LH (-)
4	G	RR SP LH (+)
5	B	RR SP LH (-)
6	Y	STRG SW A
7	G/Y	ACC
8	–	–

Terminal No.	Color of Wire	Signal Name
9	V	ILL+
10	–	–
11	LG	FR SPRH (+)
12	R	FR SPRH (-)
13	GR	RR SPRH (+)
14	O	RR SPRH (-)
15	L	STRG SW GND
16	G	STRG SW B
17	–	–
18	–	–
19	Y	+B
20	B	GND

Connector No.	M132
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	GRAY

H.S.

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

ABNIA3336GB

Connector No.	M133
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE

H.S.

47	46	45	44	43	42	41	40	39	38	37	36
59	58	57	56	55	54	53	52	51	50	49	48

Terminal No.	Color of Wire	Signal Name
36	G	COMP OUT+
37	R	COMP OUT-
38	R	B
39	B	G
40	W	R
41	R	RGB SYNC
42	–	–
43	G	YS
44	LG	DISP IT
45	B	HP
46	BR	SIG GND
47	R	SIG VCC
48	–	–
49	–	–
50	–	–
51	–	–
52	–	–
53	–	–
54	B	GND
55	–	–
56	V	IT DISP
57	W	VP
58	SB	INV GND
59	O	INV VCC

Connector No.	M134
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE

H.S.

67	66	65	64	63	62	61	60
75	74	73	72	71	70	69	68

Terminal No.	Color of Wire	Signal Name
60	–	–
61	–	–
62	–	–
63	–	–
64	W	VTR -
65	B	VTR +
66	–	–
67	–	–
68	B	RV CAM SIG
69	–	–
70	–	–
71	–	–
72	SHIELD	COMP IN SHIELD
73	–	–
74	–	–
75	–	–

ABNIA3337GB

Terminal No.	Color of Wire	Signal Name
101	GR	SW GND
102	–	–
103	SB	CD EJECT
104	W/G	IGN
105	W	REVERSE SIG
106	G	PKB SIG
107	LG	SPEED 8P

Terminal No.	Color of Wire	Signal Name
85	B	GND
86	L	CAN-H
87	P	CAN-L
88	L	M CAN1 H
89	P	M CAN1 L
90	L	M CAN2 H
91	P	M CAN2 L
92	–	–
93	–	–
94	SHIELD	HP SHIELD
95	W	AUX AUDIO RH+
96	B	AUX AUDIO LH+
97	R	AUX GND
98	–	–
99	–	–
100	–	–

Connector No.	M601
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	M135
Connector Name	AV CONTROL UNIT (WITH MID AUDIO SYSTEM)
Connector Color	WHITE

H.S.

91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76
107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92

Terminal No.	Color of Wire	Signal Name
76	–	–
77	–	–
78	–	–
79	–	–
80	–	–
81	–	–
82	–	–
83	–	–
84	–	–

Connector No.	M502
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

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

H.S.

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

ABNIA3338GB

Connector No.	M602
Connector Name	ANTENNA AMP.
Connector Color	GRAY

H.S.

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

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
9	LG	–

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	E45
Connector Name	BACK-UP LAMP RELAY
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	W/G	–
3	SB	–
5	W/G	–

Connector No.	E53
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
16	W/G	REVERSE LAMP

ABNIA2661GB

Connector No.	F9
Connector Name	A/T ASSEMBLY
Connector Color	GREEN

H.S.

5	4	3	2	1
10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
7	LG	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
5	G	– (WITHOUT BOSE AUDIO SYSTEM)
12	B	– (WITHOUT BOSE AUDIO SYSTEM)

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
54G	SB	–
77G	Y	–

Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY

H.S.

10	9	8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
7	O	REV LAMP RLY

Connector No.	F14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	LG	–

ABNIA2662GB

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

H.S.

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

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

Terminal No.	Color of Wire	Signal Name
5M	SHIELD	–
8M	B	–
9M	W	–
65M	G/Y	–
71M	GR	–
72M	O	–

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

H.S.

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

11J	12J	13J	14J	15J	16J	17J	18J	19J	20J	21J
22J	23J	24J	25J	26J	27J	28J	29J	30J		

31J	32J	33J	34J	35J	36J	37J	38J	39J	40J	41J
42J	43J	44J	45J	46J	47J	48J	49J	50J		

51J	52J	53J	54J	55J	56J	57J	58J	59J	60J	61J
62J	63J	64J	65J	66J	67J	68J	69J	70J		

71J	72J	73J	74J	75J
76J	77J	78J	79J	80J

Terminal No.	Color of Wire	Signal Name
3J	G	– (WITHOUT BOSE AUDIO SYSTEM)
8J	B	– (WITHOUT BOSE AUDIO SYSTEM)

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

H.S.

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

11M	12M	13M	14M	15M	16M	17M	18M	19M	20M	21M
22M	23M	24M	25M	26M	27M	28M	29M	30M		

31M	32M	33M	34M	35M	36M	37M	38M	39M	40M	41M
42M	43M	44M	45M	46M	47M	48M	49M	50M		

51M	52M	53M	54M	55M	56M	57M	58M	59M	60M	61M
62M	63M	64M	65M	66M	67M	68M	69M	70M		

71M	72M	73M	74M	75M
76M	77M	78M	79M	80M

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

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
5	G/Y	–
6	SHIELD	–

ABNIA2663GB

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

H.S.

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

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

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

H.S.

2	1

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

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

H.S.

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

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

Connector No.	D209
Connector Name	REAR DOOR SPEAKER LH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

H.S.

2	1

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

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

H.S.

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

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

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

H.S.

2	1

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

ABNIA2664GB

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

H.S.

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

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

Connector No.	D309
Connector Name	REAR DOOR SPEAKER RH (WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

H.S.

2	1

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

Connector No.	D450
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
5	G/Y	–
6	SHIELD	–

Connector No.	D451
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	B	–
3	G/Y	–
6	W	–
7	B	–
8	SHIELD	–

Connector No.	D550
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	–
3	G/Y	–
6	W	–
7	B	–
8	SHIELD	–

Connector No.	D551
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	G/Y	ACC
3	SHIELD	DRAIN
5	W	CAMERA -
6	B	CAMERA +

ABNIA2665GB

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:0000000007347662

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power supply and ground circuit • AV control unit	• AV-65 • AV-49
Steering switch does not operate	• Steering switch • AV control unit	• AV-83 • AV-49
All speakers do not sound	• Speaker circuit shorted to ground • AV control unit	• AV-95 • AV-49
One or several speakers do not sound	• Front door speaker • Front tweeter • Rear door speaker	• AV-77 • AV-79 • AV-81
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAGNOSIS" in the appropriate interior trim section.

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	AV control unit	AV-49
CD cannot be ejected.		
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

NORMAL OPERATING CONDITION

Description

INFOID:0000000007347663

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

NOISE

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

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

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

NOTE:

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

Type of Noise and Possible Cause

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

PRECAUTION

PRECAUTIONS

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

INFOID:0000000007347664

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000007347665

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the ″LOCK″ position.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.
For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.
If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Use the Intelligent Key or mechanical key to turn the ignition switch to the ″ACC″ position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

5. When the repair work is completed, return the ignition switch to the ″LOCK″ position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT.

Precaution for Work

INFOID:0000000007347666

- 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 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, and wring the water out of the cloth to wipe the dirty area.
  Then rub with a soft and 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, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

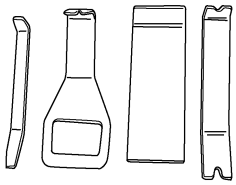
PREPARATION

PREPARATION

Special Service Tool

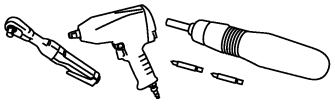
INFOID:0000000007347667

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

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

Commercial Service Tools

INFOID:0000000007347668

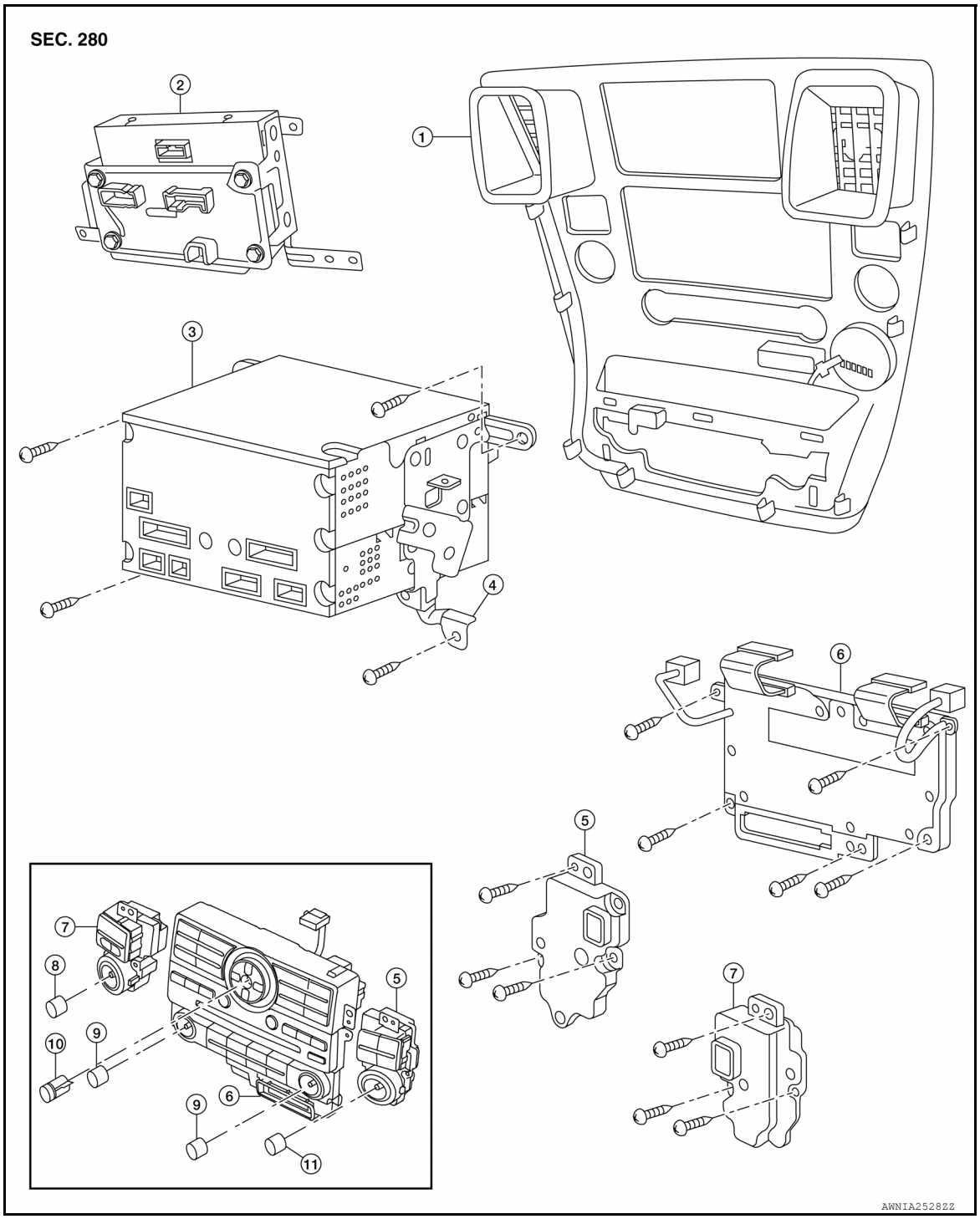
Tool name	Description
Power tool  PIIB1407E	Loosening nuts, screws and bolts

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Removal and Installation

INFOID:0000000007347669



1. Cluster lid C
2. Display unit
3. AV control unit
4. AV control unit brackets
5. Tuner knob switch
6. A/C and AV switch assembly
7. Volume knob switch
8. Volume knob
9. Temp knobs RH and LH
10. Enter button
11. Tuner knob

CAUTION:
Only remove and replace the A/C or AV switch assembly knobs if damaged or missing. The knobs must not be removed from switches when removing and installing the A/C or AV switch assembly to prevent damage to the switch assembly.

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the cluster lid C. Refer to IP-16, "Removal and Installation".
3. Remove the AV control unit screws, using a power tool.
4. Remove the AV control unit.
5. Remove the A/C and AV switch assembly screws, then remove the A/C and AV switch assemblies as necessary.

INSTALLATION

Installation is in the reverse order of removal.

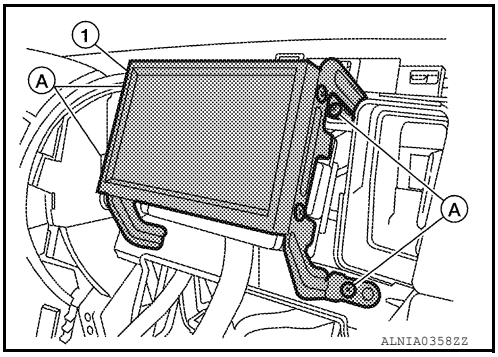
DISPLAY UNIT

Removal and Installation

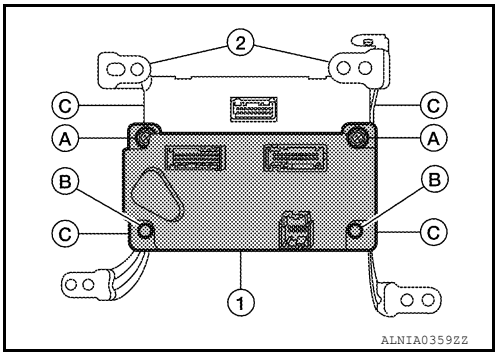
INFOID:0000000007347670

REMOVAL

1. Remove cluster lid C. Refer to IP-16, "Removal and Installation".
2. Remove the display unit screws (A).
3. Pull out the display unit (1), then disconnect the display unit connectors and remove the display unit (1).



4. Remove the A/C auto amp.screws (A), remove the (C103) fasteners (B) from the display unit assembly brackets and remove the A/C auto amp. (1).
5. Remove the display unit bracket unit screws (C) and remove the display unit brackets (2).



INSTALLATION

Installation is in reverse order of removal.

FRONT TWEETER

Removal and Installation

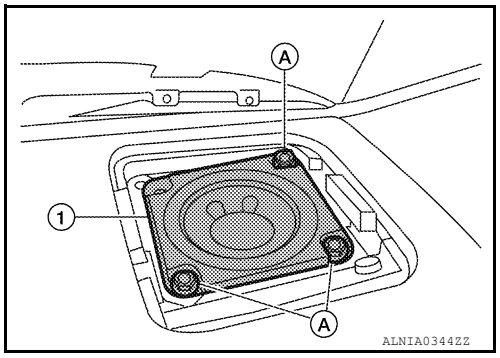
INFOID:0000000007347671

REMOVAL

CAUTION:

Use a suitable tool to prevent damage to the front tweeter speaker grille trim and the instrument panel.

1. Remove the front tweeter grille.
2. Remove the front tweeter screws (A).
3. Pull out the front tweeter speaker (1) and disconnect front tweeter connector, then remove the front tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

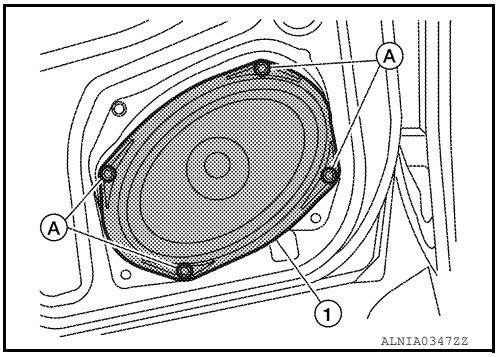
FRONT DOOR SPEAKER

Removal and Installation

INFOID:0000000007347672

REMOVAL

1. Remove the front door finisher. Refer to INT-15, "Removal and Installation".
2. Remove the front door speaker screws (A).
3. Pull out the front door speaker (1), and disconnect the front door speaker connector and remove the front door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

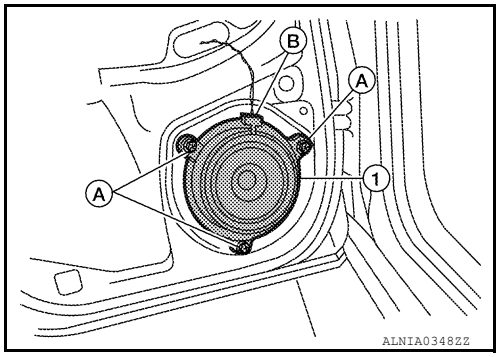
REAR DOOR SPEAKER

Removal and Installation

INFOID:0000000007347673

REMOVAL

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



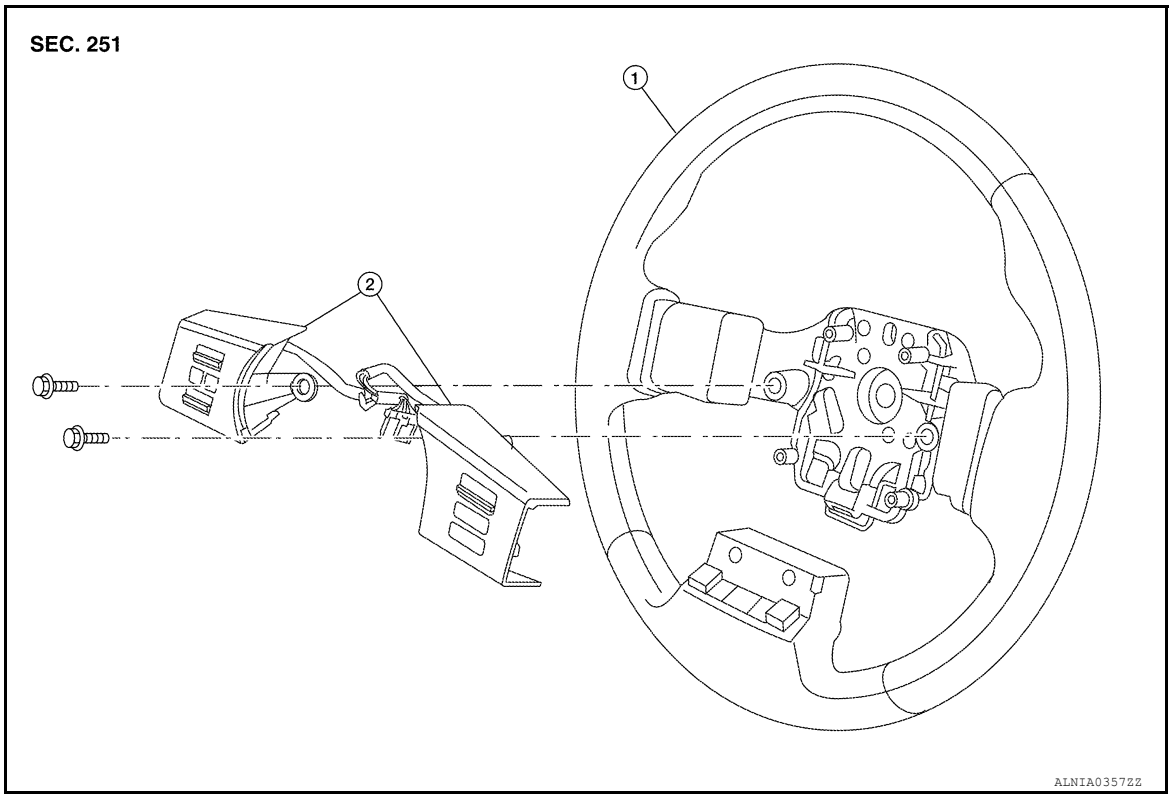
INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

Removal and Installation

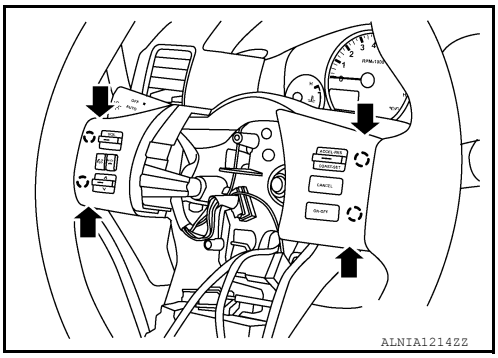
INFOID:0000000007347674



1. Steering wheel
2. Steering wheel audio control switches

REMOVAL

1. Remove the driver air bag module. Refer to SR-5, "Removal and Installation".
2. Remove the steering wheel audio control switch assembly screws.
3. Disconnect the steering wheel audio control switches connector.
4. Remove the steering wheel audio control switches by pulling on steering wheel audio control switches to release the pawls.
   CAUTION:
   Do not tilt steering wheel audio control switches during removal or damage may occur to the pawls.
   • ◌: Pawl



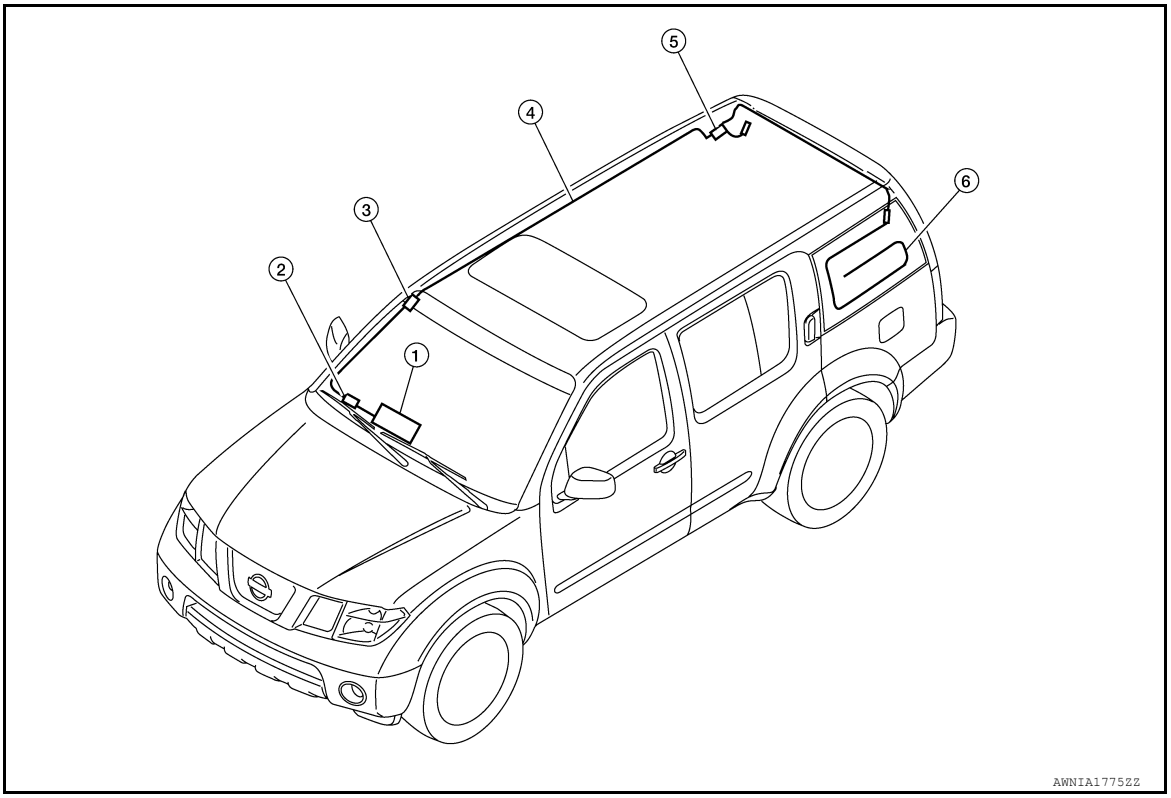
INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antenna

INFOID:0000000007347675



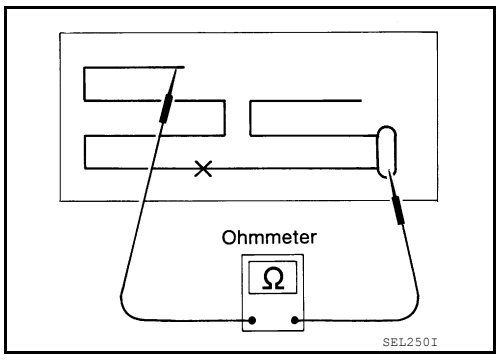
1. AV control unit M132
2. Harness connector M78, M501
3. Harness connector M502, M601
4. Antenna feeder
5. Antenna amp. M602
6. Window antenna grid

Window Antenna Repair

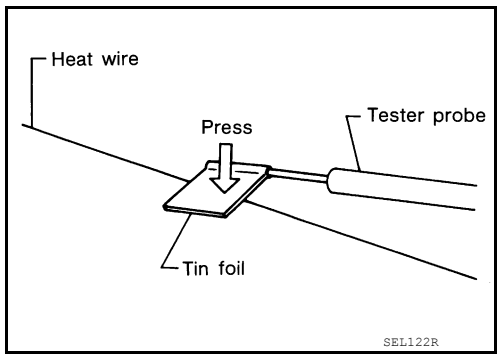
INFOID:0000000007347676

ELEMENT CHECK

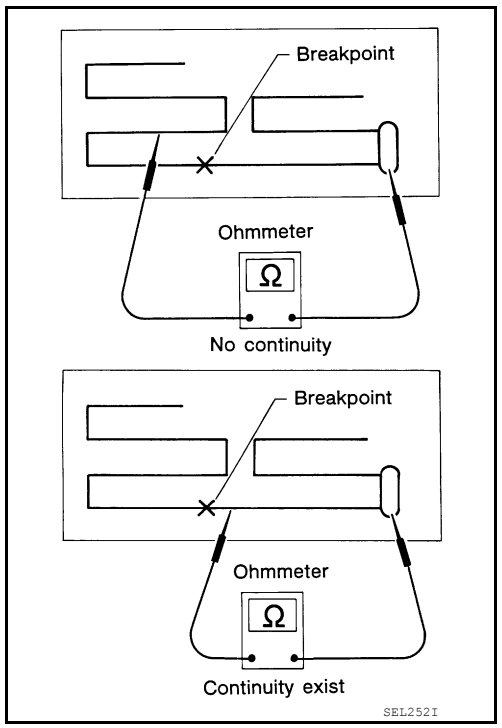
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



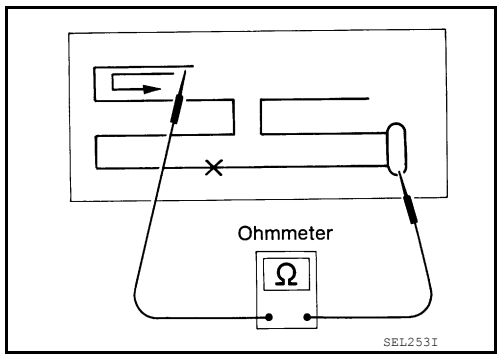
- **When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.**



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.



ELEMENT REPAIR

Refer to DEF-45, "Filament Repair".

AUXILIARY INPUT JACK

Removal and Installation

INFOID:0000000007347677

Removal

1. Remove the A/T finisher. Refer to IP-21, "Removal and Installation".
2. Remove the auxiliary input jack.

Installation

Installation is in the reverse order of removal.

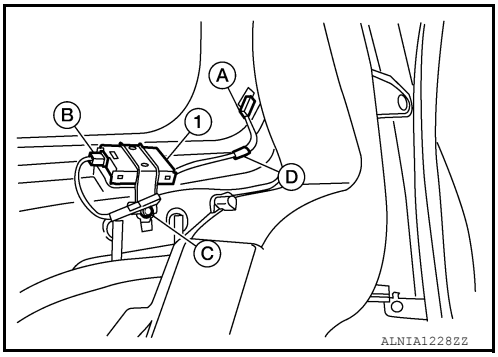
ANTENNA AMP.

Removal and Installation

INFOID:0000000007347678

REMOVAL

1. Remove the luggage side upper and lower RH finishers. Refer to INT-25, "Removal and Installation".
2. Detach the antenna amp. harness clip (D), disconnect the antenna amp. connector (A), harness connector (B), then remove the antenna amp. screw (C) and remove the antenna amp. (1).



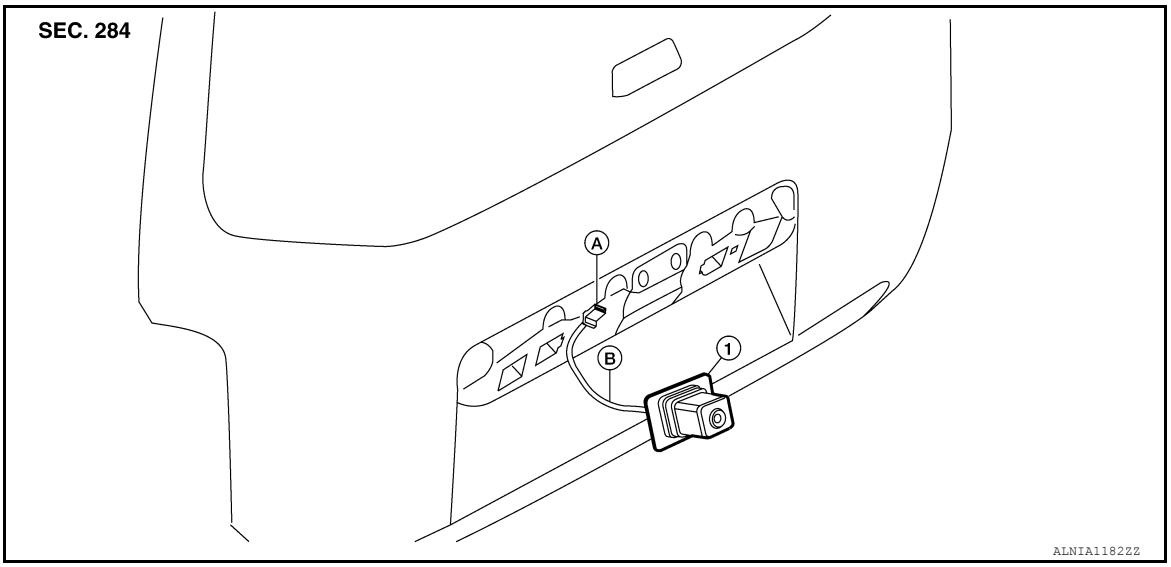
INSTALLATION

Installation is in the reverse order of removal.

REAR VIEW CAMERA

Removal and Installation

INFOID:0000000007347681



1. Rear view camera
A. Rear view camera connector
B. Rear view camera harness clip

REMOVAL

1. Remove the license lamp finisher. Refer to EXT-23, "Removal and Installation".
2. Disconnect the rear view camera connector.
3. Detach the rear view camera harness clip.
4. Detach the rear view camera to release, then pull out to remove the rear view camera while feeding the rear view camera harness and connector through the back door.

INSTALLATION

Installation is in the reverse order of removal.

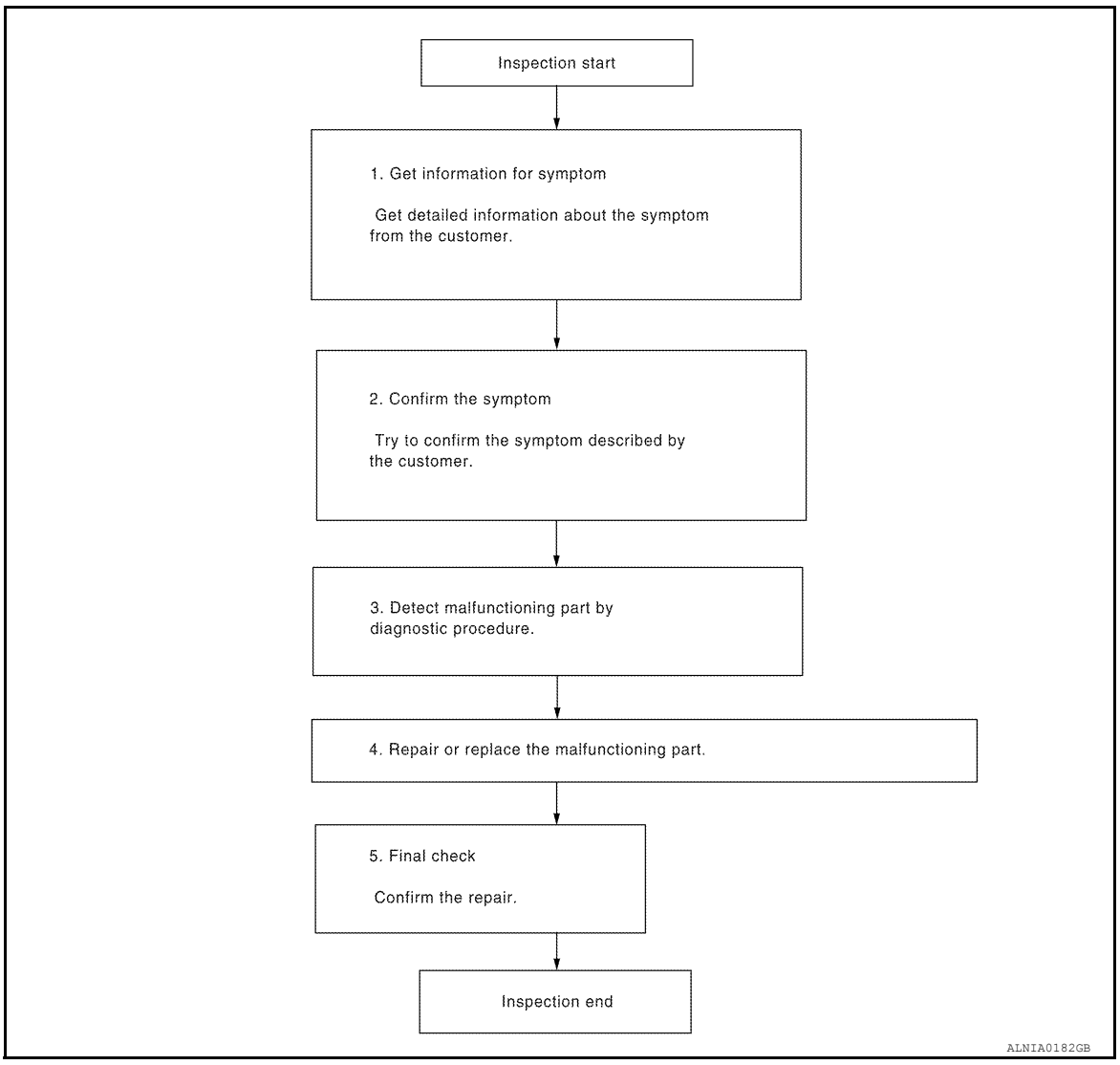
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000007347682

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.

Is malfunctioning part detected?

YES >> GO TO 4
NO >> GO TO 2

4. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 5

5. FINAL CHECK

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

Was the repair confirmed?

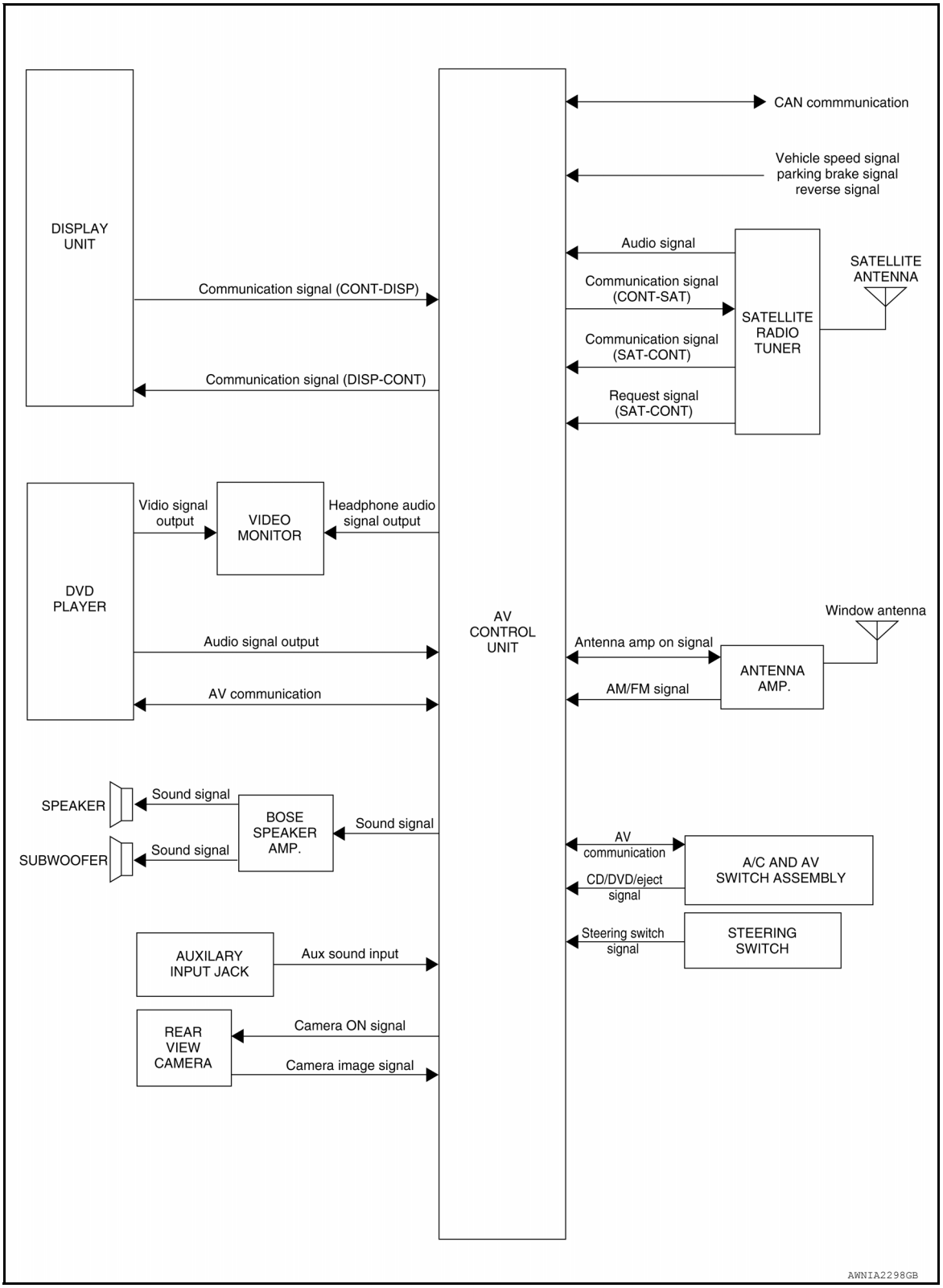
YES >> Inspection End.
NO >> GO TO 2

SYSTEM DESCRIPTION

AUDIO SYSTEM

System Diagram

INFOID:0000000007347683



System Description

INFOID:0000000007347684

AUDIO SYSTEM

The audio system consists of the following components
- AV control unit
- Display unit
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- A/C and AV switch assembly
- Front door speakers
- Front tweeters
- Rear door speakers
- Rear tweeters
- Subwoofer

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 front door speakers, front tweeters, rear door speakers, rear tweeters and the subwoofer.
Refer to Owner's Manual for audio system operating instructions.

SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components
- Satellite antenna
- Satellite radio tuner

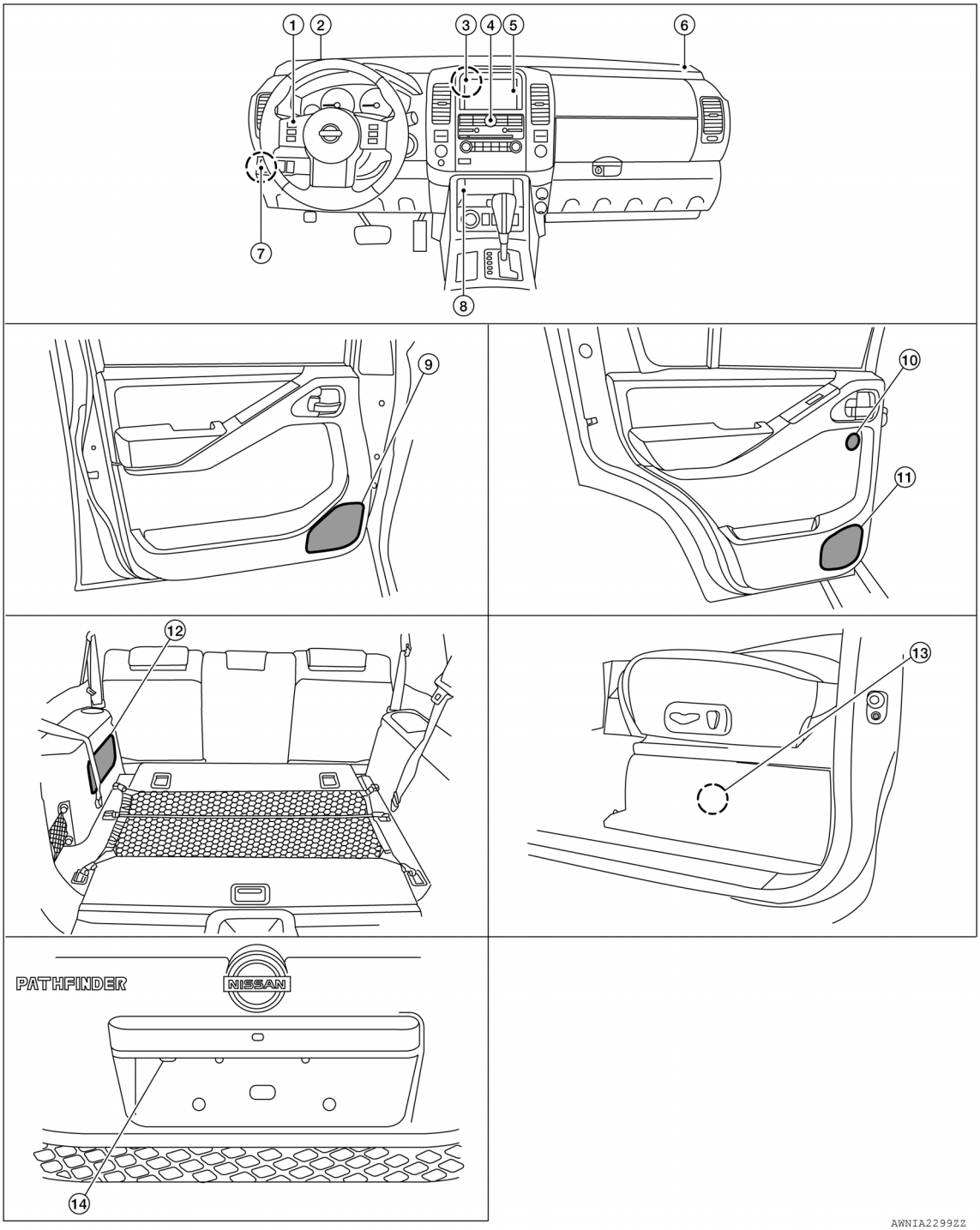
When the satellite radio system is on, radio signals are supplied to the satellite radio tuner from the satellite antenna. The satellite radio tuner then sends audio signals to the AV control unit.
Refer to Owner's Manual for satellite radio system operating instructions.

SPEED SENSITIVE VOLUME SYSTEM

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

Component Parts Location

INFOID:0000000007347685



1. Steering wheel audio control switches
2. Front tweeter LH M109
3. AV control unit M42, M43, M44, M45, M46, M69, M70
4. A/C and AV switch assembly M98
5. Display unit M93
6. Front tweeter RH M111
7. Satellite radio tuner M41, M129
8. Aux jack M85
9. Front door speaker
   LH D12
   RH D112

10. Rear tweeter
LH D208
RH D308
11. Rear door speaker
LH D207
RH D307
12. Subwoofer B72
13. BOSE speaker amp B74 & B75 (located under driver seat)
14. Rear view camera D551

Component Description

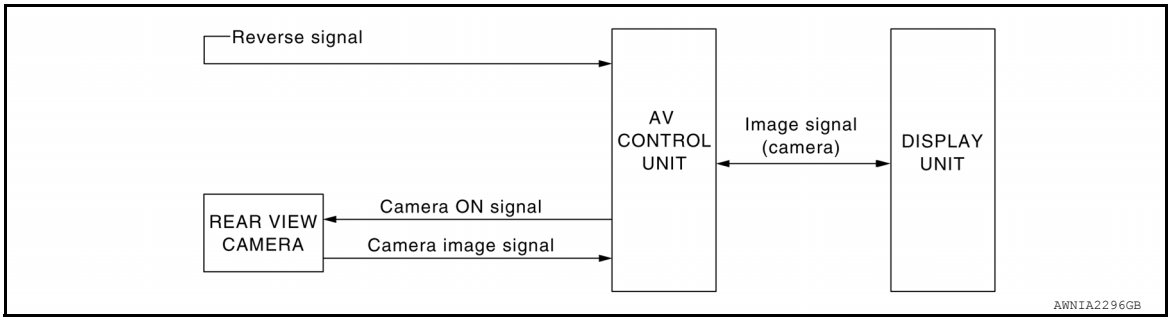
INFOID:0000000007347686

Part name	Description
AV control unit	Controls audio system and satellite radio system functions
Display unit	Displays all audio and climate control related information
BOSE speaker amp.	Receives power (amp ON) and audio signals from audio unit and outputs audio signals to each speaker.
Steering wheel audio control switches	• Audio operation can be operated • Steering wheel audio control switch signal is output to audio unit
Front door speakers	• Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Front tweeters	• Outputs audio signal from BOSE speaker amp. • Outputs high range sounds
Rear door speakers	• Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Rear tweeters	• Outputs audio signal from BOSE speaker amp. • Outputs high range sounds
Subwoofer	• Outputs audio signal from BOSE speaker amp. • Outputs low range sounds
Satellite radio tuner	• Receives radio signals from satellite antenna • Sends audio signals to AV control unit
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.

REAR VIEW MONITOR SYSTEM

System Diagram

INFOID:0000000007347687



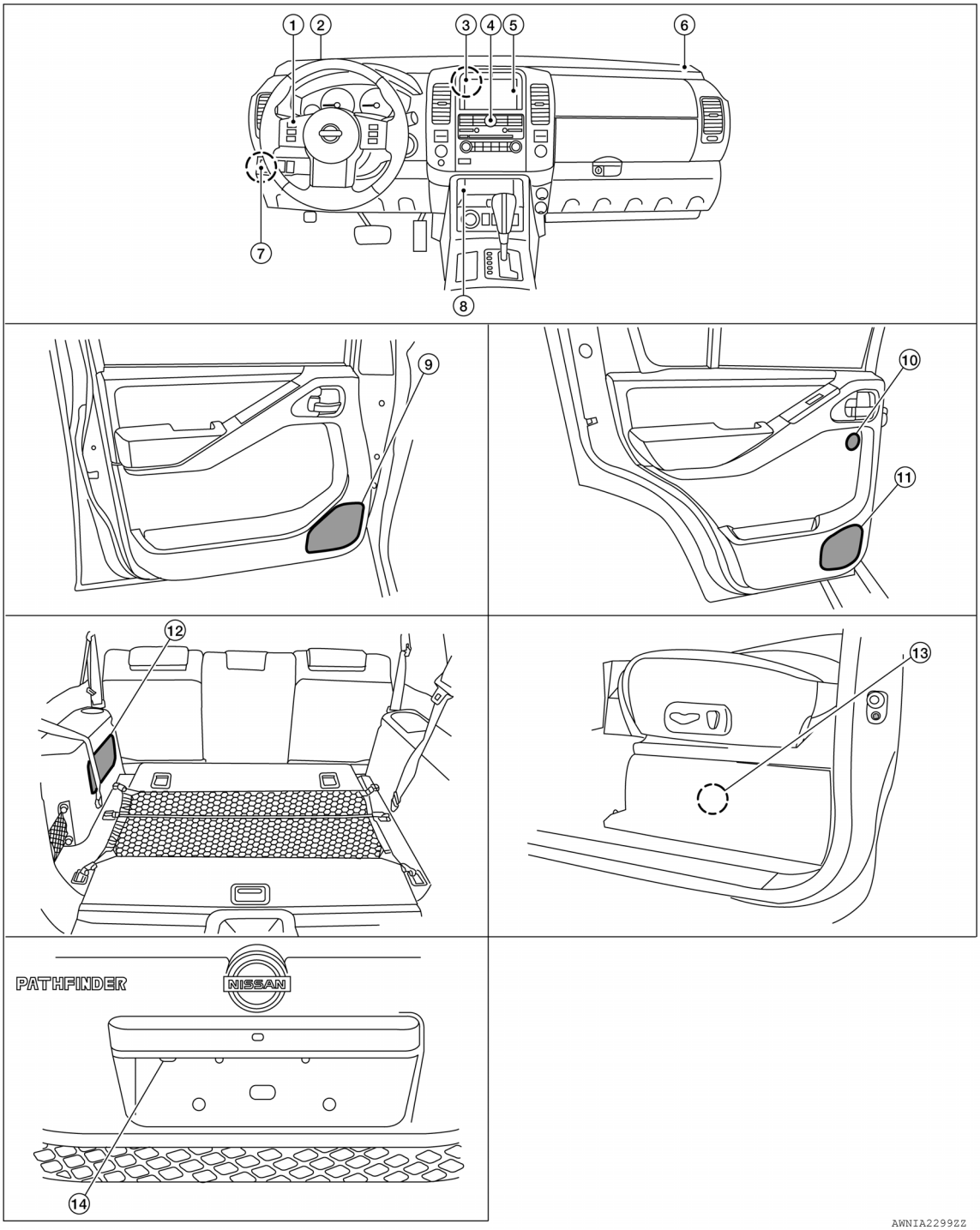
System Description

INFOID:0000000007347688

When the shift selector is in the R position the AV control unit receives the reverse signal and turns on the rear view camera. The display unit receives camera image signals from the rear view camera. The display unit then shows a view to the rear of the vehicle. Lines which indicate the vehicle clearance and distances are also displayed.

Component Parts Location

INFOID:0000000007347689



1. Steering wheel audio control switches
2. Front tweeter LH M109
3. AV control unit M42, M43, M44, M45, M46, M69, M70
4. A/C and AV switch assembly M98
5. Display unit M93
6. Front tweeter RH M111
7. Satellite radio tuner M41, M129
8. Aux jack M85
9. Front door speaker
   LH D12
   RH D112

10. Rear tweeter
LH D208
RH D308
11. Rear door speaker
LH D207
RH D307
12. Subwoofer B72
13. BOSE speaker amp B74 & B75 (located under driver seat)
14. Rear view camera D551

Component Description

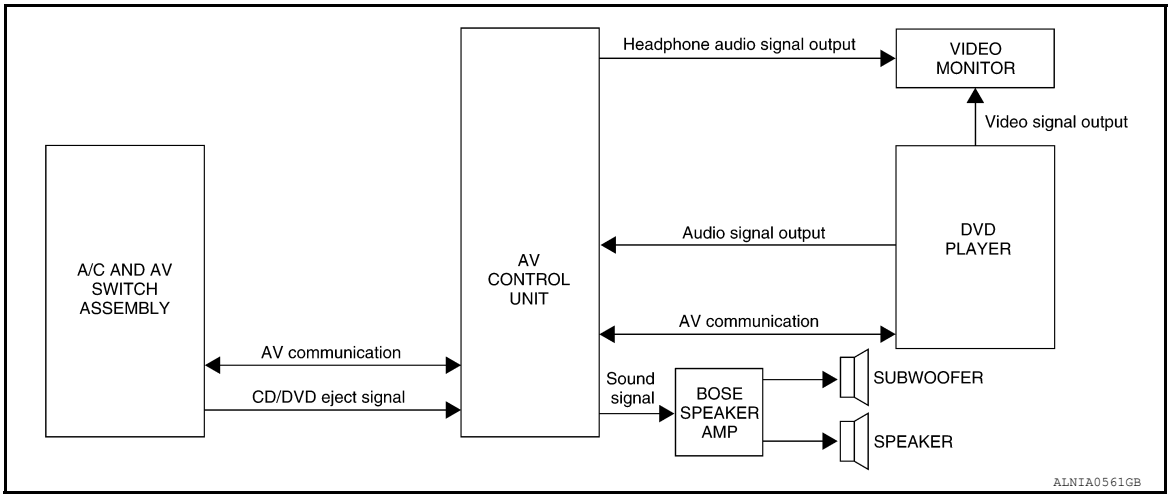
INFOID:0000000007347690

Part name	Description
AV control unit	• Receives reverse signal from back-up lamp relay • Sends camera ON signal to rear view camera • Receives image signal from rear view camera • Sends camera image signal to display unit
Rear view camera	• Receives camera ON signal from AV control unit • Sends image signal to the AV control unit
Display unit	• Receives camera image signal from AV control unit

DVD PLAYER

System Diagram

INFOID:0000000007347691



System Description

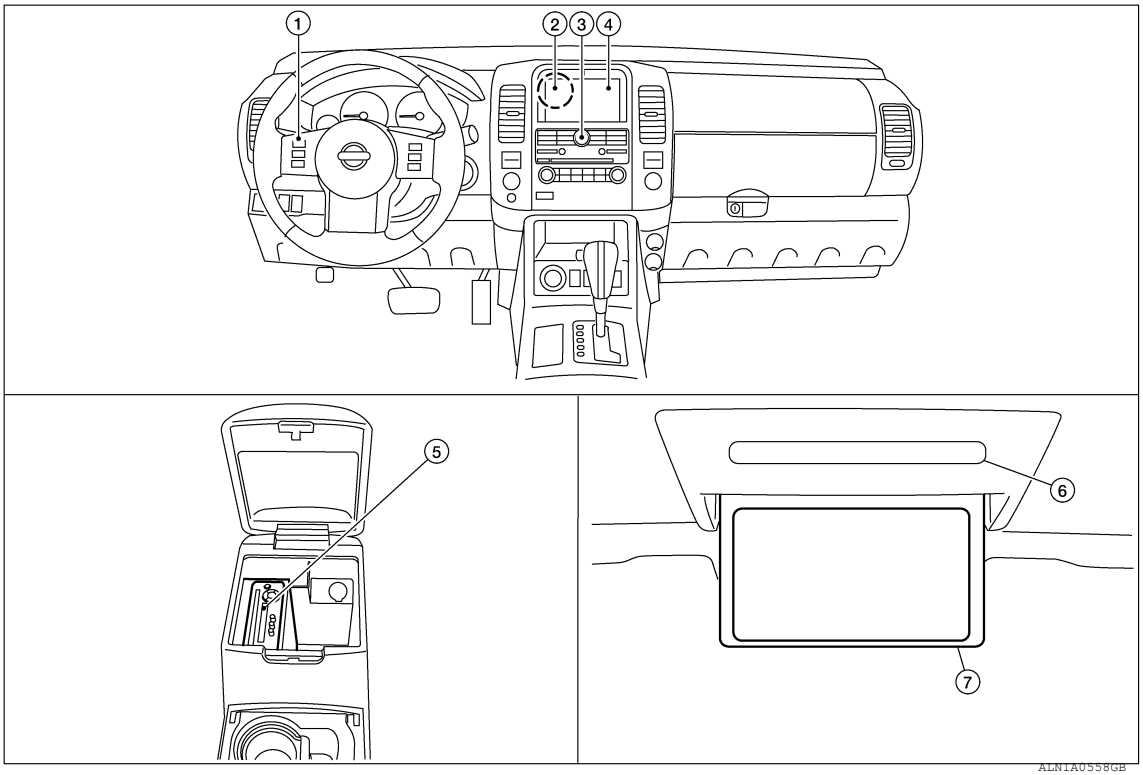
INFOID:0000000007347692

The DVD entertainment system consists of the following components
- AV control unit
- Display unit
- DVD player
- Video monitor
- A/C and AV switch assembly
- Steering wheel audio control switches
- BOSE speaker amp.
- Front tweeters
- Front door speakers
- Rear tweeters
- Rear door speakers
- Subwoofer

When the DVD entertainment system is on, video signals are sent from the DVD player to the video monitor. Audio signals are sent to the AV control unit. Audio signals can be directed through wired or wireless infrared headphones or through the BOSE speaker amp. to the vehicle speakers. Refer to the Owner's Manual for complete DVD entertainment system operating instructions.

Component Parts Location

INFOID:0000000007347693



1. Steering wheel audio control switches
2. AV control unit M42, M43, M44, M45, M46, M69, M70
3. A/C and AV switch assembly M98
4. Display unit M93
5. DVD player M205 (located in center console)
6. Infrared headphone and remote receiver/transmitter (part of video monitor assembly)
7. Video monitor B76

Component Description

INFOID:0000000007347694

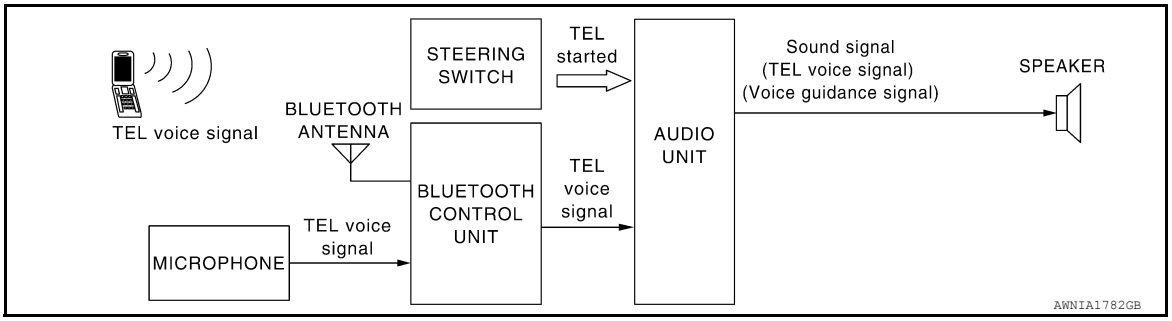
Part name	Description
DVD player	• Outputs DVD video to video monitor • Outputs DVD audio to the AV control unit
Video monitor	• Receives and displays the DVD video signal
AV control unit	• Controls audio system and DVD entertainment system functions
BOSE speaker amp.	• Recieves audio signals from the AV control unit • Outputs amplified audio signals to the speakers
A/C and AV switch assembly	• All audio and A/C operations can be operated • Switch signal is output to the AV control unit and A/C auto amp
Steering wheel audio control switches	• Audio operation can be operated • Steering switch signal (operation signal) is output to AV control unit
Front door speakers	• Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Front and rear tweeters	• Outputs audio signal from BOSE speaker amp. • Outputs high range sounds

Part name	Description
Rear door speakers	• Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Subwoofer	• Outputs audio signal from BOSE speaker amp. • Outputs low range sounds

HANDS-FREE PHONE SYSTEM

System Diagram

INFOID:0000000007347695



System Description

INFOID:0000000007347696

Refer to the owner's manual for Bluetooth telephone system operating instructions.

NOTE:

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

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

BLUETOOTH CONTROL UNIT

When the ignition switch is turned to ACC or ON, the Bluetooth control unit will power up. During power up, the Bluetooth control unit is initialized and performs various self checks. Initialization may take up to 10 seconds. If a phone is present in the vehicle and paired with the Bluetooth control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

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

MICROPHONE

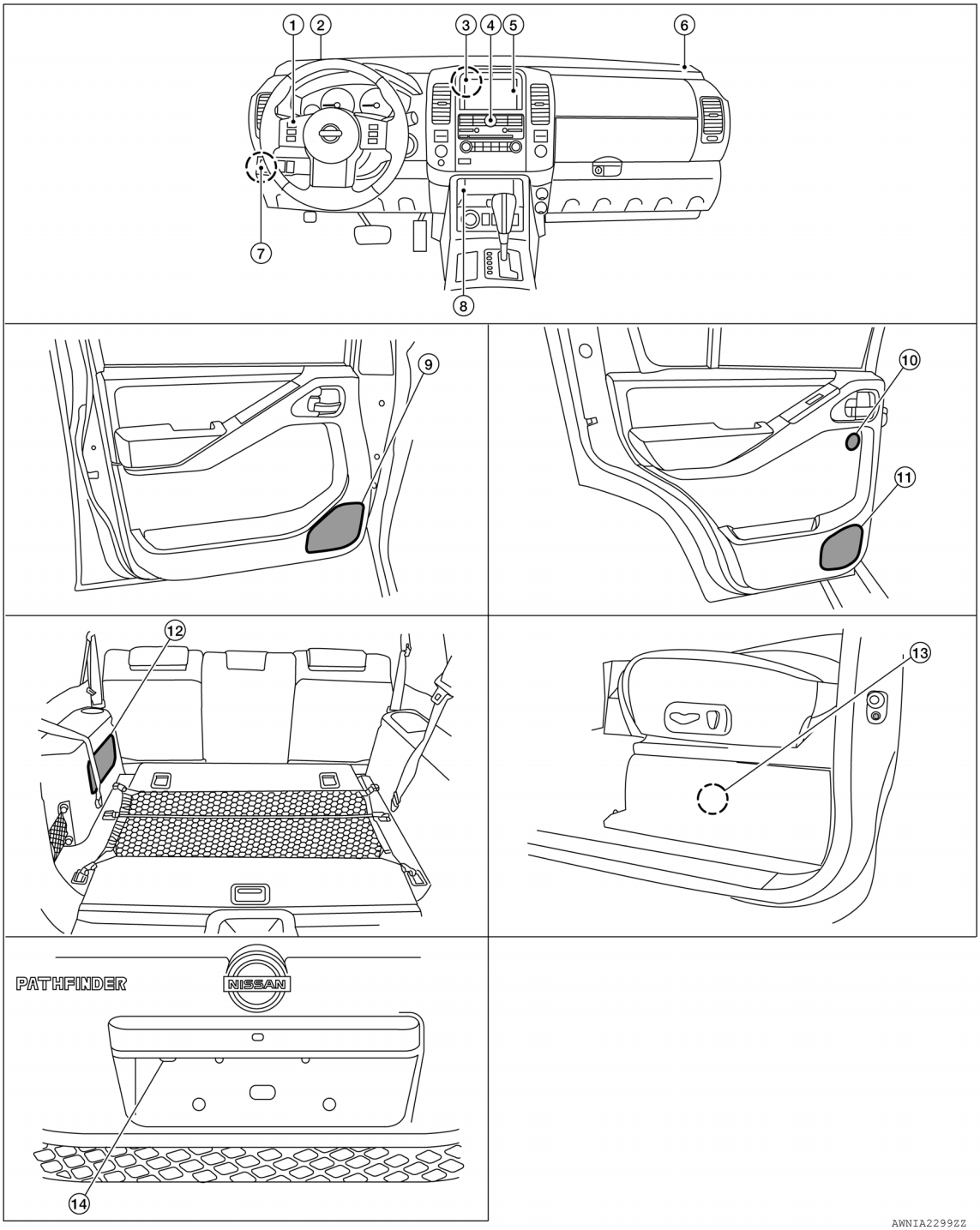
The microphone is located in the roof console assembly. The microphone sends a signal to the Bluetooth control unit. The microphone can be actively tested during self-diagnosis.

AV CONTROL UNIT

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

Component Parts Location

INFOID:0000000007347697



1. Steering wheel audio control switches
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8. Aux jack M85
9. Front door speaker
   LH D12
   RH D112

10. Rear tweeter LH D208 RH D308
11. Rear door speaker LH D207 RH D307
12. Subwoofer B72
13. BOSE speaker amp B74 & B75 (located under driver seat)
14. Rear view camera D551

Component Description

INFOID:0000000007347698

Part name	Description
AV control unit	• Receives telephone voice signal from Bluetooth control unit. • Sends telephone voice and voice guidance signals to the speakers.
Door speaker	Receives telephone voice and voice guidance signals from the AV control unit.
Front tweeter	
Center speaker	
Steering wheel audio control switches	• Start a voice recognition session • Answer and end telephone calls • Adjust the volume level
Microphone	Sends voice signals to Bluetooth control unit
Bluetooth control unit	Controls hands-free phone functions
Bluetooth antenna	Sends telephone voice signal to bluetooth control unit

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Description

INFOID:0000000007347699

DESCRIPTION

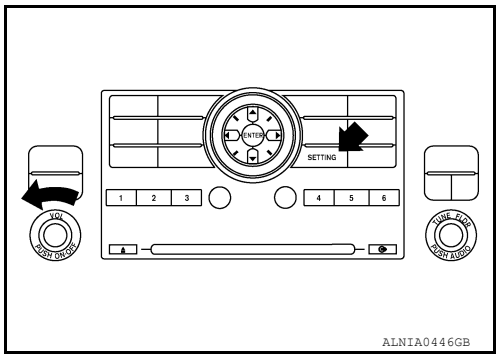
- Diagnosis function consists of the “Self-Diagnosis” mode performed automatically and the “Confirmation/ Adjustment” mode operated manually.
- “Self-Diagnosis” mode checks for connections between the units constituting this system, analyzes each individual unit at the same time, and displays the results on the LCD screen.
- “Confirmation/Adjustment” mode is used to perform trouble diagnosis that requires operation and judgment by an operator (trouble that cannot be automatically judged by the system), to check/change the set value, and to display the error history of the AV control unit.

DIAGNOSIS ITEM

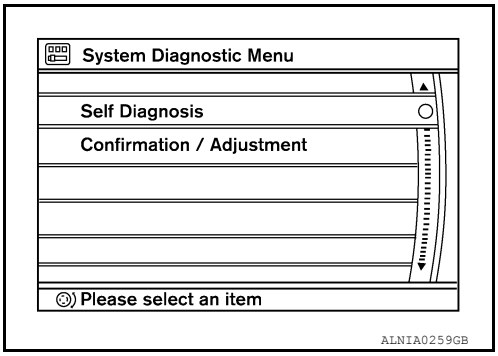
Mode			Description
Self-diagnosis			• AV control unit diagnosis • Analyzes connection between the AV control unit, front display, Bluetooth, DVD deck, Satellite tuner and switches.
CONFIRMATION/ ADJUSTMENT	Display diagnosis	Color spectrum bar	Color tone of the screen can be checked by the display of a color bar.
		Gradation bar	Shading of the screen can be checked by the display of a gray scale.
	Vehicle signals		The following vehicle signals are analyzed: Vehicle speed signal, parking brake signal, light signal, ignition switch signal, and reverse signal.
	Speaker test		Connection can be checked by sending a test tone to each speaker.
	Climate control		Start automatic air conditioner self test.
	Error history		Diagnosis results previously stored in the memory are displayed in this mode.
	Vehicle CAN diagnosis		The transmitting/receiving of CAN communication can be monitored.
	AV COMM diagnosis		The transmitting/receiving of AV communication can be monitored.
	Delete unit connection log		Erase the error history and connection history of the unit.
	Initialize settings		All audio settings are reset to default levels.

OPERATION PROCEDURE

1. Start the engine.
2. Turn the audio system off.
3. While pressing the “SETTING” button, turn the volume control dial counterclockwise 30 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)



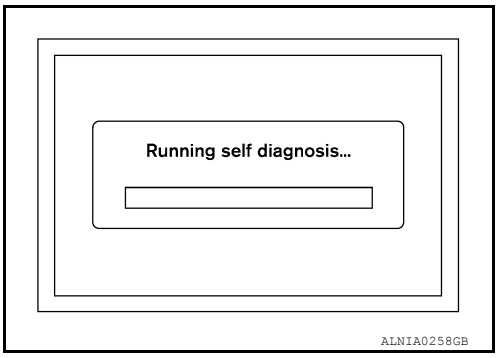
4. The initial trouble diagnosis screen will be displayed, and items “Self-Diagnosis” and “Confirmation/Adjustment” can be selected.



SELF-DIAGNOSIS

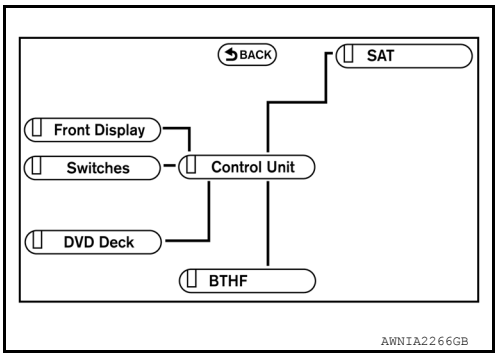
1. Perform self-diagnosis by selecting “Self-Diagnosis”.
   - Self-diagnosis subdivision screen is displayed, and the self-diagnosis mode starts.
   - A bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.

   NOTE:
   Self-diagnosis requires approximately 10 seconds to complete.



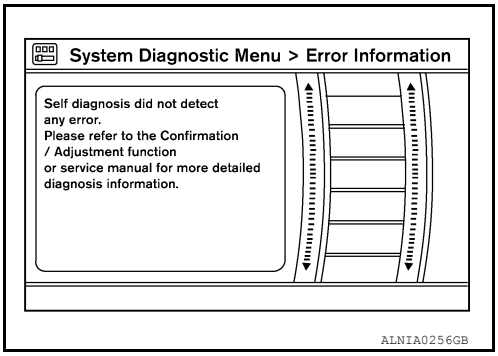
2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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

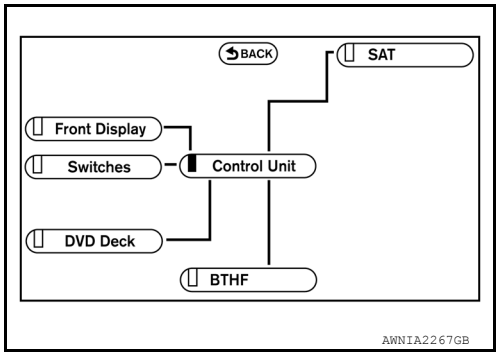
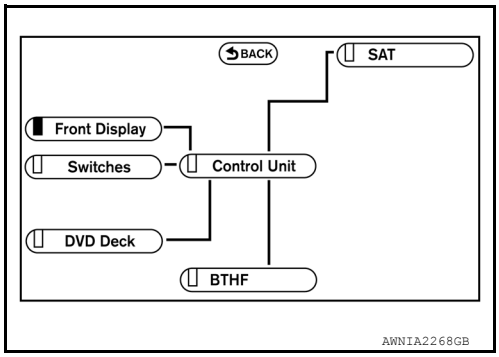
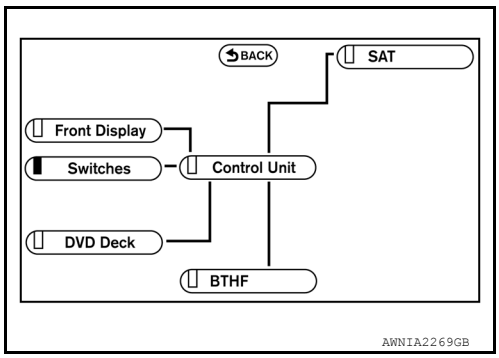
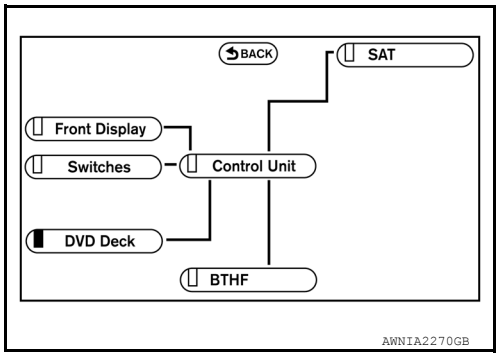


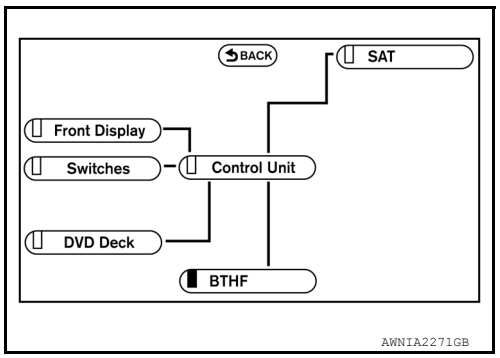
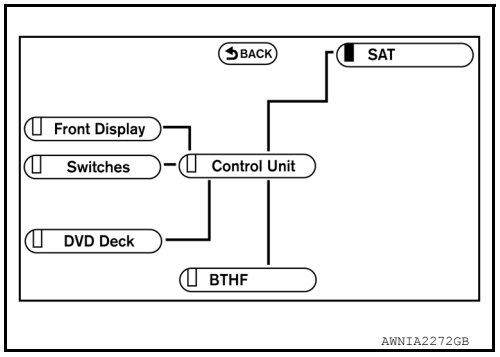
Note:
- Only the AV control unit is displayed in red.
- If multiple malfunctions occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > yellow > gray.

3. Select a component on the “Self-Diagnosis” screen and comments for the diagnosis results will be shown.



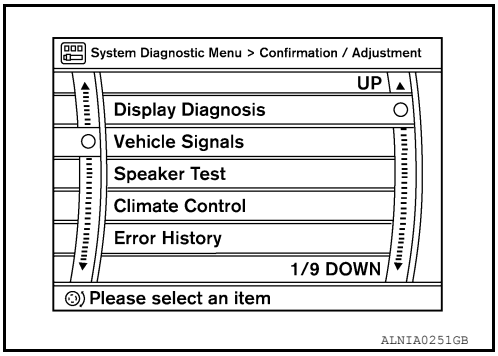
Self-Diagnosis Results

Area with yellow connection lines	Description	Possible malfunction location / Action to take
	AV control unit malfunction is detected	Replace the AV control unit. Refer to AV-255, "Removal and Installation".
	Poor connection is detected for the display unit	• Harness or connector • AV control unit • Display unit
	Switch malfunction is detected	Perform A/C and AV switch assembly diagnostics. Refer to AV-148, "A/C AND AV SWITCH ASSEMBLY : Component Function Check".
	Poor connection is detected for the DVD player.	• Harness or connector • AV control unit • DVD player

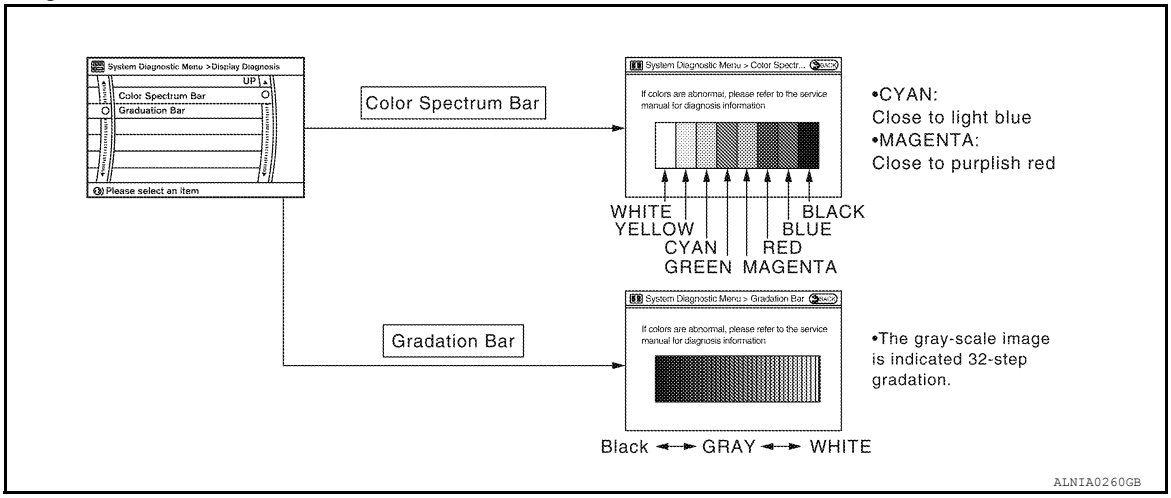
Area with yellow connection lines	Description	Possible malfunction location / Action to take
	Poor connection is detected for the Bluetooth control unit	• Harness or connector • AV control unit • Bluetooth control unit
	Poor connection is detected for the satellite radio tuner.	• Harness or connector • AV control unit • Satellite radio tuner

CONFIRMATION/ADJUSTMENT MODE

1. Start the diagnosis function and select “Confirmation/Adjustment”. The confirmation/adjustment mode indicates where each item can be checked or adjusted.
2. Select each item on the “Confirmation/Adjustment” mode screen to display the relevant trouble diagnosis screen. Touch “BACK” on the display unit or press the “BACK” switch to return to the initial Confirmation/Adjustment Mode screen.

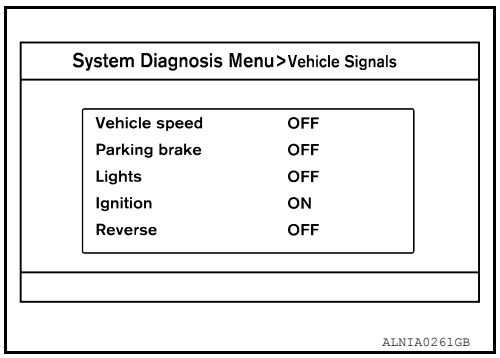


Display Diagnosis



Vehicle Signals

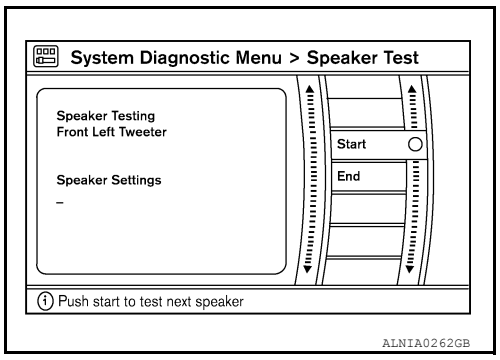
A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



Diagnosis item	Display	Vehicle status	Remarks
Vehicle speed	ON	Vehicle speed > 0 km/h	Changes in indication may be delayed by approximately 1.5 seconds. This is normal.
	OFF	Vehicle speed = 0 km/h	
	–	Ignition switch in ACC position	
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Lights	ON	Light switch ON	Block the light beam from the auto light optical sensor.
	OFF	Light switch OFF	
Ignition	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
Reverse	ON	Selector lever in R position	Changes in indication may be delayed by approximately 1.5 seconds. This is normal.
	OFF	Selector lever in any position other than R	
	–	Ignition switch in ACC position	

Speaker Test

Select “Speaker Test” to display the speaker diagnosis screen. Press “Start” to generate a test tone in speakers. Press “End” to stop the test tones.



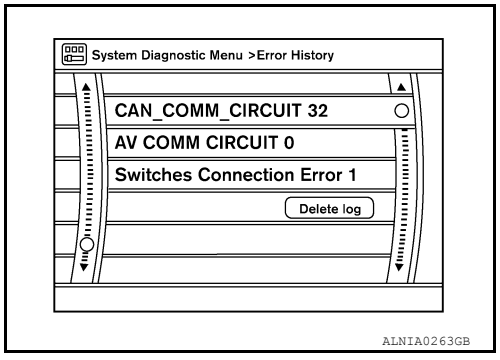
Error History

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 SW is turned ON and then no error has occurred until the self-diagnosis start. Check the “Error History” to detect any error that may have occurred before the self-diagnosis start because of this situation.

Count up method A

- The counter resets to 0 if an error occurs when IGN switch is turned ON. The counter increases by 1 if the condition is normal at a next IGN 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.

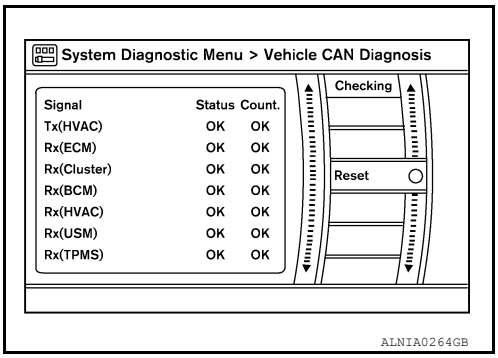
Count up method B

- The counter increases by 1 if an error occurs when IGN switch is ON. The counter will not decrease even if the condition is normal at the next IGN 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 method of occurrence frequency	Error history display item
Count up method A	CAN communication line, control unit (CAN), AV communication line, control unit (AV communication)
Count up method B	Other than above

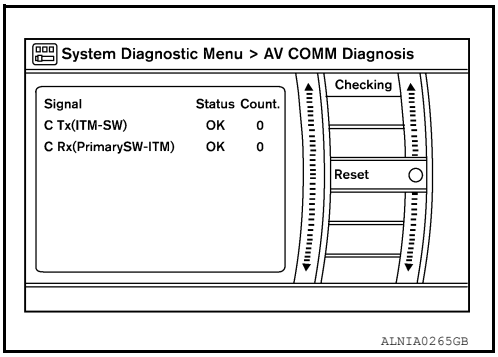
Vehicle CAN Diagnosis

- 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.



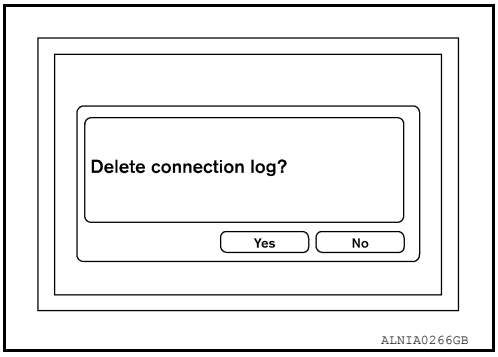
AV COMM Diagnosis

- AV 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.



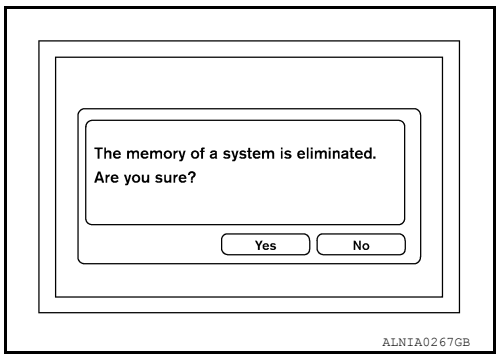
Delete Unit Connection Log

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

Initializes the AV control unit memory.



AV CONTROL UNIT : CONSULT Function

INFOID:0000000007347700

CONSULT can display each diagnostic item using the diagnostic test modes shown following.

MULTI AV diagnosis mode	Description
ECU IDENTIFICATION	The part number of AV control unit can be checked.
SELF DIAGNOSTIC RESULT	Displays AV control unit self-diagnosis results.
DATA MONITOR	Displays AV control unit input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.

Self-diagnosis results display item

Error item	Refer to
CAN COMM CIRCUIT [U1000]	AV-150, "Description"
CONTROL UNIT (CAN) [U1010]	AV-151, "Description"
Control Unit FLASH-ROM [U1200]	AV-152, "Description"
CAN CONT [U1216]	AV-153, "Description"
SWITCH CONN [U1240]	AV-154, "Description"
FRONT DISP CONN [U1243]	AV-155, "Description"
DVD DECK CONN [U1248]	AV-157, "Description"
SAT CONN [U1255]	AV-158, "Description"
HAND FREE CONN [U1256]	AV-159, "Description"
AV COMM CIRCUIT [U1300]	AV-160, "Description"
CONTROL UNIT (AV) [U1310]	AV-161, "Description"

DATA MONITOR

Display Item List

Display item [unit]	ALL SIGNALS	SELECTION FROM MENU	Description
VHCL SPD SIG [ON/OFF]	X	X	Displays “ON” when vehicle speed > 0 km/h. Displays “OFF” when vehicle speed = 0 km/h.
PKB SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of parking brake switch.
ILLUM SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of lighting switch.
IGN SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of ignition switch.
REV SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of back-up lamp switch.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Component Function Check

INFOID:0000000007347701

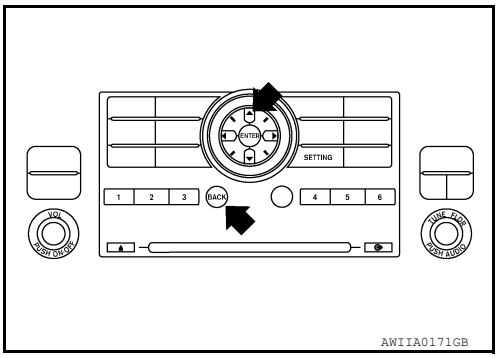
A/C and AV switch assembly self-diagnosis function

Description

The ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly can be checked.

Self-diagnosis mode

- Press the “BACK” button and the “UP” button within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more. When the self-diagnosis mode starts, a beep will sound and all LED indicators of the switch will illuminate.
- The continuity of each switch and control dial of the A/C and AV switch assembly can be checked. If the switch is operating normally, the system will beep and the LED’s will illuminate when each switch is operated.



Finishing self-diagnosis mode

Self-diagnosis mode is canceled when the ignition switch is turned OFF.

DIAGNOSIS SYSTEM (BLUETOOTH CONTROL UNIT)

Diagnosis Description

INFOID:0000000007347702

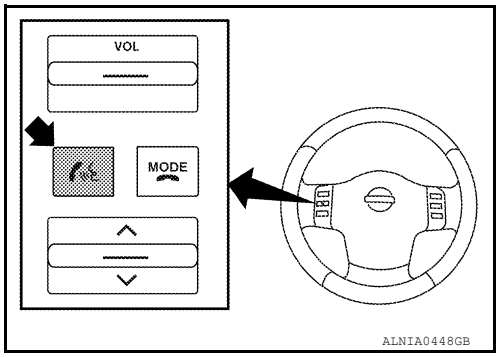
The Bluetooth control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

BLUETOOTH CONTROL UNIT INITIALIZATION CHECKS

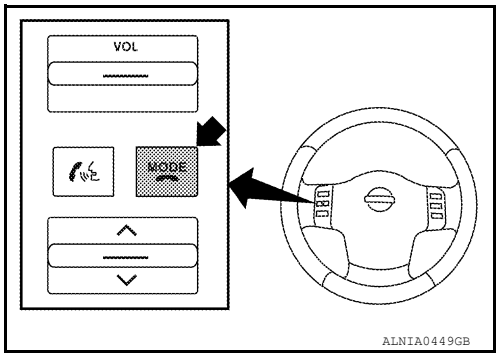
- Internal control unit failure
- Bluetooth antenna connection open or shorted
- Steering wheel audio control switches (SEND/END) stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth inquiry check

OPERATION PROCEDURE

1. Turn ignition switch to ACC or ON.
2. Wait for the Bluetooth system to complete initialization. This may take up to 10 seconds.
3. Press and hold the steering wheel audio control switch 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 wheel audio control switch MODE 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 wheel audio control switch 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-149, "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-149, "Work Flow".
8. Self-diagnosis mode is complete when the voice prompt says “All diagnostic functions completed”.



Work Flow

INFOID:0000000007347703

Failure Message	Action
“Internal failure”	Replace Bluetooth control unit. Refer to AV-264, "Removal and Installation".
“Bluetooth antenna open”	1. Inspect harness connection. 2. Replace Bluetooth antenna. Refer to AV-264, "Removal and Installation".
“Bluetooth antenna shorted”	
“Phone/Send for Hands Free System is stuck”	Check steering wheel audio control switches. Refer to AV-196, "Description".
“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-263, "Removal and Installation".

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000007347704

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart. Refer to LAN-13, "How to Use CAN Communication Signal Chart".

DTC Logic

INFOID:0000000007347705

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	Diagnostic item is detected when ...	Probable malfunction location
U1000	CAN COMM CIRCUIT	When AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system

Diagnosis Procedure

INFOID:0000000007347706

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “MULTI AV”.

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to “LAN system”. Refer to LAN-14, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI section. Refer to GI-37, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000007347707

Initial diagnosis of AV control unit.

DTC Logic

INFOID:0000000007347708

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	Diagnostic item is detected when ...	Probable malfunction location
U1010	CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected	AV control unit

Diagnosis Procedure

INFOID:0000000007347709

1.REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit. Refer to AV-255, "Removal and Installation".

>> Inspection End.

U1200 AV CONTROL UNIT

Description

INFOID:0000000007347710

Replace the AV control unit if this DTC is displayed. Refer to AV-255, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347711

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1200	Control Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit. Refer to AV-255, "Removal and Installation".

U1216 AV CONTROL UNIT

Description

INFOID:0000000007347712

Replace the AV control unit if this DTC is displayed. Refer to AV-255, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347713

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit. Refer to AV-255, "Removal and Installation".

U1240 SWITCH CONN

Description

INFOID:0000000007347714

U1240 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

Self-diagnosis results display item

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1240	• SWITCH CONN [U1240]	• A/C and AV switch assembly power supply and ground circuit malfunction is detected • A malfunction is detected in communication circuit between AV control unit and A/C and AV switch assembly • A malfunction is detected in communication signal between AV control unit and A/C and AV switch assembly	• A/C and AV switch assembly power supply and ground circuits • Communication circuit between AV control unit and A/C and AV switch assembly

U1243 DISPLAY UNIT

Description

INFOID:0000000007347715

Part name	Description
DISPLAY UNIT	• Display image is controlled by the serial communication from AV control unit. • Inputs the RGB image signal (RGB, RGB area and RGB synchronizing) from AV control unit and the auxiliary image signal from the auxiliary input jacks. • Outputs the synchronizing signals (HP and VP) to the AV control unit.

DTC Logic

INFOID:0000000007347716

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	• Display unit power supply and ground circuit malfunction is detected • Malfunction is detected on communication circuit between display unit and AV control unit • Malfunction is detected on communication signal between display unit and AV control unit	• Display unit power supply and ground circuit • Communication circuit between display unit and AV control unit

Diagnosis Procedure

INFOID:0000000007347717

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

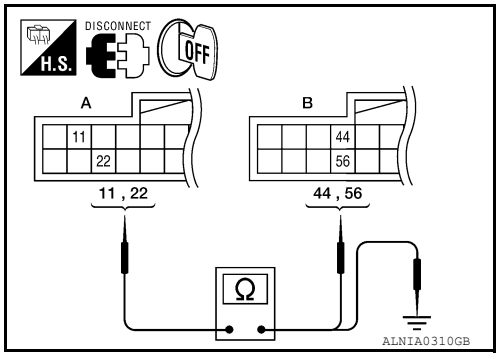
Check display unit power supply and ground circuit. Refer to AV-163, "DISPLAY UNIT : Diagnosis Procedure".

Is inspection result OK?

YES >> GO TO 2
NO >> Repair malfunctioning parts.

2.CHECK CONTINUITY OF COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector and AV control unit connector.
3. Check continuity between display unit harness connector M93 (A) terminals 11, 22 and AV control unit harness connector M45 (B) terminals 56, 44.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	11	M45	56	Yes
	22		44	

4. Check continuity between display unit harness connector M93 (A) terminals 11, 22 and ground.

A		—	Continuity
Connector	Terminal		
M93	11	Ground	No
	22		

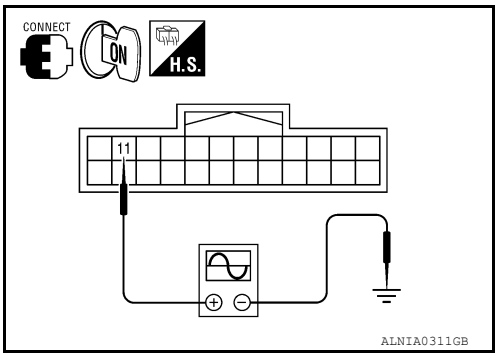
Are continuity results as specified?

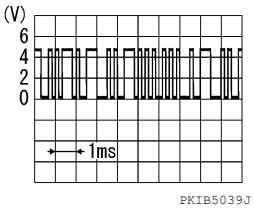
YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK COMMUNICATION SIGNAL

1. Connect display unit connector and AV control unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 11 and ground with an oscilliscope or CONSULT.



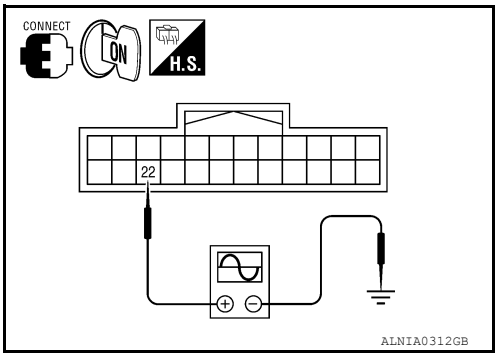
(+)		(-)	Reference signal
Connector	Terminal		
M93	11	Ground	

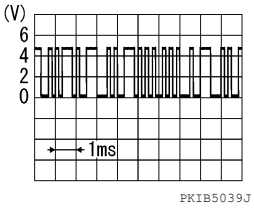
Are voltage readings as specified?

YES >> GO TO 4
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

4. CHECK COMMUNICATION SIGNAL

Check signal between display unit harness connector M93 terminal 22 and ground with an oscilliscope or CONSULT.



(+)		(-)	Reference signal
Connector	Terminal		
M93	22	Ground	

Are voltage readings as specified?

YES >> Inspection End.
NO >> Replace display unit. Refer to AV-257, "Removal and Installation".

U1248 DVD DECK CONN

Description

INFOID:0000000007347718

U1248 is indicated when a malfunction occurs in the communication signal of the DVD player. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

DTC Logic

INFOID:0000000007347719

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1248	DVD DECK CONN [U1248]	• DVD player power supply and ground circuit malfunction is detected • Malfunction is detected on communication circuit between DVD player and AV control unit • Malfunction is detected on communication signal between DVD player and AV control unit	• DVD player power supply and ground circuit • Communication circuit between DVD player and AV control unit

Diagnosis Procedure

INFOID:0000000007347720

1.CHECK DVD PLAYER POWER SUPPLY AND GROUND CIRCUIT

Check DVD player power supply and ground circuit. Refer to AV-168, "DVD PLAYER : Diagnosis Procedure".

Is inspection result OK?

YES >> Inspection End.
NO >> Repair malfunctioning parts.

U1255 SATELLITE RADIO TUNER

Description

INFOID:0000000007347721

Part name	Description
SATELLITE RADIO TUNER	• Inputs the satellite radio signal from satellite radio antenna and outputs it to the AV control unit. • It is controlled with the communication (communication signal, request signal) from AV control unit.

DTC Logic

INFOID:0000000007347722

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1255	SAT CONN [U1255]	The satellite radio tuner power supply and ground circuit malfunction is detected	Satellite radio tuner power supply and ground circuit

Diagnosis Procedure

INFOID:0000000007347723

1.CHECK SATELLITE RADIO TUNER POWER SUPPLY AND GROUND CIRCUIT

Check satellite radio tuner power supply and ground circuit. Refer to AV-166, "SATELLITE RADIO TUNER : Diagnosis Procedure".

Is inspection result OK?

YES >> Inspection End.
NO >> Repair malfunctioning parts.

U1256 HAND FREE CONN

Description

INFOID:0000000007347724

U1256 is indicated when malfunction occurs in communication signal of multi AV system. Indicated simultaneously, without fail, with the malfunction of control units connected to AV control unit with communication line. Determine the possible malfunction cause from the table below.

Self-diagnosis results display item

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1256	• HAND FREE CONN [U1256]	• Bluetooth control unit power supply and ground circuit malfunction is detected • A malfunction is detected in communication circuit between AV control unit and Bluetooth control unit • A malfunction is detected in communication signal between AV control unit and Bluetooth control unit	• Bluetooth control unit power supply and ground circuits • Communication circuit between AV control unit and Bluetooth control unit

U1300 AV COMM CIRCUIT

Description

INFOID:0000000007347725

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

Self-diagnosis results display item

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	• A/C and AV switch assembly power supply and ground circuit malfunction is detected • A malfunction is detected in communication circuit between AV control unit and A/C and AV switch assembly • A malfunction is detected in communication signal between AV control unit and A/C and AV switch assembly	• A/C and AV switch assembly power supply and ground circuits • Communication circuit between AV control unit and A/C and AV switch assembly

U1310 AV CONTROL UNIT

Description

INFOID:0000000007347726

Replace the AV control unit if this DTC is displayed. Refer to AV-255, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347727

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. Refer to AV-255, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT
AV CONTROL UNIT
AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000007347728

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK FUSES

Check that the following fuses of the AV control unit are not are not blown.

Unit	Terminals	Signal name	Fuse No.
AV control unit	19	Battery power	29
	7	Ignition switch ACC or ON	4
	104	Ignition switch ON or START	12

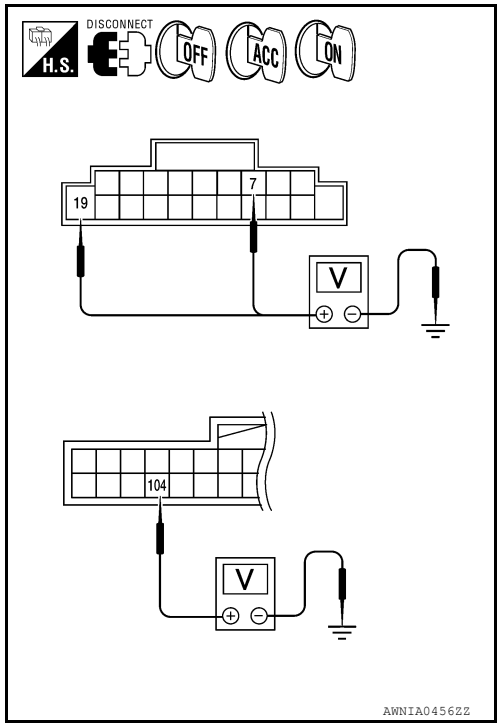
Are the fuses OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect AV control unit connectors M42 and M70.
2. Check voltage between the AV control unit connectors M42 and M70 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M42	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M70	104	Ground	0V	0V	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between AV control unit harness connectors M42, M45, M46, M70 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M42	20	Ground	Yes
M45	54		
M46	68		
M70	85		

Are the continuity results as specified?

YES >> Inspection End.
NO >> Repair AV control unit ground.

DISPLAY UNIT

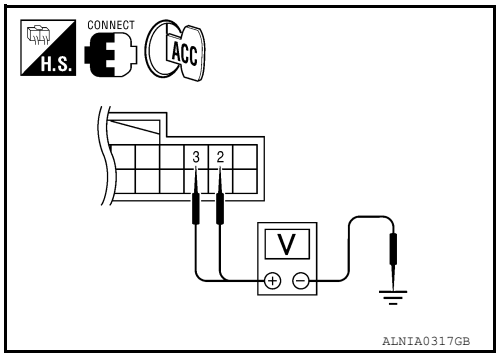
DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000007347729

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch to ACC.
2. Check voltage between display unit harness connector M93 and ground.



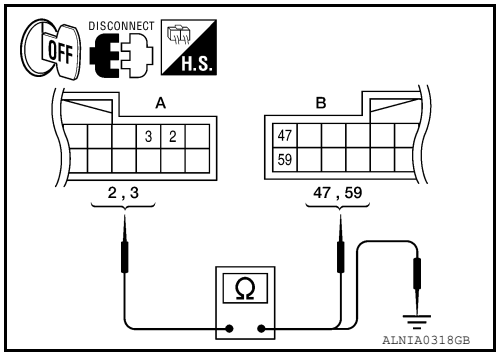
Connector	Terminal	Ignition switch position	Value (Approx.)
M93	2	ACC	9V
	3		

Does specified voltage exist?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the display unit connector M93 and the AV control unit connector M45.
3. Check continuity between the display unit harness connector M93 (A) and the AV control unit connector M45 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	2	M45	59	Yes
	3		47	

4. Check continuity between the display unit harness connector M93 (A) and ground.

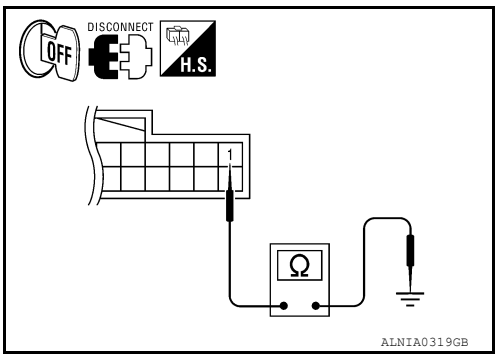
A		—	Continuity
Connector	Terminal		
M93	2	Ground	No
	3		

Are continuity results as specified?

YES >> Check AV control unit power and ground supply. Refer to AV-162, "AV CONTROL UNIT : Diagnosis Procedure".
NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check continuity between display unit harness connector and ground.



Connector	Terminal	—	Continuity
M93	1	Ground	Yes

Does continuity exist?

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

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:0000000007347730

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK FUSE

Check that the fuse of the AC and AV switch assembly is not blown.

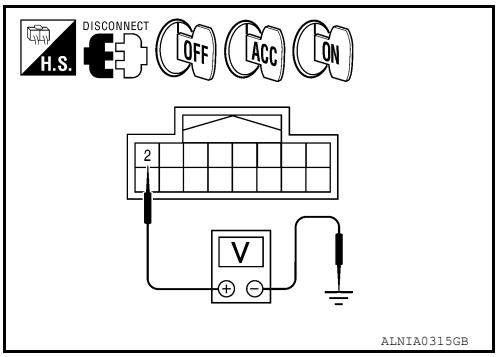
Unit	Terminal	Signal name	Fuse No.
A/C and AV switch assembly	2	Ignition switch ACC or ON	4

Is the fuse OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect A/C and AV switch assembly connector M98.
2. Check voltage between the A/C and AV switch assembly connector M98 and ground.



(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M98	2	Ground	0V	Battery voltage	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

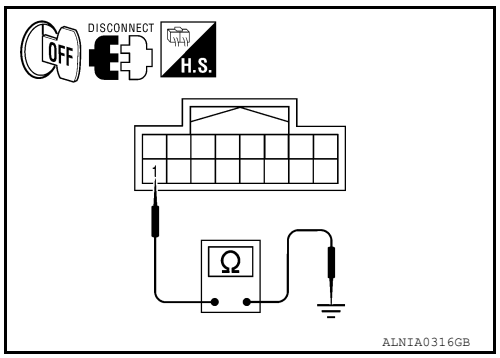
3.GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between A/C and AV switch assembly harness connector M98 and ground.

Connector	Terminal	—	Continuity
M98	1	Ground	Yes

Does continuity exist?

YES >> Inspection End.
NO >> Repair harness or ground.



BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:0000000007347731

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK FUSE

Check that the BOSE speaker amp. fuse is not blown.

Unit	Terminal	Signal name	Fuse No.
BOSE speaker amp.	1	Battery power	29

Are the fuses OK?

YES >> GO TO 2
NO >> Be sure to eliminate cause of malfunction before installing new fuse.

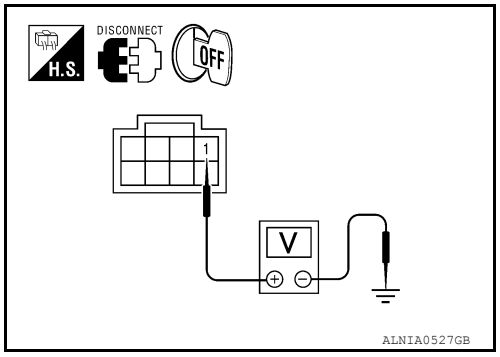
2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp. connector.
3. Check voltage between BOSE speaker amp. harness connector B74 terminal 1 and ground.

(+)		(-)	Voltage (approx.)
Connector	Terminal		
B74	1	Ground	Battery voltage

Is battery voltage present?

YES >> GO TO 3
NO >> Check harness between BOSE speaker amp. and fuse.



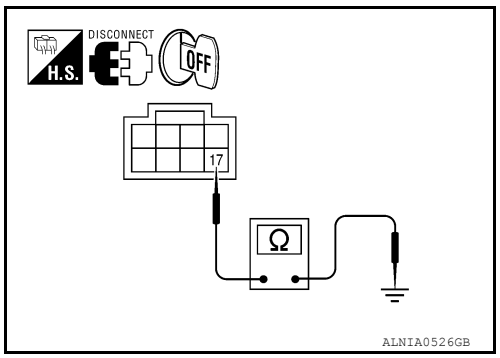
3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp. connector.
3. Check continuity between BOSE speaker amp. harness connector B74 terminal 17 and ground.

(+)		(-)	Continuity
Connector	Terminal		
B74	17	Ground	Yes

Does continuity exist?

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



SUBWOOFER

SUBWOOFER : Diagnosis Procedure

INFOID:0000000007347732

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK FUSE

Check that the subwoofer fuse is not blown.

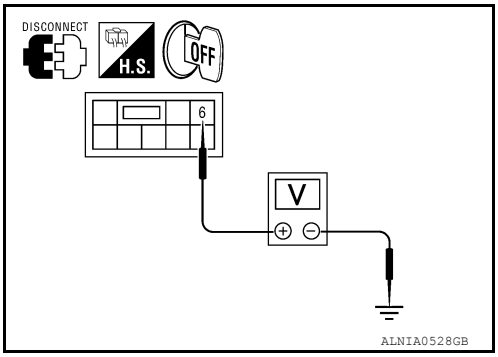
Unit	Terminal	Signal name	Fuse No.
Subwoofer	6	Battery power	17

Is the fuse OK?

YES >> GO TO 2
NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect subwoofer connector.
3. Check voltage between subwoofer harness connector B72 terminal 6 and ground.



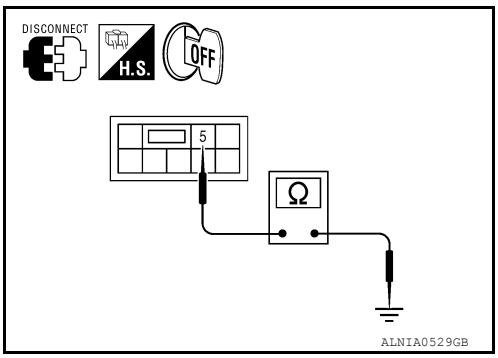
(+)		(-)	Voltage (approx.)
Connector	Terminal		
B72	6	Ground	Battery voltage

Is battery voltage present?

YES >> GO TO 3
NO >> Check harness between subwoofer and fuse.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between subwoofer harness connector B72 terminal 5 and ground.



(+)		(-)	Continuity
Connector	Terminal		
B72	5	Ground	Yes

Does continuity exist?

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

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:0000000007347733

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK FUSES

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

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

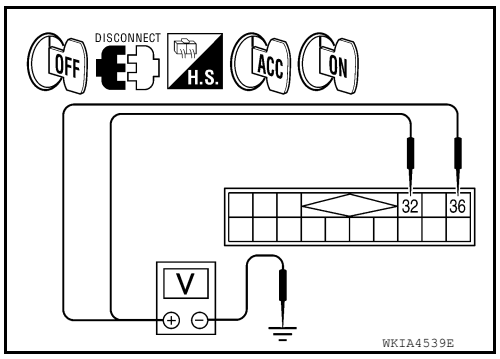
Are the fuses OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

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

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M41	32	Ground	Battery voltage	Battery voltage	Battery voltage
	36		0V	Battery voltage	Battery voltage



Are the voltage readings as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

Inspect satellite radio tuner (factory installed) case ground.

Does case ground pass inspection?

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

REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:0000000007347734

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

NOTE:
Apply parking brakes before proceeding.

1. Turn ignition switch ON.
2. Shift transmission into reverse.
3. Check voltage between rear view camera harness connector D551 terminal 2 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
D551	2	Ground	Reverse	12V

Is voltage reading approximately 12 volts?

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

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect rear view camera and AV control unit connectors.
3. Check continuity between rear view camera harness connector D551 terminal 2 and AV control unit harness connector M134 terminal 105.

Connector	Terminal	Connector	Terminal	Continuity
D551	2	M134	105	Yes

4. Check continuity between rear view camera harness connector D551 terminal 2 and ground.

Connector	Terminal	—	Continuity
D551	2	Ground	No

Are continuity test results as specified?

YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK REVERSE POSITION INPUT SIGNAL

1. Turn ignition switch ON.
2. Shift transmission into reverse.
3. Check voltage between AV control unit harness connector M134 terminal 105 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M134	105	Ground	Reverse	12V

Is voltage reading approximately 12 volts?

YES >> Replace AV control unit. Refer to AV-255, "Removal and Installation".
NO >> Check harness for open or short between AV control unit and back-up lamp relay.

4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera harness connector.
3. Check continuity between rear view camera harness connector D551 terminal 1 and ground.

Connector	Terminal	—	Continuity
D551	1	Ground	Yes

Does continuity exist?

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

DVD PLAYER

DVD PLAYER : Diagnosis Procedure

INFOID:0000000007347735

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK FUSE

Check that the following fuses of the DVD player are not blown.

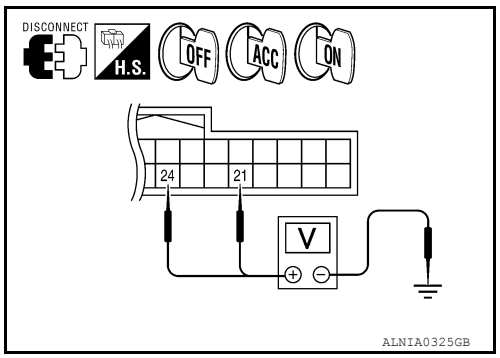
Unit	Terminal	Signal name	Fuse No.
DVD player	21	Battery power	29
	24	Ignition switch ACC or ON	4

Is the fuse OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect DVD player connector M205.
2. Check voltage between the DVD player connector M205 and ground.



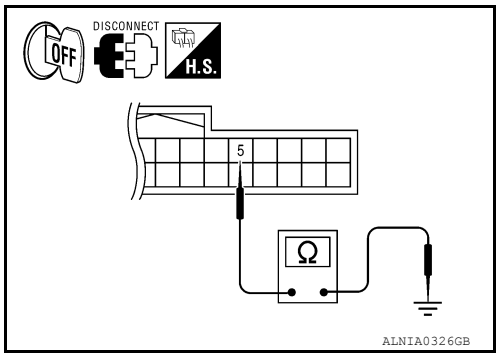
(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M205	21	Ground	Battery voltage	Battery voltage	Battery voltage
	24		0V	Battery voltage	Battery voltage

Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between DVD player harness connector M205 terminal 5 and ground.



Connector	Terminal	—	Continuity
M205	5	Ground	Yes

Does continuity exist?

YES >> Inspection End.
NO >> Repair DVD player ground.

VIDEO MONITOR

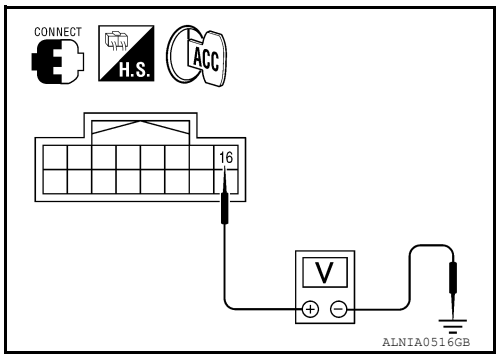
VIDEO MONITOR : Diagnosis Procedure

INFOID:0000000007347736

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch to ACC.
2. Check voltage between video monitor harness connector B76 and ground.



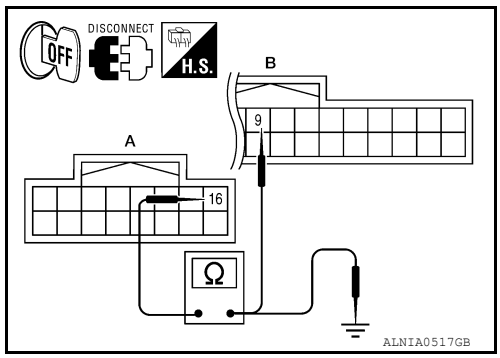
(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
B76	16	Ground	ACC	Battery voltage

Does battery voltage exist?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the video monitor connector B76 and the DVD player connector M205.
3. Check continuity between the video monitor harness connector B76 (A) and the DVD player connector M205 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
B76	16	M205	9	Yes

4. Check continuity between video monitor harness connector B76 (A) and ground.

A		—	Continuity
Connector	Terminal		
B76	16	Ground	No

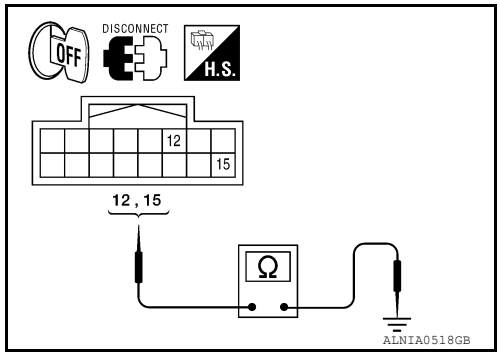
Are continuity results as specified?

YES >> Check DVD player power and ground supply. Refer to AV-168, "DVD PLAYER : Diagnosis Procedure".

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect video monitor connector.
3. Check continuity between video monitor harness connector B76 and ground.



Connector	Terminal	—	Continuity
B76	12	Ground	Yes
	15		

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.

BLUETOOTH CONTROL UNIT

BLUETOOTH CONTROL UNIT : Diagnosis Procedure

INFOID:0000000007347737

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK FUSE

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

Power source	Fuse No.
Battery	29
Ignition switch ACC or ON	4
Ignition switch ON or START	12

Are the fuses OK?

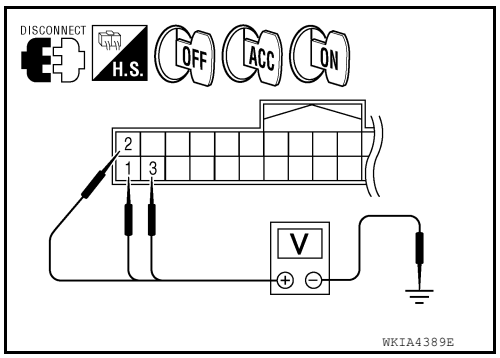
YES >> GO TO 2

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between Bluetooth control unit harness connector and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
B124	1	Ground	Battery voltage	Battery voltage	Battery voltage
	2		0V	Battery voltage	Battery voltage
	3		0V	0V	Battery voltage



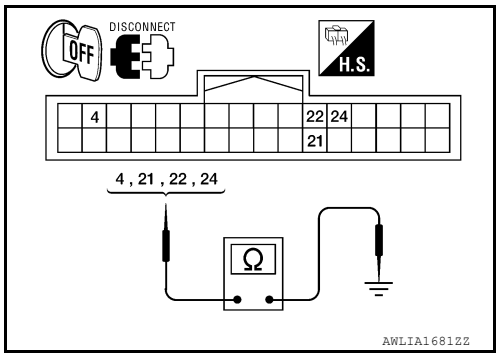
Are the voltage results as specified?

YES >> GO TO 3
NO >> Check harness between Bluetooth control unit and fuse.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector B124.
3. Check continuity between Bluetooth control unit harness connector and ground.

Connector	Terminal	—	Continuity
B124	4	Ground	Yes
	21		
	22		
	24		



Does continuity exist?

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

MICROPHONE

MICROPHONE : Diagnosis Procedure

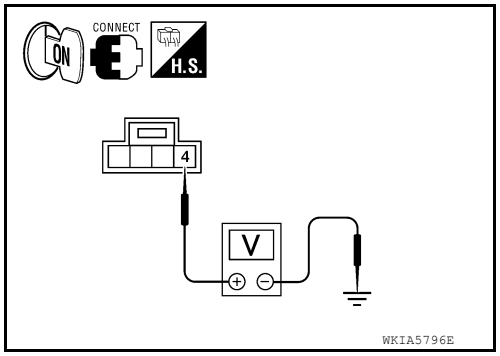
INFOID:0000000007347738

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK POWER SUPPLY CIRCUIT (MICROPHONE SIDE)

Check voltage between microphone harness connector and ground.

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

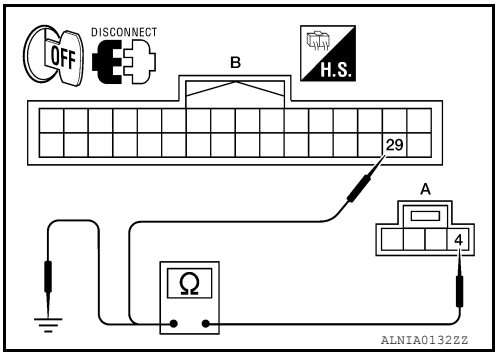


Is proper voltage present?

YES >> GO TO 4
NO >> GO TO 2

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit and microphone connectors.
3. Check continuity between microphone harness connector R8 (A) terminal 4 and Bluetooth control unit harness connector B124 (B) terminal 29.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
R8	4	B124	29	Yes

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

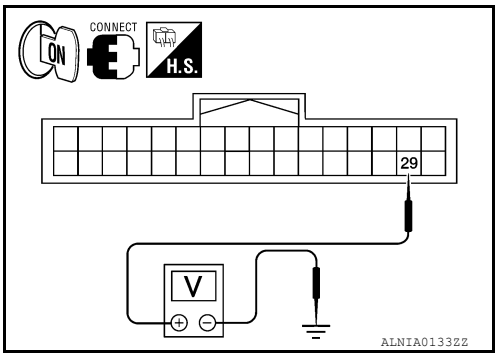
A		—	Continuity
Connector	Terminal		
R8	4	Ground	No

Are continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3. CHECK POWER SUPPLY CIRCUIT (BLUETOOTH CONTROL UNIT SIDE)

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



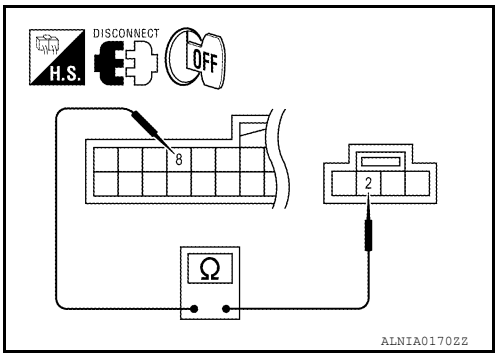
(+)		(-)	Value (Approx.)
Connector	Terminal		
B124	29	Ground	5V

Is proper voltage present?

YES >> Inspection End.
NO >> Replace Bluetooth control unit. Refer to AV-264, "Removal and Installation".

4. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit and microphone connectors.
3. Check continuity between microphone harness connector R8 terminal 2 and Bluetooth control unit harness connector B124 terminal 8.



Connector	Terminal	Connector	Terminal	Continuity
R8	2	B124	8	Yes

Is continuity present?

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

RGB (R: RED) SIGNAL CIRCUIT

Description

INFOID:0000000007347739

Transmit the image displayed with AV control unit with RGB signal to the display unit.

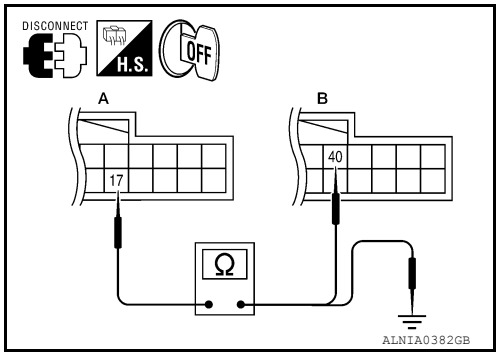
Diagnosis Procedure

INFOID:0000000007347740

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M45.
3. Check continuity between display unit harness connector M93 (A) terminal 17 and AV control unit harness connector M45 (B) terminal 40.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	17	M45	40	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 17 and ground.

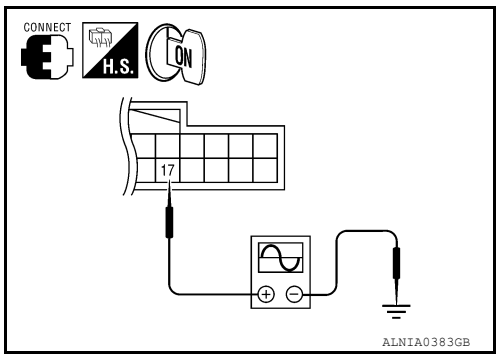
A		—	Continuity
Connector	Terminal		
M93	17	Ground	No

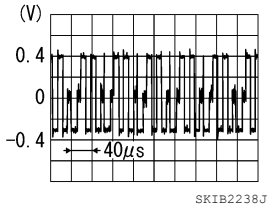
Are the continuity results as specified?

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

2.CHECK RGB (R: RED) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M45.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 17 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	17	Ground	Receive audio signal	

Are the voltage readings as specified?

YES >> Replace display unit. Refer to AV-257, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

RGB (G: GREEN) SIGNAL CIRCUIT

Description

INFOID:0000000007347741

Transmit the image displayed with AV control unit with RGB signal to the display unit.

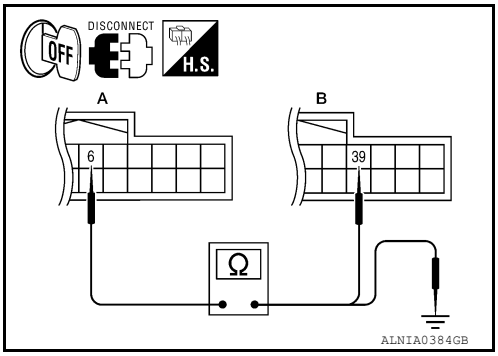
Diagnosis Procedure

INFOID:0000000007347742

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M45.
3. Check continuity between display unit harness connector M93 (A) terminal 6 and AV control unit harness connector M45 (B) terminal 39.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	6	M45	39	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 6 and ground.

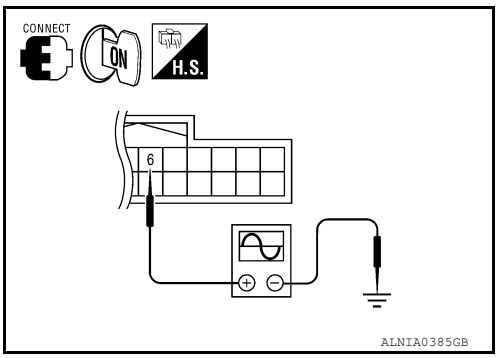
A		—	Continuity
Connector	Terminal		
M93	6	Ground	No

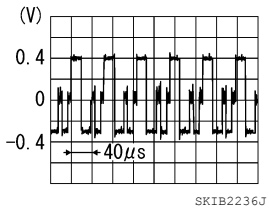
Are the continuity results as specified?

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

2.CHECK RGB (G: GREEN) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M45.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 6 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	6	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-257, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

RGB (B: BLUE) SIGNAL CIRCUIT

Description

INFOID:0000000007347743

Transmit the image displayed with AV control unit with RGB signal to the display unit.

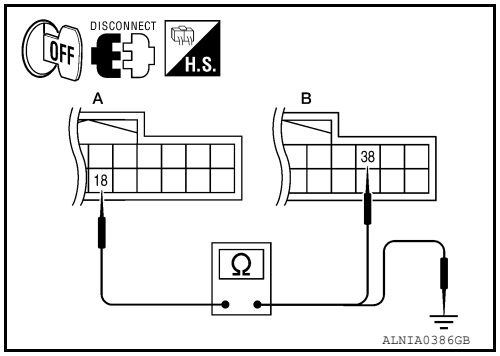
Diagnosis Procedure

INFOID:0000000007347744

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M45.
3. Check continuity between display unit harness connector M93 (A) terminal 18 and AV control unit harness connector M45 (B) terminal 38.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	18	M45	38	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 18 and ground.

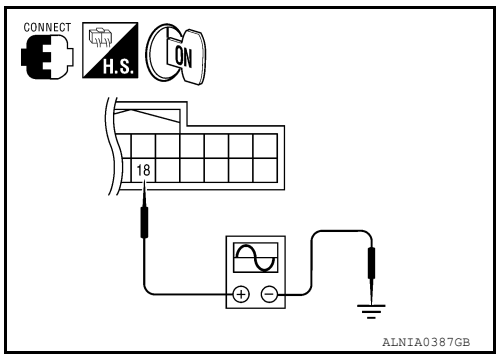
A		—	Continuity
Connector	Terminal		
M93	18	Ground	No

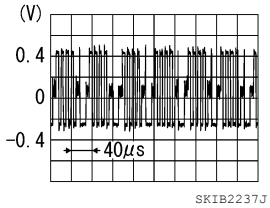
Are continuity results as specified?

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

2. CHECK RGB (B: BLUE) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M45.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 18 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	18	Ground	Receive audio signal	

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Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-257, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

RGB SYNCHRONIZING SIGNAL CIRCUIT

Description

INFOID:0000000007347745

Transmit the RGB synchronizing signal to the display unit so as to synchronize the RGB image displayed with AV control unit.

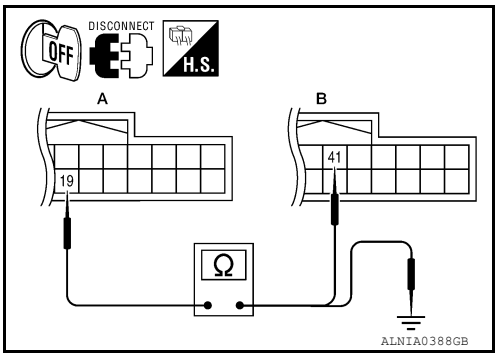
Diagnosis Procedure

INFOID:0000000007347746

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M45.
3. Check continuity between display unit harness connector M93 (A) terminal 19 and AV control unit harness connector M45 (B) terminal 41.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	19	M45	41	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 19 and ground.

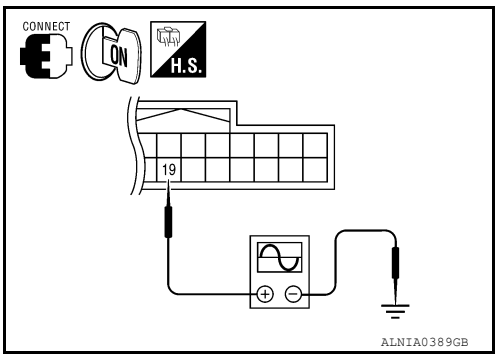
A		—	Continuity
Connector	Terminal		
M93	19	Ground	No

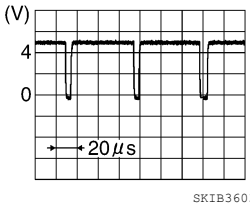
Are continuity results as specified?

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

2.CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M93 and AV control unit connector M45.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 19 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	19	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-257, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

RGB AREA (YS) SIGNAL CIRCUIT

Description

INFOID:0000000007347747

Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to display unit.

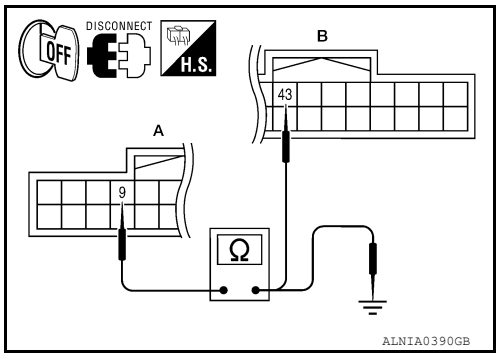
Diagnosis Procedure

INFOID:0000000007347748

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1. CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M45.
3. Check continuity between display unit harness connector M93 (A) terminal 9 and AV control unit harness connector M45 (B) terminal 43.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	9	M45	43	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 9 and ground.

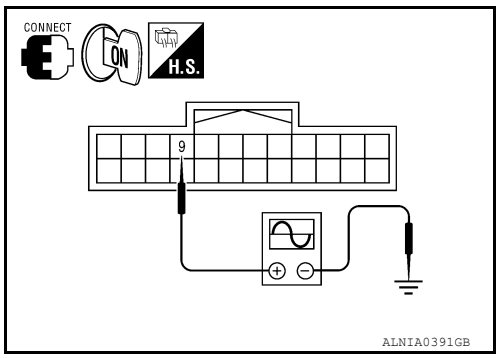
A		—	Continuity
Connector	Terminal		
M93	9	Ground	No

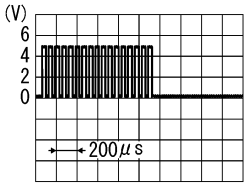
Are continuity results as specified?

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

2. CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M93 and AV control unit connector M45.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 9 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	9	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-257, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description

INFOID:0000000007347749

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

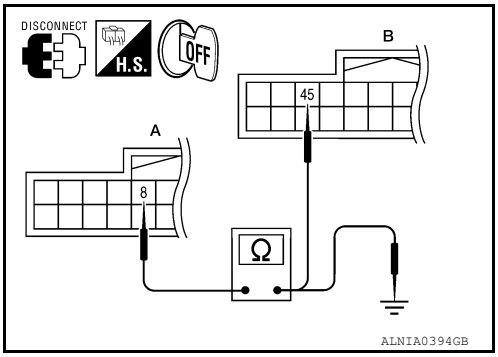
Diagnosis Procedure

INFOID:0000000007347750

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M45.
3. Check continuity between display unit harness connector M93 (A) terminal 8 and AV control unit harness connector M45 (B) terminal 45.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	8	M45	45	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 8 and ground.

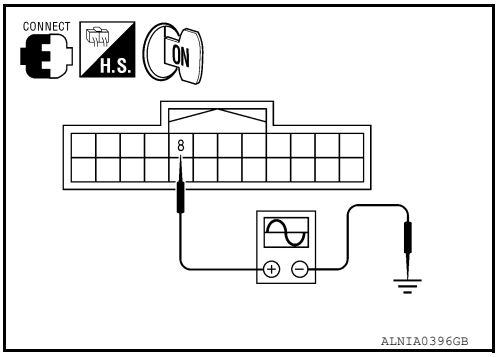
A		—	Continuity
Connector	Terminal		
M93	8	Ground	No

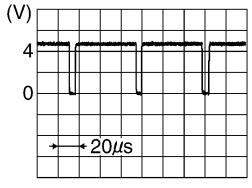
Are continuity results as specified?

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

2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M45.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 8 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	8	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-255, "Removal and Installation".
NO >> Replace display unit. Refer to AV-257, "Removal and Installation".

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

INFOID:0000000007347751

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

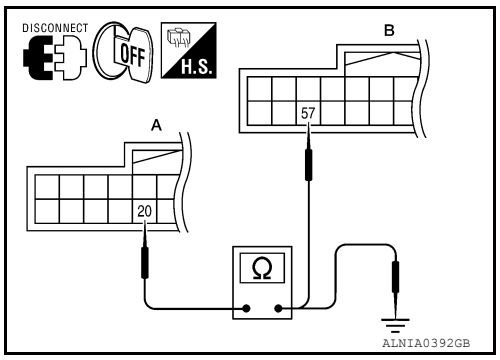
Diagnosis Procedure

INFOID:0000000007347752

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1. CHECK CONTINUITY VERTICAL SINCHRONIZING (VP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M93 and AV control unit connector M45.
3. Check continuity between display unit harness connector M93 (A) terminal 20 and AV control unit harness connector M45 (B) terminal 57.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M93	20	M45	57	Yes

4. Check continuity between display unit harness connector M93 (A) terminal 20 and ground.

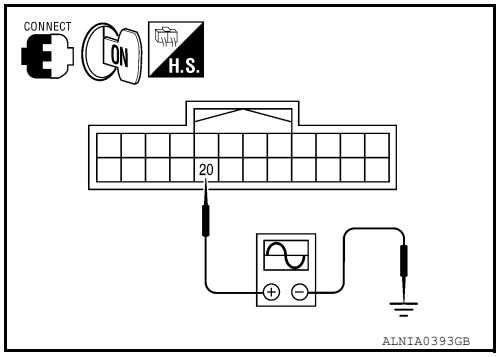
A		—	Continuity
Connector	Terminal		
M93	20	Ground	No

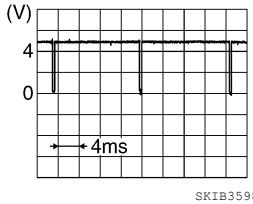
Are continuity results as specified?

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

2. CHECK VERTICAL SINCHRONIZING (VP) SIGNAL

1. Connect display unit connector M93 and AV control unit connector M45.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M93 terminal 20 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M93	20	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-255, "Removal and Installation".
NO >> Replace display unit. Refer to AV-257, "Removal and Installation".

FRONT DOOR SPEAKER

Description

INFOID:0000000007347753

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the front door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347754

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

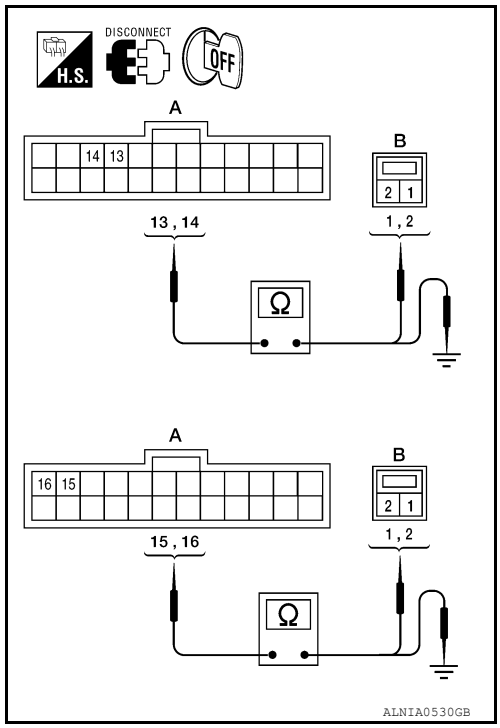
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B75 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connector B75 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B75	13	D12	1	Yes
	14		2	
	15	D112	1	
	16		2	



3. Check continuity between BOSE speaker amp. harness connector B75 (A) and ground.

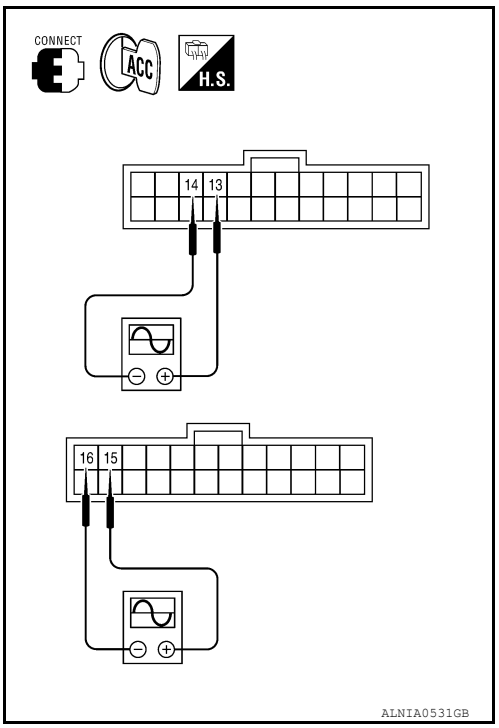
A		—	Continuity
Connector	Terminal		
B75	13	Ground	No
	14		
	15		
	16		

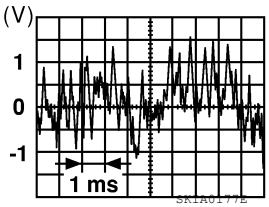
Are continuity test results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.FRONT SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B75 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connector B75 terminals with CONSULT or oscilloscope.



Connector	Terminal (+)	Terminal (-)	Condition	Reference signal
B75	13	14	Receive audio signal	
	15	16		

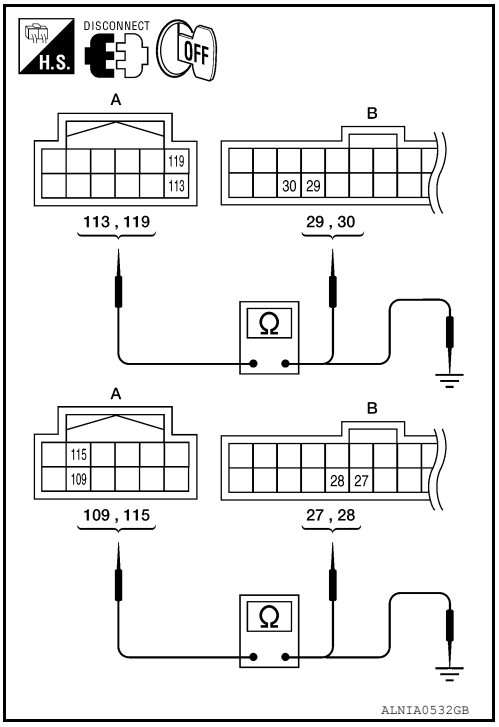
Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to AV-259, "Removal and Installation".

NO >> GO TO 4

4. HARNESS CHECK

1. Disconnect AV control unit connector M69 and BOSE speaker amp. connector B75.
2. Check continuity between AV control unit harness connector M69 (A) and BOSE speaker amp. harness connector B75 (B).



A Connector	A Terminal	B Connector	B Terminal	Continuity
M69	113	B75	30	Yes
	119		29	
	109		28	
	115		27	

3. Check continuity between AV control unit harness connector M69 (A) and ground.

A Connector	A Terminal	—	Continuity
M69	113	Ground	No
	119		
	109		
	115		

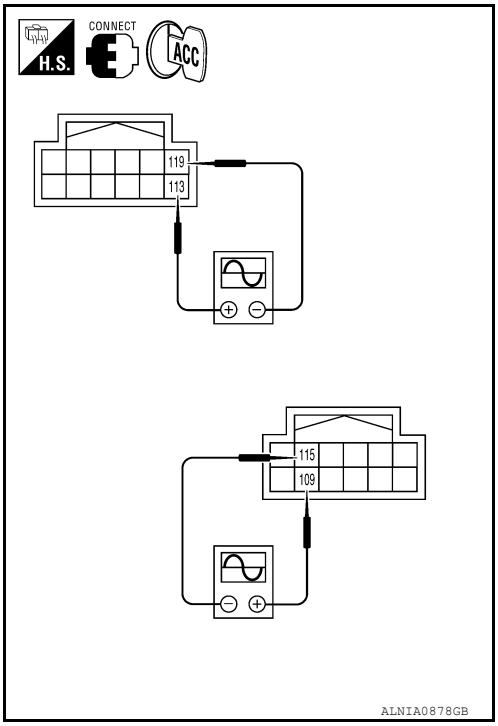
Are continuity test results as specified?

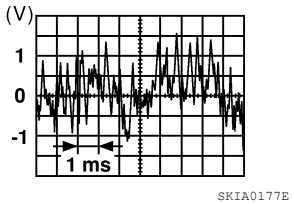
YES >> GO TO 5

NO >> Repair harness or connector.

5. FRONT SPEAKER SIGNAL CHECK

1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M69 terminals with CONSULT or oscilloscope.



Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M69	113	119	Receive audio signal	
	109	115		

Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to AV-265, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

FRONT TWEETER

Description

INFOID:0000000007347755

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the tweeters using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347756

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

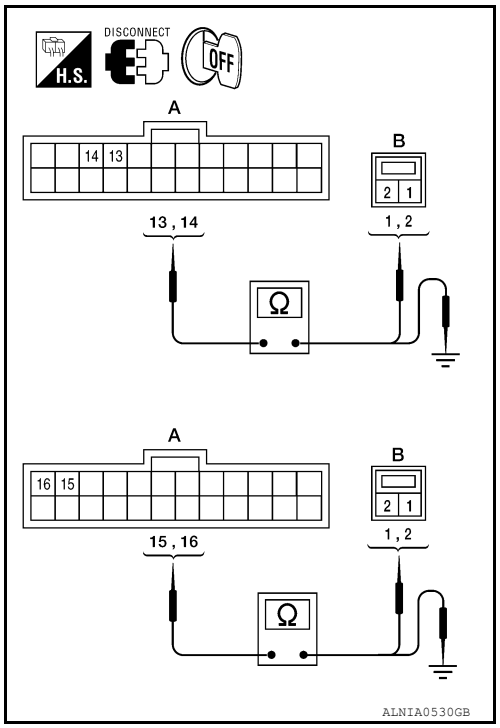
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B75 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connector B75 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B75	13	M109	1	Yes
	14		2	
	15	M111	1	
	16		2	



3. Check continuity between BOSE speaker amp. harness connector B75 (A) and ground.

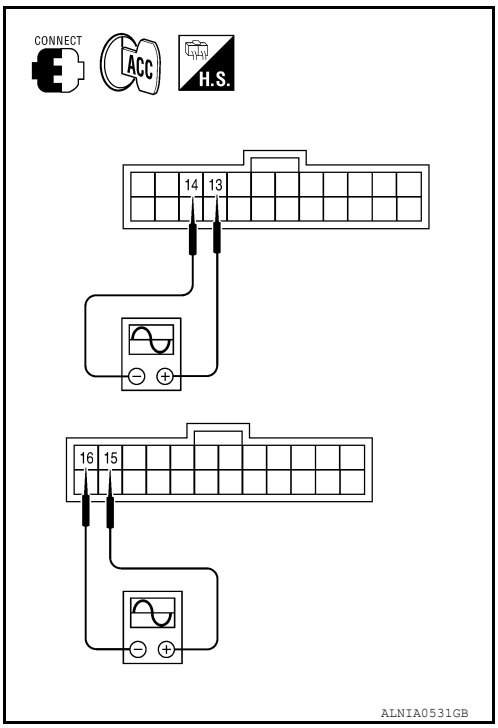
A		—	Continuity
Connector	Terminal		
B75	13	Ground	No
	14		
	15		
	16		

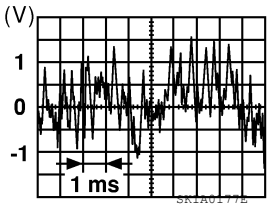
Are continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.FRONT TWEETER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B75 and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connector B75 terminals with CONSULT or oscilloscope.



Connector	Terminal (+)	Terminal (-)	Condition	Reference signal
B75	13	14	Receive audio signal	
	15	16		

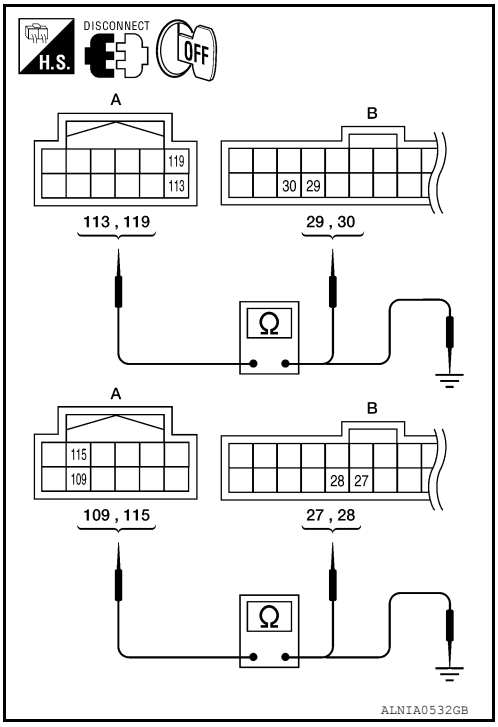
Is audio signal voltage as specified?

YES >> Replace suspect tweeter. Refer to AV-258, "Removal and Installation".

NO >> GO TO 4

4. HARNESS CHECK

1. Disconnect AV control unit connector M69 and BOSE speaker amp. connector B75.
2. Check continuity between AV control unit harness connector M69 (A) and BOSE speaker amp. harness connector B75 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M69	113	B75	30	Yes
	119		29	
	109		28	
	115		27	

3. Check continuity between AV control unit harness connector M69 (A) and ground.

A		—	Continuity
Connector	Terminal		
M69	113	Ground	No
	119		
	109		
	115		

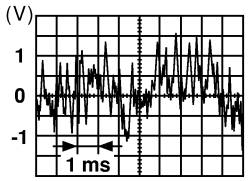
Are continuity results as specified?

YES >> GO TO 5

NO >> Repair harness or connector.

5. FRONT TWEETER SIGNAL CHECK

1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M69 terminals with CONSULT or oscilloscope.

Connector	Terminals (+)	Terminals (-)	Condition	Reference signal
M69	113	119	Receive audio signal	
	109	115		

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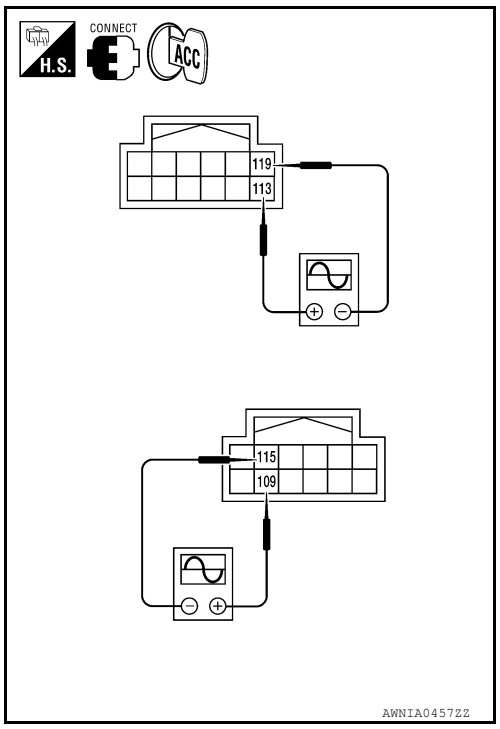

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Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to AV-265, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

REAR DOOR SPEAKER

Description

INFOID:0000000007347757

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the rear door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347758

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

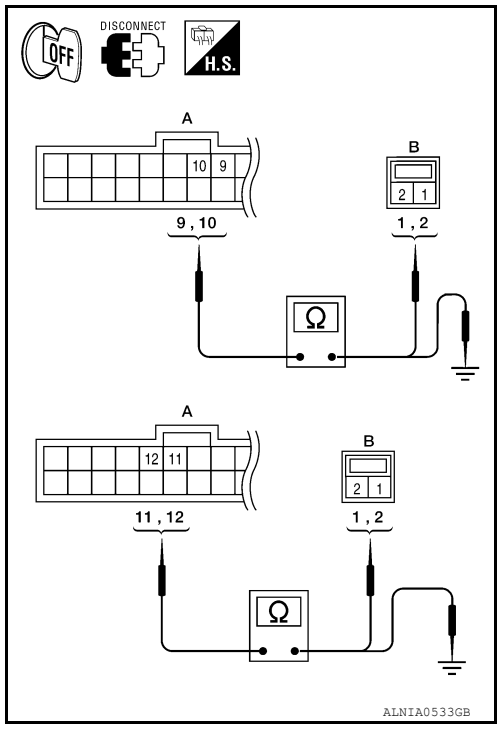
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B75 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connectors B75 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B75	9	D207	1	Yes
	10		2	
	11	D307	1	
	12		2	



3. Check continuity between BOSE speaker amp. harness connectors B75 (A) and ground.

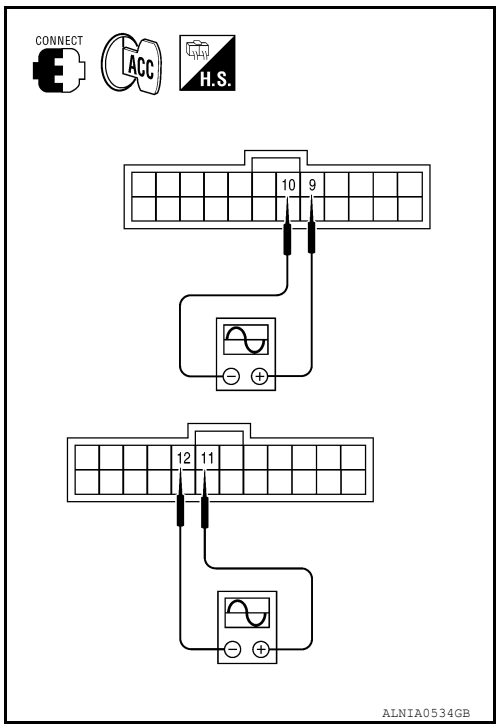
Connector	Terminal	-	Continuity
B75	9	Ground	No
	10		
	11		
	12		

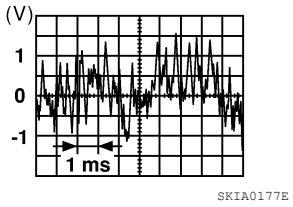
Are the continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.REAR DOOR SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connectors and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connectors B75 terminals with CONSULT or oscilloscope.



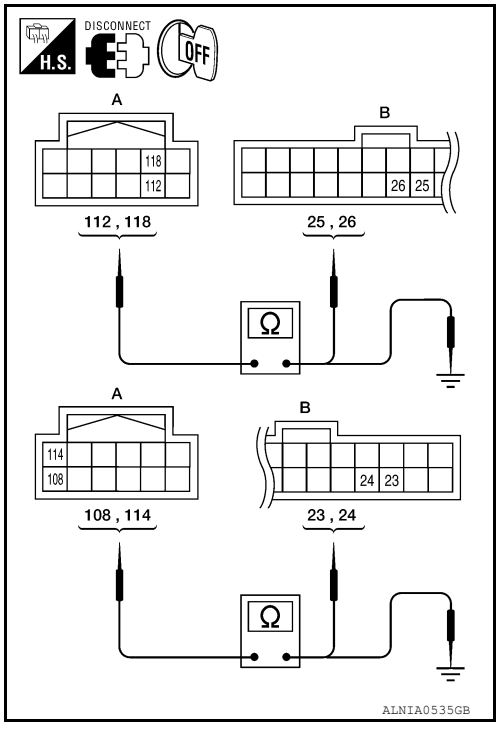
Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B75	9	10	Receive audio signal	
	11	12		

Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to AV-261, "Removal and Installation of Rear Tweeter".
NO >> GO TO 4

4. HARNESS CHECK

1. Disconnect AV control unit connector M69 and BOSE speaker amp. connector B75.
2. Check continuity between AV control unit harness connector M69 (A) and BOSE speaker amp. harness connector B75 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M69	112	B75	26	Yes
	118		25	
	108		24	
	114		23	

3. Check continuity between AV control unit harness connector M69 (A) and ground.

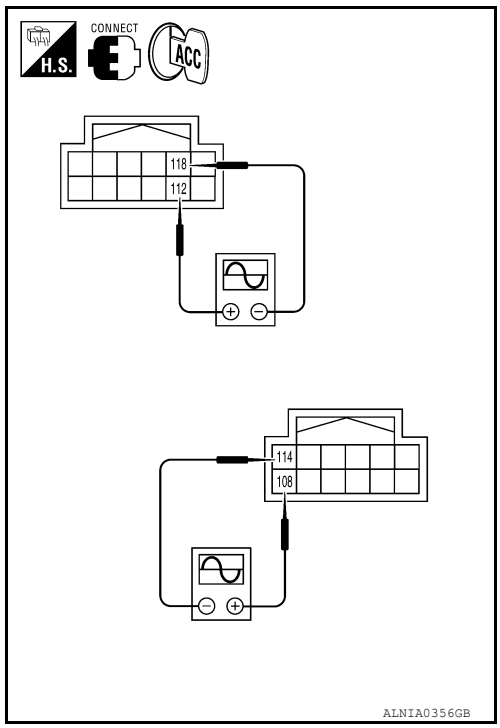
A		—	Continuity
Connector	Terminal		
M69	112	Ground	No
	118		
	108		
	114		

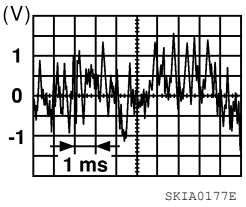
Are the continuity results as specified?

YES >> GO TO 5
NO >> Repair harness or connector.

5. REAR DOOR SPEAKER SIGNAL CHECK

1. Connect AV control unit connector M69 and BOSE speaker amp. connector B75.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M69 terminals with CONSULT or oscilloscope.



Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M69	112	118	Receive audio signal	
	108	114		

Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to AV-265, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

REAR TWEETER

Description

INFOID:0000000007347759

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the rear tweeters using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347760

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

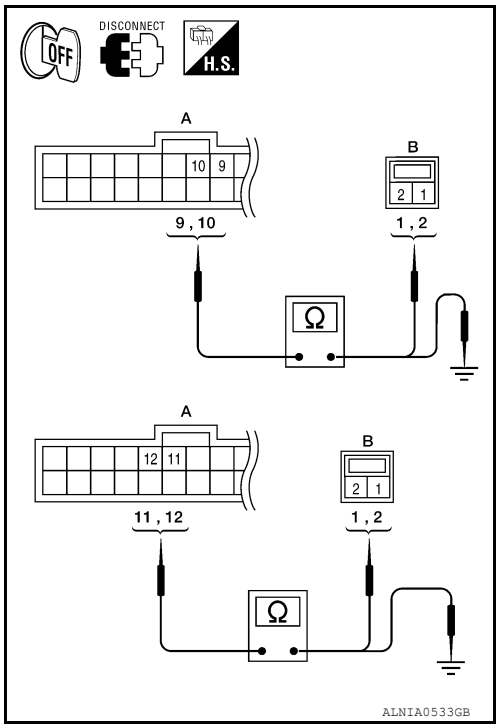
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B75 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connectors B75 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B75	9	D208	1	Yes
	10		2	
	11	D308	1	
	12		2	



3. Check continuity between BOSE speaker amp. harness connectors B75 (A) and ground.

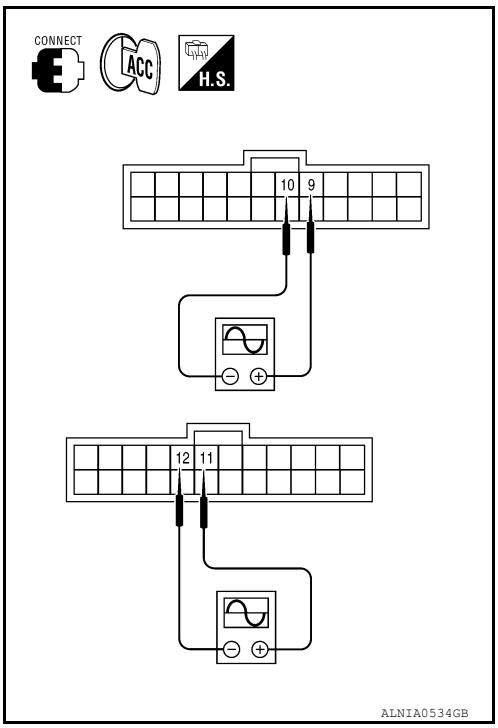
Connector	Terminal	-	Continuity
B75	9	Ground	No
	10		
	11		
	12		

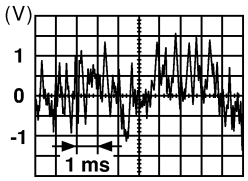
Are the continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.REAR TWEETER SIGNAL CHECK

1. Connect BOSE speaker amp. connectors and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connectors B75 terminals with CONSULT or oscilloscope.



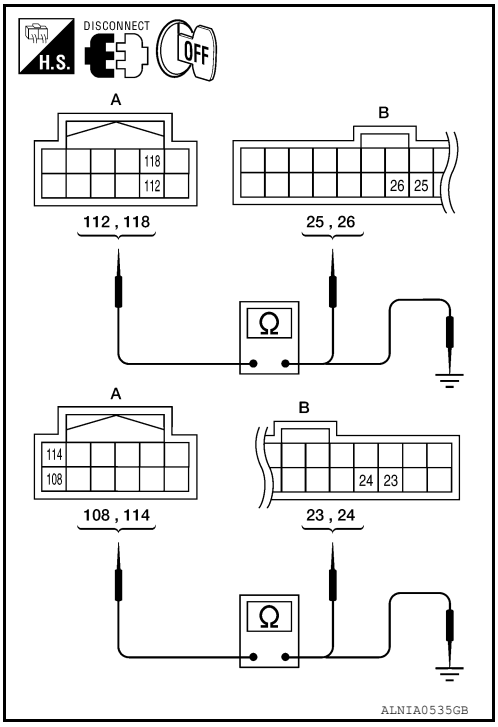
Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B75	9	10	Receive audio signal	
	11	12		

Are audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to AV-261, "Removal and Installation of Rear Tweeter".
NO >> GO TO 4

4. HARNESS CHECK

1. Disconnect AV control unit connector M69 and BOSE speaker amp. connector B75.
2. Check continuity between AV control unit harness connector M69 (A) and BOSE speaker amp. harness connector B75 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M69	112	B75	26	Yes
	118		25	
	108		24	
	114		23	

3. Check continuity between AV control unit harness connector M69 (A) and ground.

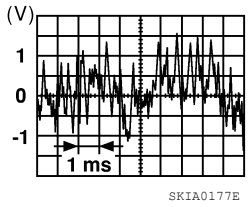
A		—	Continuity
Connector	Terminal		
M69	112	Ground	No
	118		
	108		
	114		

Are the continuity results as specified?

YES >> GO TO 5
NO >> Repair harness or connector.

5. REAR TWEETER SIGNAL CHECK

1. Connect AV control unit connector M69 and BOSE speaker amp. connector B75.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M69 terminals with CONSULT or oscilloscope.

Connector	Terminals (+)	Terminals (-)	Condition	Reference signal
M69	112	118	Receive audio signal	
	108	114		

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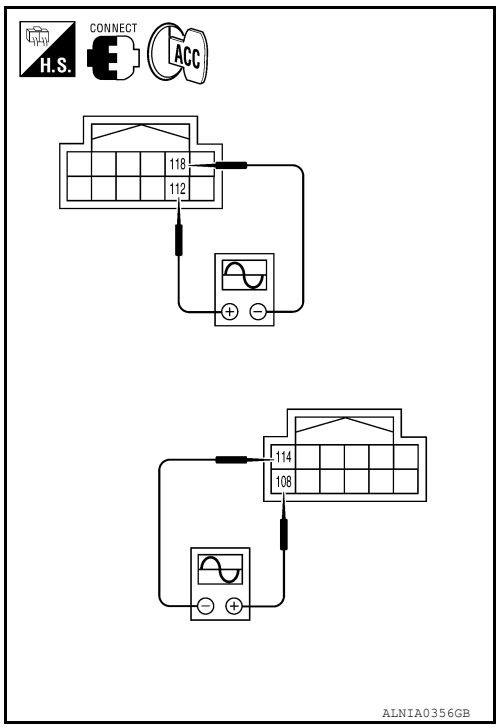


ALNIA0356GB

Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to AV-265, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

SUBWOOFER

Description

INFOID:0000000007347761

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the subwoofer using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347762

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

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.VERIFY SUBWOOFER POWER AND GROUND SUPPLY

Check power and ground supply to the subwoofer. Refer to AV-166, "SUBWOOFER : Diagnosis Procedure"

Did the power and ground supply check OK?

YES >> GO TO 3
NO >> Repair harness or connector.

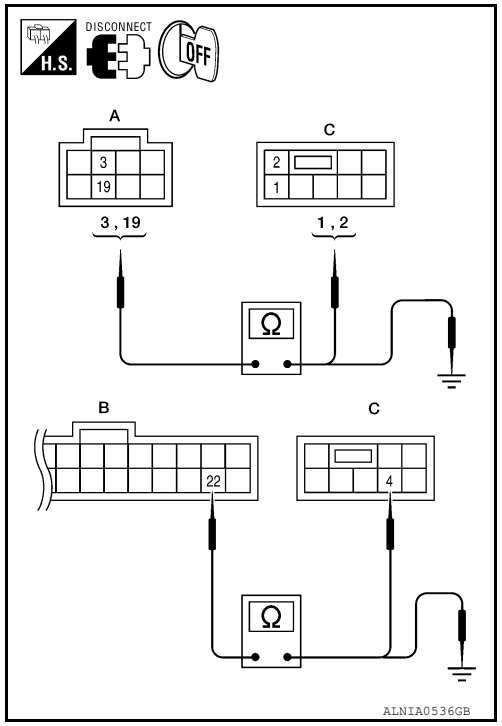
3.HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors and subwoofer connector.
2. Check continuity between BOSE speaker amp. harness connectors B74 (A) and B75 (B) and subwoofer harness connector B72 (C).

Connector	Terminal	Connector	Terminal	Continuity
A: B74	3	C: B72	1	Yes
	19		2	
B: B75	22		4	

3. Check continuity between BOSE speaker amp. harness connector B74 (A) and B75 (B) and ground.

Connector	Terminal	-	Continuity
A: B74	3	Ground	No
	19		
B: B75	22		

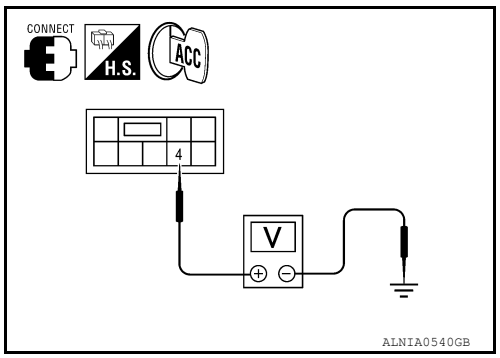


Are the continuity results as specified?

YES >> GO TO 4
NO >> Repair harness or connector.

4.SUBWOOFER AMP ON SIGNAL CHECK

1. Connect BOSE speaker amp. connector B74.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check voltage between subwoofer connector B72 terminal 4 and ground.



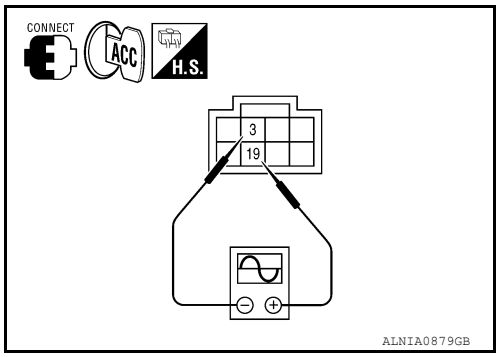
(+)		(-)	Voltage
Connector	Terminal		
B72	4	Ground	Battery voltage

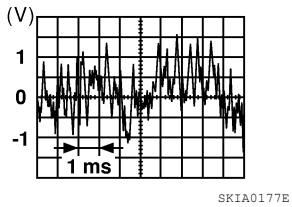
Are the voltage readings as specified?

YES >> GO TO 5
NO >> Replace BOSE speaker amp. Refer to AV-265, "Removal and Installation".

5. SUBWOOFER AUDIO SIGNAL CHECK

1. Connect BOSE speaker amp. connectors and subwoofer connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connector B74 terminals with CONSULT or oscilloscope.



Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B74	19	3	Receive audio signal	

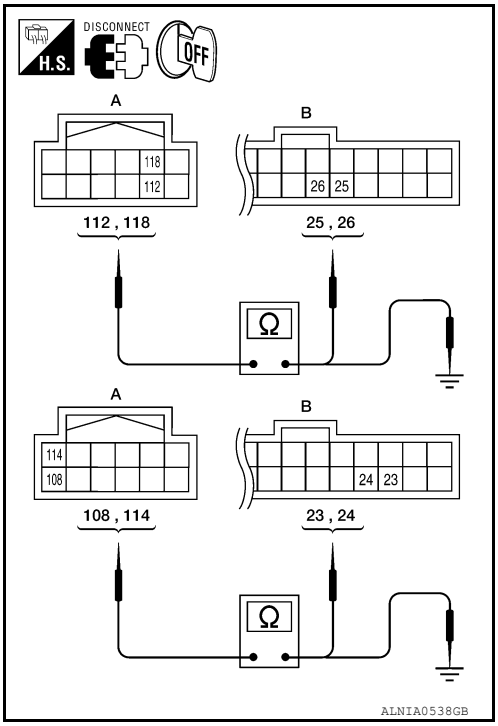
Is the audio signal voltage as specified?

YES >> Replace subwoofer. Refer to AV-266, "Removal and Installation".
NO >> GO TO 6

6. HARNESS CHECK

1. Turn ignition switch OFF.

2. Disconnect AV control unit connector M69 and BOSE speaker amp. connector B75.
3. Check continuity between AV control unit harness connector M69 (A) and BOSE speaker amp. harness connector B75 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M69	112	B75	26	Yes
	118		25	
	108		24	
	114		23	

4. Check continuity between AV control unit harness connector M69 (A) and ground.

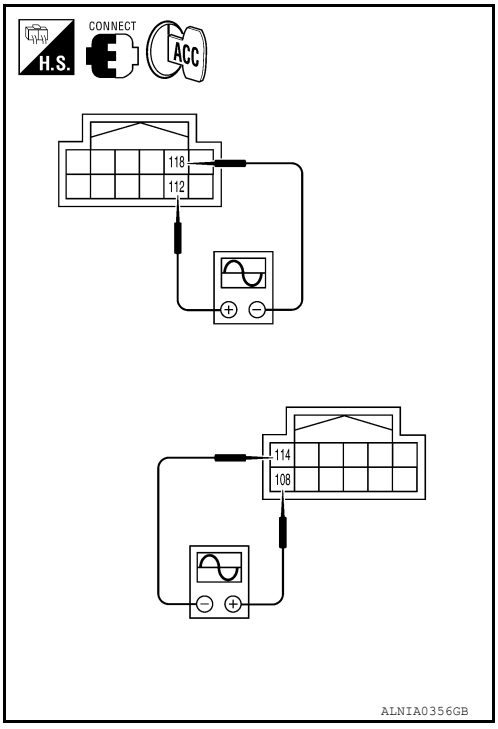
A		—	Continuity
Connector	Terminal		
M69	112	Ground	No
	118		
	108		
	114		

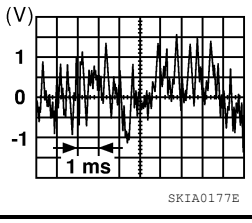
Are the continuity results as specified?

YES >> GO TO 7
NO >> Repair harness or connector.

7. BACK DOOR SPEAKER SIGNAL CHECK

1. Connect AV control unit connector M69 and BOSE speaker amp. connector B75.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M69 terminals with CONSULT or oscilloscope.



Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M69	112	118	Receive audio signal	
	108	114		

Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to AV-265, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

AMP ON SIGNAL CIRCUIT

Description

INFOID:0000000007347763

When the audio system is turned on, a voltage signal is supplied from the AV control unit to the BOSE speaker amp. When this signal is received, the BOSE speaker amp. will turn on.

Diagnosis Procedure

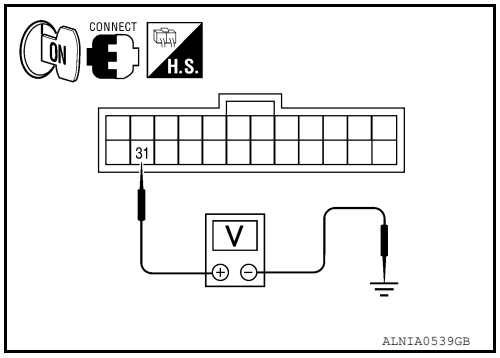
INFOID:0000000007347764

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

1. Turn audio system ON.
2. Check voltage between BOSE speaker amp. harness connector B75 terminal 31 and ground.

(+)		(-)	Value (Approx.)
Connector	Terminal		
B75	31	Ground	Battery Voltage



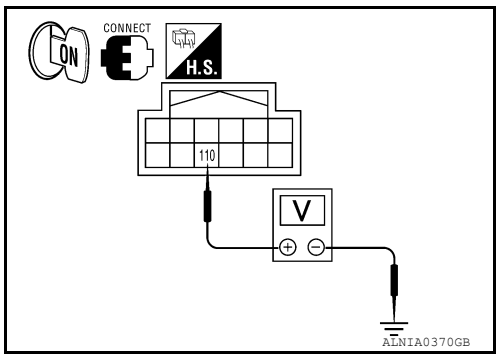
Is battery voltage present?

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

2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

Check voltage between AV control unit harness connector M69 terminal 110 and ground.

(+)		(-)	Value (Approx.)
Connector	Terminal		
M69	110	Ground	Battery Voltage



Is battery voltage present?

YES >> Repair harness or connector.
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

STEERING SWITCH

Description

INFOID:0000000007347765

When one of the steering wheel AV control switches is pushed, the resistance in the steering wheel AV control switch circuit changes depending on which button is pushed.

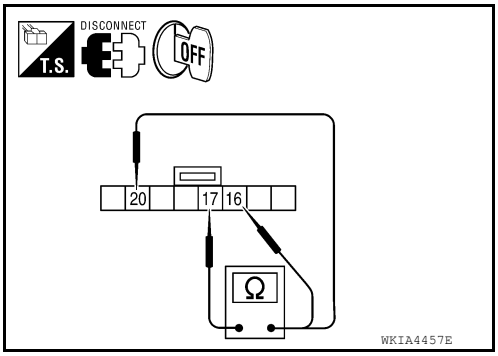
Diagnosis Procedure

INFOID:0000000007347766

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1. CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect steering wheel audio control switch connector M102.
3. Check resistance between steering switch connector terminals.



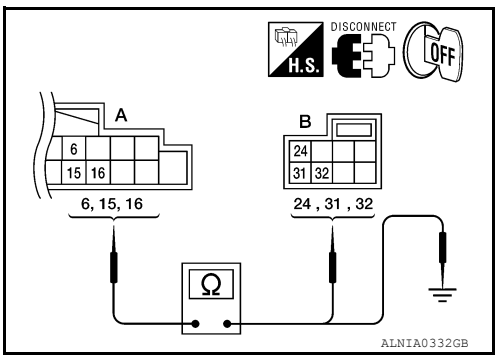
Terminal		Signal name	Condition	Resistance (Ω) (Approx.)
16	17	Seek (down)	Depress ▽ switch.	165
		Volume (down)	Depress VOL down switch.	652
		Mode/End	Depress MODE switch.	0
20	17	Seek (up)	Depress △ switch.	165
		Volume (up)	Depress VOL up switch.	652
		Phone/Send	Depress switch.	0

Do the steering wheel audio control switches check OK?

YES >> GO TO 2
NO >> Replace steering wheel audio control switch. Refer to AV-262, "Removal and Installation".

2. CHECK HARNESS

1. Disconnect AV control unit connector M42 and spiral cable connector M30.
2. Check continuity between AV control unit harness connector M42 (A) and spiral cable harness connector M30 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M42	6	M30	24	Yes
	15		31	
	16		32	

3. Check continuity between AV control unit connector M42 (A) and ground.

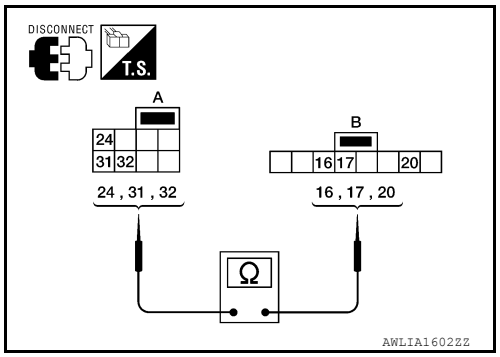
A		—	Continuity
Connector	Terminal		
M42	6	Ground	No
	15		
	16		

Are the continuity results as specified?

YES >> GO TO 3
NO >> Repair harness.

3. SPIRAL CABLE CHECK

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



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

Is continuity present?

YES >> Inspection End.
NO >> Replace spiral cable. Refer to SR-7, "Removal and Installation".

COMMUNICATION SIGNAL CIRCUIT
SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:0000000007347767

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

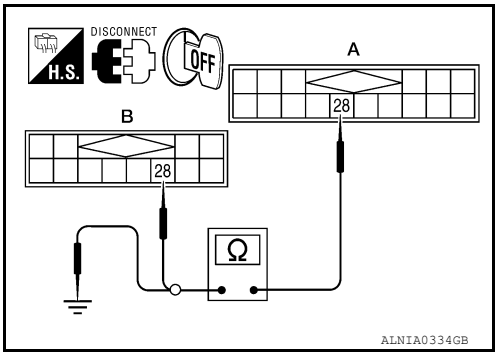
SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:0000000007347768

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1.CHECK HARNESS - 1

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector M41 and AV control unit connector M136.
3. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 28 and AV control unit harness connector M136 (B) terminal 28.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	28	M136	28	Yes

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

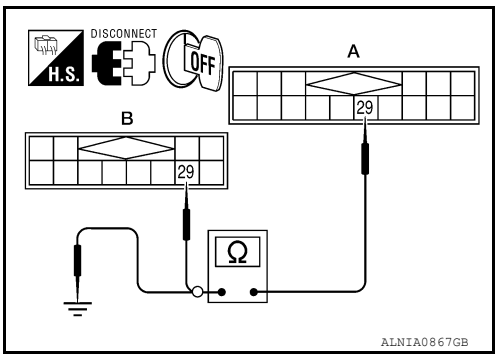
A		—	Continuity
Connector	Terminal		
M41	28	Ground	No

Are continuity results as specified?

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

2.CHECK HARNESS - 2

1. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 29 and AV control unit harness connector M136 (B) terminal 29.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	29	M136	29	Yes

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

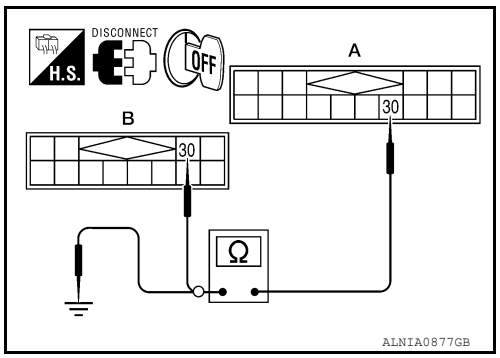
A		—	Continuity
Connector	Terminal		
M41	29	Ground	No

Are continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.CHECK HARNESS - 3

1. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and AV control unit harness connector M136 (B) terminal 30.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	30	M136	30	Yes

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

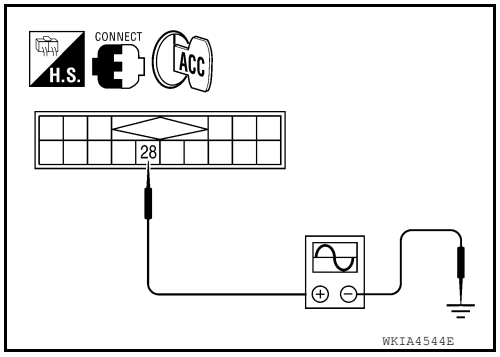
A		—	Continuity
Connector	Terminal		
M41	30	Ground	No

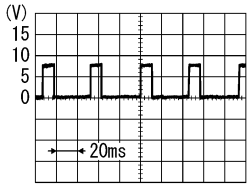
Are continuity results as specified?

YES >> GO TO 4
NO >> Repair harness or connector.

4.CHECK REQ1 SIGNAL

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



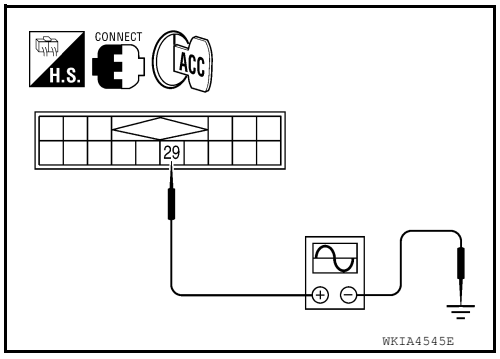
(+)		(-)	Reference signal
Connector	Terminal		
M41	28	Ground	

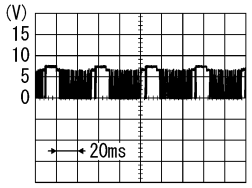
Are voltage readings as specified?

YES >> GO TO 5
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

5.CHECK TXD SIGNAL

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



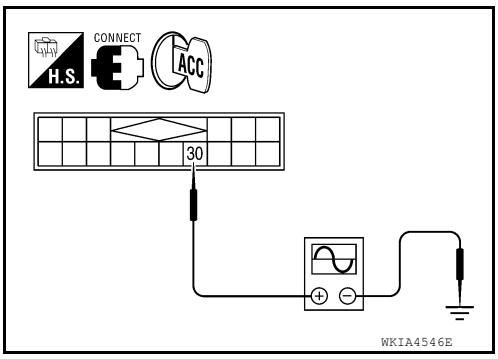
(+)		(-)	Reference signal
Connector	Terminal		
M41	29	Ground	

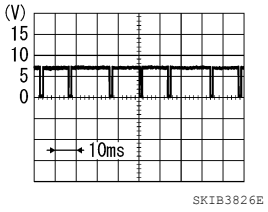
Are the voltage readings as specified?

YES >> GO TO 6
NO >> Replace satellite radio tuner. Refer to AV-273, "Removal and Installation".

6. CHECK RXD SIGNAL

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



(+)		(-)	Reference signal
Connector	Terminal		
M41	30	Ground	

Are the voltage readings as specified?

YES >> Replace satellite radio tuner. Refer to AV-273, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-255, "Removal and Installation".

SOUND SIGNAL CIRCUIT
SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Description

INFOID:0000000007347769

Left and right channel audio signals are supplied from the satellite radio tuner to the AV control unit through the sound signal circuits.

SATELLITE RADIO TUNER : Diagnosis Procedure

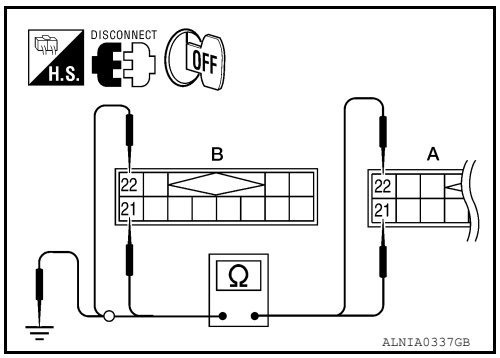
INFOID:0000000007347770

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

LEFT CHANNEL

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector M41 and AV control unit connector M136.
3. Check continuity between satellite radio tuner (factory installed) connector M41 (A) and AV control unit connector M136 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	21	M43	21	Yes
	22		22	

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

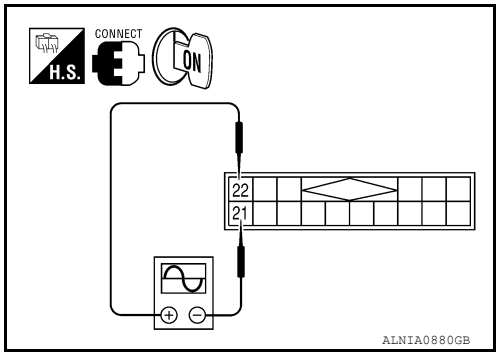
A		—	Continuity
Connector	Terminal		
M41	21	Ground	No
	22		

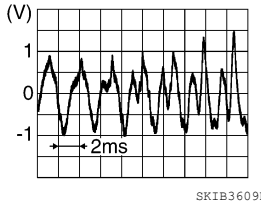
Are continuity results as specified?

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

2. CHECK LEFT CHANNEL AUDIO SIGNAL

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



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

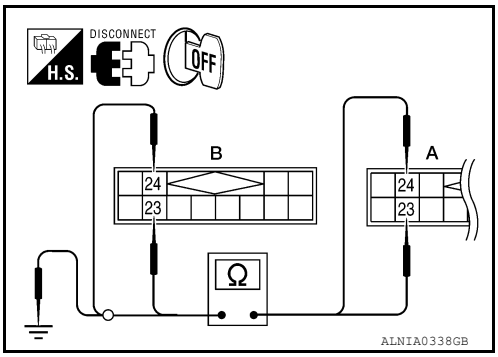
Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-255, "Removal and Installation".
NO >> Replace satellite radio tuner. Refer to AV-273, "Removal and Installation".

RIGHT CHANNEL

1. CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner (factory installed) connector M41 and AV control unit connector M136.
3. Check continuity between satellite radio tuner (factory installed) M41 (A) and AV control unit M136 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M41	23	M136	23	Yes
	24		24	

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

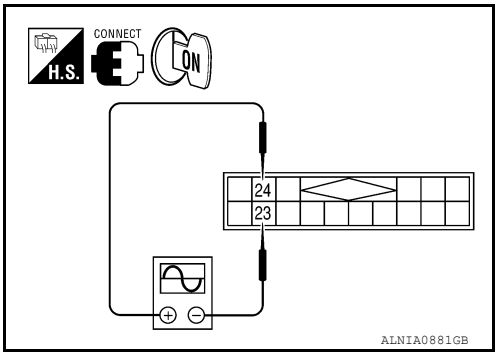
A		—	Continuity
Connector	Terminal		
M41	23	Ground	No
	24		

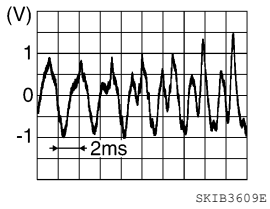
Are continuity results as specified?

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

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

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



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

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-255, "Removal and Installation".
NO >> Replace satellite radio tuner. Refer to AV-273, "Removal and Installation".

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000007347771

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

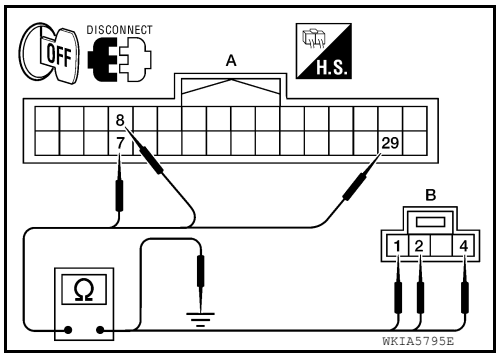
Diagnosis Procedure

INFOID:0000000007347772

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1. CHECK HARNESS BETWEEN BLUETOOTH CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect Bluetooth control unit connector and microphone connector.
3. Check continuity between Bluetooth control unit harness connector B124 (A) and microphone harness connector R8 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
B124	7	R8	1	Yes
	8		2	
	29		4	

4. Check continuity between Bluetooth control unit harness connector B124 (A) and ground.

A		—	Continuity
Connector	Terminal		
B124	7	Ground	No
	8		
	29		

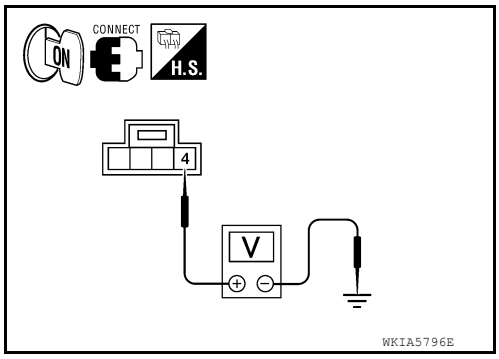
Are the continuity test results as specified?

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

2. CHECK MICROPHONE POWER SUPPLY

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

4 - Ground : Approx. 5V

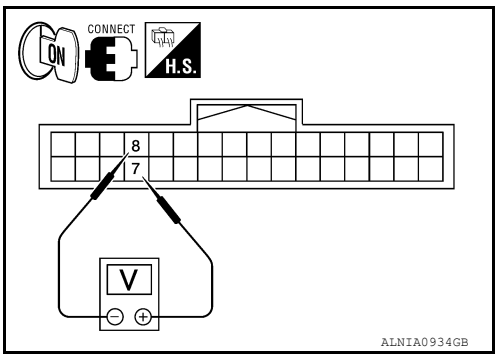


Is voltage reading approx. 5 volts?

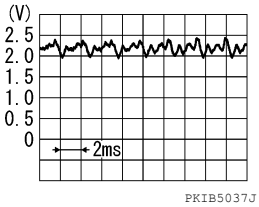
YES >> GO TO 3
NO >> Replace Bluetooth control unit. Refer to AV-264, "Removal and Installation".

3. CHECK MICROPHONE SIGNAL

Check signal between Bluetooth control unit harness connector B124 terminals 7 and 8.



7 - 8: **When giving a voice**



Are voltage readings as specified?

YES >> Replace Bluetooth control unit. Refer to AV-264, "Removal and Installation".
NO >> Replace microphone. Refer to AV-263, "Removal and Installation".

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000007347773

Rear view camera signals are transmitted from the rear view camera to the AV control unit using the camera signal circuits.

Diagnosis Procedure

INFOID:0000000007347774

Regarding Wiring Diagram information, refer to AV-225, "Wiring Diagram - Without Navigation System".

1. CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

NOTE:
Apply parking brakes before proceeding.

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M134 and rear view camera connector D551.
3. Check continuity between AV control unit harness connector M134 terminals 64, 65, 72 and rear view camera harness connector D551 terminals 3, 5 and 6.

64 - 5	**: Continuity should exist.**
65 - 6	**: Continuity should exist.**
72 - 3	**: Continuity should exist.**

4. Check continuity between AV control unit harness connector M134 terminals 64, 65, 72 and ground.

64, 65, 72 - Ground	**: Continuity should not exist.**

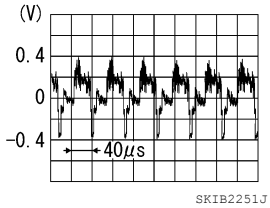
Is inspection result OK?

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

2. CHECK CAMERA IMAGE SIGNAL

1. Connect AV control unit connector M134 and rear view camera connector D551.
2. Turn ignition switch ON.
3. Shift transmission into reverse.
4. Check signal between AV control unit harness connector M134 terminals 64 and 65.

64 - 65 **:**



Is inspection result OK?

YES >> Replace AV control unit. Refer to AV-255, "Removal and Installation".
NO >> Replace rear view camera. Refer to AV-274, "Removal and Installation".

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

Reference Value

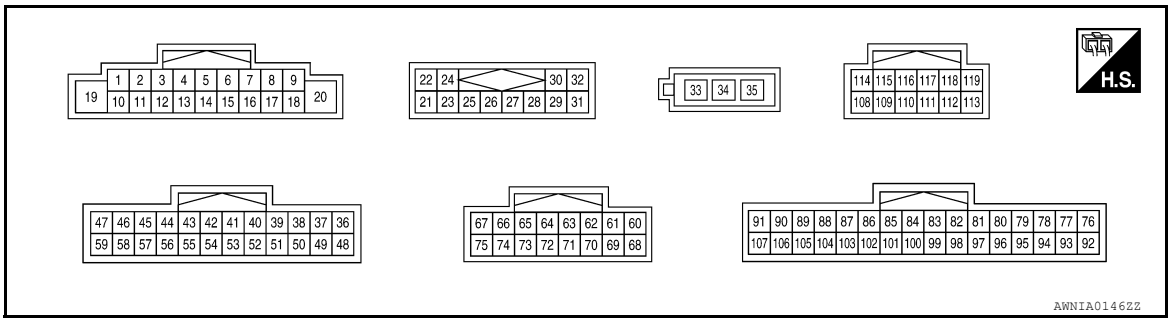
INFOID:0000000007347775

VALUES ON THE DIAGNOSIS TOOL

CONSULT data monitor item

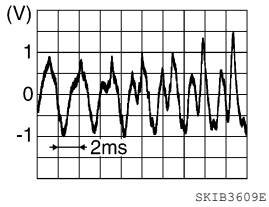
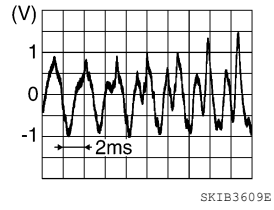
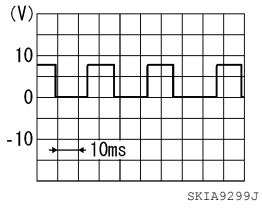
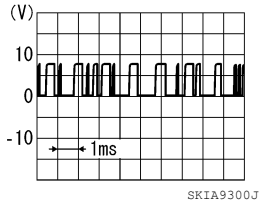
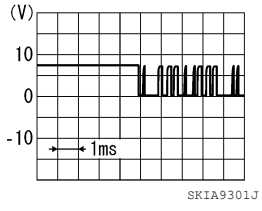
Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed =0 km/h (0 MPH)	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
	OFF	Parking brake is released.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON .	—
	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.	
IGN SIG	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
REV SIG	ON	Selector lever in R position	Changes in indication may be delayed. This is normal.
	OFF	Selector lever in any position other than R	

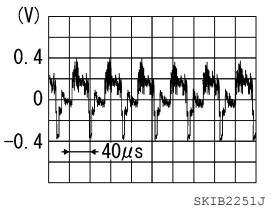
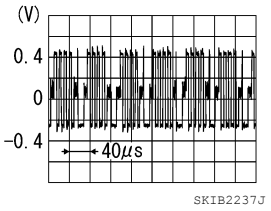
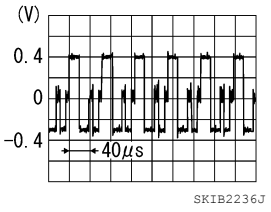
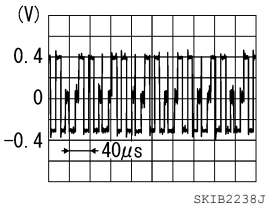
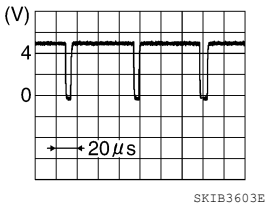
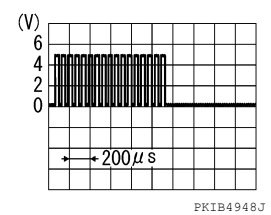
TERMINAL LAYOUT

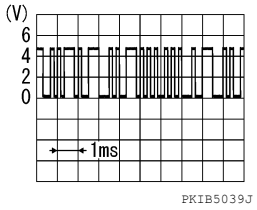
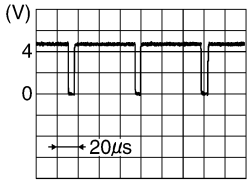
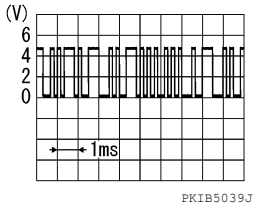
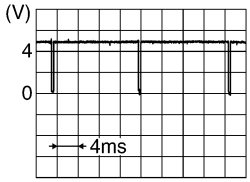


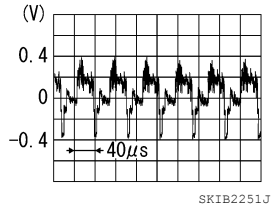
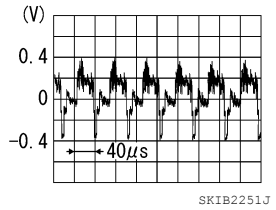
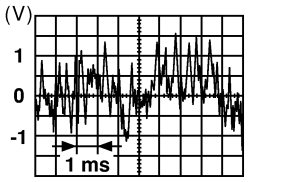
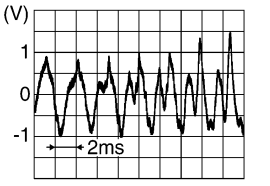
PHYSICAL VALUES

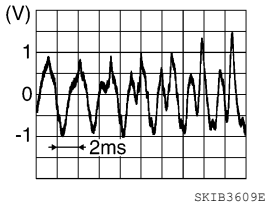
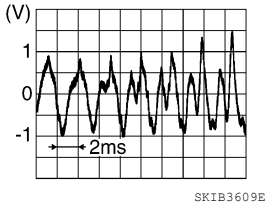
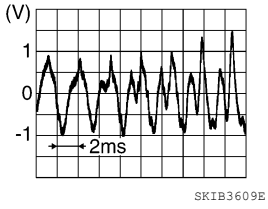
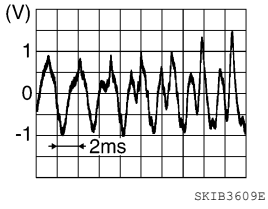
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
6 (Y)	15 (L)	Steering switch signal A	Input	Ignition switch ON	Pressing switch	0V
					Pressing △ switch	0.75V
					Pressing VOL up switch	2V
					Except for above	5V
7 (G/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
9 (V)	Ground	Illumination signal	Input	OFF	Lighting switch is OFF.	0V
					Lighting switch is ON.	Battery voltage

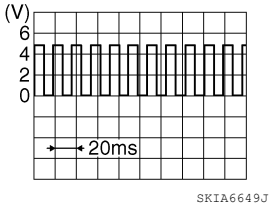
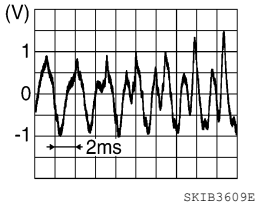
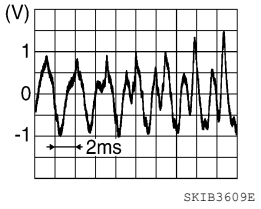
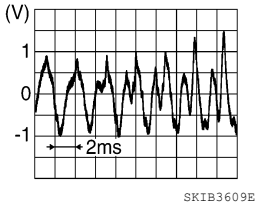
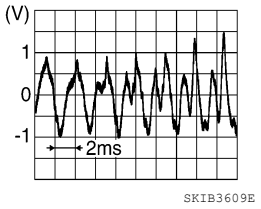
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
15 (L)	Ground	Steering switch signal ground	—	Ignition switch ON	—	0V
16 (G)	15 (L)	Steering switch signal B	Input	Ignition switch ON	Pressing MODE switch	0V
					Pressing ▽ switch	0.75V
					Pressing VOL down switch	2V
					Except for above	5V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0V
22 (R)	21 (G)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
24 (B)	23 (W)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
28 (O)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	 SKIA9299J
29 (P)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	When satellite radio mode is selected	 SKIA9300J
30 (L)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	When satellite radio mode is selected	 SKIA9301J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
34	—	Antenna main	—	—	—	—
35	—	Antenna B+	—	—	—	—
36 (G)	Ground	AUX image signal	Output	Ignition switch ON	When AUX mode is selected	 SKIB2251J
37 (R)	Ground	AUX image ground	—	Ignition switch ON	—	0V
38 (R)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2237J
39 (B)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2236J
40 (W)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2238J
41 (R)	Ground	RGB synchronizing signal	Output	Ignition switch ON	—	 SKIB3603E
43 (G)	Ground	RGB area (YS) signal	Output	Ignition switch ON	RGB image	5V
					AUX image	 PKIB4948J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
44 (LG)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness	 PKIB5039J
45 (B)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	—	 SKIB3601E
46 (BR)	Ground	Signal ground	—	Ignition switch	—	0V
47 (R)	Ground	Signal VCC	Output	Ignition switch ACC	—	9V
54 (B)	Ground	Ground	—	Ignition switch ON	—	0V
56 (V)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness	 PKIB5039J
57 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch On	—	 SKIB3598E
58 (SB)	Ground	Inverter ground	—	Ignition switch ON	—	0V
59 (O)	Ground	Inverter VCC	Output	Ignition switch ACC	—	9V
64 (W)	Ground	Rear view camera video signal ground	—	Ignition switch ON	—	0V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
65 (B)	Ground	Rear view camera video in (+)	Input	Ignition switch ON	With rear view camera ON	 SKIB2251J
66 (G)	Ground	DVD player video signal (+)	Input	Ignition switch ON	With DVD player operating	 SKIB2251J
68 (B)	Ground	Rear view camera signal (ground)	—	Ignition switch ON	—	0V
72	—	Shield	—	—	—	—
74 (R)	Ground	DVD player video ground	—	Ignition switch ON	—	0V
77 (B)	76 (R)	Headphone RH audio signal	Output	Ignition switch ON	With DVD player operating	 SKIA0177E
80 (GR)	79 (SB)	Microphone signal	Input	Ignition switch ON	—	—
83 (R)	82 (G)	DVD player audio signal RH	Input	Ignition switch ON	With DVD player operating	 SKIB3609E
85 (B)	Ground	Ground	—	Ignition switch ON	—	0V
86 (L)	—	CAN–H	Input/ Output	—	—	—
87 (P)	—	CAN–L	Input/ Output	—	—	—
88 (L)	—	AV communication signal 1 (H)	Input/ Output	—	—	—
89 (P)	—	AV communication signal 1 (L)	Input/ Output	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
90 (L)	—	AV communication signal 2 (H)	Input/ Output	—	—	—
91 (P)	—	AV communication signal 2 (L)	Input/ Output	—	—	—
93 (G)	92 (W)	Headphone LH audio signal	Output	Ignition switch ON	With DVD player operating	 SKIB3609E
94	—	Shield	—	—	—	—
95 (W)	97 (R)	AUX audio signal RH	Input	Ignition switch ON	When AUX mode is selected	 SKIB3609E
96 (B)	97 (R)	AUX audio signal LH	Input	Ignition switch ON	When AUX mode is selected	 SKIB3609E
98 (W)	99 (B)	DVD player audio signal LH	Input	Ignition switch ON	With DVD player operating	 SKIB3609E
101 (GR)	Ground	A/C and AV switch assembly ground	—	Ignition switch ON	—	0V
103 (SB)	Ground	CD eject signal	Input	—	Pressing the eject switch	0V
					Except for above	3.3V
104 (W/G)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
105 (W)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
					Other than R position	0V
106 (G)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake ON	0V
					Parking brake OFF	Battery voltage

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
107 (LG)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	 SKIA6649J
108 (G/R)	114 (B)	Rear RH pre-amp. audio signal	Output	Ignition switch ON	Audio output	 SKIB3609E
109 (G/Y)	115 (G/O)	Front RH pre-amp. audio signal	Output	Ignition switch ON	Audio output	 SKIB3609E
110 (SB)	Ground	Amp. ON signal	Output	Ignition switch ON	Audio output	Battery voltage
112 (BR/W)	118 (BR/Y)	Rear LH pre-amp. audio signal	Output	Ignition switch ON	Audio output	 SKIB3609E
113 (BR)	119 (B)	Front LH pre-amp. audio signal	Output	Ignition switch ON	Audio output	 SKIB3609E

DTC Index

INFOID:0000000007347776

Self-diagnosis results display item

Error item	Refer to
CAN COMM CIRCUIT [U1000]	AV-150, "DTC Logic"
CONTROL UNIT (CAN) [U1010]	AV-151, "DTC Logic"
Control Unit FLASH-ROM [U1200]	AV-152, "DTC Logic"
CAN CONT [U1216]	AV-153, "DTC Logic"

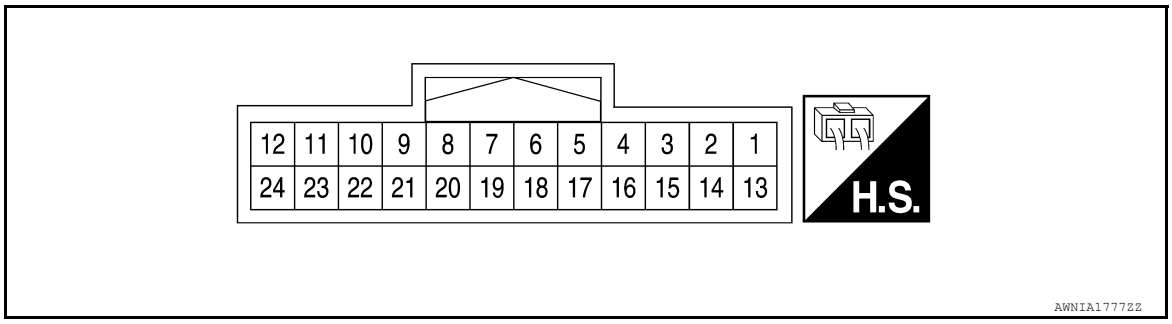
Error item	Refer to
SWITCH CONN [U1240]	AV-154, "Description"
FRONT DISP CONN [U1243]	AV-155, "DTC Logic"
DVD DECK CONN [U1248]	AV-157, "DTC Logic"
SAT CONN [U1255]	AV-158, "DTC Logic"
HAND FREE CONN [U1256]	AV-159, "Description"
AV COMM CIRCUIT [U1300]	AV-160, "Description"
CONTROL UNIT (AV) [U1310]	AV-161, "DTC Logic"

DISPLAY UNIT

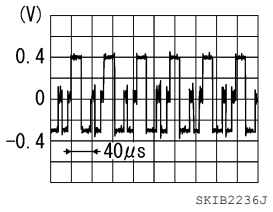
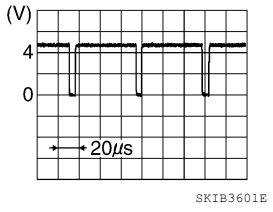
Reference Value

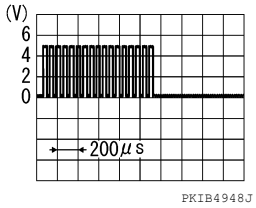
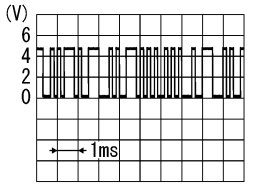
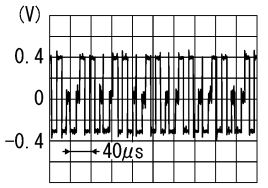
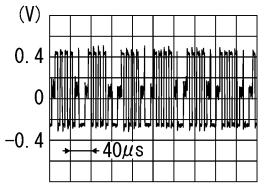
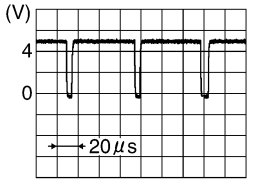
INFOID:0000000007347777

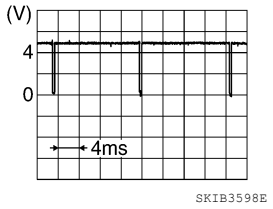
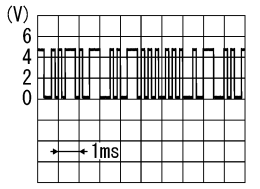
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0V
2 (O)	Ground	Inverter VCC	Input	Ignition switch ACC	—	9V
3 (R)	Ground	Signal VCC	Input	Ignition switch ACC	—	9V
4 (R)	Ground	AUX image ground	—	Ignition switch ON	—	0V
6 (B)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting“Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	
8 (B)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	—	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (G)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image displayed	5V
					At rear view camera image displayed	 PKIB4948J
11 (V)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display-brightness	 PKIB5039J
13 (SB)	Ground	Inverter ground	—	Ignition switch ON	—	0V
14 (BR)	Ground	Signal ground	—	Ignition switch ON	—	0V
15 (G)	—	AUX image synchronizing signal	Input	—	—	—
17 (W)	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.	 SKIB2238J
18 (R)	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.	 SKIB2237J
19 (R)	Ground	RGB synchronizing signal	Input	Ignition switch ON	—	 SKIB3603E

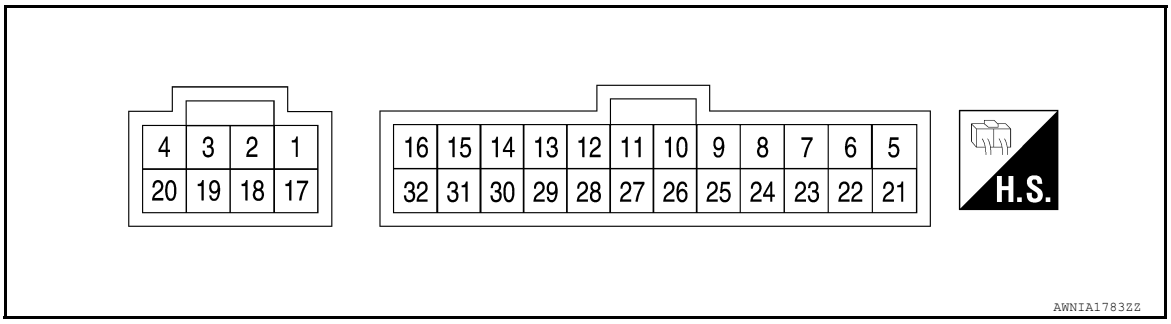
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	—	 SKIB3598E
22 (LG)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display-brightness	 PKIB5039J

BOSE SPEAKER AMP

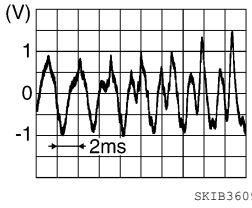
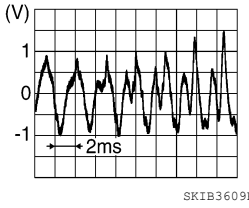
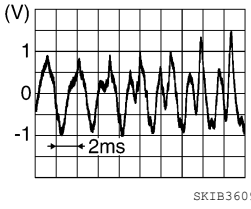
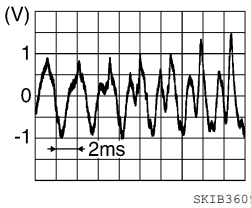
Reference Value

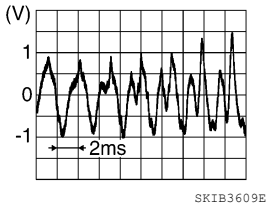
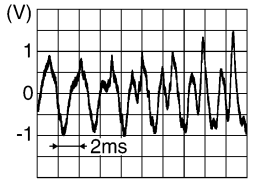
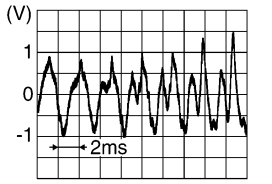
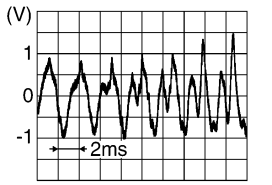
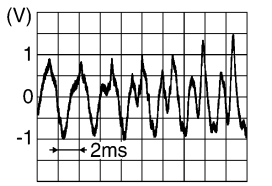
INFOID:0000000007347778

TERMINAL LAYOUT



PHYSICAL VALUES

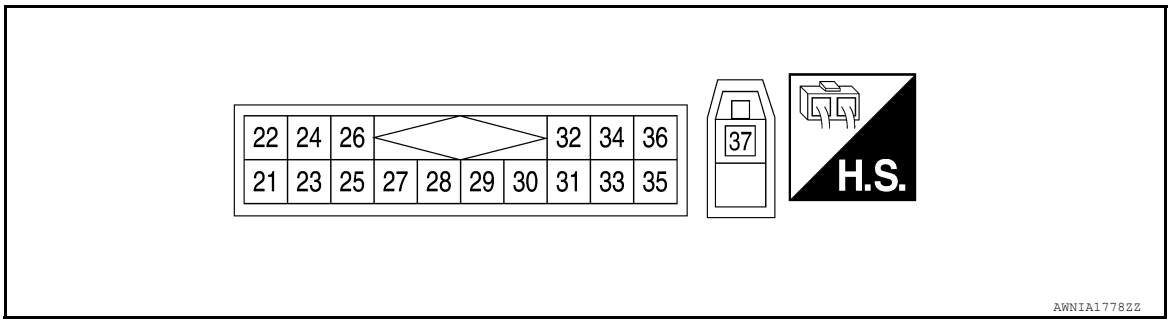
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (Y)	Ground	Battery power	Input	—	—	Battery voltage
9 (B)	10 (G)	Audio signal rear door speaker and tweeter LH	Output	Ignition switch ON	Audio output	
11 (GR)	12 (O)	Audio signal rear door speaker and tweeter RH	Output	Ignition switch ON	Audio output	
13 (LG)	14 (L)	Audio signal front door speaker and tweeter LH	Output	Ignition switch ON	Audio output	
15 (W)	16 (R)	Audio signal front door speaker and tweeter RH	Output	Ignition switch ON	Audio output	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
17 (B)	Ground	Ground	—	Ignition switch ON	—	0V
19 (SB)	3 (B)	Audio signal subwoofer	Output	Ignition switch ON	Audio output	 SKIB3609E
22 (Y)	Ground	Subwoofer amp. ON signal	Output	Ignition switch ACC	Audio output	Battery voltage
24 (G/R)	23 (B)	Audio signal rear RH	Input	Ignition switch ON	Audio input	 SKIB3609E
26 (BR/W)	25 (BR/Y)	Audio signal rear LH	Input	Ignition switch ON	Audio input	 SKIB3609E
28 (G/Y)	27 (G/O)	Audio signal front RH	Input	Ignition switch ON	Audio input	 SKIB3609E
30 (BR)	29 (B)	Audio signal front LH	Input	Ignition switch ON	Audio input	 SKIB3609E
31 (SB)	Ground	Amp. ON signal	Input	Ignition switch ON	Audio output	Battery voltage

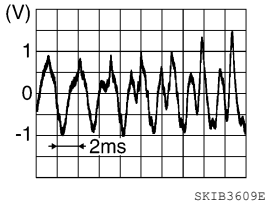
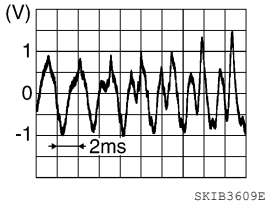
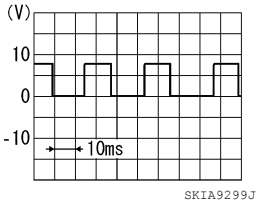
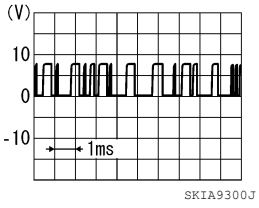
SATELLITE RADIO TUNER

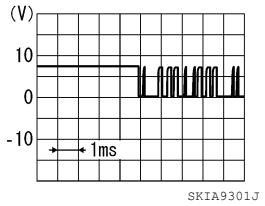
Reference Value

INFOID:0000000007347779



PHYSICAL VALUES

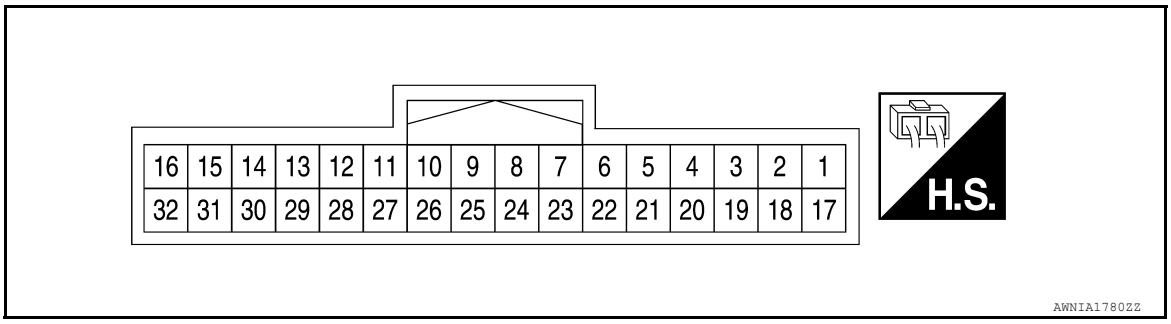
Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
22 (R)	21 (G)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
24 (B)	23 (W)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite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

Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
30 (L)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	 SKIA9301J
32 (R/B)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
36 (G/B)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
37	—	Satellite antenna	Input	—	—	—

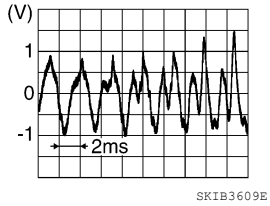
DVD PLAYER

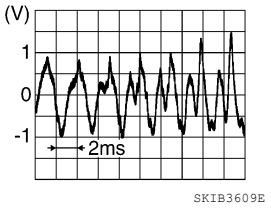
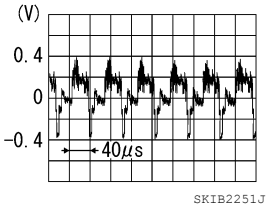
Reference Value

INFOID:0000000007347780



PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	2 (W)	DVD audio signal LH	Output	Ignition switch ON	With operation of the DVD player	
5 (B)	Ground	Ground	—	Ignition switch ON	—	0V
6 (BR)	Ground	Illumination control (pulse width modulated)	—	—	With lighting switch ON	—
7 (L)	Ground	CAN communication	Input/ Output	Ignition switch ON	—	—
9 (BR)	Ground	Video monitor power supply	Output	Ignition switch ON	With DVD player operation	12V
10 (GR)	Ground	Switch power	Output	Ignition switch ON	With DVD player operation	5V
12 (W/L)	Ground	VTR (+)	Output	Ignition switch ON	With DVD player operation	—
13 (O/L)	Ground	VTR (-)	Output	Ignition switch ON	With DVD player operation	—
14 (Y)	Ground	Display ground	—	Ignition switch ON	With DVD player operation	0V
16 (V)	—	Data receive	Input	—	—	—

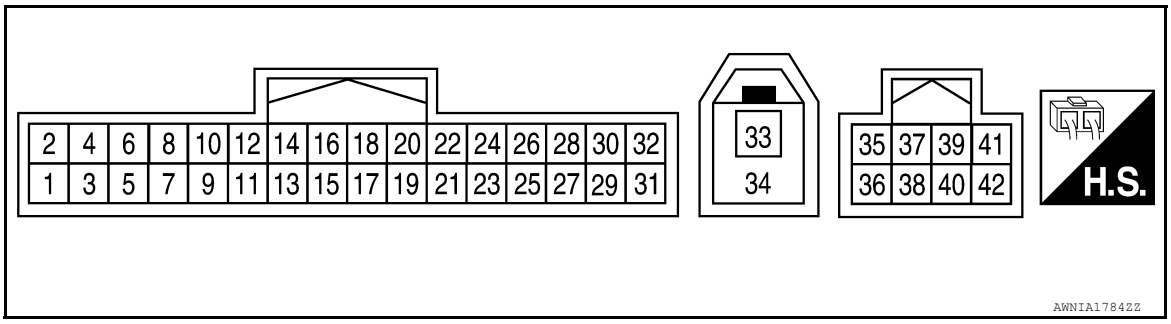
Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
17 (R)	18 (G)	DVD audio signal RH	Output	Ignition switch ON	With DVD player operation	 SKIB3609E
21 (Y)	Ground	Battery power	Input	—	—	12V
22 (SB)	Ground	Illumination power	Input	—	With instrument illumination ON	12V
23 (P)	Ground	CAN communication	Input/ Output	Ignition switch ON	—	0V
24 (G/B)	Ground	ACC power	Input	Ignition switch ACC or ON	—	12V
26 (P)	Ground	Ground	Input	Ignition switch ON	—	0V
28 (G)	Ground	Video out	Input	Ignition switch ACC or ON	—	 SKIB2251J
32 (LG)	—	Data transmit	Output	—	—	—

BLUETOOTH CONTROL UNIT

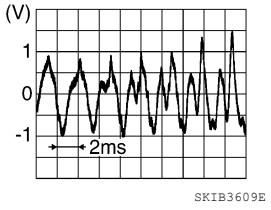
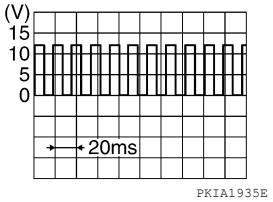
Reference Value

INFOID:0000000007347781

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	–			Ignition switch	Operation	
1 (R/Y)	Ground	Battery power	Input	–	–	Battery voltage
2 (G/Y)	Ground	ACC power	Input	ACC/ON	–	Battery voltage
3 (W/G)	Ground	IGN power	Input	ON/ START	–	Battery voltage
4 (B)	–	Ground	–	–	–	–
7 (R)	–	Mic-in signal	Input	–	–	–
8	–	Shield	–	–	–	–
9 (GR)	10 (SB)	Audio out	Output	ACC/ON	Bluetooth control unit sends audio signal	
21 (B)	–	Ground	–	–	–	–
22 (B)	–	Ground	–	–	–	–
24 (B)	–	Ground	–	–	–	–
28 (SB)	Ground	Vehicle speed input signal (8-pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25 mph)	
29 (G)	Ground	Microphone power	Output	ON	With Bluetooth ON	5V

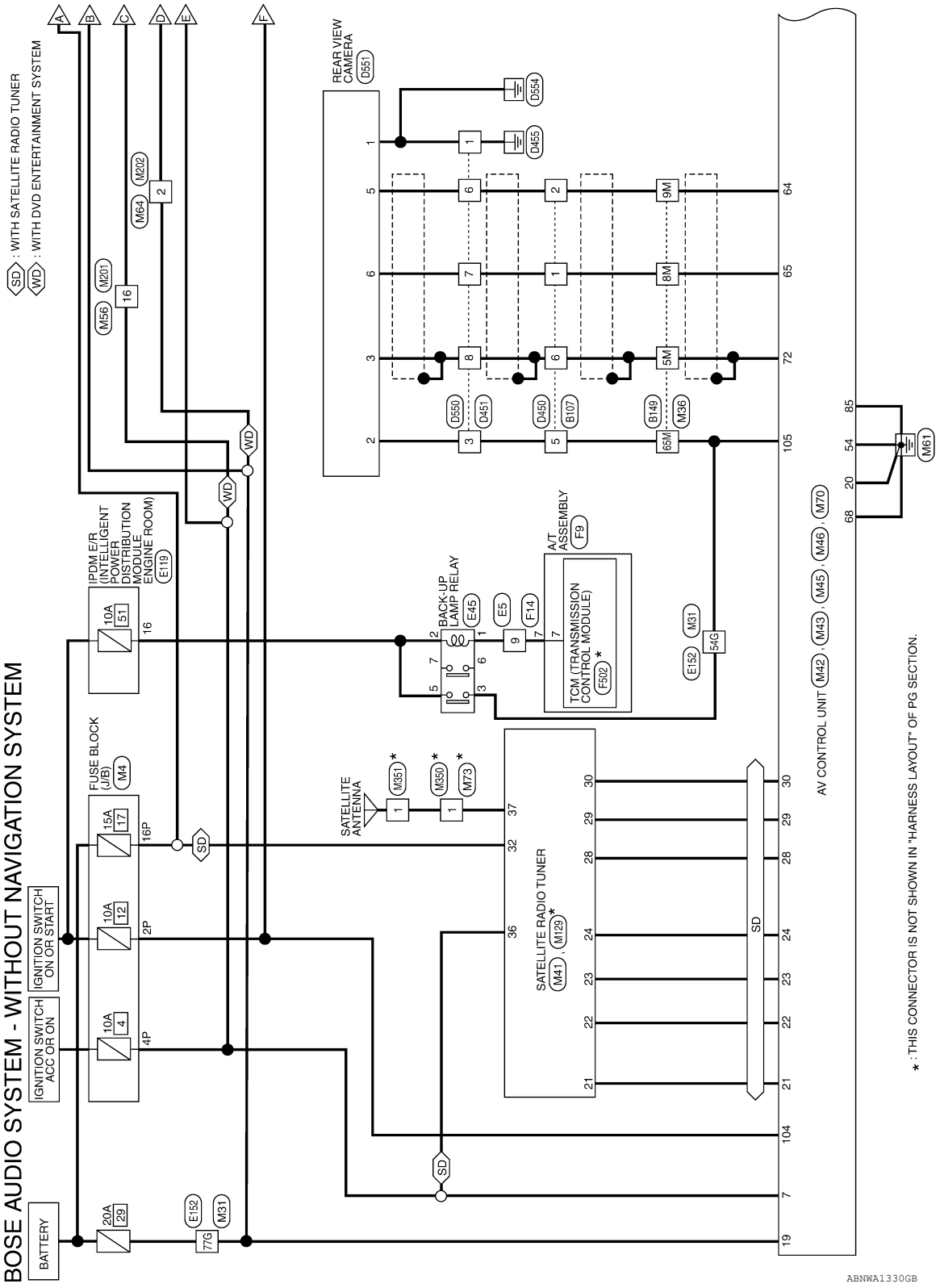
Terminal (Wire color)		Item	Signal input/ output	Condition		Reference value (Approx.)
+	–			Ignition switch	Operation	
33 (B)	–	Bluetooth antenna	–	–	–	–
34 (B)	–	Bluetooth antenna	–	–	–	–
35 (L)	–	M-CAN H	–	–	–	–
36 (P)	–	M-CAN L	–	–	–	–

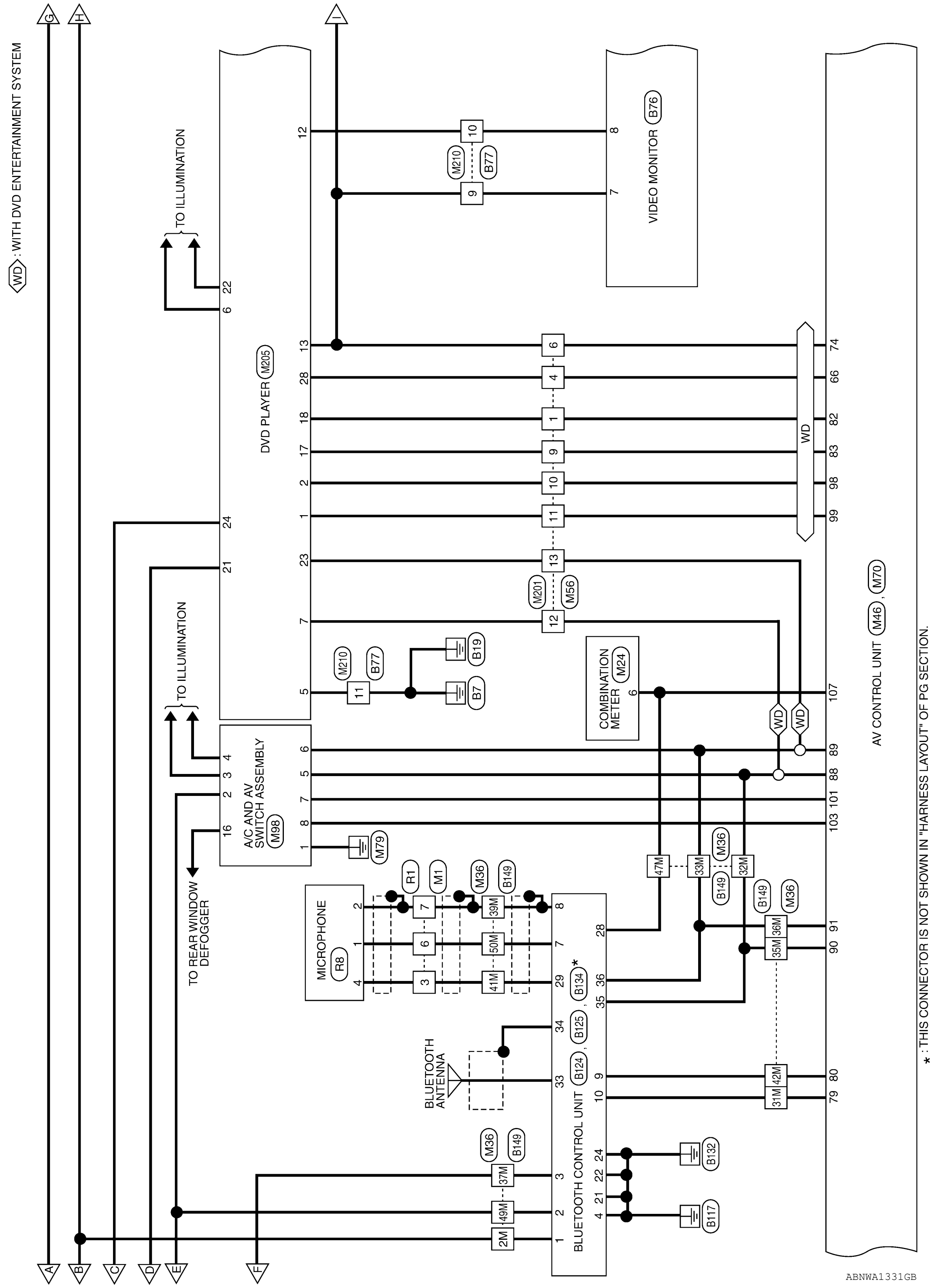
WIRING DIAGRAM

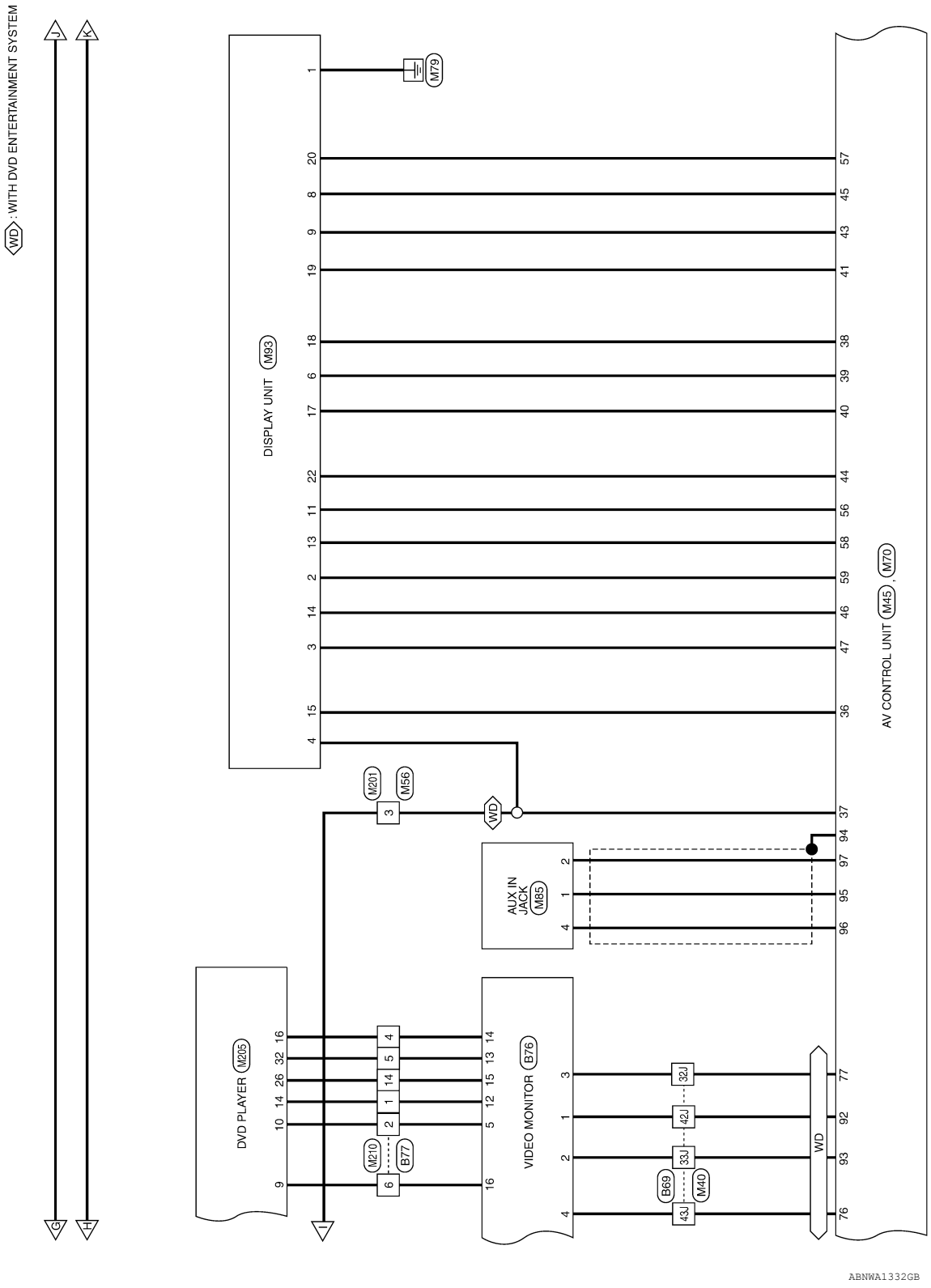
BOSE AUDIO SYSTEM

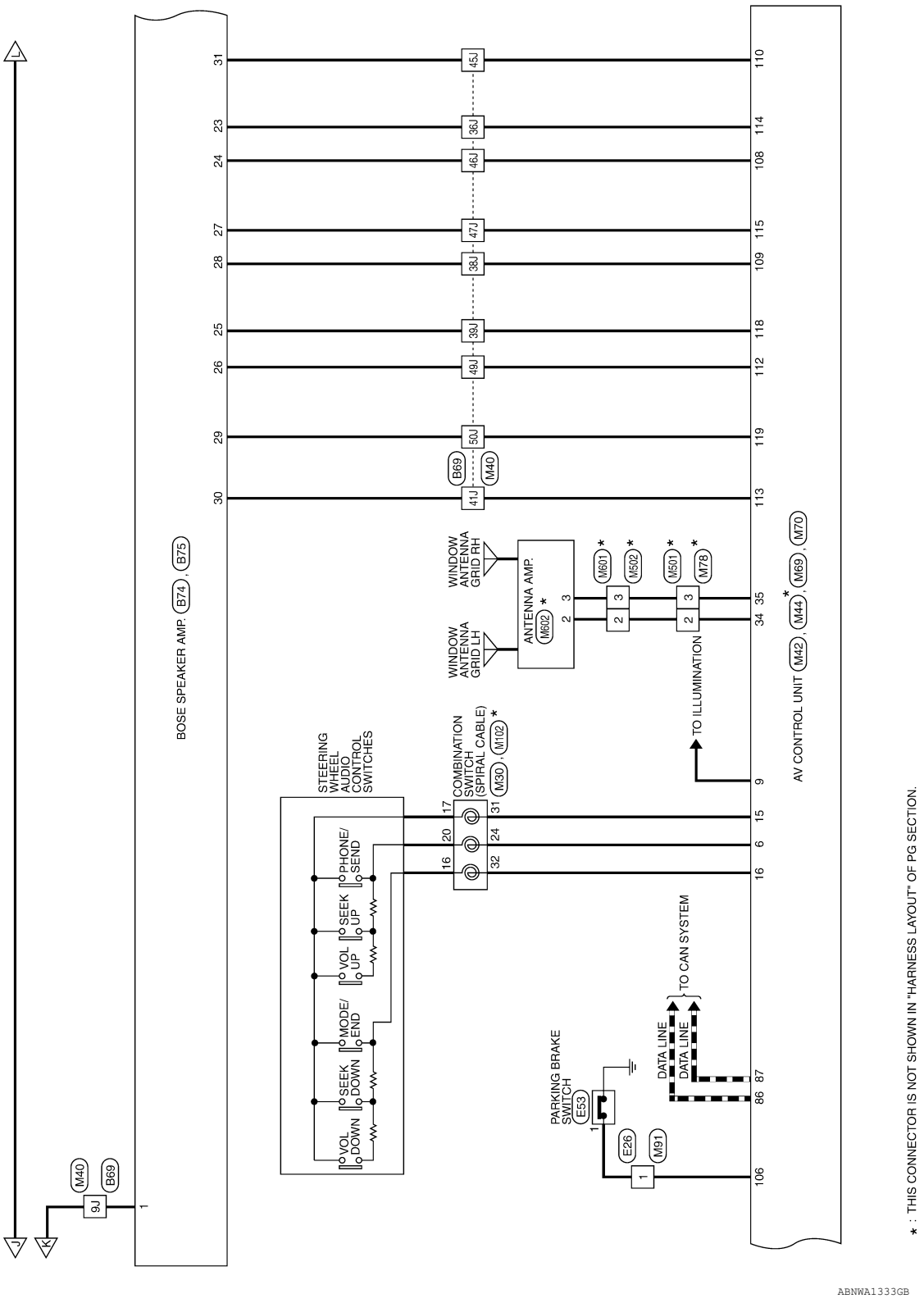
Wiring Diagram - Without Navigation System

INFOID:0000000007347782

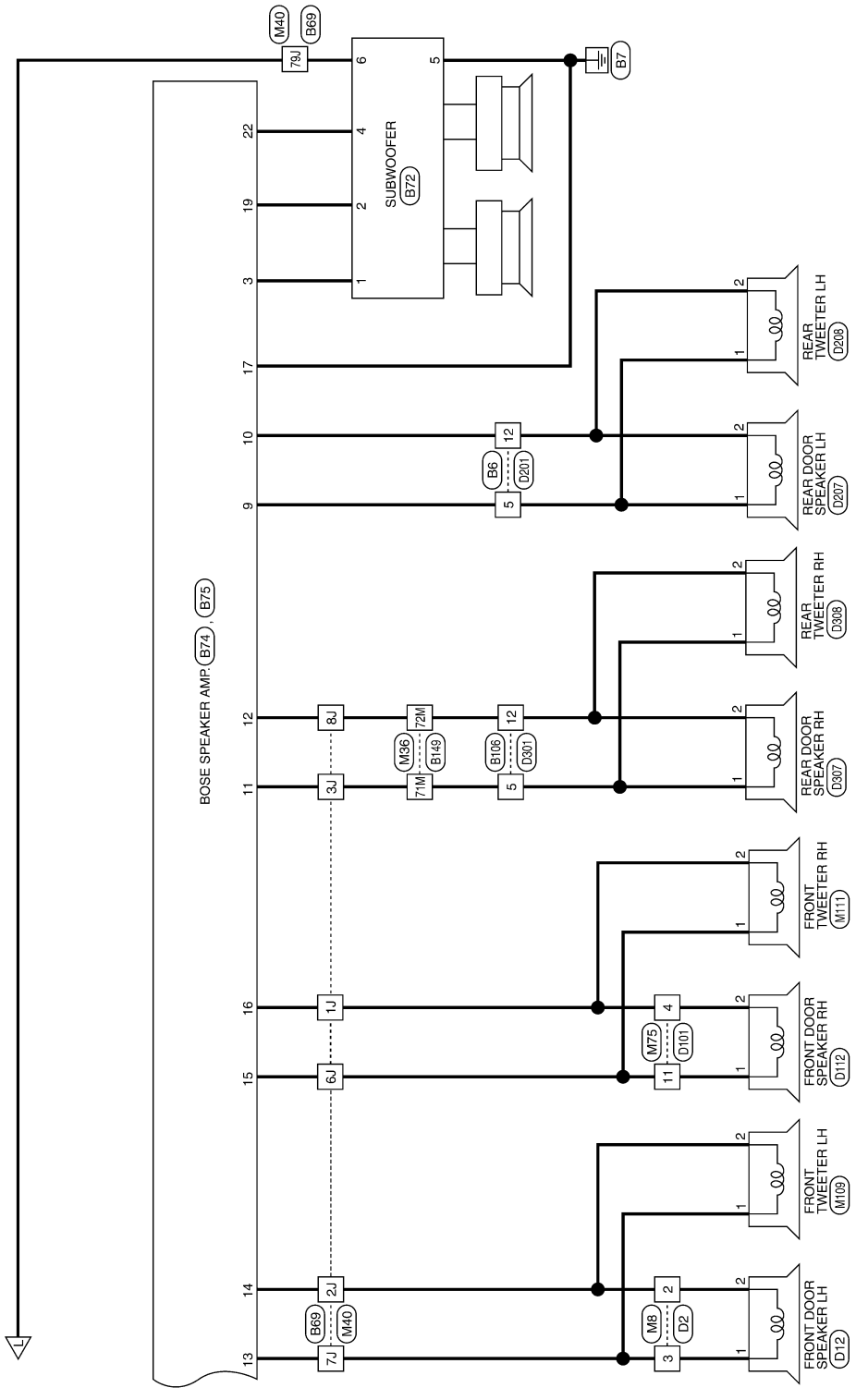



WD : WITH DVD ENTERTAINMENT SYSTEM
TO ILLUMINATION
DVD PLAYER M205
VIDEO MONITOR B76
TO ILLUMINATION
A/C AND AV SWITCH ASSEMBLY M98
TO REAR WINDOW DEFOGGER
MICROPHONE R8
COMBINATION METER M24
BLUETOOTH ANTENNA
BLUETOOTH CONTROL UNIT B124 , B125 , B134 *
AV CONTROL UNIT M46 , M70
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
ABNWA1331GB


WD : WITH DVD ENTERTAINMENT SYSTEM
DISPLAY UNIT M93
M79
AV CONTROL UNIT M45, M70
M201
M56
WD
AUX IN JACK M85
DVD PLAYER M205
VIDEO MONITOR B76
M210
B77
B69
M40
32J
42J
33J
43J
WD
ABNWA1332GB



ABNWA1333GB


BOSE SPEAKER AMP. B74, B75
SUBWOOFER B72
REAR TWEETER LH D208
REAR DOOR SPEAKER LH D207
REAR TWEETER RH D308
REAR DOOR SPEAKER RH D307
FRONT TWEETER RH M111
FRONT DOOR SPEAKER RH D112
FRONT TWEETER LH M109
FRONT DOOR SPEAKER LH D12
M40 B69 79J
B7
B6 D201
B106 D301
M36 B149 72M
71M 3J 8J
M75 D101 4 11 6J 1J
M8 D2 2 3 7J 2J
B69 M40
ABNWA1523GB

BOSE AUDIO SYSTEM CONNECTORS - WITHOUT NAVIGATION SYSTEM

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

H.S.

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
3	G	–
6	R	–
7	SHIELD	–

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

H.S.

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L	–
3	G	– (WITH BOSE AUDIO SYSTEM)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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	LG	SPEED OUT 8

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

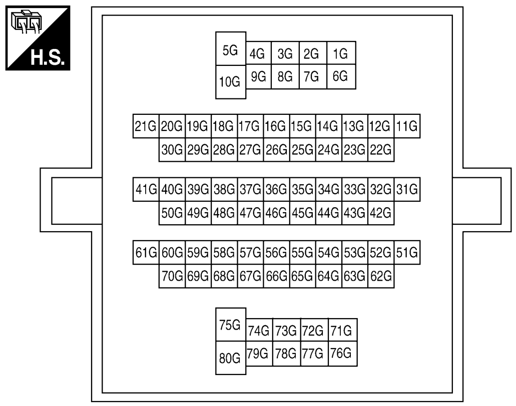
H.S.

24	25	26	27
31	32	33	34

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

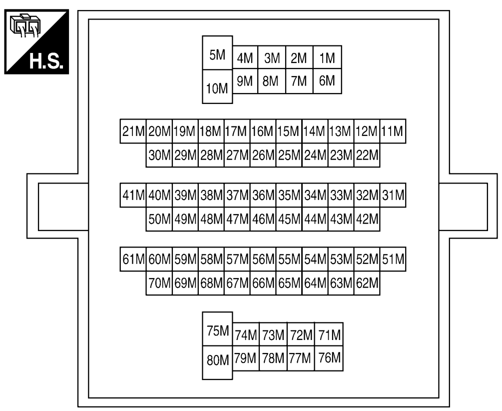
ABNIA2618GB

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



Terminal No.	Color of Wire	Signal Name
54G	SB	–
77G	Y	–

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

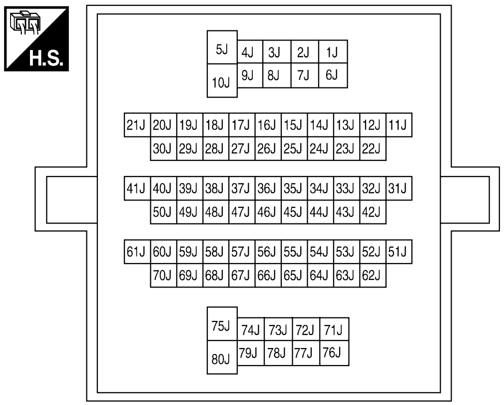


Terminal No.	Color of Wire	Signal Name
2M	R/Y	–
5M	SHIELD	–
8M	B	–
9M	W	–
31M	SB	–
32M	L	–
33M	P	–
35M	L	–
36M	P	–
37M	W/G	–
39M	SHIELD	–

Terminal No.	Color of Wire	Signal Name
41M	G	–
42M	GR	–
47M	SB	–
49M	G/Y	–
50M	R	–
65M	G/Y	–
71M	GR	–
72M	O	–

ABNIA2619GB

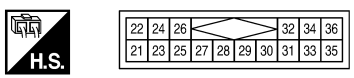
Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1J	R	–
2J	L	–
3J	GR	– (WITH BOSE AUDIO SYSTEM)
6J	W	–
7J	LG	–
8J	O	– (WITH BOSE AUDIO SYSTEM)
9J	Y	–
32J	B	–
33J	G	–
36J	B	–
38J	G/Y	–

Terminal No.	Color of Wire	Signal Name
39J	BR/Y	–
41J	BR	–
42J	W	–
43J	R	–
45J	SB	–
46J	G/R	–
47J	G/O	–
49J	BR/W	–
50J	B	–
79J	R/B	– (WITHOUT BASE AUDIO SYSTEM)

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



Terminal No.	Color of Wire	Signal Name
21	G	SAT LCH (-)
22	R	SAT LCH (+)
23	W	SAT RCH (-)
24	B	SAT RCH (+)

Terminal No.	Color of Wire	Signal Name
25	–	–
26	–	–
27	–	–
28	O	REQ (TO HU)
29	P	TX (FROM HU)
30	L	RX (TO HU)
31	–	–
32	R/B	BACKUP
33	–	–
34	–	–
35	–	–
36	G/B	ACC

ABNIA3327GB

Connector No.	M42
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	–	–
4	–	–
5	–	–
6	Y	STRG SW A
7	G/Y	ACC
8	–	–
9	V	ILL+
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	L	STRG SW GND
16	G	STRG SW B
17	–	–
18	–	–
19	Y	+B
20	B	GND

Connector No.	M43
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
21	G	N BUS LH-
22	R	N BUS LH+
23	W	N BUS RH-
24	B	N BUS RH+
25	–	–
26	–	–
27	–	–
28	O	REQ1 (TO HU)
29	P	RX (TO HU)
30	L	TX (FROM HU)
31	–	–
32	–	–

Connector No.	M44
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	GRAY

H.S.

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

ABNIA2621GB

Terminal No.	Color of Wire	Signal Name
55	–	–
56	V	IT DISP
57	W	VP
58	SB	INV GND
59	O	INV VCC

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	G	–
3	L	–
4	G	–
6	R	–
9	R	–
10	W	–
11	B	–
12	L	–
13	P	–
16	G/B	–

Terminal No.	Color of Wire	Signal Name
42	–	–
43	G	YS
44	LG	DISP IT
45	B	HP
46	BR	SIG GND
47	R	SIG VCC
48	–	–
49	–	–
50	–	–
51	–	–
52	–	–
53	–	–
54	B	GND

Terminal No.	Color of Wire	Signal Name
66	G	COMP1 IN+
67	–	–
68	B	RV CAM SIG
69	–	–
70	–	–
71	–	–
72	SHIELD	COMP IN SHIELD
73	–	–
74	R	COMP1 IN-
75	–	–

Connector No.	M45
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE

H.S.

47	46	45	44	43	42	41	40	39	38	37	36
59	58	57	56	55	54	53	52	51	50	49	48

Terminal No.	Color of Wire	Signal Name
36	G	COMP OUT+
37	R	COMP OUT-
38	R	B
39	B	G
40	W	R
41	R	RGB SYNC

Connector No.	M46
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE

H.S.

67	66	65	64	63	62	61	60
75	74	73	72	71	70	69	68

Terminal No.	Color of Wire	Signal Name
60	–	–
61	–	–
62	–	–
63	–	–
64	W	VTR -
65	B	VTR +

ABNIA3328GB

Connector No.	M64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	Y	–

Connector No.	M69
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
108	G/R	RR RH PRE+
109	G/Y	FR RH PRE+
110	SB	AMP ON
111	–	–
112	BR/W	RR LH PRE+
113	BR	FR LH PRE+

Terminal No.	Color of Wire	Signal Name
114	B	RR RH PRE-
115	G/O	FR RH PRE-
116	–	–
117	–	–
118	BR/Y	RR LH PRE-
119	B	FR LH PRE-

Terminal No.	Color of Wire	Signal Name
101	GR	SW GND
102	–	–
103	SB	CD EJECT
104	W/G	IGN
105	W	REVERSE SIG
106	G	PKB SIG
107	LG	SPEED 8P

Connector No.	M70
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITHOUT NAVI)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
76	R	HP RH-
77	B	HP RH+
78	–	–
79	SB	TEL VOICE (TO IT)-
80	GR	TEL VOICE (TO IT)+
81	–	–
82	G	AUDIO BUS RH-
83	R	AUDIO BUS RH+
84	–	–

Terminal No.	Color of Wire	Signal Name
85	B	GND
86	L	CAN-H
87	P	CAN-L
88	L	M CAN1 H
89	P	M CAN1 L
90	L	M CAN2 H
91	P	M CAN2 L
92	W	HP LH-
93	G	HP LH+
94	SHIELD	HP SHIELD
95	W	AUX AUDIO RH+
96	B	AUX AUDIO LH+
97	R	AUX GND
98	W	AUDIO BUS LH-
99	B	AUDIO BUS LH+
100	–	–

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Connector No.	M78
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
4	R	–
11	W	– (WITH BOSE AUDIO SYSTEM)

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	M73
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	AUX AUDIO RH+
2	R	AUX GND
4	B	AUX AUDIO LH+

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	G/Y	ACC
3	LG	ILL
4	BR	ILL CONT GND
5	L	M CAN1-H
6	P	M CAN1-L
7	GR	SW GND
8	SB	CD DVD EJECT
9	–	–
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	–	–
16	Y	RR DEFOG

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

H.S.

2	1

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

Terminal No.	Color of Wire	Signal Name
6	B	G
7	–	–
8	B	HP
9	G	YS
10	–	–
11	V	IT DISP
12	–	–
13	SB	INV GND
14	BR	SIG GND
15	G	COMP IN SYNC
16	–	–
17	W	R
18	R	B
19	R	RGB SYNC
20	W	VP
21	–	–
22	LG	DISP IT
23	–	–
24	–	–

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

H.S.

2	1

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

Connector No.	M93
Connector Name	DISPLAY UNIT (WITHOUT NAVI)
Connector Color	WHITE

H.S.

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	B	GND
2	O	INV VCC
3	R	SIG VCC
4	R	COMP IN-
5	–	–

Connector No.	M102
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

14	15	16	17	18	19	20	21

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

ABNIA2625GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
37	–	–

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
3	L	–
4	G	–
6	R	–
9	R	–
10	W	–
11	B	–
12	L	–
13	P	–
16	G/B	–

Connector No.	M202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	Y	–

Connector No.	M205
Connector Name	DVD PLAYER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	FES L+ OUTPUT
2	W	FES L- OUTPUT
3	–	–
4	–	–
5	B	GND
6	BR	ILL-
7	L	M CAN2 H
8	–	–
9	BR	+B
10	GR	SW POWER +5
11	–	–
12	W/L	VTR+
13	O/L	VTR-
14	Y	GND
15	–	–
16	V	DATA RX1 (LCD->DVD)
17	R	FES R+ OUTPUT
18	G	FES R- OUTPUT
19	–	–
20	–	–
21	Y	+B
22	SB	ILL+
23	P	M CAN2 L
24	G/B	ACC
25	–	–
26	P	GND
27	–	–
28	G	VIDEO OUT
29	–	–
30	–	–
31	–	–
32	LG	DATA TX1 (DVD->LCD)

ABNIA3332GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	GR	–
4	V	–
5	LG	–
6	BR	–
9	O/L	–
10	W/L	–
11	B	–
14	P	–

Connector No.	M350
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–

Connector No.	M351
Connector Name	SATELLITE ANTENNA
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–

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

H.S.

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

Connector No.	M502
Connector Name	WIRE TO WIRE
Connector Color	GRAY

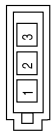
H.S.

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

ABNIA2627GB

Connector No.	M601
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.



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

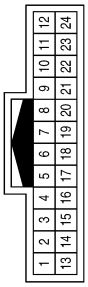
Connector No.	M602
Connector Name	ANTENNA AMP.
Connector Color	GRAY

H.S.

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

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

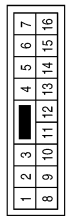
H.S.



Terminal No.	Color of Wire	Signal Name
9	LG	–

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	E45
Connector Name	BACK-UP LAMP RELAY
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	W/G	–
3	SB	–
5	W/G	–

Connector No.	E53
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–

ABNIA2628GB

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

9	8	7	6		5	4	3
18	17	16	15	14	13	12	11	10

Terminal No.	Color of Wire	Signal Name
16	W/G	REVERSE LAMP

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

H.S.

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															

Terminal No.	Color of Wire	Signal Name
54G	SB	–
77G	Y	–

Connector No.	F9
Connector Name	A/T ASSEMBLY
Connector Color	GREEN

H.S.

5	4	3	2	1
10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
7	LG	–

Connector No.	F14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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
9	LG	–

Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY

H.S.

10	9	8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
7	O	REV LAMP RLY

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

H.S.

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

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

ABNIA2629GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
1J	R	–
2J	L	–
3J	GR	– (WITH BOSE AUDIO SYSTEM)
6J	W	–
7J	LG	–
8J	O	– (WITH BOSE AUDIO SYSTEM)
9J	Y	–
32J	B	–
33J	G	–
36J	B	–

Terminal No.	Color of Wire	Signal Name
38J	G/Y	–
39J	BR/Y	–
41J	BR	–
42J	W	–
43J	R	–
45J	SB	–
46J	G/R	–
47J	G/O	–
49J	BR/W	–
50J	B	–
79J	R/B	– (WITHOUT BASE AUDIO SYSTEM)

Connector No.	B72
Connector Name	SUBWOOFER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	WOOFER-
2	SB	WOOFER+
4	Y	AMP ON
5	B	GND
6	R/B	BATT

Connector No.	B74
Connector Name	BOSE SPEAKER AMP.
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	BATT
2	–	–
3	B	WOOFER-
4	–	–
17	B	GND
18	–	–
19	SB	WOOFER+
20	–	–

ABNIA2630GB

Connector No.	B75
Connector Name	BOSE SPEAKER AMP.
Connector Color	BLACK

H.S.

16	15	14	13	12	11	10	9	8	7	6	5
32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
5	–	–
6	–	–
7	–	–
8	–	–
9	B	RR DR LH+ OUT
10	G	RR DR LH- OUT
11	GR	RR DR RH+ OUT
12	O	RR DR RH- OUT
13	LG	FR DR LH+ OUT
14	L	FR DR LH- OUT
15	W	FR DR RH+ OUT
16	R	FR DR RH- OUT
21	–	–
22	Y	WOOFER CTRL
23	B	RR RH-(IN)
24	G/R	RR RH+(IN)
25	BR/Y	RR LH-(IN)
26	BR/W	RR LH+(IN)
27	G/O	FR RH-(IN)
28	G/Y	FR RH+(IN)
29	B	FR LH-(IN)
30	BR	FR LH+(IN)
31	SB	AMP ON
32	–	–

Connector No.	B76
Connector Name	VIDEO MONITOR
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	FES L CH INPUT-
2	G	FES L CH INPUT+
3	B	FES R CH INPUT-
4	R	FES R CH INPUT+
5	GR	SW POWER +5
6	–	–
7	O/L	VIDEO IN-
8	W/L	VIDEO IN+
9	–	–
10	–	–
11	–	–
12	Y	GND
13	LG	DATA RX (DVD->LCD)
14	V	DATA TX (DVD->DVD)
15	P	GND
16	BR	FILTERED BATT

Connector No.	B77
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

10	9	8	7	6	5	4	3	2	1
18	17	16	15	14	13	12	11		

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	GR	–
4	V	–
5	LG	–
6	BR	–
9	O/L	–
10	W/L	–
11	B	–
14	P	–

ABNIA2631GB

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

H.S.

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

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

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

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
5	G/Y	–
6	SHIELD	–

Connector No.	B124
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	R/Y	BATT
2	G/Y	ACC
3	W/G	IGN
4	B	GND
5	–	–
6	–	–
7	R	MIC IN+
8	SHIELD	MIC IN-
9	GR	AUDIO OUT+
10	SB	AUDIO OUT-
11	–	–
12	–	–
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–
21	B	CONT 2
22	B	CONT 3
23	–	–
24	B	CONT 5
25	–	–
26	–	–
27	–	–
28	SB	SPEED SIGNAL
29	G	MIC POWER
30	–	–
31	–	–
32	–	–

ABNIA2632GB

Connector No.	B125
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
35	L	M CAN1 H
36	P	M CAN1 L

Connector No.	B134
Connector Name	BLUETOOTH CONTROL UNIT
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
37	–	–
38	–	–
39	–	–
40	–	–
41	–	–
42	–	–

Terminal No.	Color of Wire	Signal Name
41M	G	–
42M	GR	–
47M	SB	–
49M	G/Y	–
50M	R	–
65M	G/Y	–
71M	GR	–
72M	O	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
2M	R/Y	–
5M	SHIELD	–
8M	B	–
9M	W	–
31M	SB	–
32M	L	–
33M	P	–
35M	L	–
36M	P	–
37M	W/G	–
39M	SHIELD	–

ABNIA3333GB

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

H.S.

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
3	G	–
6	R	–
7	SHIELD	–

Connector No.	R8
Connector Name	MICROPHONE
Connector Color	WHITE

H.S.

1	2	3	4

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

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

H.S.

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

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

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

H.S.

2	1

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

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

H.S.

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

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

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

H.S.

2	1

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

ABNIA2634GB

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

H.S.

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

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

Connector No.	D207
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN

H.S.

2	1

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

Connector No.	D208
Connector Name	REAR TWEETER LH
Connector Color	BROWN

H.S.

2	1

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

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

H.S.

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

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

Connector No.	D307
Connector Name	REAR DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN

H.S.

2	1

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

Connector No.	D308
Connector Name	REAR TWEETER RH
Connector Color	BROWN

H.S.

2	1

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

ABNIA2635GB

Connector No.	D450
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
5	G/Y	–
6	SHIELD	–

Connector No.	D451
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	B	–
3	G/Y	–
6	W	–
7	B	–
8	SHIELD	–

Connector No.	D550
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	–
3	G/Y	–
6	W	–
7	B	–
8	SHIELD	–

Connector No.	D551
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	G/Y	ACC
3	SHIELD	DRAIN
5	W	CAMERA -
6	B	CAMERA +

ABNIA2636GB

SYMPTOM DIAGNOSIS

AUDIO SYSTEM

Symptom Table

INFOID:0000000007347783

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power supply and ground circuit • AV control unit	• AV-162 • AV-141
Steering switch does not operate	• Steering switch • AV control unit	• AV-196 • AV-141
All speakers do not sound	• Speaker circuit shorted to ground • AV control unit • BOSE speaker amp. ON signal • BOSE speaker amp. power supply and ground circuit • BOSE speaker amp.	• AV-225 • AV-141 • AV-195 • AV-165 • AV-265
One or several speakers do not sound	• Front door speaker • Front tweeter • Rear door speaker • Rear tweeter • Subwoofer	• AV-180 • AV-183 • AV-186 • AV-189 • AV-192
Buzz/rattle sound from speaker	The majority of buzz/rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the buzz/rattle.	Refer to "SQUEAK AND RATTLE TROUBLE DIAGNOSIS" in the appropriate interior trim section.

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	AV control unit	AV-141
CD cannot be ejected.		
The CD cannot be played.		
The sound skips, stops suddenly, or is distorted.		

SATELLITE RADIO

Symptom	Possible cause	Reference page
Inoperative	• Satellite radio tuner power supply and ground circuit • Satellite radio tuner communication circuit • Satellite radio tuner	• AV-166 • AV-198 • AV-273
Right or left channel does not sound	• Satellite radio tuner audio signal circuit • Satellite radio tuner	• AV-201 • AV-273

DVD PLAYER

Symptom	Possible cause	Reference page
DVD player inoperative	• DVD player power supply and ground circuit • DVD player	• AV-168 • AV-267
No sound when playing a DVD	• Audio signal circuits • AV control unit • DVD player	• AV-221 • AV-141 • AV-267

Symptom	Possible cause	Reference page
Video monitor is inoperative/does not display properly	• Video monitor power supply and ground circuit • Video out circuit • DVD player • Video monitor	• AV-169 • AV-221 • AV-267 • AV-267
DVD remote control is inoperative/does not operate properly	• DVD remote control • DVD player	• AV-267
Headphones inoperative	• Headphone batteries • DVD player	• AV-267

NORMAL OPERATING CONDITION

Description

INFOID:0000000007347784

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

NOISE

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

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

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

NOTE:

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

Type of Noise and Possible Cause

Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	• Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		• Fuel pump condenser
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	• Relay malfunction, 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

PRECAUTION

PRECAUTIONS

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

INFOID:0000000007347785

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000007347786

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the ″LOCK″ position.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.
For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.
If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Use the Intelligent Key or mechanical key to turn the ignition switch to the ″ACC″ position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

5. When the repair work is completed, return the ignition switch to the ″LOCK″ position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT.

Precaution for Work

INFOID:0000000007347787

- 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 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, and wring the water out of the cloth to wipe the dirty area.
  Then rub with a soft and 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, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

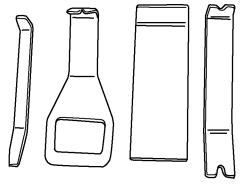
PREPARATION

PREPARATION

Special Service Tool

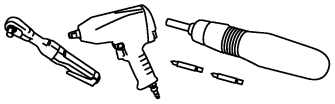
INFOID:0000000007347788

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

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

Commercial Service Tools

INFOID:0000000007347789

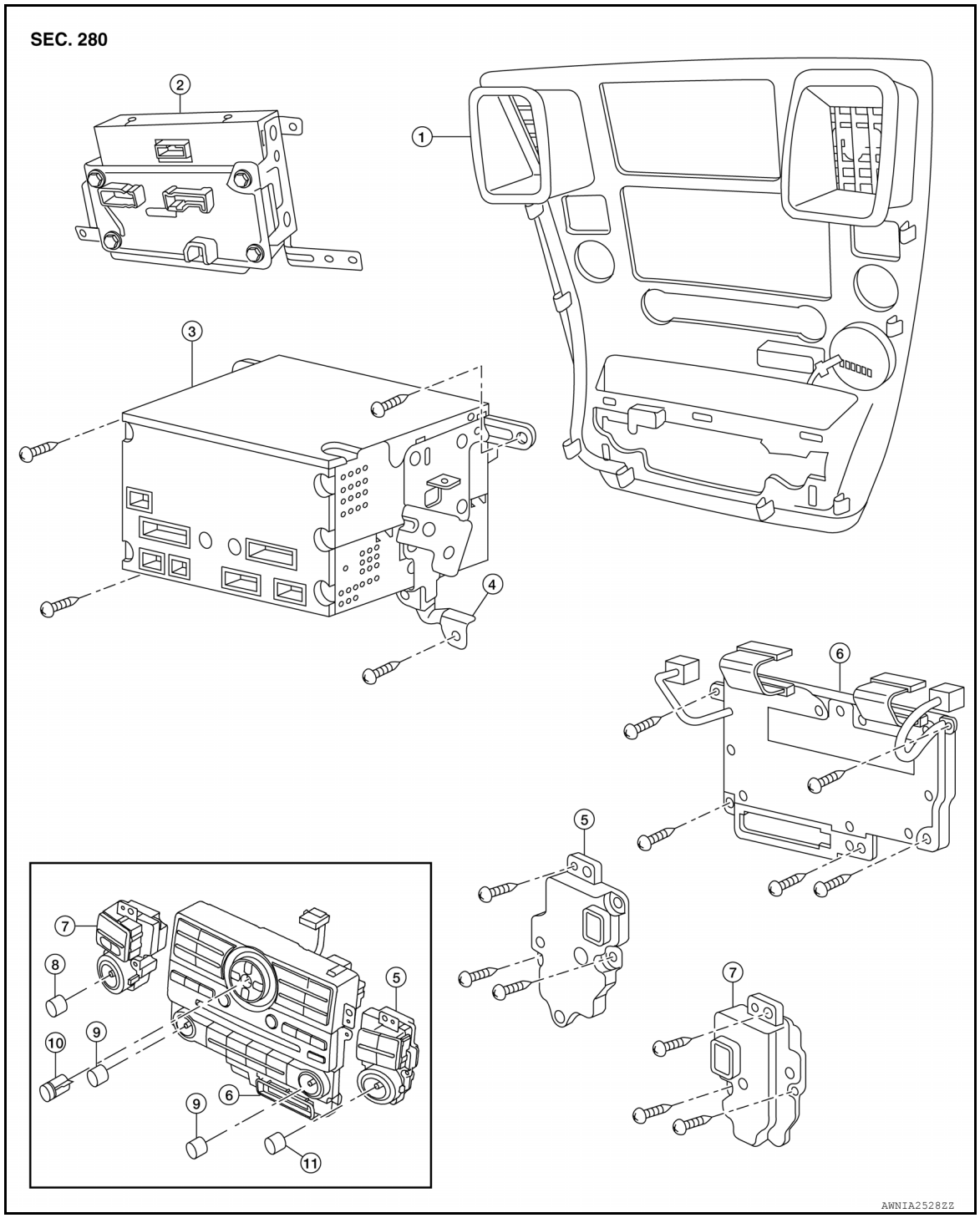
Tool name	Description
Power tool  PIIB1407E	Loosening nuts, screws and bolts

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Removal and Installation

INFOID:0000000007347790



1. Cluster lid C
2. Display unit
3. AV control unit
4. AV control unit brackets
5. Tuner knob switch
6. A/C and AV switch assembly
7. Volume knob switch
8. Volume knob
9. Temp knobs RH and LH
10. Enter button
11. Tuner knob

CAUTION:
Only remove and replace the A/C or AV switch assembly knobs if damaged or missing. The knobs must not be removed from switches when removing and installing the A/C or AV switch assembly to prevent damage to the switch assembly.

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the cluster lid C. Refer to IP-16, "Removal and Installation".
3. Remove the AV control unit screws, using a power tool.
4. Remove the AV control unit.
5. Remove the A/C and AV switch assembly screws, then remove the A/C and AV switch assemblies as necessary.

INSTALLATION

Installation is in the reverse order of removal.

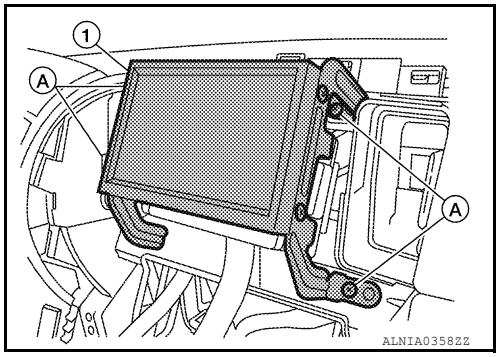
DISPLAY UNIT

Removal and Installation

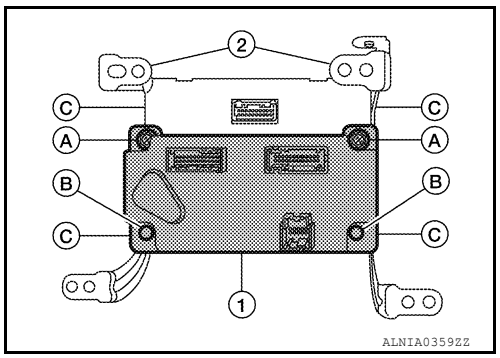
INFOID:0000000007347791

REMOVAL

1. Remove cluster lid C. Refer to IP-16, "Removal and Installation".
2. Remove the display unit screws (A).
3. Pull out the display unit (1), then disconnect the display unit connectors and remove the display unit (1).



4. Remove the A/C auto amp.screws (A), remove the (C103) fasteners (B) from the display unit assembly brackets and remove the A/C auto amp. (1).
5. Remove the display unit bracket unit screws (C) and remove the display unit brackets (2).



INSTALLATION

Installation is in reverse order of removal.

FRONT TWEETER

Removal and Installation

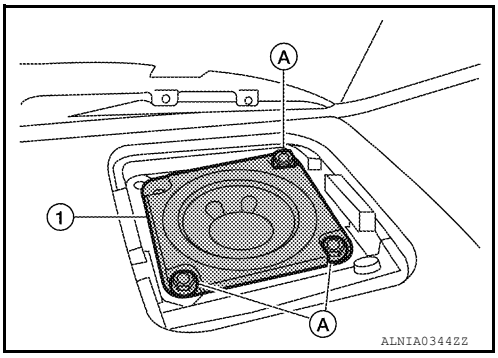
INFOID:0000000007347792

REMOVAL

CAUTION:

Use a suitable tool to prevent damage to the front tweeter speaker grille trim and the instrument panel.

1. Remove the front tweeter grille.
2. Remove the front tweeter screws (A).
3. Pull out the front tweeter speaker (1) and disconnect front tweeter connector, then remove the front tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

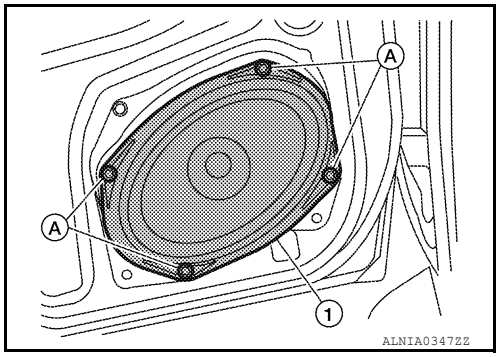
FRONT DOOR SPEAKER

Removal and Installation

INFOID:0000000007347793

REMOVAL

1. Remove the front door finisher. Refer to INT-15, "Removal and Installation".
2. Remove the front door speaker screws (A).
3. Pull out the front door speaker (1), and disconnect the front door speaker connector and remove the front door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

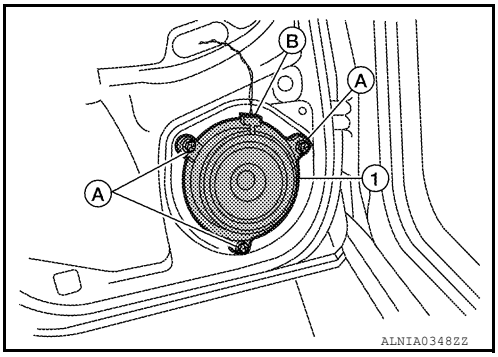
REAR DOOR SPEAKER

Removal and Installation of Rear Door Speaker

INFOID:0000000007347794

REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

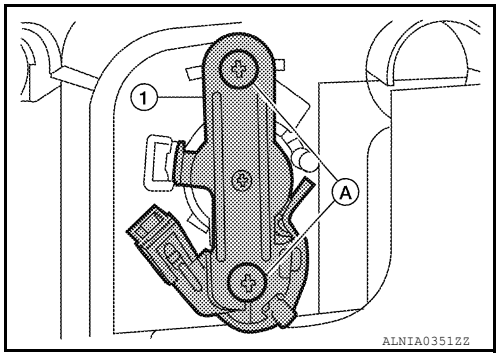
REAR DOOR TWEETER

Removal and Installation of Rear Tweeter

INFOID:0000000007347795

REMOVAL

1. Remove rear door finisher. Refer to INT-15, "Removal and Installation".
2. Remove the rear tweeter screws (A) and remove the rear tweeter (1).



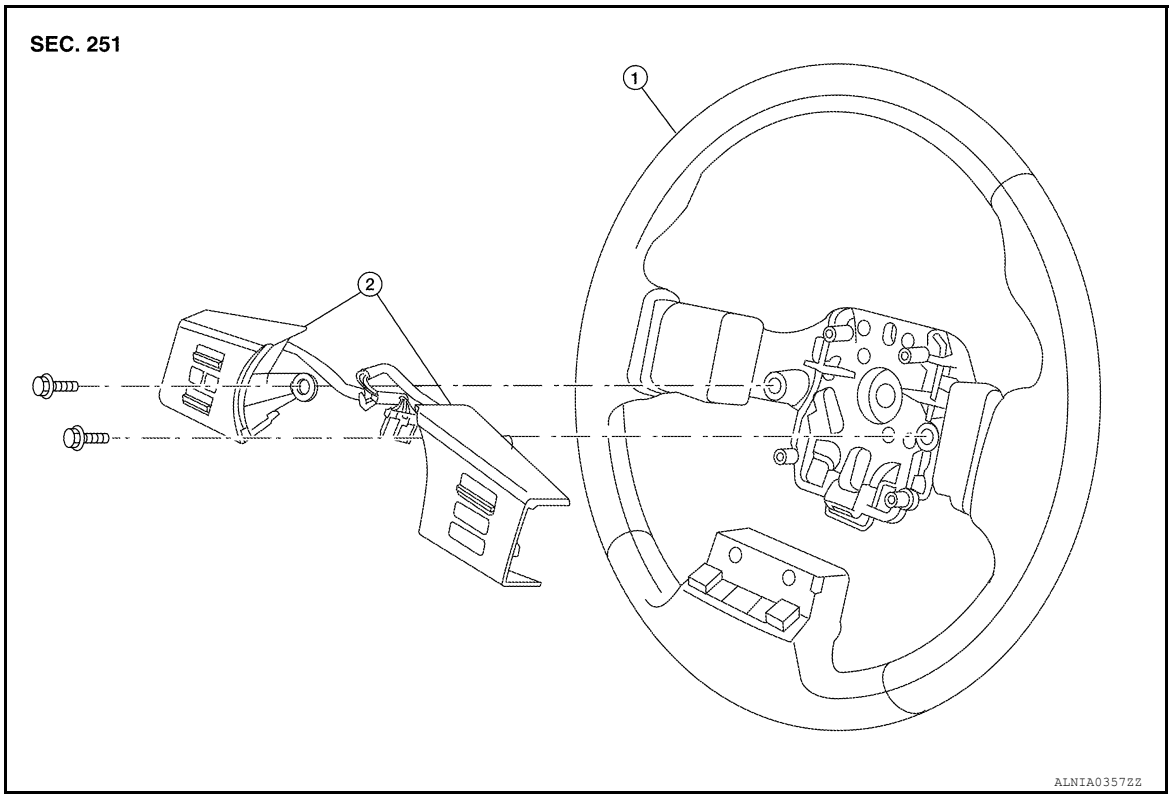
INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

Removal and Installation

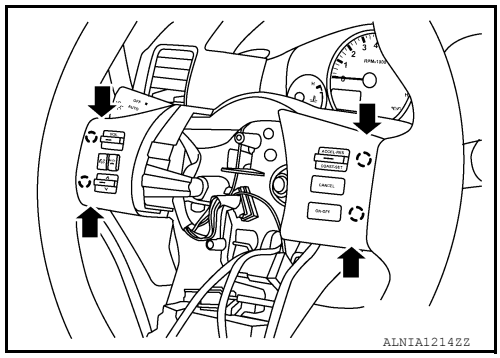
INFOID:0000000007347796



1. Steering wheel
2. Steering wheel audio control switches

REMOVAL

1. Remove the driver air bag module. Refer to SR-5, "Removal and Installation".
2. Remove the steering wheel audio control switch assembly screws.
3. Disconnect the steering wheel audio control switches connector.
4. Remove the steering wheel audio control switches by pulling on steering wheel audio control switches to release the pawls.
   CAUTION:
   Do not tilt steering wheel audio control switches during removal or damage may occur to the pawls.
   • ◌: Pawl



INSTALLATION

Installation is in the reverse order of removal.

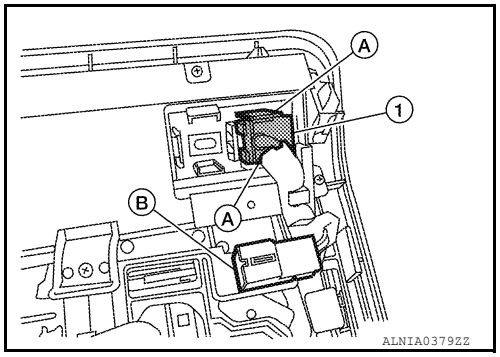
MICROPHONE

Removal and Installation

INFOID:0000000007347797

REMOVAL

1. Remove the front roof console finisher. Refer to INT-22, "Removal and Installation".
2. Detach the microphone (1) from the front console finisher tabs (A).
3. Disconnect the microphone connector (B) and remove the microphone (1).



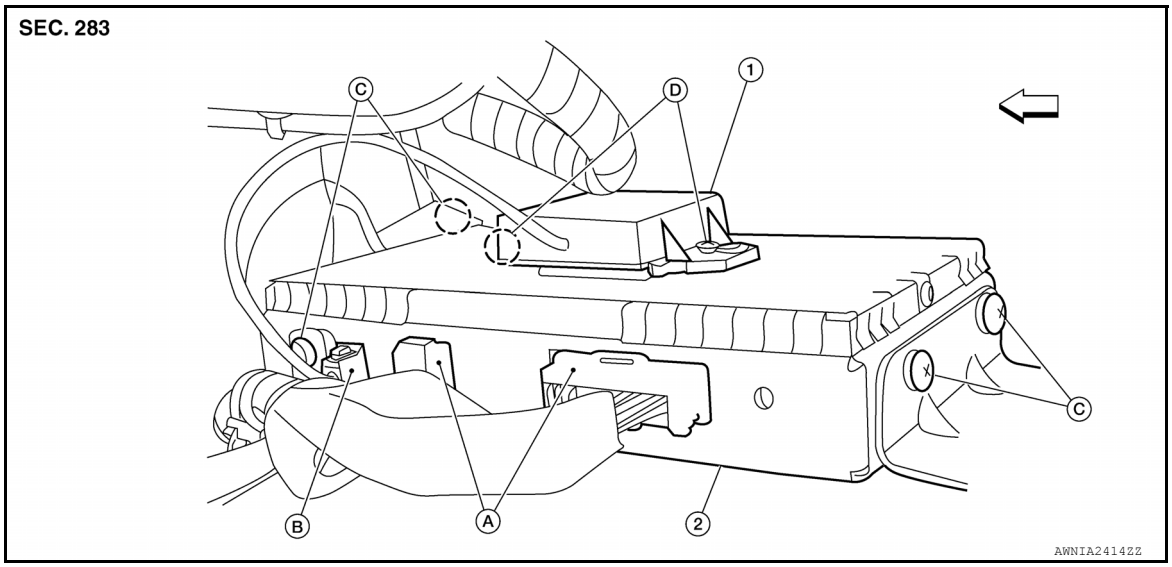
INSTALLATION

Installation is in the reverse order of removal.

BLUETOOTH CONTROL UNIT

Removal and Installation

INFOID:0000000007347798



1. Bluetooth antenna
2. Bluetooth control unit
A. Bluetooth control unit connectors
B. Bluetooth antenna connector
C. Bluetooth control unit screws
D. Bluetooth antenna screws
⇦ Vehicle front

REMOVAL

1. Remove the RH front seat. Refer to SE-33, "Removal and Installation".
2. Disconnect the Bluetooth control unit connectors.
3. Remove the Bluetooth control unit bracket screws and remove the Bluetooth control unit assembly.
4. Remove the Bluetooth control unit screws.
5. Transfer the Bluetooth antenna to the new Bluetooth control unit.

INSTALLATION

Installation is in the reverse order of removal.

BOSE SPEAKER AMP

Removal and Installation

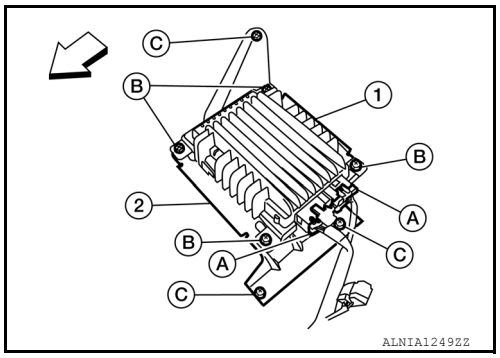
INFOID:0000000007830127

REMOVAL

NOTE:

Do not remove the LH front seat from the vehicle.

1. Remove LH front seat bolts, disconnect the LH front seat electrical harness connector. Refer to SE-33, "Removal and Installation".
2. Tilt the LH front seat back to access the BOSE speaker amp. (1), then remove the BOSE speaker amp. screws (B).
   - ⇦: Vehicle front
3. Disconnect the Bose speaker amp. connectors (A) and remove Bose speaker amp. (1) from the bracket (2).
4. Then remove the BOSE speaker amp. bracket screws (C) and remove bracket (2).



INSTALLATION

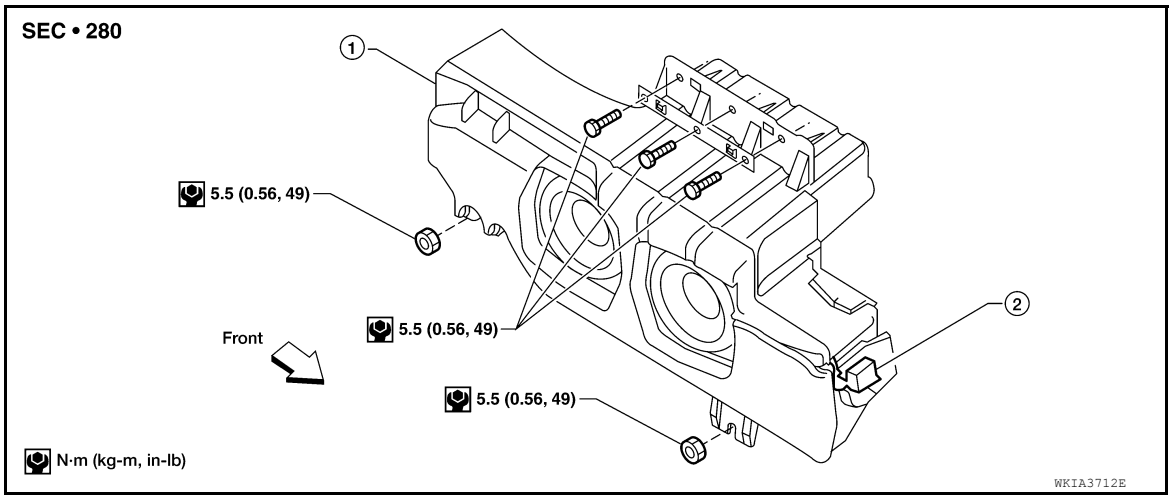
Installation is in the reverse order of removal.

SUBWOOFER

Removal and Installation

INFOID:0000000007347800

BOSE SYSTEM



1. Subwoofer
2. Subwoofer connector

Removal

1. Remove the luggage side lower finisher LH. Refer to INT-25, "Removal and Installation".
2. Remove subwoofer bolts and nuts.
3. Disconnect the subwoofer connector and remove the subwoofer.

Installation

Installation is in the reverse order of removal.

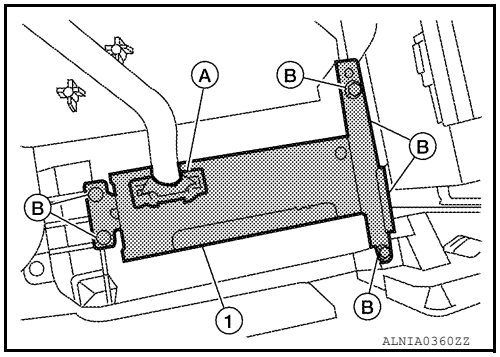
DVD ENTERTAINMENT SYSTEM

Removal and Installation of DVD Player

INFOID:0000000007347801

REMOVAL

1. Remove the center console assembly. Refer to IP-22, "Removal and Installation".
2. Disconnect the DVD player connector (A).
3. Remove the DVD player screws (B), then remove the DVD player (1).
4. Remove the DVD player bracket screws and then remove DVD player brackets.



INSTALLATION

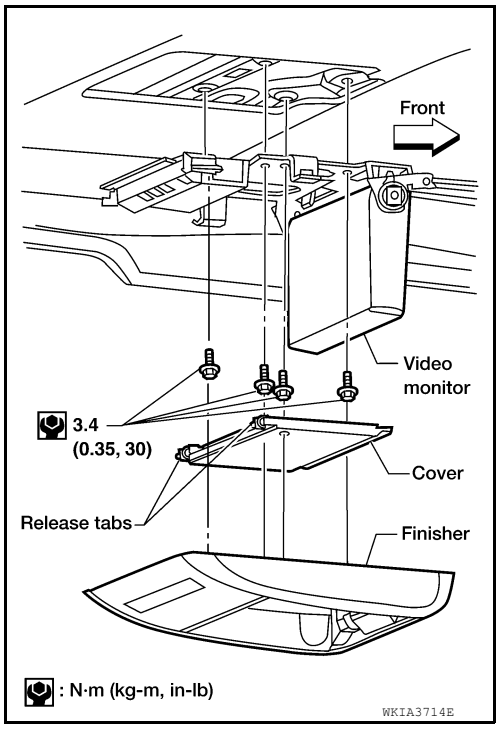
Installation is in reverse order of removal.

Removal and Installation of Video Monitor

INFOID:0000000007347802

REMOVAL

1. Release the clips and remove the video monitor finisher from headlining.
2. Press the release tabs and remove the cover.
3. Remove the video monitor screws.
4. Gently lower the assembly and disconnect the connector, then remove the video monitor from the headlining.



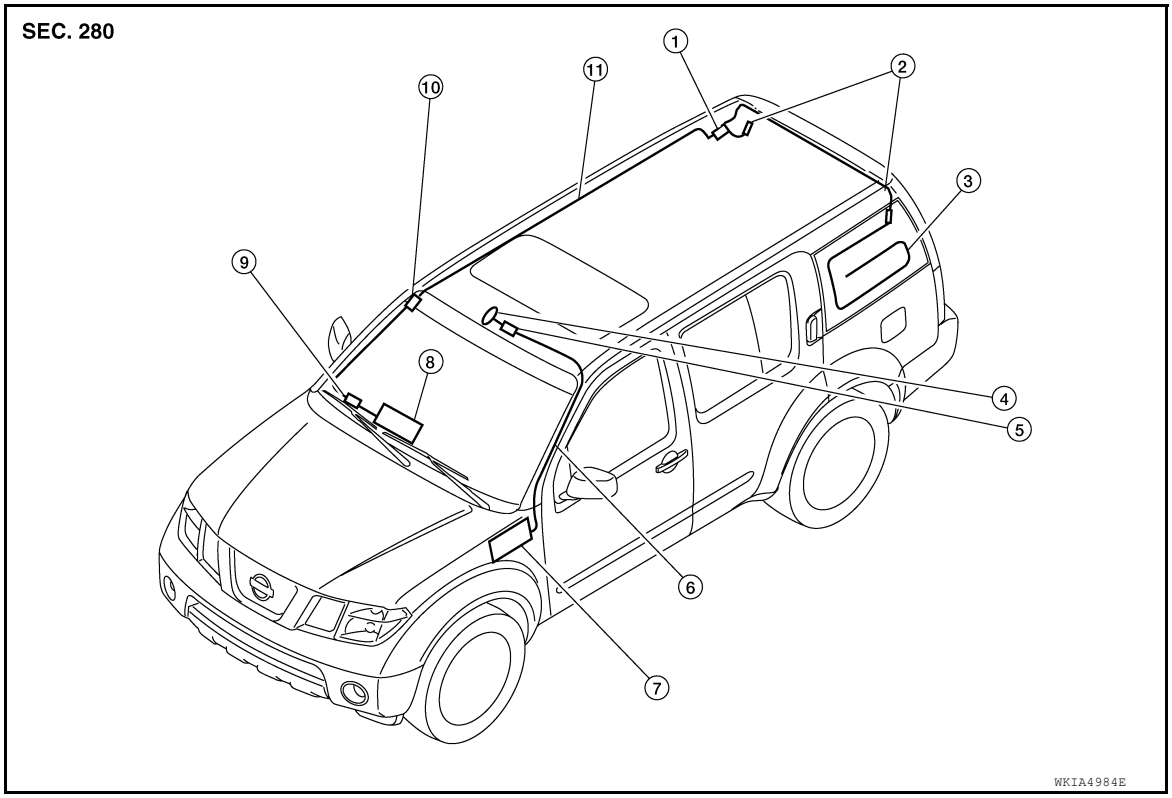
INSTALLATION

Installation is in reverse order of removal.

AUDIO ANTENNA

Location of Antenna

INFOID:0000000007347803



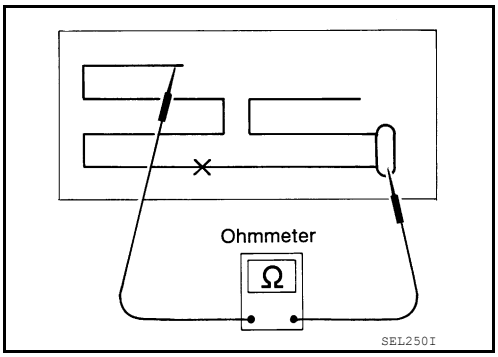
1. Antenna amp. M602
2. Window antenna grid connector bracket
3. Window antenna grid
4. Satellite antenna M351
5. Harness connector M73, M350
6. Satellite antenna feeder
7. Satellite radio tuner M41, M129
8. AV control unit M43, M44
9. Harness connector M78, M501
10. Harness connector M502, M601
11. Antenna feeder

Window Antenna Repair

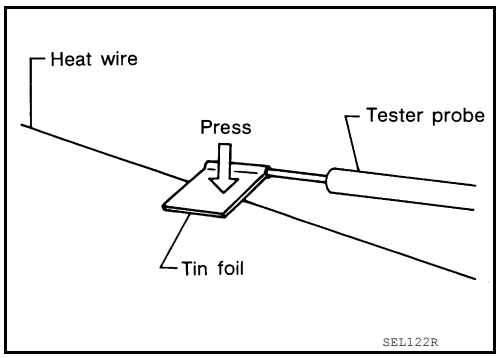
INFOID:0000000007347804

ELEMENT CHECK

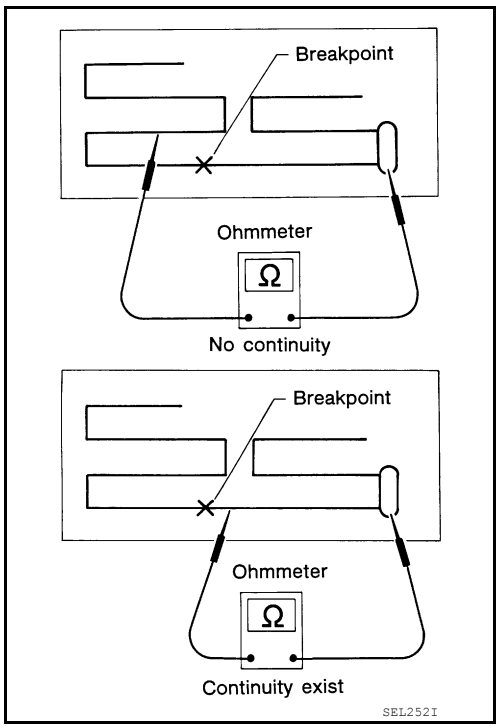
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



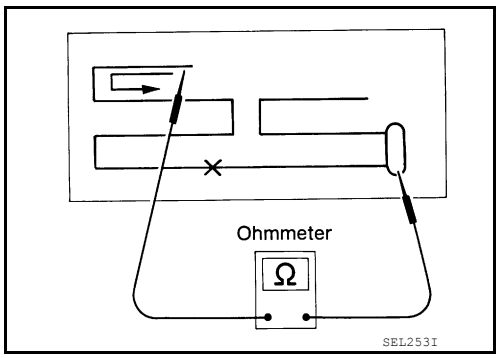
- **When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.**



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.



ELEMENT REPAIR

Refer to DEF-45, "Filament Repair".

AUXILIARY INPUT JACK

Removal and Installation

INFOID:0000000007347805

Removal

1. Remove the A/T finisher. Refer to IP-21, "Removal and Installation".
2. Remove the auxiliary input jack.

Installation

Installation is in the reverse order of removal.

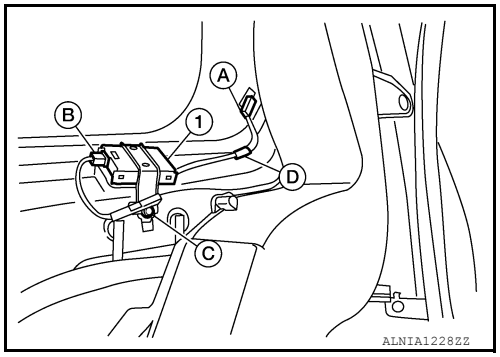
ANTENNA AMP.

Removal and Installation

INFOID:0000000007347806

REMOVAL

1. Remove the luggage side upper and lower RH finishers. Refer to INT-25, "Removal and Installation".
2. Detach the antenna amp. harness clip (D), disconnect the antenna amp. connector (A), harness connector (B), then remove the antenna amp. screw (C) and remove the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

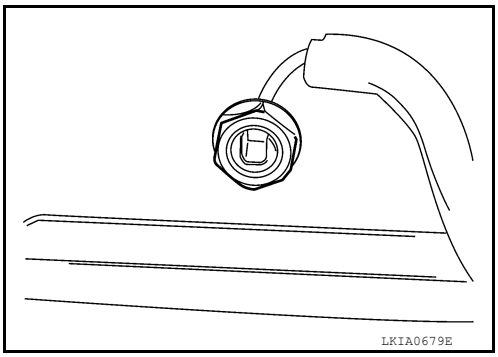
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:0000000007347807

REMOVAL

1. Remove the front roof console finisher. Refer to INT-22, "Removal and Installation".
2. Disconnect the satellite antenna connector.
3. Remove the satellite antenna nut.
4. Remove the satellite antenna.



INSTALLATION

Installation is in the reverse order of removal.

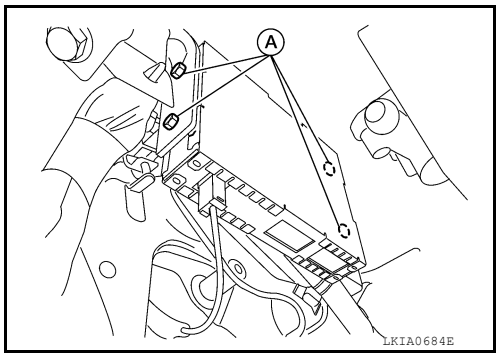
SATELLITE RADIO TUNER

Removal and Installation

INFOID:0000000007347808

REMOVAL

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



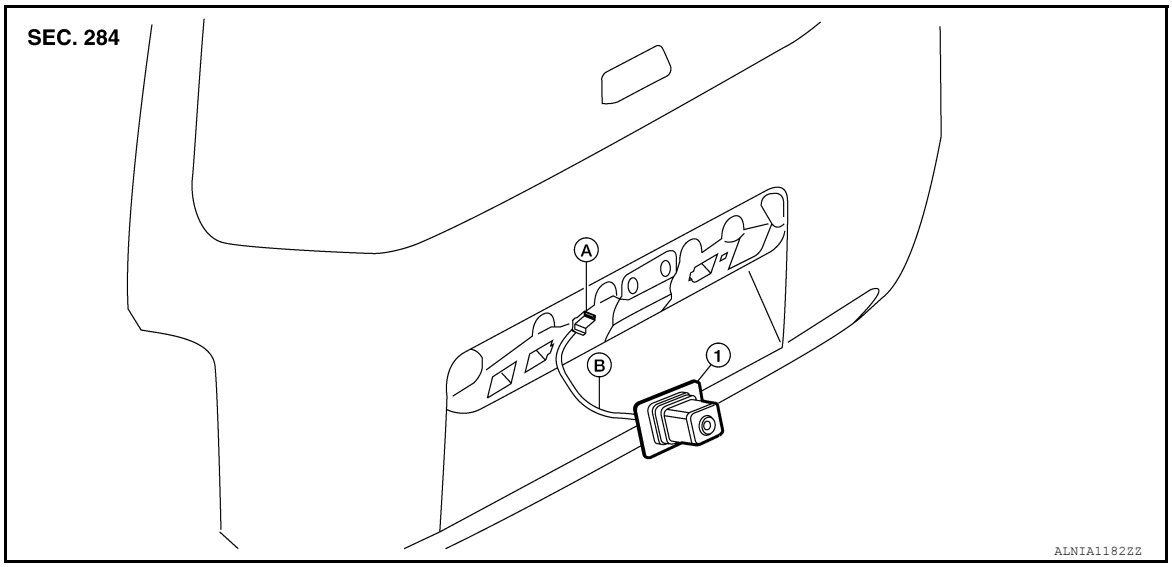
INSTALLATION

Installation is in the reverse order of removal.

REAR VIEW CAMERA

Removal and Installation

INFOID:0000000007347809



1. Rear view camera
A. Rear view camera connector
B. Rear view camera harness clip

REMOVAL

1. Remove the license lamp finisher. Refer to EXT-23, "Removal and Installation".
2. Disconnect the rear view camera connector.
3. Detach the rear view camera harness clip.
4. Detach the rear view camera to release, then pull out to remove the rear view camera while feeding the rear view camera harness and connector through the back door.

INSTALLATION

Installation is in the reverse order of removal.

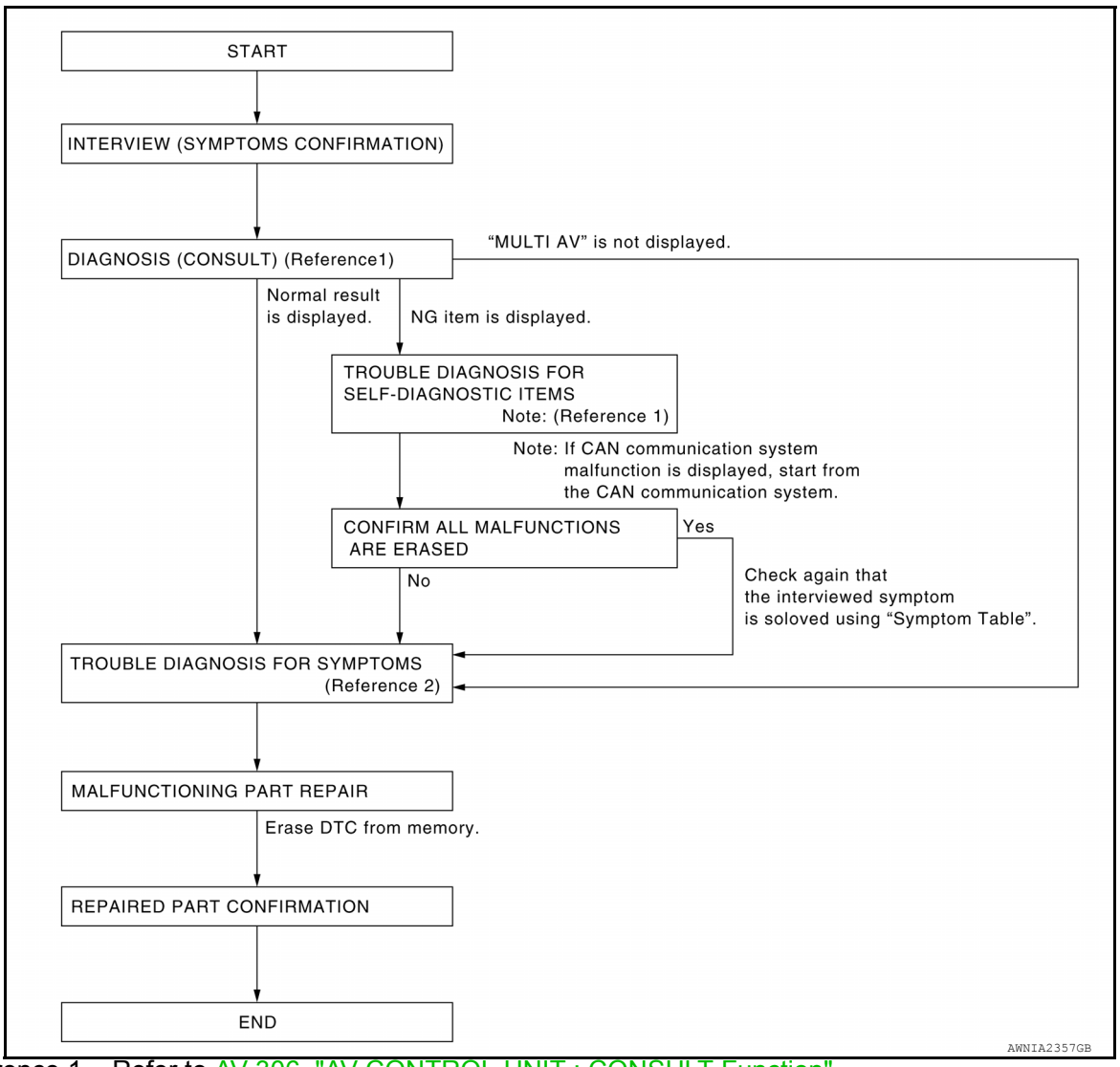
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000007347810

OVERALL SEQUENCE



- Reference 1··· Refer to AV-306, "AV CONTROL UNIT : CONSULT Function".
- Reference 2··· Refer to AV-407, "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.

Is any DTC 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-376, "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-407, "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 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?

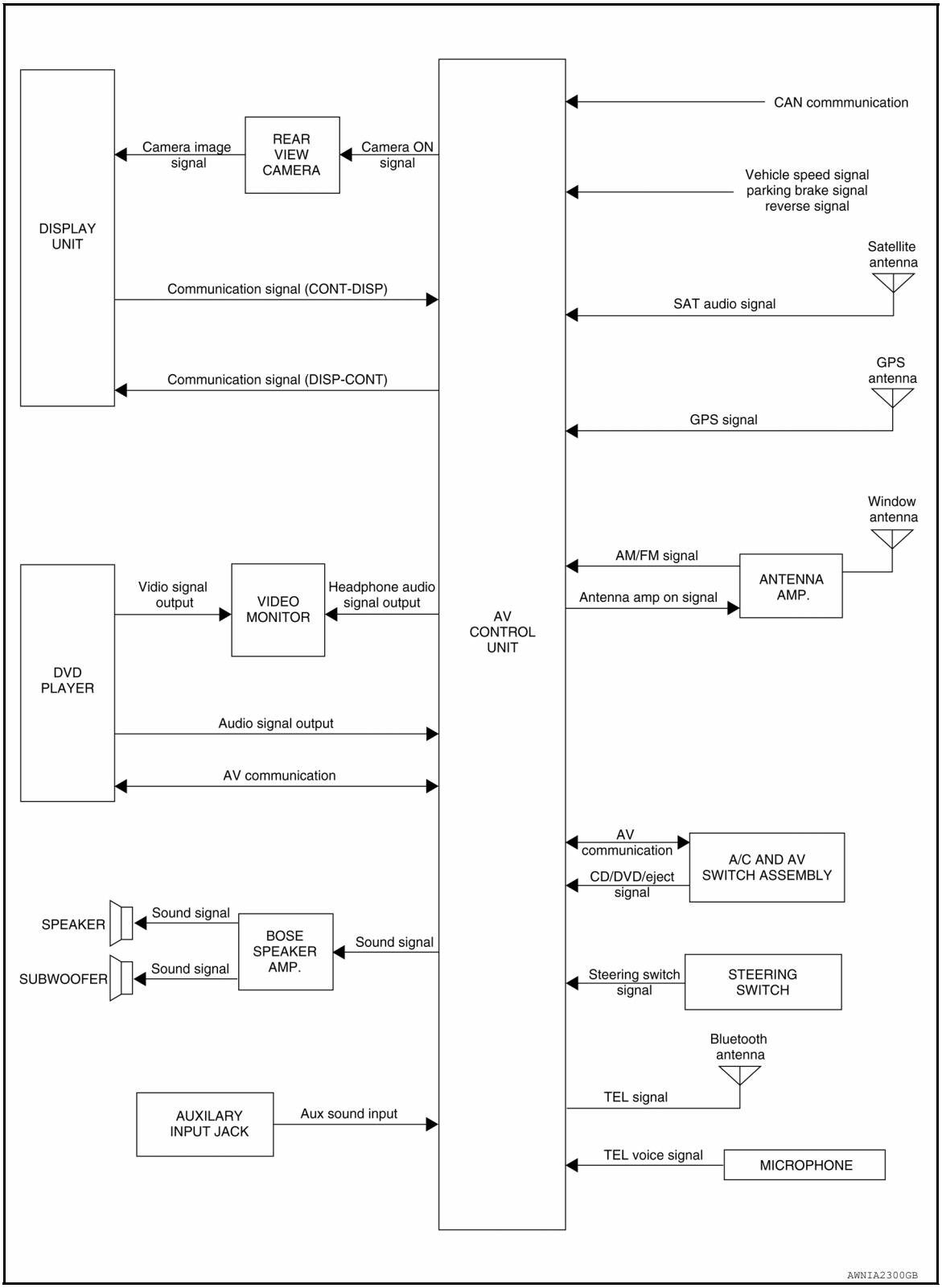
YES >> GO TO 4
NO >> Inspection End.

SYSTEM DESCRIPTION

AUDIO SYSTEM

System Diagram

INFOID:0000000007347811



System Description

INFOID:0000000007347812

AUDIO SYSTEM

The audio system consists of the following components
- AV control unit
- Display unit
- BOSE speaker amp.
- Window antenna
- Steering wheel audio control switches
- A/C and AV switch assembly
- Front door speakers
- Front tweeters
- Rear door speakers
- Rear tweeters
- Subwoofer

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 front door speakers, front tweeters, rear door speakers, rear tweeters and the subwoofer.
Refer to Owner's Manual for audio system operating instructions.

SATELLITE RADIO SYSTEM

The satellite radio system consists of the following components
- Satellite antenna
- AV control unit

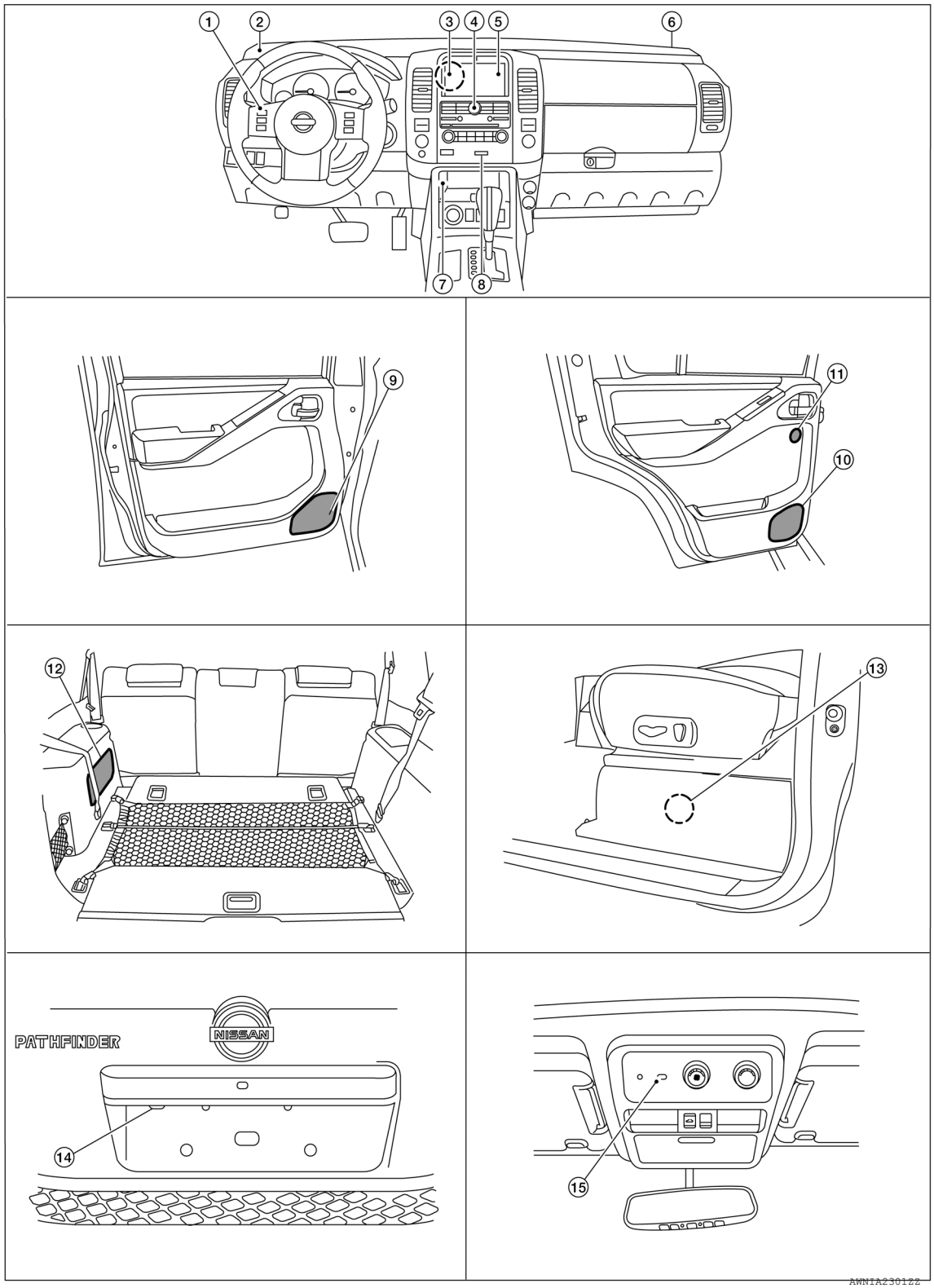
When the satellite radio system is on, radio signals are supplied to the AV control unit from the satellite antenna. The AV control unit then sends audio signals to the BOSE speaker amp.
Refer to Owner's Manual for satellite radio system operating instructions.

SPEED SENSITIVE VOLUME SYSTEM

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

Component Parts Location

INFOID:0000000007347813



1. Steering wheel audio control switches
2. Front tweeter LH M109
3. AV control unit M23, M37, M39, M44, M48, M71, M72
4. A/C and AV switch assembly M98
5. Display unit M92
6. Front tweeter RH M111

7. Aux. jack M85
8. Compact Flash insert slot
9. Front door speaker LH D12 RH D112
10. Rear door speaker LH D207 RH D307
11. Rear tweeter LH D208 RH D308
12. Subwoofer B72
13. BOSE speaker amp B74, B75 (located under driver seat)
14. Rear view camera D551
15. Microphone R8

Component Description

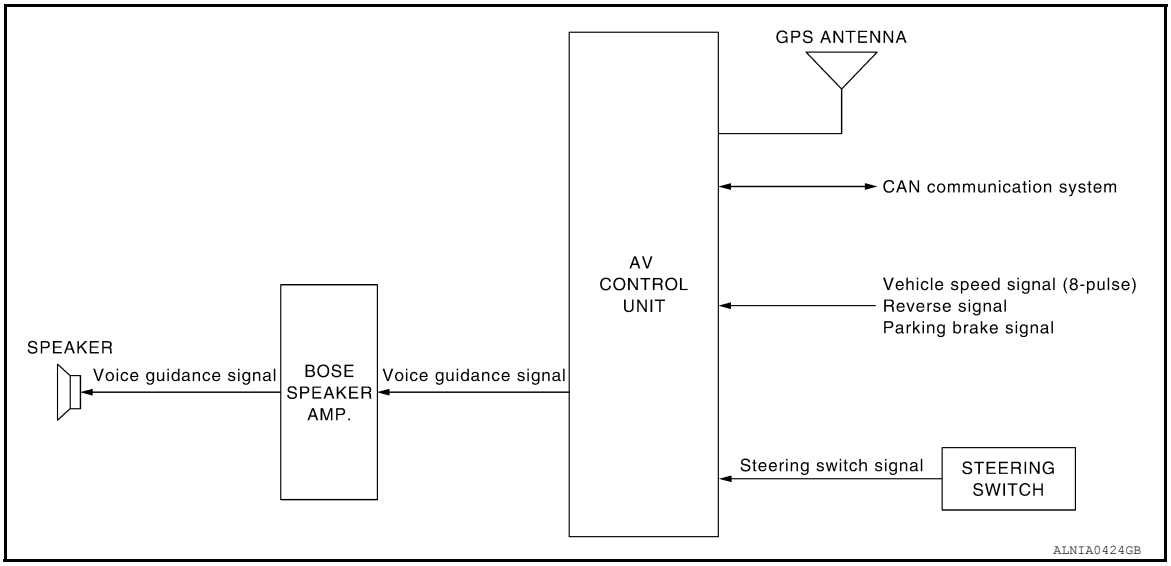
INFOID:0000000007347814

Part name	Description
AV control unit	Controls audio system and satellite radio system functions
Display unit	• Touch screen controls all audio and A/C operations • Displays all audio and climate control related information
BOSE speaker amp.	Receives power (amp ON) and audio signals from AV control unit and outputs audio signals to each speaker.
Steering wheel audio control switches	• Audio operation can be operated • Steering wheel audio control switch signal is output to AV control unit
Front door speakers	• Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Front tweeters	• Outputs audio signal from BOSE speaker amp. • Outputs high range sounds
Rear door speakers	• Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Rear tweeters	• Outputs audio signal from BOSE speaker amp. • Outputs high range sounds
Subwoofer	• Outputs audio signal from BOSE speaker amp. • Outputs low range sounds
Satellite antenna	Audio signal (satellite radio) is received and output to AV control unit.

NAVIGATION SYSTEM

System Diagram

INFOID:0000000007347815



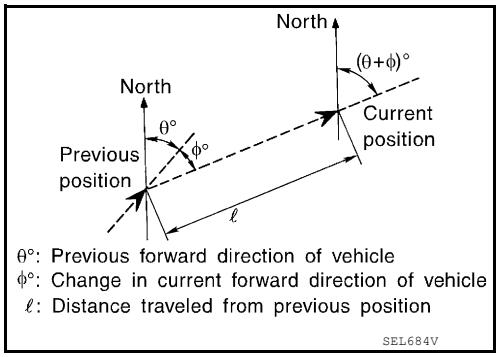
System Description

INFOID:0000000007347816

NOTE:
Refer to NAVIGATION 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

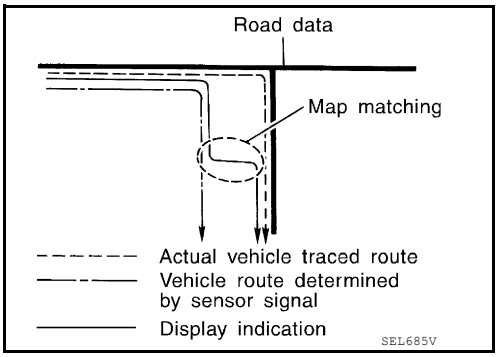
Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals from them are prioritized in each situation. However, this order of priority may change 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.

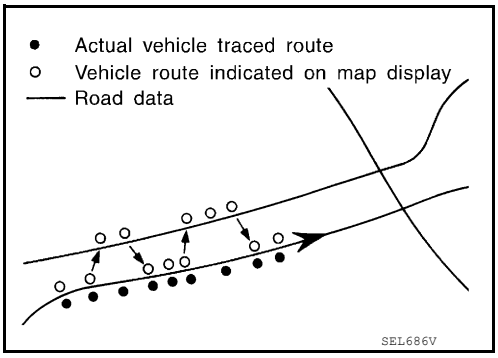
Therefore, the vehicle position may not be corrected after the vehicle is driven over a certain distance or time in which GPS information is hard to receive. In this case, the current-location mark on the display must be corrected manually.



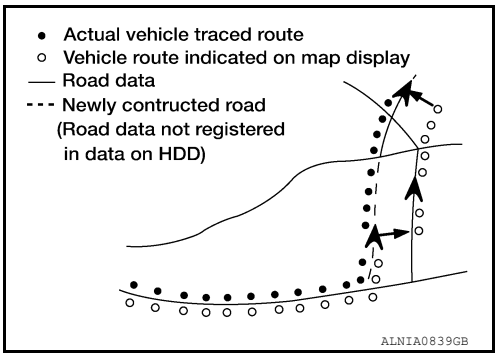
CAUTION:

The road map data is based on data stored on the HDD.

- 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.



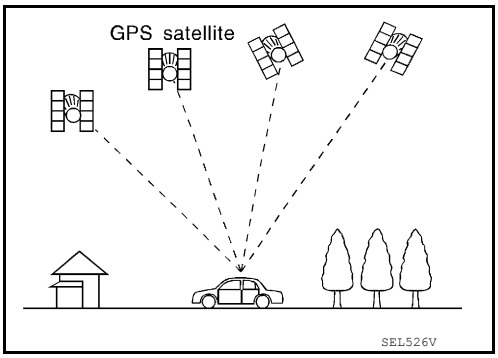
- Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded on the HDD, or when the road pattern stored in the map data and the actual road pattern are different due to repair.
  When driving on a road not present in the map, the map-matching function 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 miles).

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).

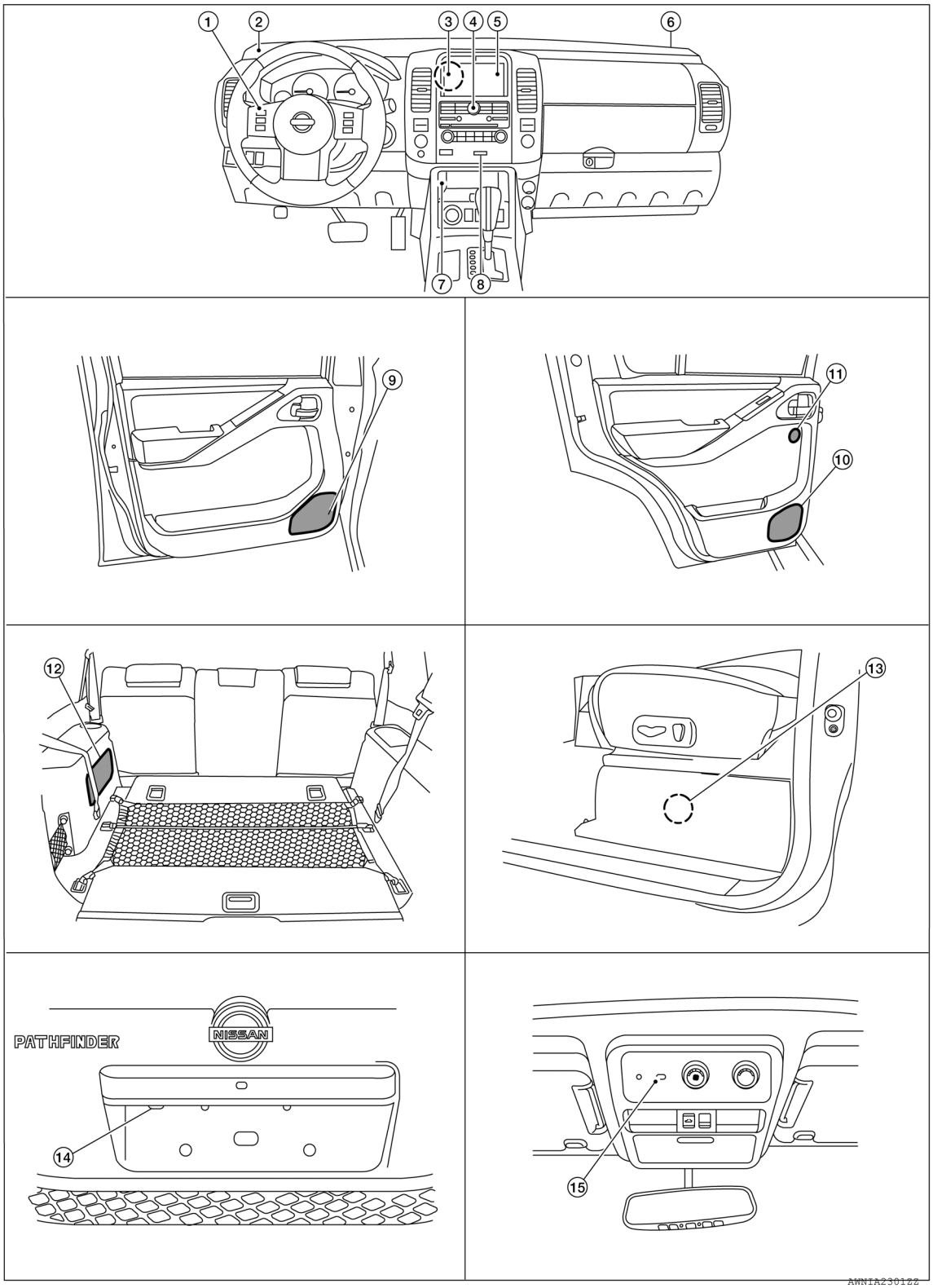


Accuracy of the GPS will deteriorate under the following conditions.

- 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.

Component Parts Location

INFOID:0000000007347817



1. Steering wheel audio control switches
2. Front tweeter LH M109
3. AV control unit M23, M37, M39, M44, M48, M71, M72
4. A/C and AV switch assembly M98
5. Display unit M92
6. Front tweeter RH M111

7. Aux. jack M85
8. Compact Flash insert slot
9. Front door speaker LH D12 RH D112
10. Rear door speaker LH D207 RH D307
11. Rear tweeter LH D208 RH D308
12. Subwoofer B72
13. BOSE speaker amp B74, B75 (located under driver seat)
14. Rear view camera D551
15. Microphone R8

Component Description

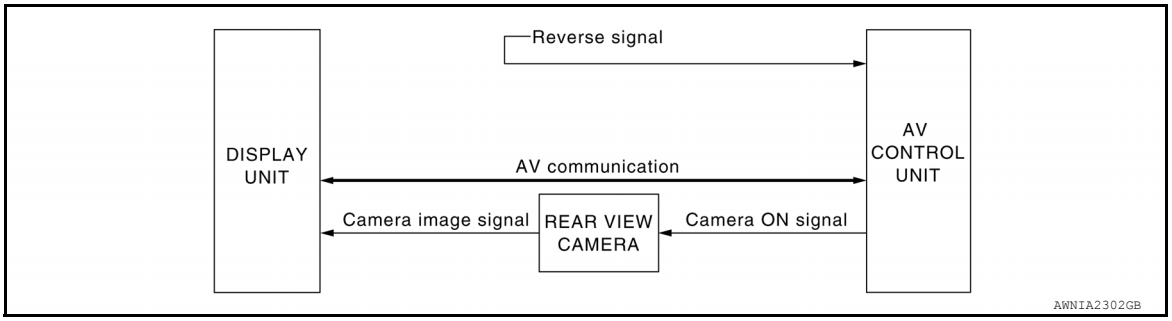
INFOID:0000000007347818

Part name	Description
AV control unit	• Controls each operation of the navigation system • DVD-ROM drive is built in • Voice guidance signal is output to BOSE speaker amp.
BOSE speaker amp.	Voice guidance signal is input from AV control unit, and it is output to speakers.
Tweeter	Voice guidance signal from BOSE speaker amp. is output.
Steering wheel audio control switches	• Each operation of navigation system can be performed • Switch operating signal is output to AV control unit
Microphone	Sends voice signals to AV control unit
GPS antenna	GPS signal is received and is output to AV control unit.

REAR VIEW MONITOR SYSTEM

System Diagram

INFOID:0000000007347819



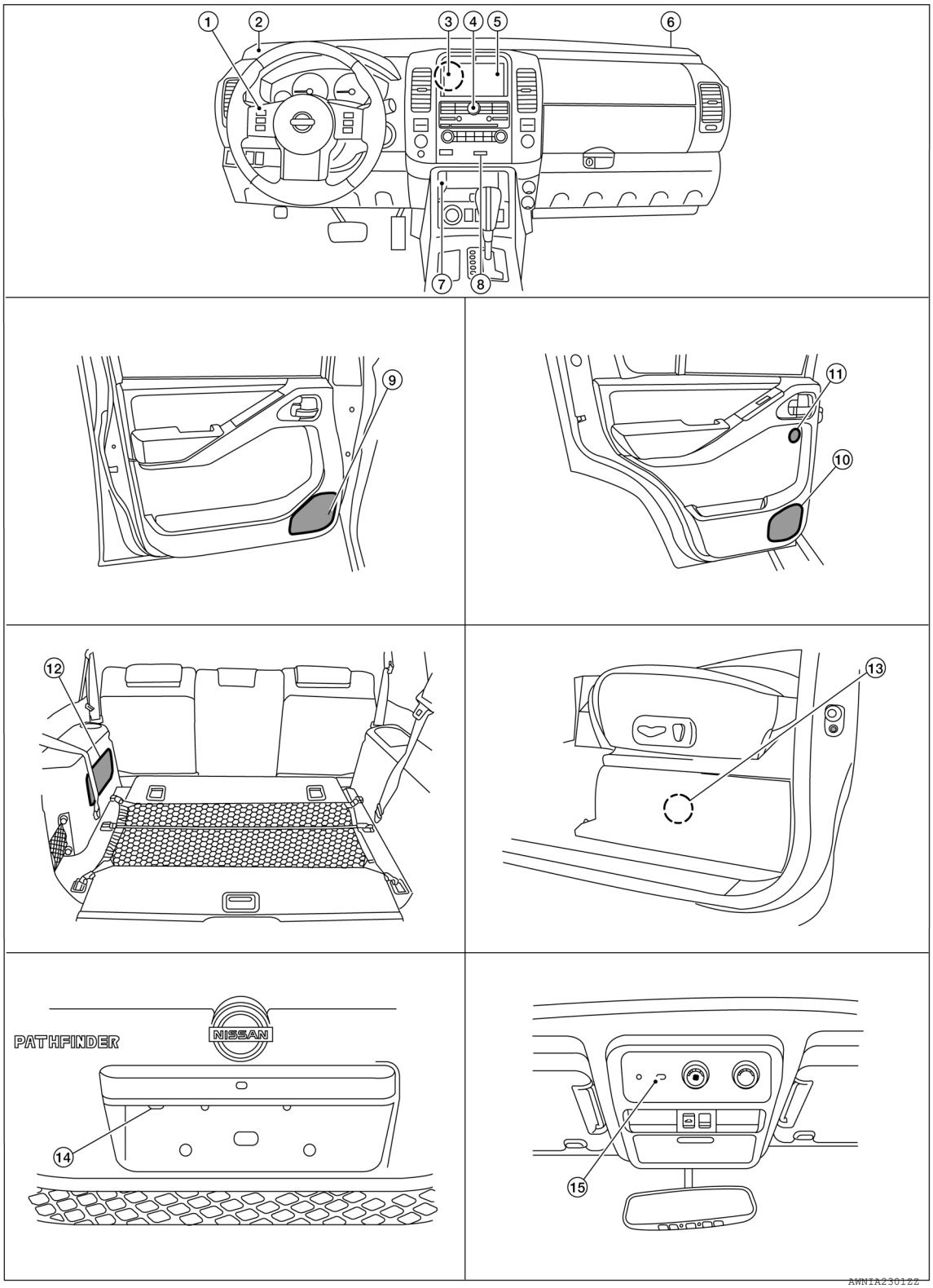
System Description

INFOID:0000000007347820

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

Component Parts Location

INFOID:0000000007347821



1. Steering wheel audio control switches
2. Front tweeter LH M109
3. AV control unit M23, M37, M39, M44, M48, M71, M72
4. A/C and AV switch assembly M98
5. Display unit M92
6. Front tweeter RH M111

7. Aux. jack M85
8. Compact Flash insert slot
9. Front door speaker LH D12 RH D112
10. Rear door speaker LH D207 RH D307
11. Rear tweeter LH D208 RH D308
12. Subwoofer B72
13. BOSE speaker amp B74, B75 (located under driver seat)
14. Rear view camera D551
15. Microphone R8

Component Description

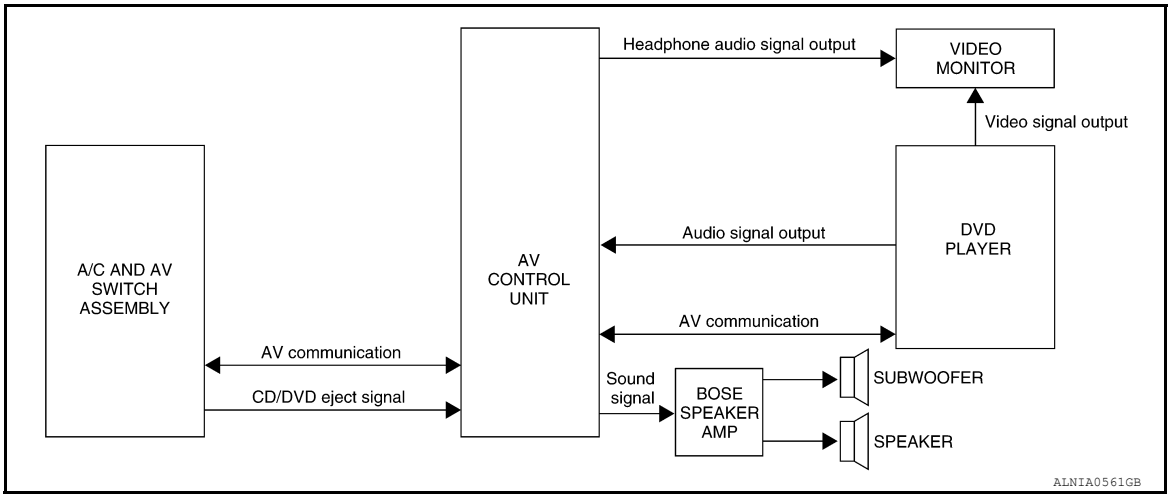
INFOID:0000000007347822

Part name	Description
AV control unit	• Receives reverse signal from back-up lamp relay • Sends camera ON signal to rear view camera
Rear view camera	• Receives camera ON signal from AV control unit • Sends image signal to the display unit
Display unit	• Receives image signal from rear view camera

DVD PLAYER

System Diagram

INFOID:0000000007347823



System Description

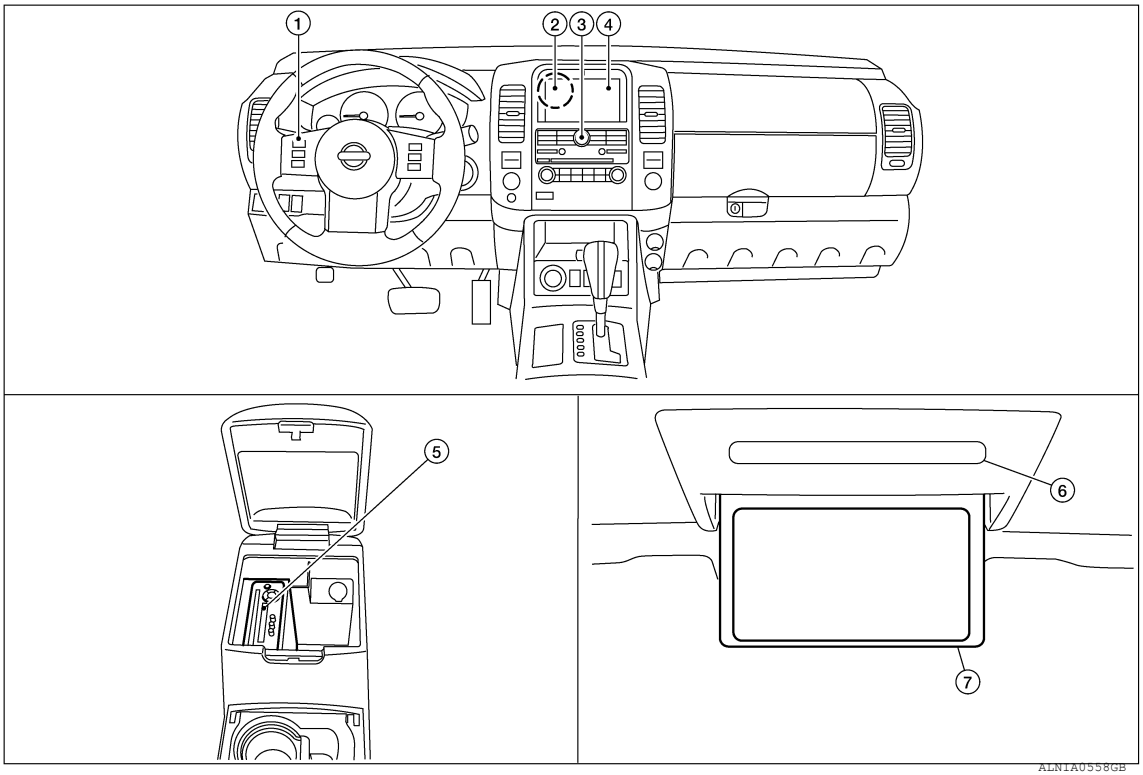
INFOID:0000000007347824

The DVD entertainment system consists of the following components
- AV control unit
- Display unit
- DVD player
- Video monitor
- A/C and AV switch assembly
- Steering wheel audio control switches
- BOSE speaker amp.
- Front tweeters
- Front door speakers
- Rear tweeters
- Rear door speakers
- Subwoofer

When the DVD entertainment system is on, video signals are sent from the DVD player to the video monitor. Audio signals are sent to the AV control unit. Audio signals can be directed through wireless infrared headphones or through the BOSE speaker amp. to the vehicle speakers. Refer to the Owner's Manual for complete DVD entertainment system operating instructions.

Component Parts Location

INFOID:0000000007347825



1. Steering wheel audio control switches
2. AV control unit M23, M37, M39, M44, M48, M71, M72
3. A/C and AV switch assembly M98
4. Display unit M92
5. DVD player M205 (located in center console)
6. Infrared headphone and remote receiver/transmitter (part of video monitor assembly)
7. Video monitor B76

Component Description

INFOID:0000000007347826

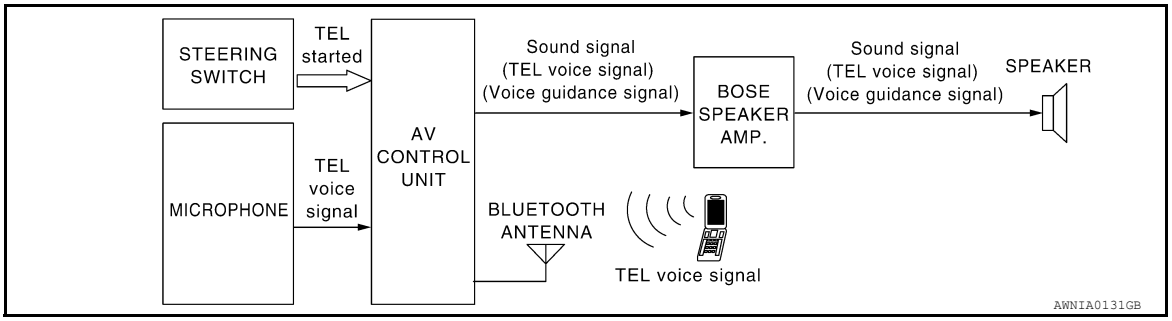
Part name	Description
DVD player	• Outputs DVD video to video monitor • Outputs DVD audio to the AV control unit
Video monitor	• Receives and displays the DVD video signal
AV control unit	• Controls audio system and DVD entertainment system functions
BOSE speaker amp.	• Receives audio signals from the AV control unit • Outputs amplified audio signals to the speakers
A/C and AV switch assembly	• All audio and A/C operations can be operated • Switch signal is output to the AV control unit and A/C auto amp
Steering wheel audio control switches	• Audio operation can be operated • Steering switch signal (operation signal) is output to AV control unit
Front door speakers	• Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Front and rear tweeters	• Outputs audio signal from BOSE speaker amp. • Outputs high range sounds

Part name	Description
Rear door speakers	• Outputs audio signal from BOSE speaker amp. • Outputs high, mid and low range sounds
Subwoofer	• Outputs audio signal from BOSE speaker amp. • Outputs low range sounds

HANDS-FREE PHONE SYSTEM

System Diagram

INFOID:0000000007347827



System Description

INFOID:0000000007347828

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

NOTE:

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

Bluetooth telephone system allows users who have a Bluetooth equipped 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. Personal memos can be created using the Nissan Voice Recognition system. 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 and the vehicle Owner's Manual for more information.

AV CONTROL UNIT

When the ignition switch is turned to ACC or ON, the AV control unit will power up. During power up, the Bluetooth feature is initialized and performs various self checks. Initialization may take up to 10 seconds. If a phone is present in the vehicle and paired with the AV control unit, Nissan Voice Recognition will then become active. Bluetooth telephone functions can be turned off using the Nissan Voice Recognition system.

STEERING WHEEL AUDIO CONTROL SWITCHES

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

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

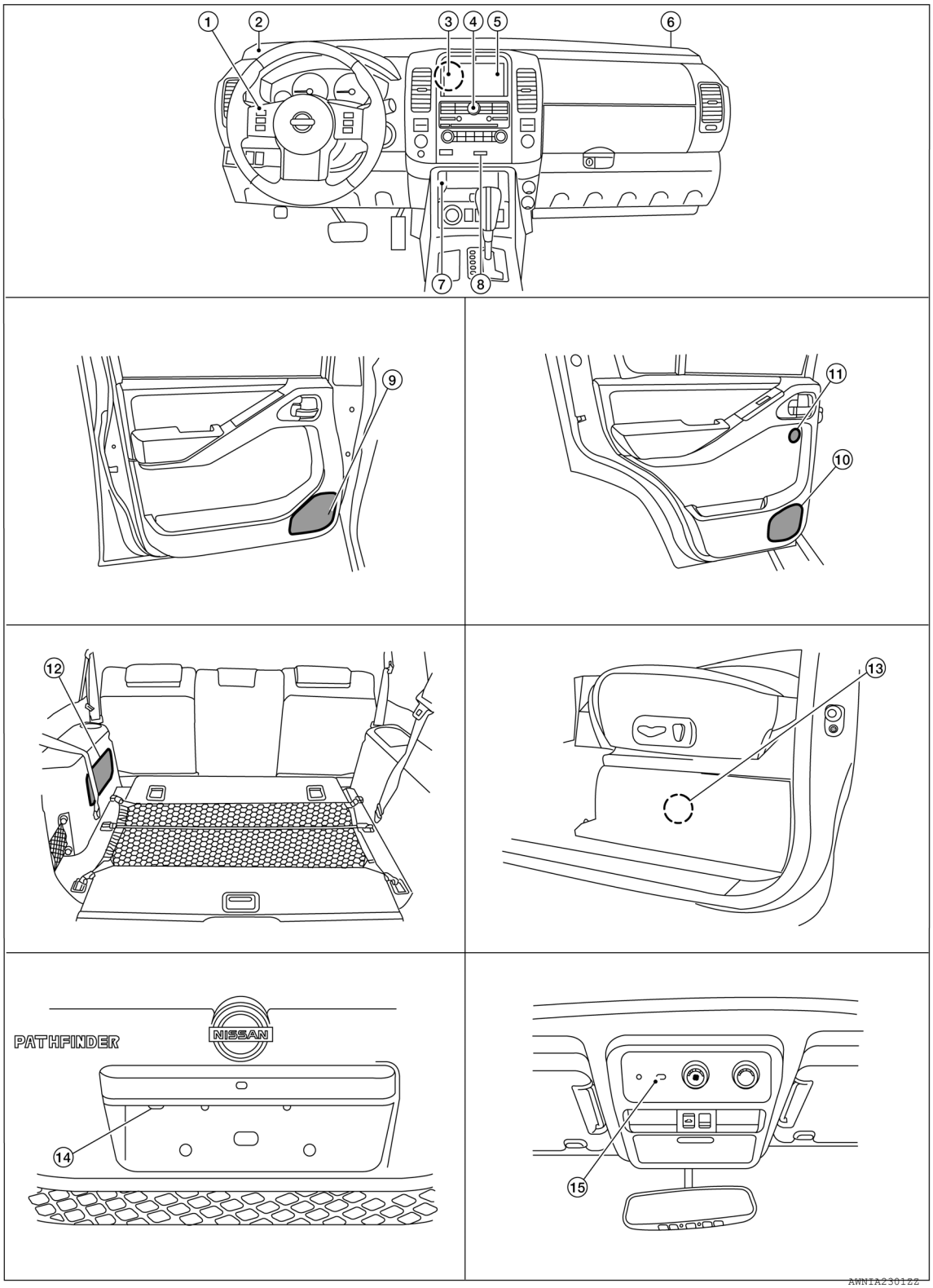
- Initiate Self Diagnosis of the Bluetooth telephone system
- Start a voice recognition session
- Answer and end telephone calls
- Adjust the volume of calls
- Record memos

MICROPHONE

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.

Component Parts Location

INFOID:0000000007347829



1. Steering wheel audio control switches
2. Front tweeter LH M109
3. AV control unit M23, M37, M39, M44, M48, M71, M72
4. A/C and AV switch assembly M98
5. Display unit M92
6. Front tweeter RH M111

7. Aux. jack M85
8. Compact Flash insert slot
9. Front door speaker LH D12 RH D112
10. Rear door speaker LH D207 RH D307
11. Rear tweeter LH D208 RH D308
12. Subwoofer B72
13. BOSE speaker amp B74, B75 (located under driver seat)
14. Rear view camera D551
15. Microphone R8

Component Description

INFOID:0000000007347830

Part name	Description
AV control unit	• Receives telephone voice signal from Antenna and Microphone • Sends telephone voice and voice guidance signals to the speakers
BOSE speaker amp.	• Receives audio signals from the AV control unit • Outputs amplified audio signals to the speakers.
Front door speaker	Receives telephone voice and voice guidance signals from the AV control unit through the BOSE speaker amp.
Front tweeter	
Steering wheel audio control switches	• Start a voice recognition session • Answer and end telephone calls • Adjust the volume level
Microphone	Sends voice signals to Bluetooth control unit
Bluetooth antenna	Sends telephone voice signal to Bluetooth control unit

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Description

INFOID:0000000007347831

DESCRIPTION

- Diagnosis function consists of the “Self-Diagnosis” mode performed automatically and the “Confirmation/ Adjustment” mode operated manually.
- “Self-Diagnosis” mode checks for connections between the units constituting this system, analyzes each individual unit at the same time, and displays the results on the LCD screen.
- “Confirmation/Adjustment” mode is used to perform trouble diagnosis that requires operation and judgment by an operator (trouble that cannot be automatically judged by the system), to check/change the set value, and to display the error history of the AV control unit.

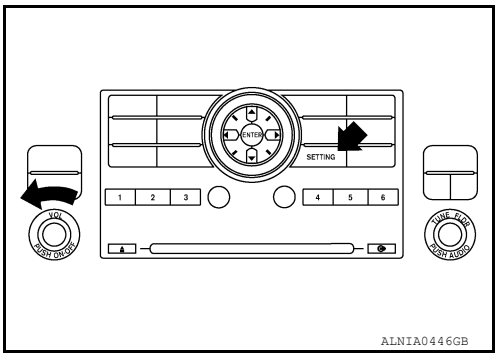
DIAGNOSIS ITEM

Mode	Description
Self-diagnosis	• AV control unit diagnosis. • Analyzes connection between the AV control unit, front display, switches, DVD deck, GPS antenna and SAT antenna.

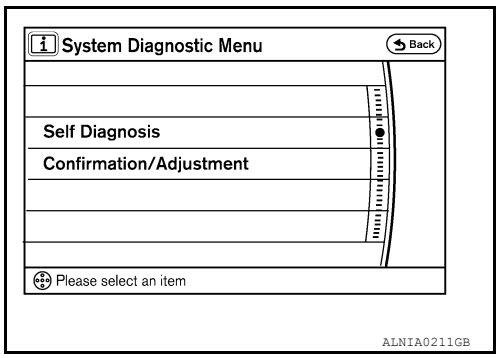
Mode			Description
CONFIRMATION/ ADJUSTMENT	Display diagnosis	Color spectrum bar	Color tone of the screen can be checked by the display of a color bar.
		Gradation bar	Shading of the screen can be checked by the display of a gray scale.
		Touch panel	• Touch panel calibration. • Touch panel response check.
	Vehicle signals		The following vehicle signals are analyzed: Vehicle speed signal, parking brake signal, light signal, ignition switch signal, and reverse signal.
	Speaker test		Connection can be checked by sending a test tone to each speaker.
	Navigation	Steering angle adjustment	Confirm/adjust the steering angle when there is a difference between the displayed vehicle mark turning angle and actual.
		Speed calibration	Confirm/adjust the speed calibration when there is a difference between the displayed vehicle mark location and actual.
		XM SAT subscription status	Check the subscription status of the XM NAV Traffic subscription.
	Error history		Diagnosis results previously stored in the memory are displayed in this mode.
	Synchronize FES clock		Turns FES (Family Entertainment System) clock synchronization function ON/OFF.
	Vehicle CAN diagnosis		The transmitting/receiving of CAN communication can be monitored.
	AV COMM diagnosis		The transmitting/receiving of AV communication can be monitored.
	Hands-free phone	Hands-free volume adjustment	Adjust hands-free volume (low, medium, high).
		Voice microphone test	Test microphone operation.
		Delete hands-free memory	Erase hands-free system memory.
	Bluetooth	Confirm/Change passkey	Confirm and change the Bluetooth passkey.
		Confirm/Change device name	Confirm and change a device name stored in Bluetooth.
	SAT	Change channel	Any necessary channels required to receive traffic information from the satellite radio system can be set.
		Change application ID	Any application ID's required to receive traffic information from the satellite radio system can be set.
		Diag	Not used.
	Delete unit connection log		Erase the error history and connection history of the unit.
	Initialize settings		All audio settings are reset to default levels.

OPERATION PROCEDURE

1. Start the engine.
2. Turn the audio system off.
3. While pressing the "SETTING" button, turn the volume control dial counterclockwise 30 clicks or more.



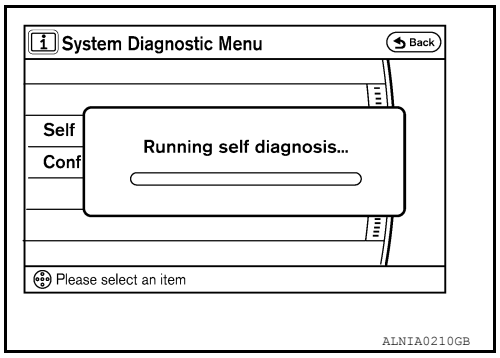
4. The initial trouble diagnosis screen will be displayed, and items “Self-Diagnosis” and “Confirmation/Adjustment” can be selected.



SELF-DIAGNOSIS

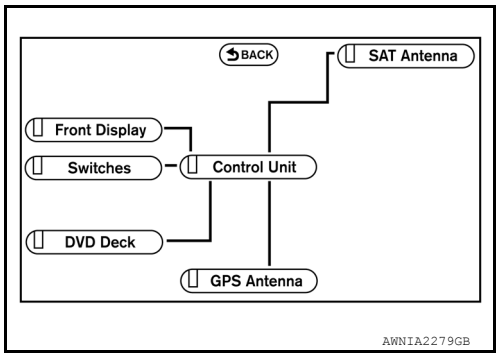
1. Perform self-diagnosis by selecting “Self-Diagnosis”.
   - Self-diagnosis subdivision screen is displayed, and the self-diagnosis mode starts.
   - A bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.

   NOTE:
   Self-diagnosis requires approximately 10 seconds to complete.



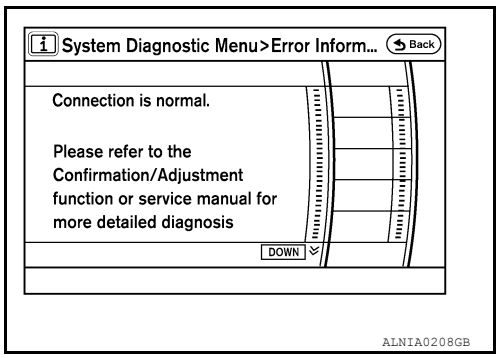
2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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

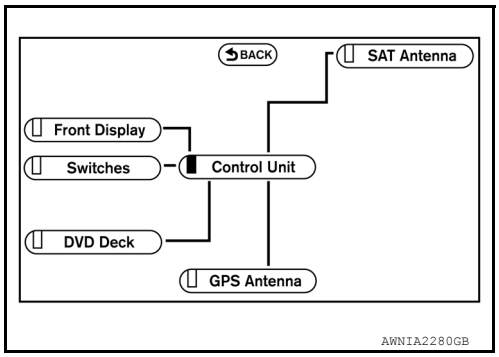
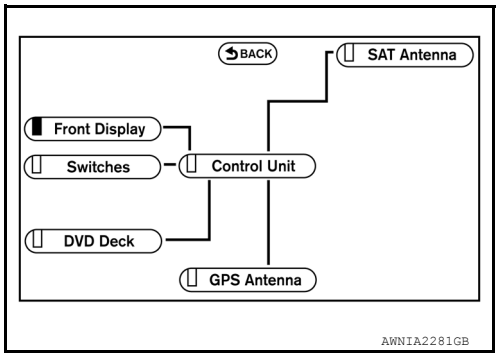
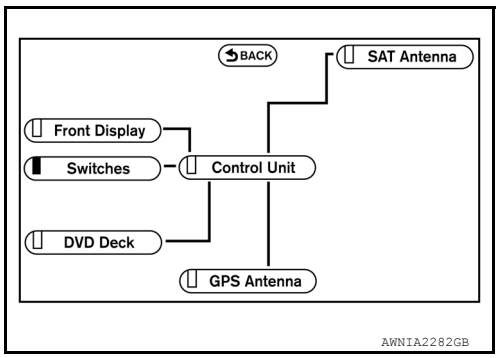
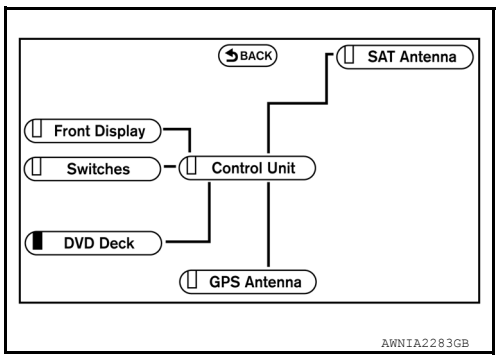


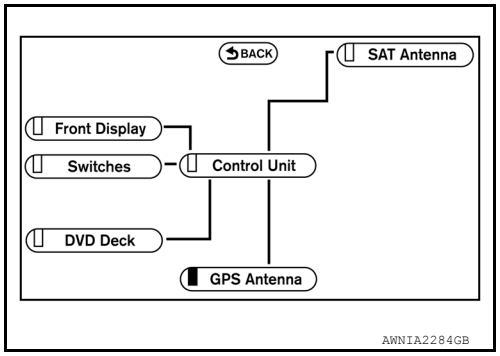
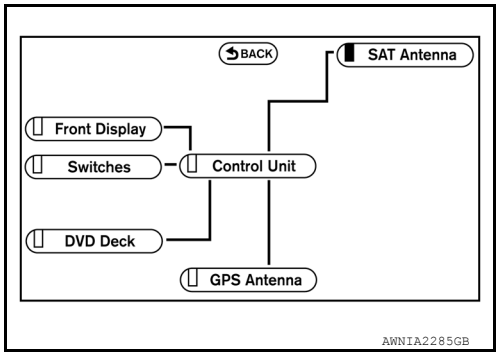
Note:
- Only the AV control unit is displayed in red.
- If multiple malfunctions occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > yellow > gray.

3. Select a component on the “Self-Diagnosis” screen and comments for the diagnosis results will be shown.



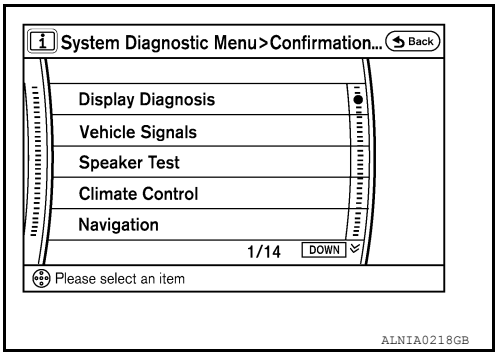
Self-Diagnosis Results

Area with yellow connection lines	Description	Possible malfunction location / Action to take
	AV control unit malfunction is detected.	Replace the AV control unit. Refer to AV-420, "Removal and Installation".
	Poor connection is detected for the display unit.	• Harness or connector. • AV control unit. • Display unit.
	Switch malfunction is detected.	Perform A/C and AV switch assembly diagnostics. Refer to AV-307, "A/C AND AV SWITCH ASSEMBLY : Component Function Check".
	Poor connection is detected for the DVD player.	• Harness or connector. • AV control unit. • DVD player.

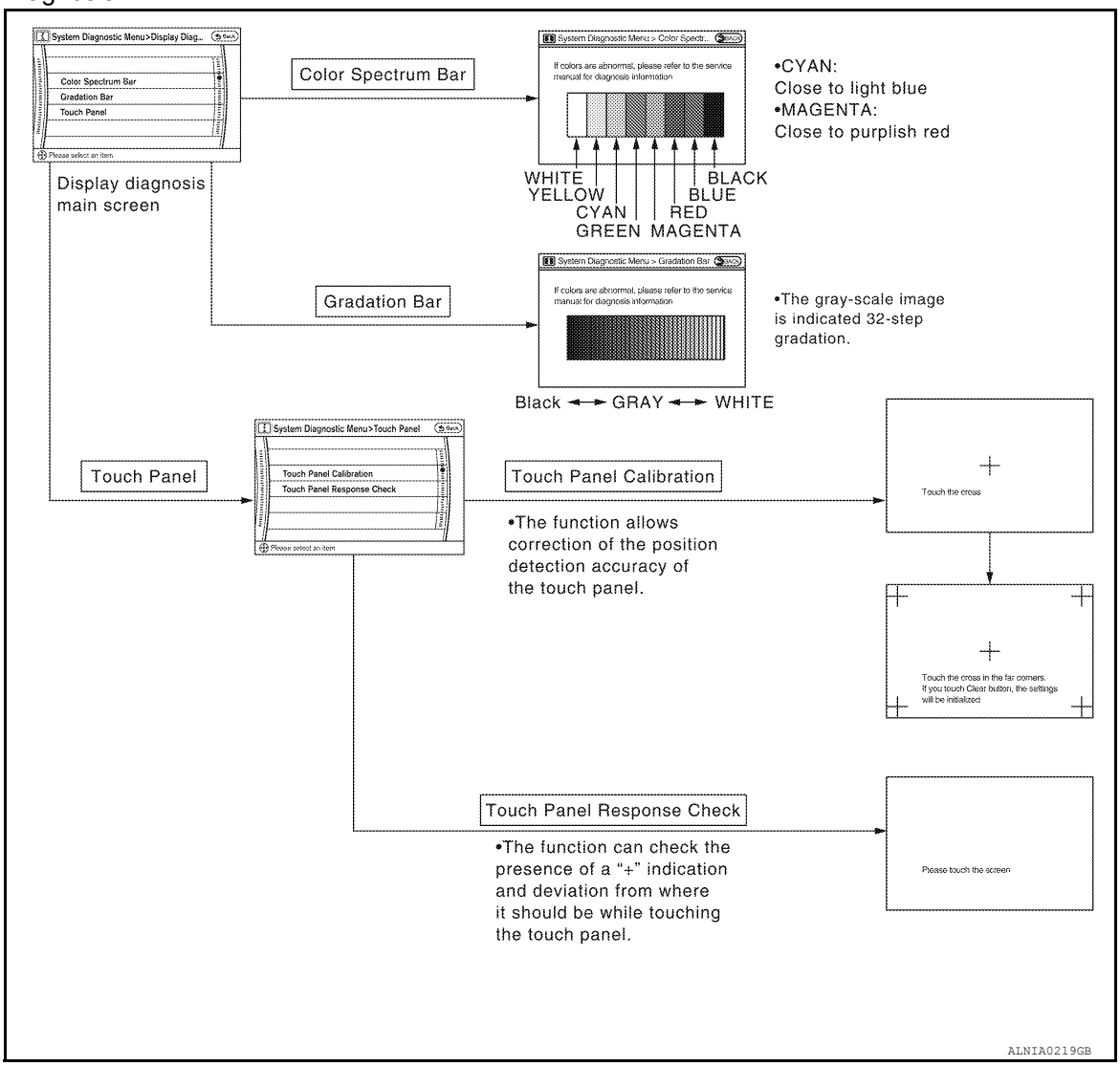
Area with yellow connection lines	Description	Possible malfunction location / Action to take
	Poor connection is detected for the GPS antenna.	• Harness or connector. • AV control unit. • GPS antenna.
	Poor connection is detected for the satellite radio tuner.	• Harness or connector. • AV control unit. • Satellite radio tuner.

CONFIRMATION/ADJUSTMENT MODE

1. Start the diagnosis function and select “Confirmation/Adjustment”. The confirmation/adjustment mode indicates where each item can be checked or adjusted.
2. Select each item on the “Confirmation/Adjustment” mode screen to display the relevant trouble diagnosis screen. Touch “BACK” on the display or press the “BACK” button to return to the initial Confirmation/Adjustment Mode screen.



Display Diagnosis

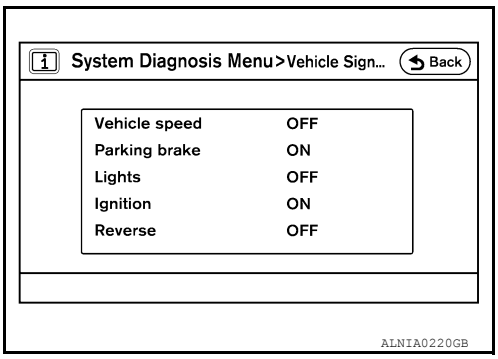


The tint of the color bar indication is as per the following list if RGB signal error is detected.

R (red) signal error : Light blue (Cyan) tint
G (green) signal error : Purple (Magenta) tint
B (blue) signal error : Yellow tint

Vehicle Signals

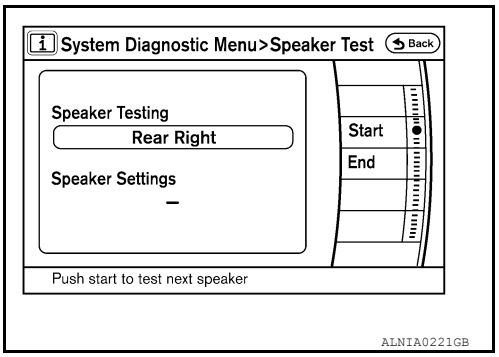
A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



Diagnosis item	Display	Vehicle status	Remarks
Vehicle speed	ON	Vehicle speed > 0 km/h	Changes in indication may be delayed by approximately 1.5 seconds. This is normal.
	OFF	Vehicle speed = 0 km/h	
	–	Ignition switch in ACC position	
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Lights	ON	Light switch ON	Block the light beam from the auto light optical sensor.
	OFF	Light switch OFF	
Ignition	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
Reverse	ON	Selector lever in R position	Changes in indication may be delayed by approximately 1.5 seconds. This is normal.
	OFF	Selector lever in any position other than R	
	–	Ignition switch in ACC position	

Speaker Test

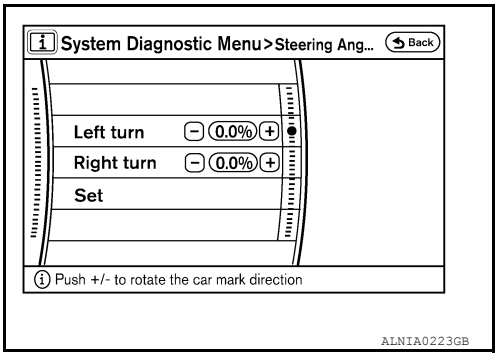
Select “Speaker Test” to display the speaker diagnosis screen. Press “Start” to generate a test tone in speakers. Touch “End” to stop the test tones.



Navigation

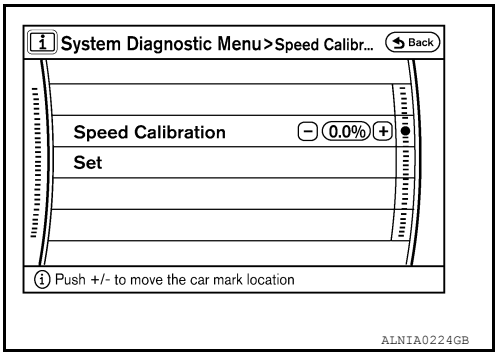
STEERING ANGLE ADJUSTMENT

The steering angle output value detected with the gyroscope is adjusted.

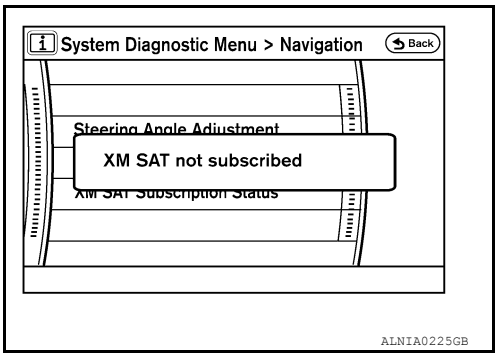


SPEED CALIBRATION

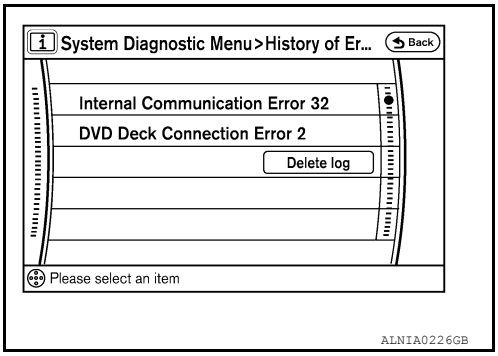
During normal driving, distance error caused by tire wear and tire pressure change is automatically adjusted for by the automatic distance correction function. This function, on the other hand, is for immediate adjustment, in cases such as driving with tire chain fitted on tires.



XM SAT SUBSCRIPTION STATUS
The XM NavTraffic subscription status can be checked.



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 SW is turned ON and then no error has occurred until the self-diagnosis start. Check the “Error History” to detect any error that may have occurred before the self-diagnosis start because of this situation.



Count up method A
- The counter resets to 0 if an error occurs when IGN switch is turned ON. The counter increases by 1 if the condition is normal at a next IGN 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 IGN switch is ON. The counter will not decrease even if the condition is normal at the next IGN 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 method of occurrence frequency	Error history display item
Count up method A	CAN communication line, control unit (CAN), AV communication line, control unit (AV communication)
Count up method B	Other than above

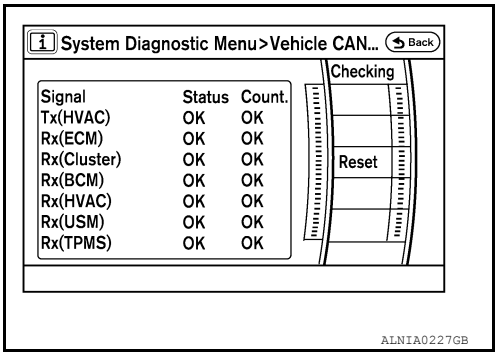
Error item
Some error items may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items

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-306, "AV CONTROL UNIT : CONSULT Function".

Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit. Refer to AV-420, "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		
XM SERIAL COMM Error		
CAN Controller Memory Error		
Bluetooth Module Connection Error		
HDD CONN Error		
HDD READ Error		
HDD WRITE Error		
HDD COMM Error		
HDD ACCESS Error		
DSP CONN Error		
DSP COMM Error		
Internal Communication Error		AV control unit power supply and ground circuit. Refer to AV-334, "AV CONTROL UNIT : Diagnosis Procedure".
GPS Communication Error	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer toAV-420, "Removal and Installation".
GPS ROM Error		
GPS RAM Error		
GPS RTC Error		
Front Display Connection Error	• Display unit power supply and ground circuit malfunction is detected. • Malfunction is detected on communication circuit between display unit and AV control unit. • Malfunction is detected on communication signal between display unit and AV control unit.	• Display unit power supply and ground circuit. Refer to AV-335, "DISPLAY UNIT : Diagnosis Procedure". • Communication circuit between display unit and AV control unit.
GPS Antenna Error	GPS antenna connection malfunction is detected.	GPS antenna.
XM Antenna Connection Error	Poor connection is detected in satellite radio antenna.	Satellite radio antenna.
• AV COMM CIRCUIT • Switches Connection Error	• A/C and AV switch assembly power supply and ground circuit malfunction is detected. • A malfunction is detected in AV communication circuit between AV control unit and A/C and AV switch assembly. • A malfunction is detected in AV communication signal 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-336, "A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure". • AV communication circuit between AV control unit and A/C and AV switch assembly.

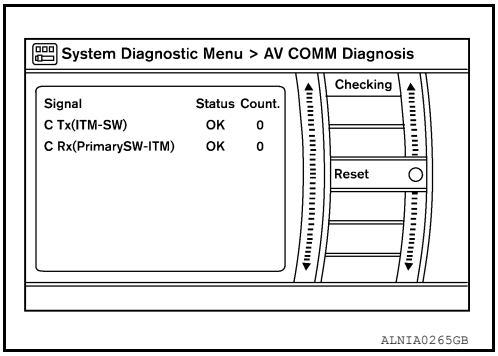
Vehicle CAN Diagnosis

- 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.



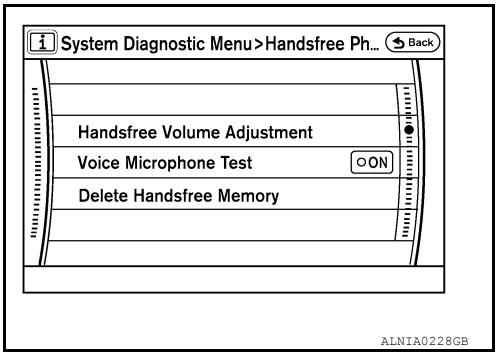
AV COMM Diagnosis

- AV 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.



Hands-free Phone

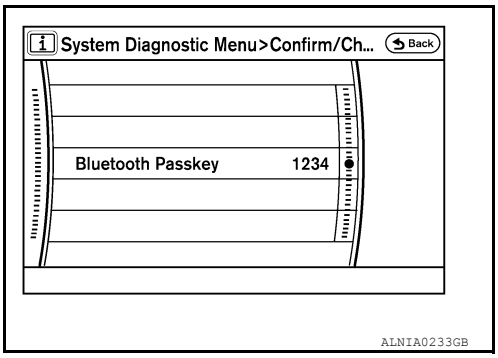
The hands-free phone reception volume adjustment, microphone and speaker test, and memory erase functions are also available.



Bluetooth

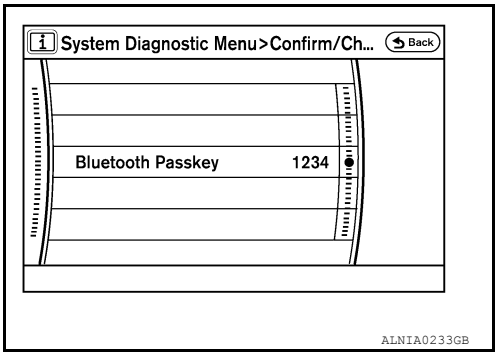
Passkey confirmation/change

- The passkey of Bluetooth can be confirmed and changed.
- The passkey can be changed by four digits within 0 to 9.



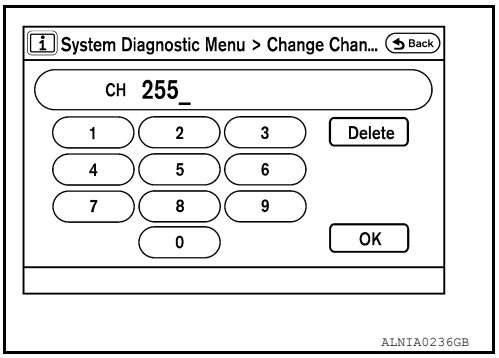
Device name check/change

- The device name of Bluetooth can be confirmed and changed.
- The device name can be changed by sixteen digits within A to Z (small character can be used) and - (hyphen).

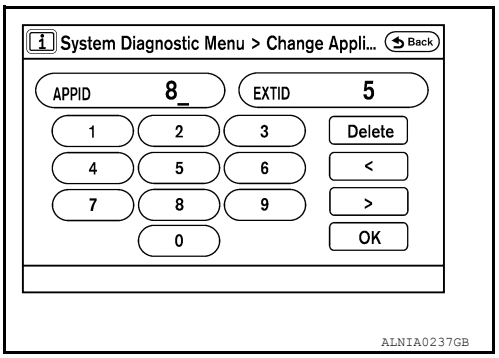


SAT

- Change Channel
- Any necessary channels required to receive traffic information from the satellite radio system can be set.

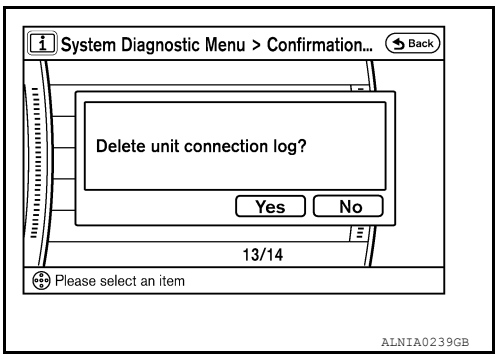


- Change Application ID
- Any application ID's required to receive traffic information from the satellite radio system can be set.



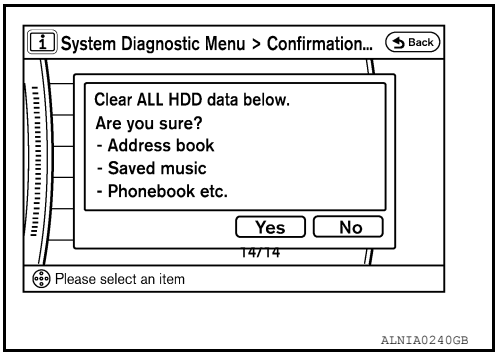
Delete Unit Connection Log

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

Initializes the AV control unit memory.



AV CONTROL UNIT : CONSULT Function

INFOID:0000000007347832

CONSULT can display each diagnostic item using the diagnostic test modes shown following.

MULTI AV diagnosis mode	Description
ECU IDENTIFICATION	The part number of AV control unit can be checked.
SELF DIAGNOSTIC RESULT	Displays AV control unit self-diagnosis results.
DATA MONITOR	Displays AV control unit input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.

Self-diagnosis results

- In CONSULT self-diagnosis, self-diagnosis results and error history are displayed collectively.
- The current malfunction indicates “CRNT”. The past malfunction indicates “PAST”.
- The timing is displayed as “0” if any of the error codes [U1000], [U1010], [U1300] and [U1310] is detected. The counter increases by 1 if the condition is normal at the next ignition switch ON cycle.

Self-diagnosis results display item

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT[U1000]	CAN communication malfunction is detected	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-309, "Description".
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected	Replace the AV control unit
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected	
Control Unit FLASH-ROM [U1200]	AV control unit malfunction is detected	
Gyro NO CONN [U1201]		
CAN CONT [U1216]		
BLUETOOTH CONN [U1217]		
HDD CONN [U1218]		
HDD READ [U1219]		
XM SERIAL COMM [U1220]		
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
DSP CONN [U121D]		
DSP COMM [U121E]		
INTERNAL COMM [U121F]		AV control unit power supply and ground circuit

Error item	Description	Possible malfunction factor/Action to take
GPS COMM [U1204] GPS ROM [U1205] GPS RAM [U1206] GPS RTC [U1207]	GPS malfunction is detected	An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly.
FRONT DISP CONN [U1243]	• Display unit power supply and ground circuit malfunction is detected • Malfunction is detected on communication circuit between display unit and AV control unit • Malfunction is detected on communication signal between display unit and AV control unit	• Display unit power supply and ground circuit • Communication circuit between display unit and AV control unit
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected	GPS antenna
XM ANTENNA CONN [U1258]	Poor connection is detected in satellite radio antenna	Satellite radio antenna
• AV COMM CIRCUIT [U1300] • SWITCHE CONN [U1240]	• Multifunction switch power supply and ground circuit malfunction is detected • A malfunction is detected in AV communication circuit between AV control unit and multifunction switch • A malfunction is detected in AV communication signal between AV control unit and multifunction switch	• Multifunction switch power supply and ground circuits • AV communication circuit between AV control unit and multifunction switch

DATA MONITOR

Display Item List

Display item [unit]	ALL SIGNALS	SELECTION FROM MENU	Description
VHCL SPD SIG [ON/OFF]	X	X	Displays “ON” when vehicle speed > 0 km/h. Displays “OFF” when vehicle speed = 0 km/h.
PKB SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of parking brake switch.
ILLUM SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of lighting switch.
IGN SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of ignition switch.
REV SIG [ON/OFF]	X	X	Displays [ON/OFF] condition of back-up lamp switch.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Component Function Check

INFOID:0000000007347833

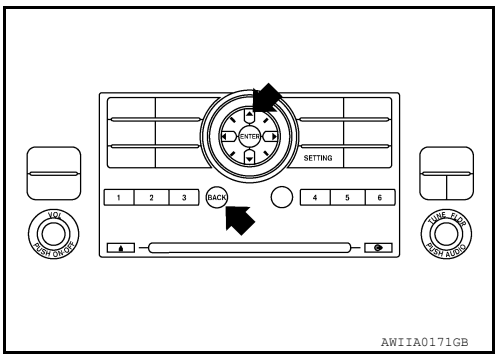
A/C and AV switch assembly self-diagnosis function

Description

The ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly can be checked.

Self-diagnosis mode

- Press the “BACK” button and the “UP” button within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more. When the self-diagnosis mode starts, a beep will sound and all LED indicators of the switch will illuminate.
- The continuity of each switch and control dial of the A/C and AV switch assembly can be checked. If the switch is operating normally, the system will beep and the LED’s will illuminate when each switch is operated.



Finishing self-diagnosis mode

Self-diagnosis mode is canceled when the ignition switch is turned OFF.

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000007347834

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart. Refer to LAN-13, "How to Use CAN Communication Signal Chart".

DTC Logic

INFOID:0000000007347835

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	Diagnostic item is detected when ...	Probable malfunction location
U1000	CAN COMM CIRCUIT	When AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system

Diagnosis Procedure

INFOID:0000000007347836

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “MULTI AV”.

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to “LAN system”. Refer to LAN-14, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI section. Refer to GI-37, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000007347837

Initial diagnosis of AV control unit.

DTC Logic

INFOID:0000000007347838

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	Diagnostic item is detected when ...	Probable malfunction location
U1010	CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected	AV control unit

Diagnosis Procedure

INFOID:0000000007347839

1.REPLACE AV CONTROL UNIT

When DTC U1010 is detected, replace AV control unit. Refer to AV-420, "Removal and Installation".

>> Inspection End.

U1200 AV CONTROL UNIT

Description

INFOID:0000000007347840

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347841

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1200	Control Unit FLASH- ROM [U1200]	An internal malfunction is detected in AV control unit (FLASH-ROM).	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1201 AV CONTROL UNIT

Description

INFOID:0000000007347842

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347843

DTC DETECTION LOGIC

DTC	CONSULT display	Detection condition	Action to take
U1201	GYRO NO CONN [U1201]	An internal malfunction is detected in AV control unit (gyrocompass disconnection).	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1204 GPS COMM

Description

INFOID:0000000007347844

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347845

DTC DETECTION LOGIC

DTC	CONSULT display	Detection condition	Action to take
U1204	GPS COMM [U1204]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1205 GPS ROM

Description

INFOID:0000000007347846

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347847

DTC DETECTION LOGIC

DTC	CONSULT display	Detection condition	Action to take
U1205	GPS ROM [U1205]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1206 GPS RAM

Description

INFOID:0000000007347848

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347849

DTC DETECTION LOGIC

DTC	CONSULT display	Detection condition	Action to take
U1206	GPS RAM [U1206]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1207 GPS RTC

Description

INFOID:0000000007347850

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347851

DTC DETECTION LOGIC

DTC	CONSULT display	Detection condition	Action to take
U1207	GPS RTC [U1207]	An internal malfunction is detected in AV control unit (GPS malfunction).	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1216 AV CONTROL UNIT

Description

INFOID:0000000007347852

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347853

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1216	CAN CONT [U1216]	Internal malfunction of AV control unit (CAN controller) is detected.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1217 AV CONTROL UNIT

Description

INFOID:0000000007347854

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347855

DTC DETECTION LOGIC

DTC	CONSULT display	Detection condition	Action to take
U1217	BLUETOOTH CONN [U1217]	An internal malfunction is detected in AV control unit (Bluetooth module connection malfunction).	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1218 AV CONTROL UNIT

Description

INFOID:0000000007347856

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• Integrates HDD (hard disk drive) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347857

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1218	HDD-CONN [U1218]	Internal malfunction of AV control unit (HDD connection malfunction) is detected.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1219 AV CONTROL UNIT

Description

INFOID:0000000007347858

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• Integrates HDD (hard disk drive) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347859

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1219	HDD-READ [U1219]	Internal malfunction of AV control unit (HDD read malfunction) is detected.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1220 AV CONTROL UNIT

Description

INFOID:0000000007347860

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347861

DTC DETECTION LOGIC

DTC	CONSULT display	Detection condition	Action to take
U1220	XM SERIAL COMM [U1220]	An internal malfunction is detected in AV control unit (satellite radio tuner communication malfunction).	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U121A AV CONTROL UNIT

Description

INFOID:0000000007347862

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• Integrates HDD (hard disk drive) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347863

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U121A	HDD-WRITE [U121A]	Internal malfunction of AV control unit (HDD write malfunction) is detected.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U121B AV CONTROL UNIT

Description

INFOID:0000000007347864

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• Integrates HDD (hard disk drive) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347865

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U121B	HDD-COMM [U121B]	Internal malfunction of AV control unit (HDD communication error) is detected.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U121C AV CONTROL UNIT

Description

INFOID:0000000007347866

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• Integrates HDD (hard disk drive) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347867

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U121C	HDD-ACCESS [U121C]	Internal malfunction of AV control unit (HDD access error) is detected.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U121D AV CONTROL UNIT

Description

INFOID:0000000007347868

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• Integrates HDD (hard disk drive) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347869

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U121D	DSP CONN [U121D]	Internal malfunction of AV control unit (DSP connection error) is detected.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U121E AV CONTROL UNIT

Description

INFOID:0000000007347870

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• Integrates HDD (hard disk drive) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347871

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U121E	DSP COMM [U121E]	Internal malfunction of AV control unit (DSP communication error) is detected.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

U121F AV CONTROL UNIT

Description

INFOID:0000000007347872

Part name	Description
AV CONTROL UNIT	• Integrates HDD (hard disk drive) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347873

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U121F	INTERNAL COMM [U121F]	Internal malfunction of AV control unit (internal communication error) is detected.	AV control unit power supply and ground circuit

Diagnosis Procedure

INFOID:0000000007347874

1.CHECK AV CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check audio control unit power supply and ground circuit. Refer to AV-334, "AV CONTROL UNIT : Diagnosis Procedure".

Is inspection result OK?

YES >> Inspection End.
NO >> Repair malfunctioning parts.

U1243 DISPLAY UNIT

Description

INFOID:0000000007347875

Part name	Description
DISPLAY UNIT	• Display image is controlled by the serial communication from AV control unit. • RGB image signal is input from AV control unit (RGB, RGB area and RGB synchronizing). Auxiliary image signal is input from the auxiliary input jack. Camera image signal is input from the rear view camera. • Synchronize signal (HP, VP) is output to AV control unit. • Touch panel function can be operated for each system by touching a display directly.

DTC Logic

INFOID:0000000007347876

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	• Display unit power supply and ground circuit malfunction is detected • Malfunction is detected on communication circuit between display unit and AV control unit • Malfunction is detected on communication signal between display unit and AV control unit	• Display unit power supply and ground circuit • Communication circuit between display unit and AV control unit

Diagnosis Procedure

INFOID:0000000007347877

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

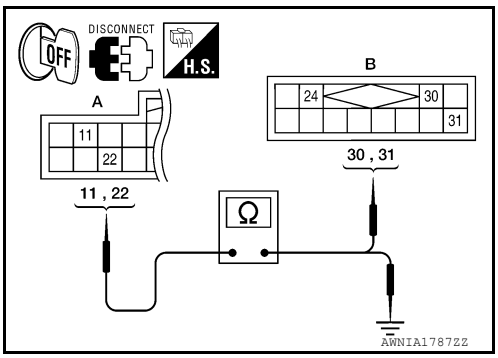
Check display unit power supply and ground circuit. Refer to AV-335, "DISPLAY UNIT : Diagnosis Procedure".

Is inspection result OK?

YES >> GO TO 2
NO >> Repair malfunctioning parts.

2.CHECK CONTINUITY COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M37.
3. Check continuity between display unit harness connector M92 (A) terminals 11, 22 and AV control unit harness connector M37 (B) terminals 30, 31.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M92	11	M37	30	Yes
	22		31	

4. Check continuity between display unit harness connector M92 (A) terminals 11, 22 and ground.

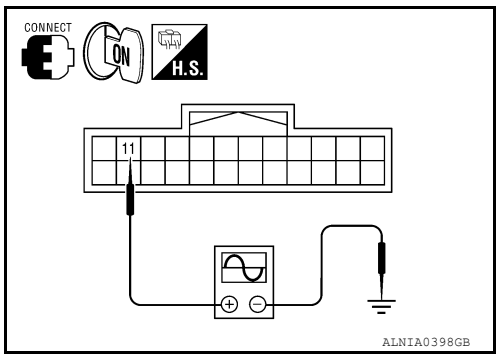
A		—	Continuity
Connector	Terminal		
M92	11	Ground	No
	22		

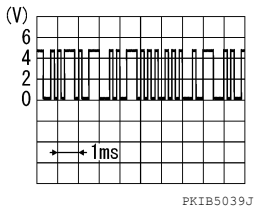
Are continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3. CHECK COMMUNICATION SIGNAL

1. Connect display unit connector M92 and AV control unit connector M37.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M92 terminal 11 and ground.



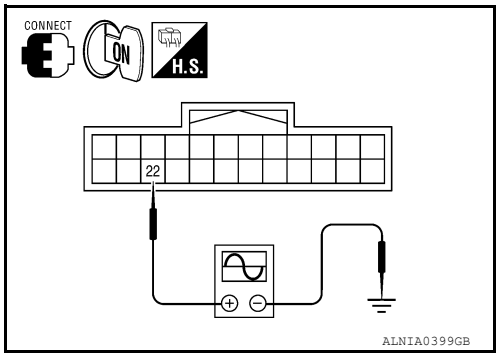
Connector	Terminals		Reference Signal
	(+)	(-)	
M92	11	Ground	

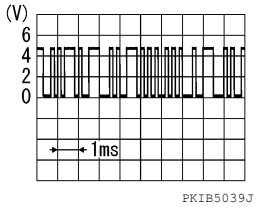
Are voltage readings as specified?

YES >> GO TO 4
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

4. CHECK COMMUNICATION SIGNAL

Check signal between display unit harness connector M92 terminal 22 and ground.



Connector	Terminals		Reference Signal
	(+)	(-)	
M92	22	Ground	

Are voltage readings as specified?

YES >> Inspection End.
NO >> Replace display unit. Refer to AV-422, "Removal and Installation".

U1244 GPS ANTENNA

Description

INFOID:0000000007347878

The GPS antenna receives satellite GPS signals.

DTC Logic

INFOID:0000000007347879

DTC DETECTION LOGIC

DTC	CONSULT display	Detection condition
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.

Diagnosis Procedure

INFOID:0000000007347880

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.GPS ANTENNA CHECK

Inspect GPS antenna and antenna feeder for damage or poor connection.

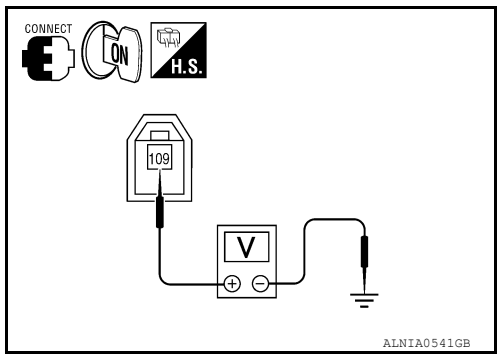
Is the GPS antenna and feeder clean and undamaged?

YES >> GO TO 2
NO >> Repair or replace malfunctioning parts.

2.CHECK AV CONTROL UNIT VOLTAGE

1. Turn ignition switch ON.
2. Check voltage between AV control unit connector M72 terminal 109 and ground.

109 - Ground : Approx. 5V



Is the voltage reading as specified?

YES >> Replace GPS antenna. Refer to AV-434, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1258 SATELLITE RADIO ANTENNA

Description

INFOID:0000000007347881

Part name	Description
SATELLITE RADIO ANTENNA	Satellite radio signal is received and sent to audio control unit.

DTC Logic

INFOID:0000000007347882

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1258	XM ANETNNA CONN [U1258]	Satellite radio antenna connection malfunction is detected	Satellite radio antenna disconnection

Diagnosis Procedure

INFOID:0000000007347883

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.SATELLITE RADIO ANTENNA CHECK

Visually check satellite radio antenna and antenna feeder.

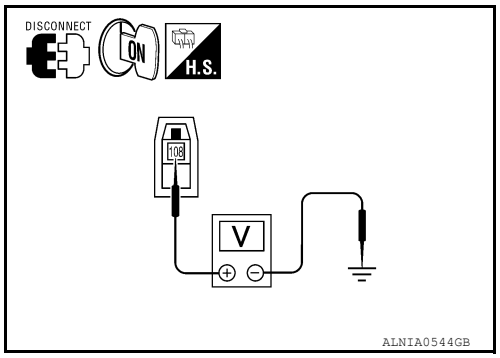
Is inspection result OK?

YES >> GO TO 2
NO >> Repair malfunctioning parts.

2.CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect AV control unit connector M71.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M71 terminal 108 and ground.

108 - Ground : Approx. 5 V



Is voltage approximately 5 volts?

YES >> Replace sattelite radio antenna. Refer to AV-435, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

U1300 AV COMM CIRCUIT

Description

INFOID:0000000007347884

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

Self-diagnosis results display item

DTC	Display contents of CONSULT	DTC Detection Condition	Possible causes
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	• A/C and AV switch assembly power supply and ground circuit malfunction is detected • A malfunction is detected in communication circuit between AV control unit and A/C and AV switch assembly • A malfunction is detected in communication signal between AV control unit and A/C and AV switch assembly	• A/C and AV switch assembly power supply and ground circuits • Communication circuit between AV control unit and A/C and AV switch assembly

U1310 AV CONTROL UNIT

Description

INFOID:0000000007347885

Replace the AV control unit if this DTC is displayed. Refer to AV-420, "Removal and Installation".

Part name	Description
AV CONTROL UNIT	• It is the master unit of the MULTI AV system and it is connected to each control unit by means of communication. It operates each system according to communication signals from the AV control unit. • AV control unit includes audio function and vehicle information function. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the automatic brightness ON/OFF signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake).

DTC Logic

INFOID:0000000007347886

DTC	Display contents of CONSULT	DTC Detection Condition	Action to take
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit. Refer to AV-420, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT
AV CONTROL UNIT
AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000007347887

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK FUSES

Check that the following AV control unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
AV control unit	19, 69, 71	Battery power	29
	7, 72	Ignition switch ACC or ON	4
	82	Ignition switch ON or START	12

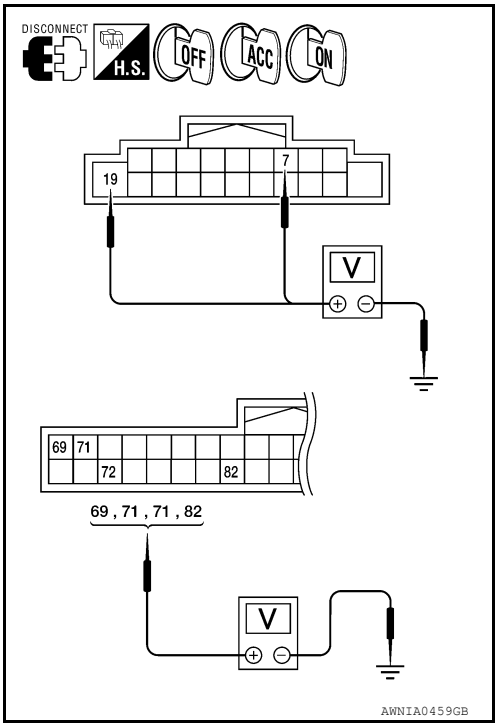
Are the fuses OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect AV control unit connectors M39 and M48.
2. Check voltage between the AV control unit connectors M39 and M48 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M39	7	Ground	0V	Battery voltage	Battery voltage
	19	Ground	Battery voltage	Battery voltage	Battery voltage
M48	69	Ground	Battery voltage	Battery voltage	Battery voltage
	71	Ground	Battery voltage	Battery voltage	Battery voltage
	72	Ground	0V	Battery voltage	Battery voltage
	82	Ground	0V	0V	Battery voltage



Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

1. Ignition OFF.
2. Check continuity between AV control unit harness connector M39, M48 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M39	20	Ground	Yes
M48	68		
	70		
	87		
	89		
	90		

Are the continuity results as specified?

YES >> Inspection End.
NO >> Repair AV control unit ground.

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000007347888

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK FUSES

Check that the following display unit fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Display unit	2	Battery power	29
	3	Ignition switch ACC or ON	4

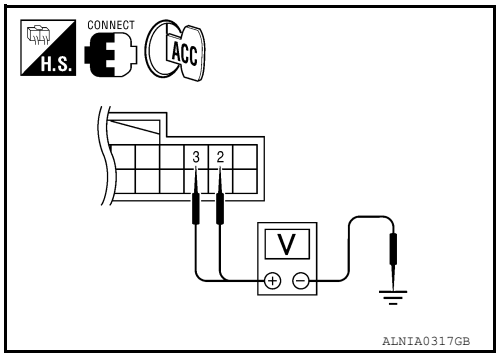
Are the fuses OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch to ACC
2. Check voltage between display unit harness connector M92 and ground.

Connector	Terminal	Ignition switch position	Value (Approx.)
M92	2	ACC	Battery voltage
	3		

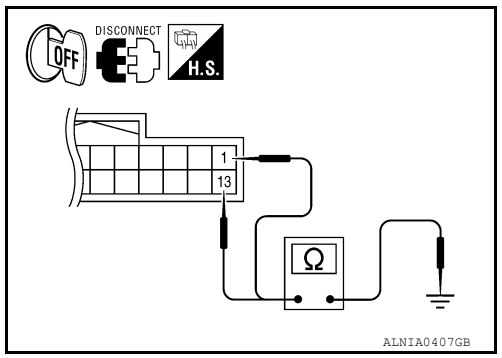


Does specified voltage exist?

YES >> GO TO 3.
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check continuity between display unit harness connector M92 and ground.



(+)		(-)	Continuity
Connector	Terminal		
M92	1	Ground	Yes
	13		

Does continuity exist?

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

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:0000000007347889

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK FUSE

Check that the A/C and AV switch assembly fuse is not blown.

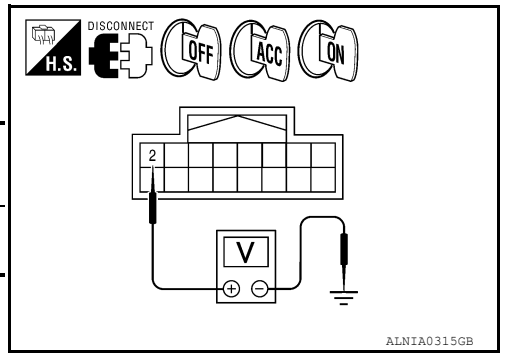
Unit	Terminal	Signal name	Fuse No.
A/C and AV switch assembly	2	Ignition switch ACC or ON	4

Is the fuse OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect A/C and AV switch assembly connector M98.
2. Check voltage between the A/C and AV switch assembly connector M98 and ground.



(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M98	2	Ground	0V	Battery voltage	Battery voltage

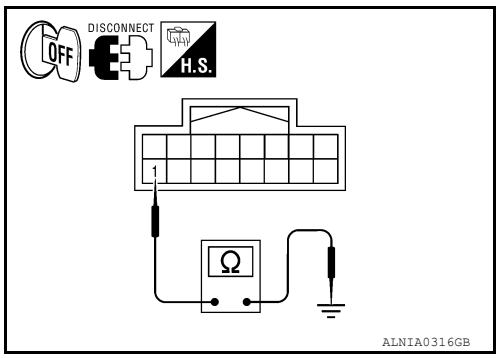
Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

1. Ignition OFF.
2. Check continuity between A/C and AV switch assembly harness connector M98 and ground.

(+)		(-)	Continuity
Connector	Terminal		
M98	1	Ground	Yes



Are the continuity results as specified?

YES >> Inspection End.
NO >> Repair A/C and AV switch assembly ground.

BOSE SPEAKER AMP

BOSE SPEAKER AMP : Diagnosis Procedure

INFOID:0000000007347890

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK FUSE

Check that the BOSE speaker amp. fuse is not blown.

Unit	Terminal	Signal name	Fuse No.
BOSE speaker amp.	1	Battery power	29

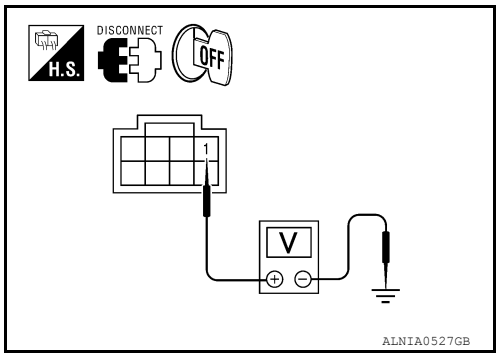
Are the fuses OK?

YES >> GO TO 2
NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp. connector.
3. Check voltage between BOSE speaker amp. harness connector B74 terminal 1 and ground.

(+)		(-)	Voltage (approx.)
Connector	Terminal		
B74	1	Ground	Battery voltage



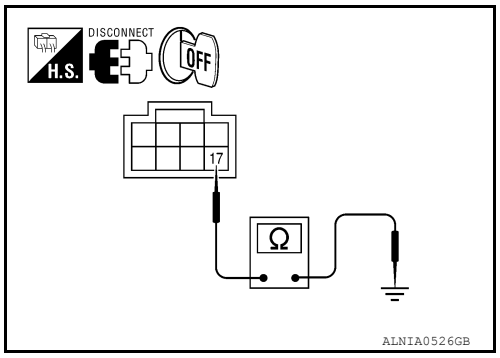
Is battery voltage present?

YES >> GO TO 3
NO >> Check harness between BOSE speaker amp. and fuse.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE speaker amp. connector.
3. Check continuity between BOSE speaker amp. harness connector B74 terminal 17 and ground.

(+)		(-)	Continuity
Connector	Terminal		
B74	17	Ground	Yes



Does continuity exist?

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

SUBWOOFER

SUBWOOFER : Diagnosis Procedure

INFOID:0000000007347891

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK FUSE

Check that the subwoofer fuse is not blown.

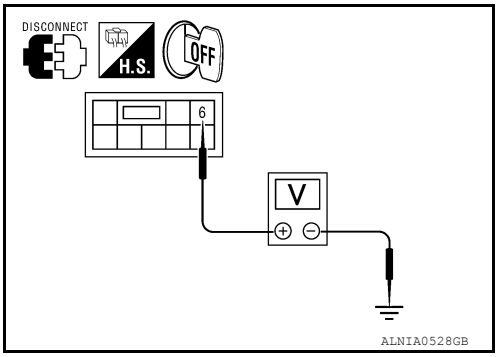
Unit	Terminal	Signal name	Fuse No.
Subwoofer	6	Battery power	17

Is the fuse OK?

YES >> GO TO 2
NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect subwoofer connector.
3. Check voltage between subwoofer harness connector B72 terminal 6 and ground.



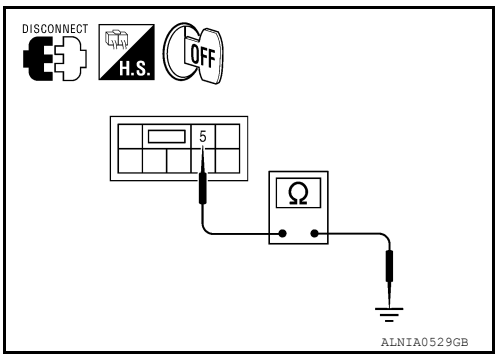
(+)		(-)	Voltage (approx.)
Connector	Terminal		
B72	6	Ground	Battery voltage

Is battery voltage present?

YES >> GO TO 3
NO >> Check harness between subwoofer and fuse.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between subwoofer harness connector B72 terminal 5 and ground.



(+)		(-)	Continuity
Connector	Terminal		
B72	5	Ground	Yes

Does continuity exist?

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

REAR VIEW CAMERA

REAR VIEW CAMERA : Diagnosis Procedure

INFOID:0000000007347892

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK POWER SUPPLY CIRCUIT (REAR VIEW CAMERA SIDE)

NOTE:
Apply parking brakes before proceeding.

1. Turn ignition switch ON.
2. Shift transmission into reverse.
3. Check voltage between rear view camera harness connector D551 terminal 2 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
D551	2	Ground	Reverse	12V

Is voltage reading approximately 12 volts?

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

2.CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect rear view camera and AV control unit connectors.
3. Check continuity between rear view camera harness connector D551 terminal 2 and AV control unit harness connector M48 terminal 84.

Connector	Terminal	Connector	Terminal	Continuity
D551	2	M48	84	Yes

4. Check continuity between rear view camera harness connector D551 terminal 2 and ground.

Connector	Terminal	—	Continuity
D551	2	Ground	No

Are continuity test results as specified?

YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK REVERSE POSITION INPUT SIGNAL

1. Turn ignition switch ON.
2. Shift transmission into reverse.
3. Check voltage between AV control unit harness connector M48 terminal 84 and ground.

(+)		(-)	Transmission position	Value (Approx.)
Connector	Terminal			
M48	84	Ground	Reverse	12V

Is voltage reading approximately 12 volts?

YES >> Replace AV control unit. Refer to AV-420, "Removal and Installation".
NO >> Check harness for open or short between AV control unit and back-up lamp relay.

4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera harness connector.
3. Check continuity between rear view camera harness connector D551 terminal 1 and ground.

Connector	Terminal	—	Continuity
D551	1	Ground	Yes

Does continuity exist?

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

DVD PLAYER

DVD PLAYER : Diagnosis Procedure

INFOID:0000000007347893

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK FUSE

Check that the following fuses of the DVD player are not blown.

Unit	Terminal	Signal name	Fuse No.
DVD player	21	Battery power	29
	24	Ignition switch ACC or ON	4

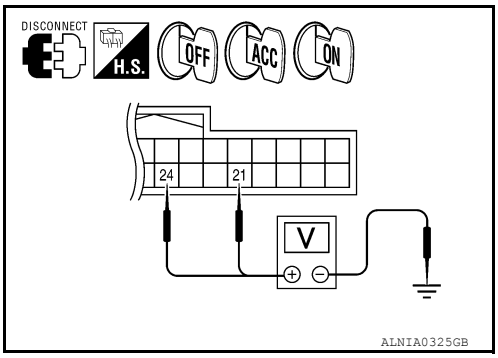
Is the fuse OK?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

1. Disconnect DVD player connector M205.
2. Check voltage between the DVD player connector M205 and ground.

(+)		(-)	OFF	ACC	ON
Connector	Terminal				
M205	21	Ground	Battery voltage	Battery voltage	Battery voltage
	24		0V	Battery voltage	Battery voltage



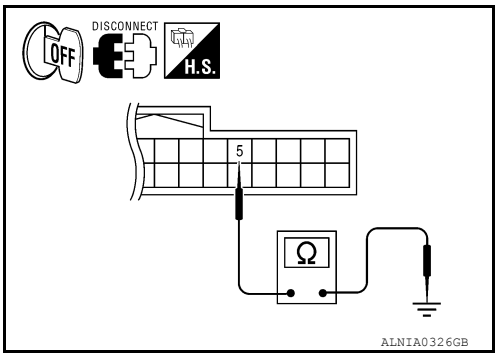
Are the voltage results as specified?

YES >> GO TO 3
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

3.GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between DVD player harness connector M205 terminal 5 and ground.

Connector	Terminal	—	Continuity
M205	5	Ground	Yes



Does continuity exist?

YES >> Inspection End.
NO >> Repair DVD player ground.

VIDEO MONITOR

VIDEO MONITOR : Diagnosis Procedure

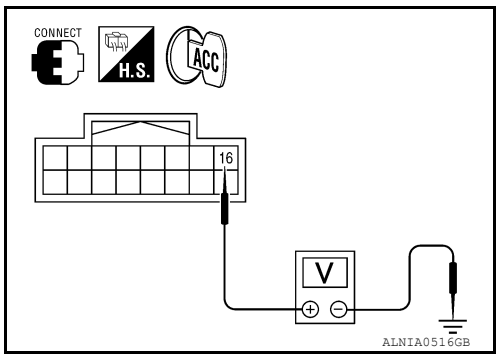
INFOID:0000000007347894

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch to ACC.

2. Check voltage between video monitor harness connector B76 and ground.



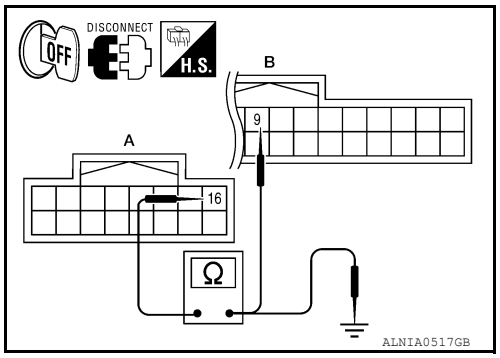
(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
B76	16	Ground	ACC	Battery voltage

Does battery voltage exist?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the video monitor connector B76 and the DVD player connector M205.
3. Check continuity between the video monitor harness connector B76 (A) and the DVD player connector M205 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
B76	16	M205	9	Yes

4. Check continuity between video monitor harness connector B76 (A) and ground.

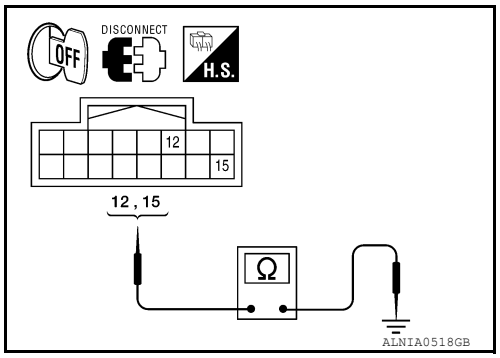
A		—	Continuity
Connector	Terminal		
B76	16	Ground	No

Are continuity results as specified?

YES >> Check DVD player power and ground supply. Refer to AV-339, "DVD PLAYER : Diagnosis Procedure".
NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect video monitor connector.
3. Check continuity between video monitor harness connector B76 and ground.



Connector	Terminal	—	Continuity
B76	12	Ground	Yes
	15		

Does continuity exist?

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

MICROPHONE

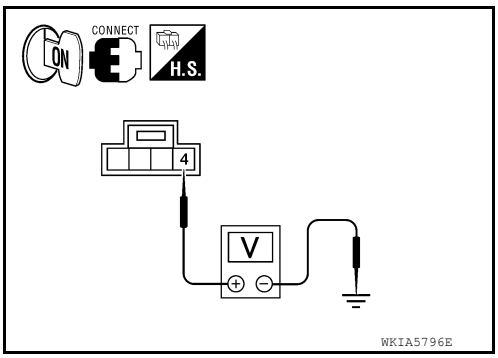
MICROPHONE : Diagnosis Procedure

INFOID:0000000007347895

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK POWER SUPPLY CIRCUIT

Check voltage between microphone harness connector R8 terminal 4 and ground.



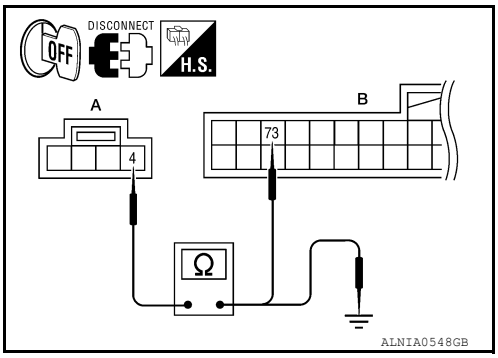
(+)		(-)	Ignition switch position	Value (Approx.)
Connector	Terminal			
R8	4	Ground	ON	5V

Is approximately 5V present?

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

2. CHECK POWER SUPPLY CIRCUIT (CONTINUITY)

1. Turn ignition switch OFF.
2. Disconnect microphone and AV control unit harness connectors.
3. Check continuity between microphone harness connector R8 (A) terminal 4 and AV control unit harness connector M48 (B) terminal 73.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
R8	4	M48	73	Yes

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

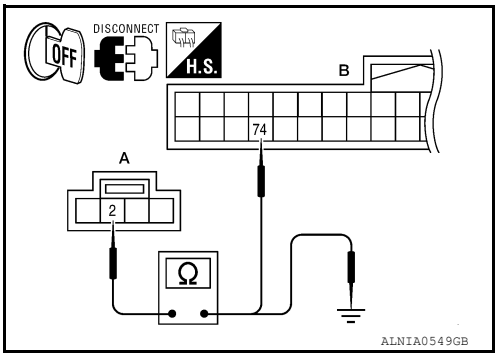
A		—	Continuity
Connector	Terminal		
R8	4	Ground	No

Are the continuity test results as specified?

YES >> Replace the AV control unit. Refer to AV-420, "Removal and Installation".
NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect microphone harness connector R8 and AV control unit harness connector M48.
3. Check continuity between microphone harness connector R8 (A) terminal 2 and AV control unit harness connector M48 (B) terminal 74.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
R8	2	M48	74	Yes

Does continuity exist?

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

RGB (R: RED) SIGNAL CIRCUIT

Description

INFOID:0000000007347896

Transmit the image displayed with audio control unit with RGB signal to the display unit.

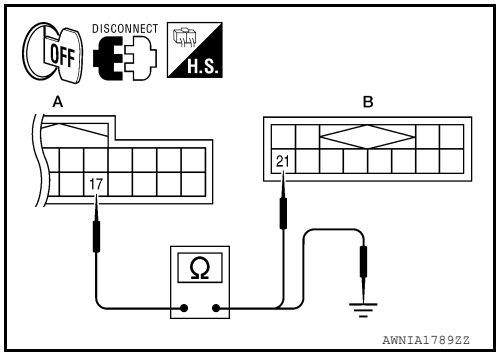
Diagnosis Procedure

INFOID:0000000007347897

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M37.
3. Check continuity between display unit harness connector M92 (A) terminal 17 and AV control unit harness connector M37 (B) terminal 21.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M92	17	M37	21	Yes

4. Check continuity between display unit harness connector M92 (A) terminal 17 and ground.

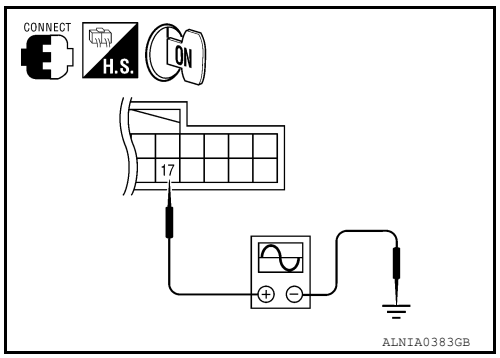
A		—	Continuity
Connector	Terminal		
M92	17	Ground	No

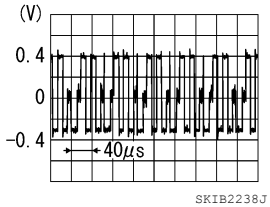
Are the continuity results as specified?

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

2.CHECK RGB (R: RED) SIGNAL

1. Connect display unit connector M92 and AV control unit connector M37.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M92 terminal 17 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M92	17	Ground	Receive audio signal	

Are the voltage readings as specified?

YES >> Replace display unit. Refer to AV-422, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

RGB (G: GREEN) SIGNAL CIRCUIT

Description

INFOID:0000000007347898

Transmit the image displayed with AV control unit with RGB signal to the display unit.

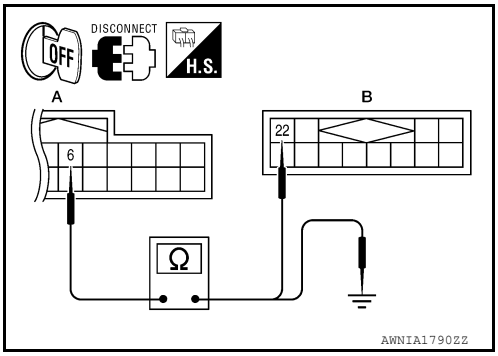
Diagnosis Procedure

INFOID:0000000007347899

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M37.
3. Check continuity between display unit harness connector M92 (A) terminal 6 and AV control unit harness connector M37 (B) terminal 22.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M92	6	M37	22	Yes

4. Check continuity between display unit harness connector M92 (A) terminal 6 and ground.

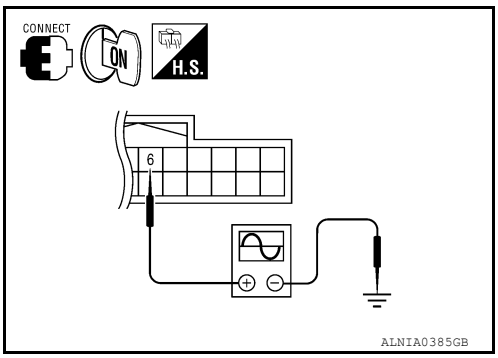
A		—	Continuity
Connector	Terminal		
M92	6	Ground	No

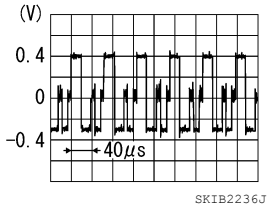
Are the continuity results as specified?

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

2.CHECK RGB (G: GREEN) SIGNAL

1. Connect display unit connector M92 and AV control unit connector M37.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M92 terminal 6 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M92	6	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-422, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

RGB (B: BLUE) SIGNAL CIRCUIT

Description

INFOID:0000000007347900

Transmit the image displayed with AV control unit with RGB signal to the display unit.

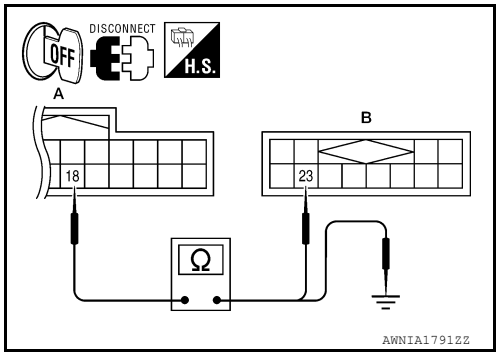
Diagnosis Procedure

INFOID:0000000007347901

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

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

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M37.
3. Check continuity between display unit harness connector M92 (A) terminal 18 and AV control unit harness connector M37 (B) terminal 23.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M92	18	M37	23	Yes

4. Check continuity between display unit harness connector M92 (A) terminal 18 and ground.

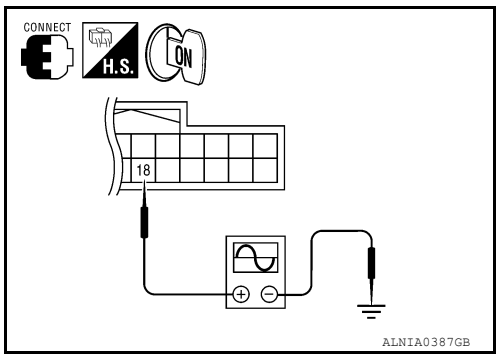
A		—	Continuity
Connector	Terminal		
M92	18	Ground	No

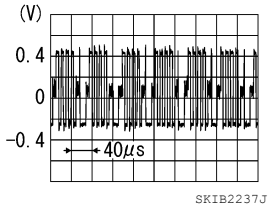
Are continuity results as specified?

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

2. CHECK RGB (B: BLUE) SIGNAL

1. Connect display unit connector M92 and AV control unit connector M37.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M92 terminal 18 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M92	18	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-422, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

RGB SYNCHRONIZING SIGNAL CIRCUIT

Description

INFOID:0000000007347902

Transmit the RGB synchronizing signal to the display unit so as to synchronize the RGB image displayed with AV control unit.

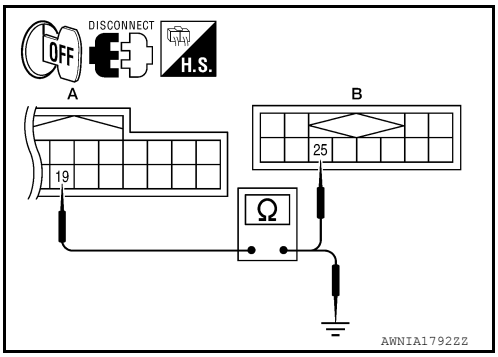
Diagnosis Procedure

INFOID:0000000007347903

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK CONTINUITY RGB SYNCHRONIZING SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M37.
3. Check continuity between display unit harness connector M92 (A) terminal 19 and AV control unit harness connector M37 (B) terminal 25.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M92	19	M37	25	Yes

4. Check continuity between display unit harness connector M92 (A) terminal 19 and ground.

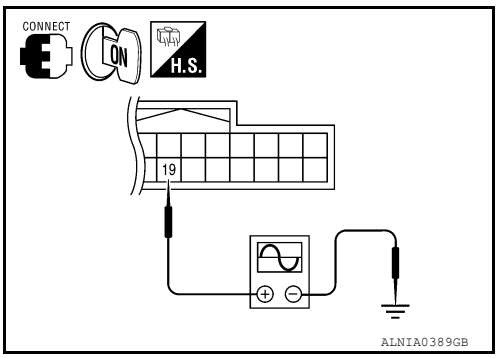
A		—	Continuity
Connector	Terminal		
M92	19	Ground	No

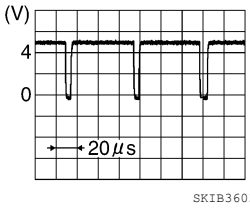
Are continuity results as specified?

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

2.CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M92 and AV control unit connector M37.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M92 terminal 19 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M92	19	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-422, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

RGB AREA (YS) SIGNAL CIRCUIT

Description

INFOID:0000000007347904

Transmits the display area of RGB image displayed by AV control unit with RGB area (YS) signal to display unit.

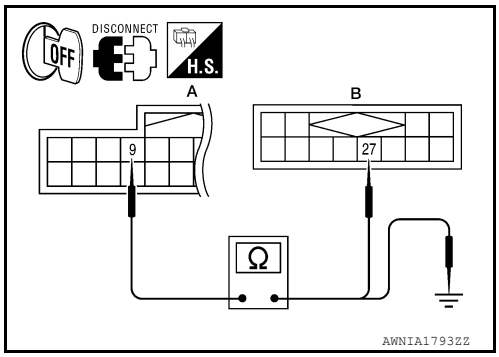
Diagnosis Procedure

INFOID:0000000007347905

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK CONTINUITY RGB AREA (YS) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M37.
3. Check continuity between display unit harness connector M92 (A) terminal 9 and AV control unit harness connector M37 (B) terminal 27.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M92	9	M37	27	Yes

4. Check continuity between display unit harness connector M92 (A) terminal 9 and ground.

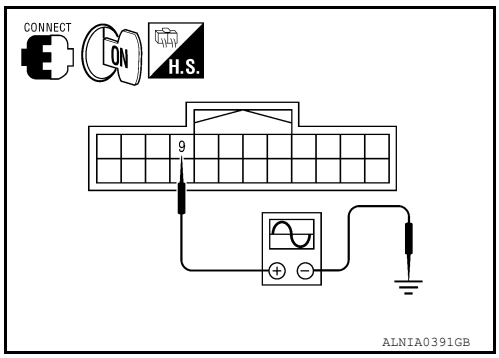
A		—	Continuity
Connector	Terminal		
M92	9	Ground	No

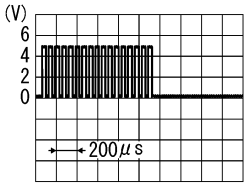
Are continuity results as specified?

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

2.CHECK RGB SYNCHRONIZING SIGNAL

1. Connect display unit connector M92 and AV control unit connector M37.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M92 terminal 9 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M92	9	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace display unit. Refer to AV-422, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Description

INFOID:0000000007347906

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

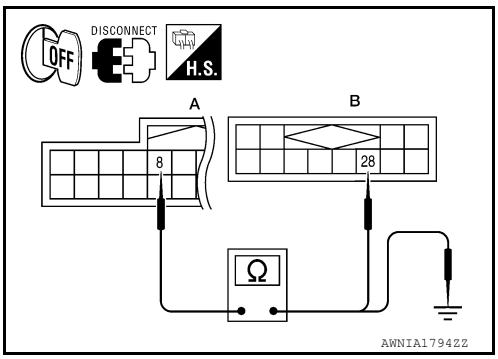
Diagnosis Procedure

INFOID:0000000007347907

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1. CHECK CONTINUITY HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M37.
3. Check continuity between display unit harness connector M92 (A) terminal 8 and AV control unit harness connector M37 (B) terminal 28.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M92	8	M37	28	Yes

4. Check continuity between display unit harness connector M92 (A) terminal 8 and ground.

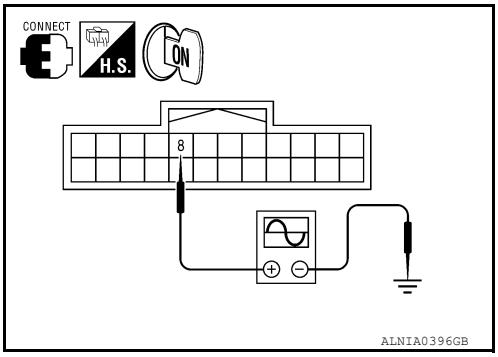
A		—	Continuity
Connector	Terminal		
M92	8	Ground	No

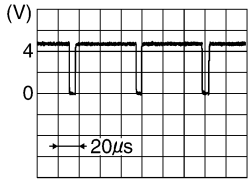
Are continuity results as specified?

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

2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

1. Connect display unit connector M92 and AV control unit connector M37.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M92 terminal 8 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M92	8	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-420, "Removal and Installation".
NO >> Replace display unit. Refer to AV-422, "Removal and Installation".

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Description

INFOID:0000000007347908

In composite image (AUX image, camera image), transmit the vertical synchronizing (VP) signal and horizontal synchronizing (HP) signal from display unit to AV control unit so as to synchronize the RGB images displayed with AV control unit such as the image quality adjusting menu, etc.

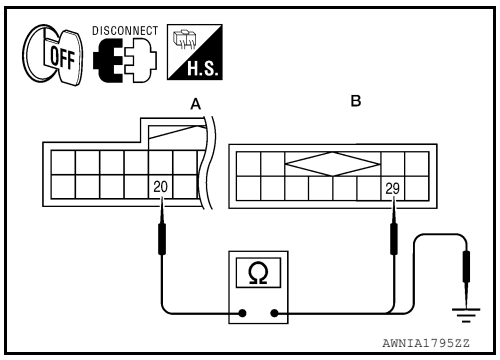
Diagnosis Procedure

INFOID:0000000007347909

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1. CHECK CONTINUITY VERTICAL SINCHRONIZING (VP) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M37.
3. Check continuity between display unit harness connector M92 (A) terminal 20 and AV control unit harness connector M37 (B) terminal 29.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M92	20	M37	29	Yes

4. Check continuity between display unit harness connector M92 (A) terminal 20 and ground.

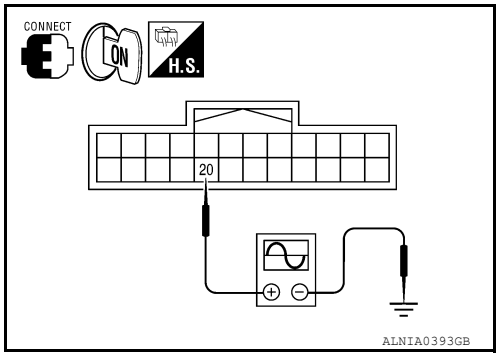
A		—	Continuity
Connector	Terminal		
M92	20	Ground	No

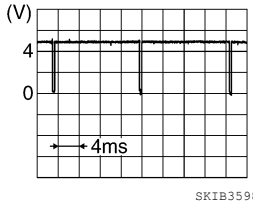
Are continuity results as specified?

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

2. CHECK VERTICAL SINCHRONIZING (VP) SIGNAL

1. Connect display unit connector M92 and AV control unit connector M37.
2. Turn ignition switch ON.
3. Check signal between display unit harness connector M92 terminal 20 and ground.



(+)		(-)	Condition	Reference signal
Connector	Terminal			
M92	20	Ground	Receive audio signal	

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-420, "Removal and Installation".
NO >> Replace display unit. Refer to AV-422, "Removal and Installation".

FRONT DOOR SPEAKER

Description

INFOID:0000000007347910

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the front door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347911

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

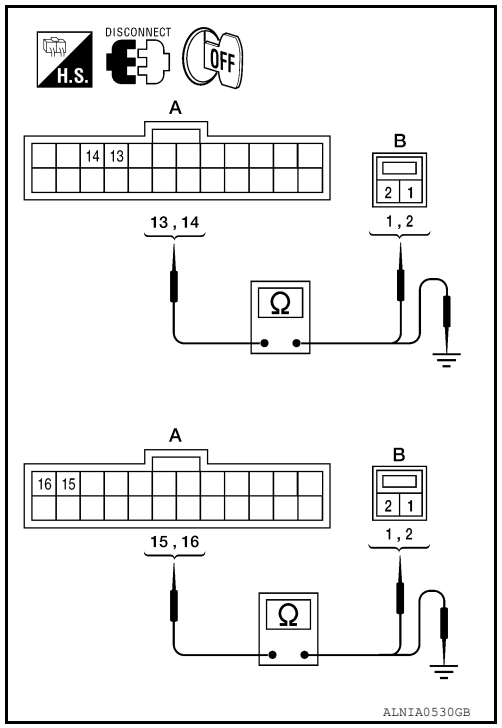
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B75 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connector B75 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B75	13	D12	1	Yes
	14		2	
	15	D112	1	
	16		2	



3. Check continuity between BOSE speaker amp. harness connector B75 (A) and ground.

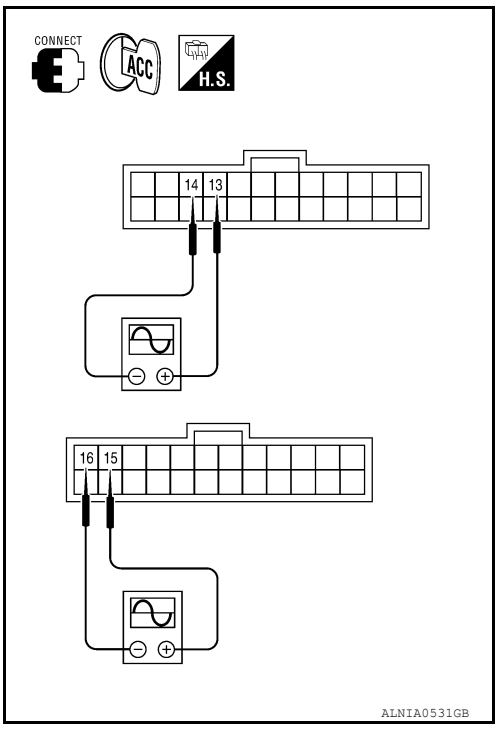
A		—	Continuity
Connector	Terminal		
B75	13	Ground	No
	14		
	15		
	15		

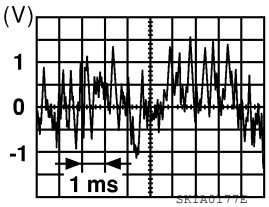
Are continuity test results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.FRONT SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B75 and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connector B75 terminals with CONSULT or oscilloscope.



Connector	Terminal (+)	Terminal (-)	Condition	Reference signal
B75	13	14	Receive audio signal	
	15	16		

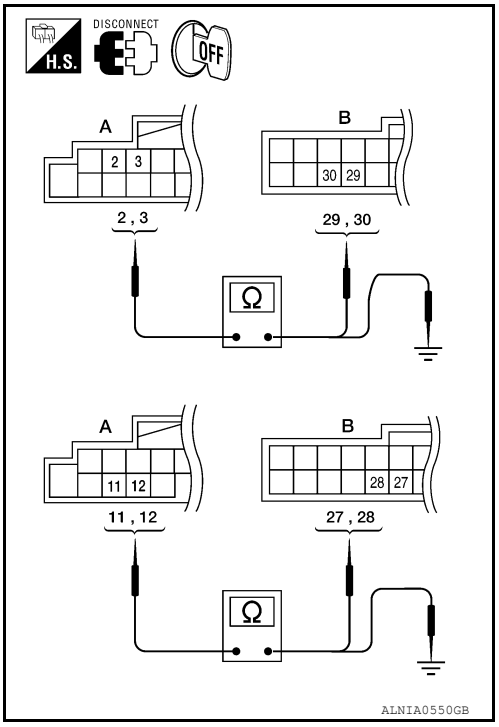
Is audio signal voltage as specified?

YES >> Replace suspect speaker. Refer to AV-424, "Removal and Installation".

NO >> GO TO 4

4. HARNESS CHECK

1. Disconnect AV control unit connector M39 and BOSE speaker amp. connector B75.
2. Check continuity between AV control unit harness connector M39 (A) and BOSE speaker amp. harness connector B75 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M39	2	B75	30	Yes
	3		29	
	11		28	
	12		27	

3. Check continuity between AV control unit harness connector M39 (A) and ground.

A		—	Continuity
Connector	Terminal		
M39	2	Ground	No
	3		
	11		
	12		

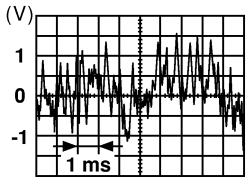
Are continuity test results as specified?

YES >> GO TO 5

NO >> Repair harness or connector.

5. FRONT SPEAKER SIGNAL CHECK

1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M39 terminals with CONSULT or oscilloscope.

Connector	Terminals (+)	Terminals (-)	Condition	Reference signal
M39	2	3	Receive audio signal	
	11	12		

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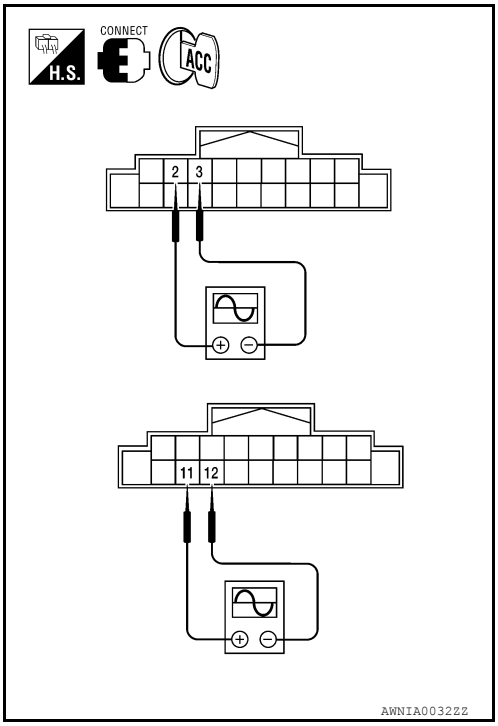
Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to AV-427, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".



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FRONT TWEETER

Description

INFOID:0000000007347912

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the tweeters using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347913

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

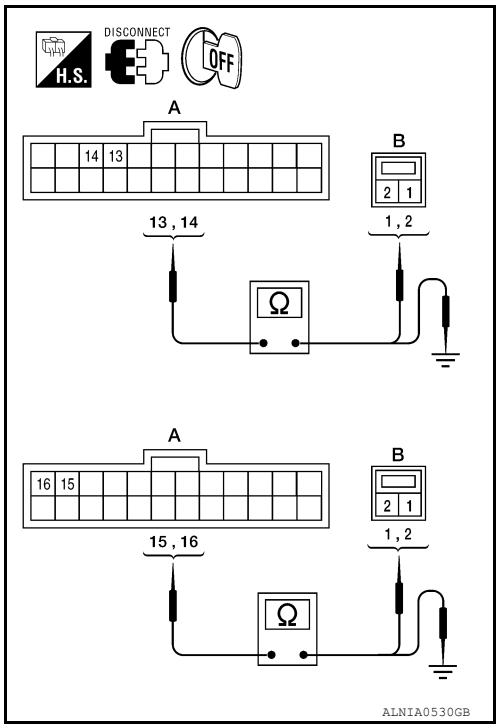
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect BOSE speaker amp. connector B75 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connector B75 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B75	13	M109	1	Yes
	14		2	
	15	M111	1	
	16		2	



3. Check continuity between BOSE speaker amp. harness connector B75 (A) and ground.

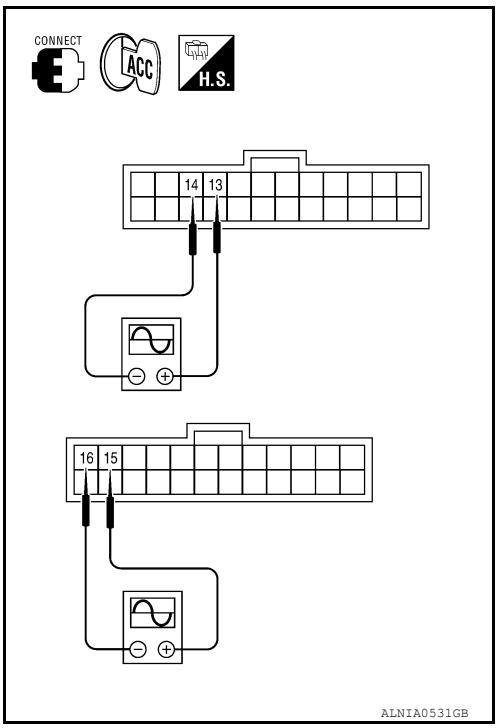
A		—	Continuity
Connector	Terminal		
B75	13	Ground	No
	14		
	15		
	16		

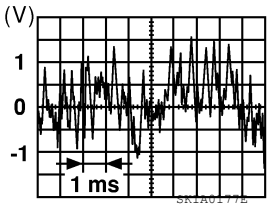
Are continuity test results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.FRONT TWEETER SIGNAL CHECK

1. Connect BOSE speaker amp. connector B75 and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connector B75 terminals with CONSULT or oscilloscope.



Connector	Terminal (+)	Terminal (-)	Condition	Reference signal
B75	13	14	Receive audio signal	
	15	16		

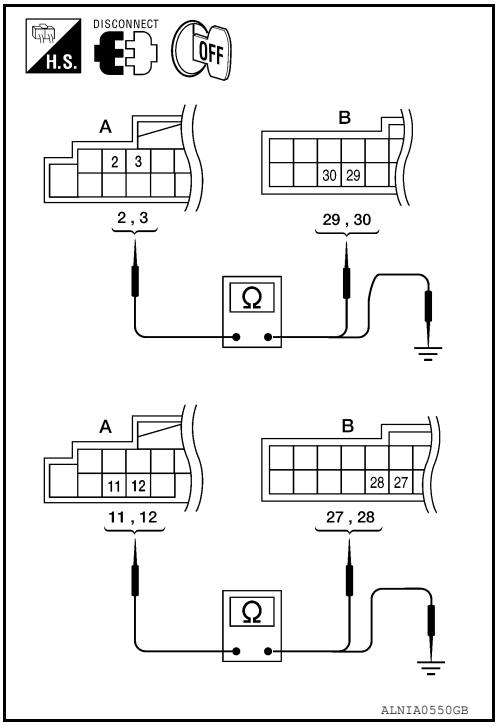
Is audio signal voltage as specified?

YES >> Replace suspect tweeter. Refer to AV-423, "Removal and Installation".

NO >> GO TO 4

4. HARNESS CHECK

1. Disconnect AV control unit connector M39 and BOSE speaker amp. connector B75.
2. Check continuity between AV control unit harness connector M39 (A) and BOSE speaker amp. harness connector B75 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M39	2	B75	30	Yes
	3		29	
	11		28	
	12		27	

3. Check continuity between AV control unit harness connector M39 (A) and ground.

A		—	Continuity
Connector	Terminal		
M39	2	Ground	No
	3		
	11		
	12		

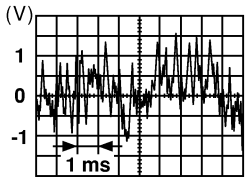
Are continuity test results as specified?

YES >> GO TO 5

NO >> Repair harness or connector.

5. FRONT TWEETER SIGNAL CHECK

1. Connect AV control unit connector and BOSE speaker amp. connector.
2. Turn ignition switch ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M39 terminals with CONSULT or oscilloscope.

Connector	Terminals (+)	Terminals (-)	Condition	Reference signal
M39	2	3	Receive audio signal	
	11	12		

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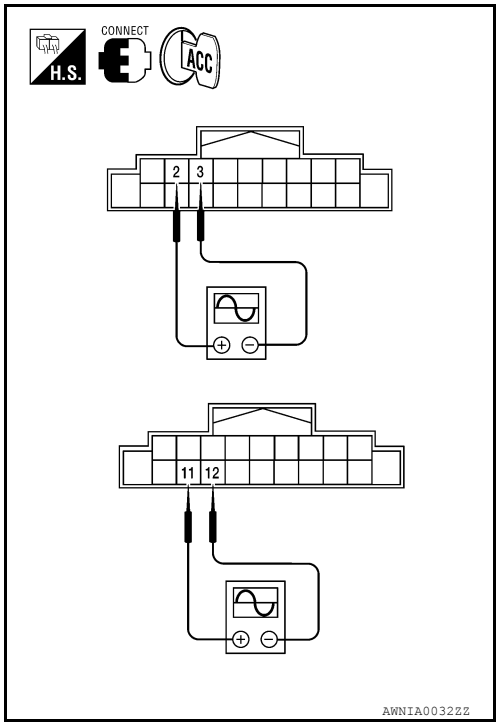

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Are the audio signal voltage readings as specified?

YES >> Replace BOSE speaker amp. Refer to AV-427, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

REAR DOOR SPEAKER

Description

INFOID:0000000007347914

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the rear door speakers using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347915

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

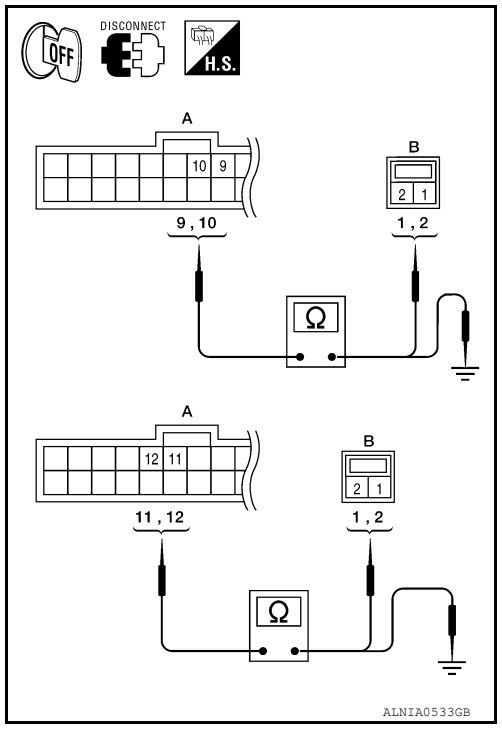
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B75 and suspect speaker connector.
2. Check continuity between BOSE speaker amp. harness connectors B75 (A) and suspect speaker harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B75	9	D207	1	Yes
	10		2	
	11	D307	1	
	12		2	



3. Check continuity between BOSE speaker amp. harness connectors B75 (A) and ground.

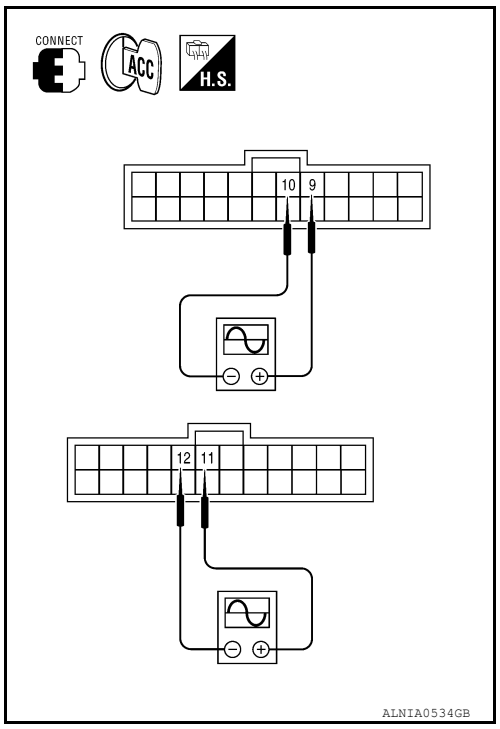
Connector	Terminal	-	Continuity
B75	9	Ground	No
	10		
	11		
	12		

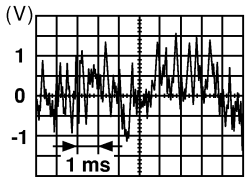
Are the continuity test results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.REAR DOOR SPEAKER SIGNAL CHECK

1. Connect BOSE speaker amp. connectors and suspect speaker connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connectors B75 terminals with CONSULT or oscilloscope.



Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B75	9	10	Receive audio signal	
	11	12		

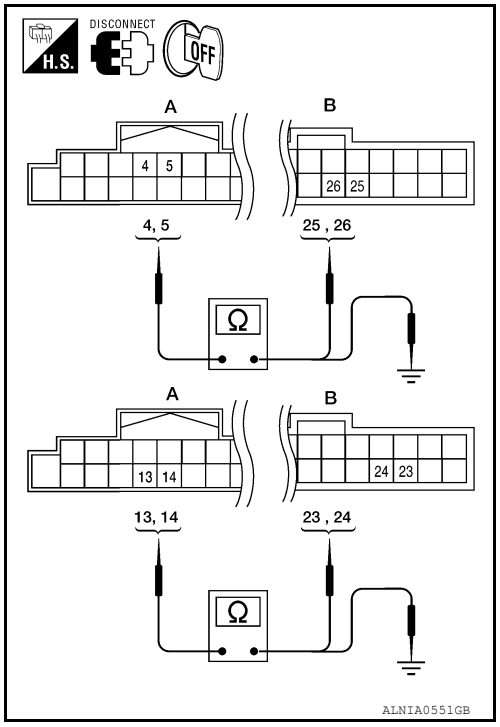
Are audio signal voltage readings as specified?

YES >> Replace suspect speaker. Refer to AV-425, "Removal and Installation of Rear Door Speaker".

NO >> GO TO 4

4. HARNESS CHECK

1. Disconnect AV control unit connector M39 and BOSE speaker amp. connector B75.
2. Check continuity between AV control unit harness connector M39 (A) and BOSE speaker amp. harness connector B75 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M39	4	B75	26	Yes
	5		25	
	13		24	
	14		23	

3. Check continuity between AV control unit harness connector M39 (A) and ground.

A		—	Continuity
Connector	Terminal		
M39	4	Ground	No
	5		
	13		
	14		

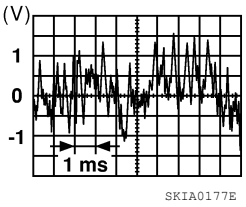
Are the continuity test results as specified?

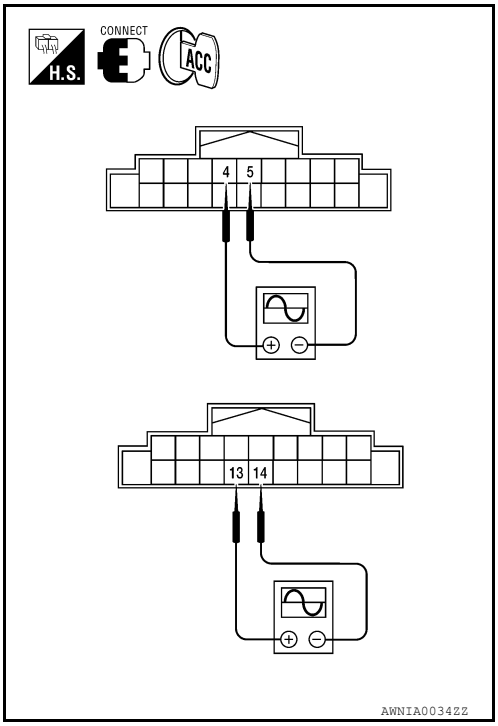
YES >> GO TO 5

NO >> Repair harness or connector.

5. REAR DOOR SPEAKER SIGNAL CHECK

1. Connect AV control unit connector M39 and BOSE speaker amp. connector B75.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M39 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M39	4	5	Receive audio signal	
	13	14		



Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to AV-427, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

REAR TWEETER

Description

INFOID:0000000007347916

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the rear tweeters using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347917

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CONNECTOR CHECK

Check the AV control unit, BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

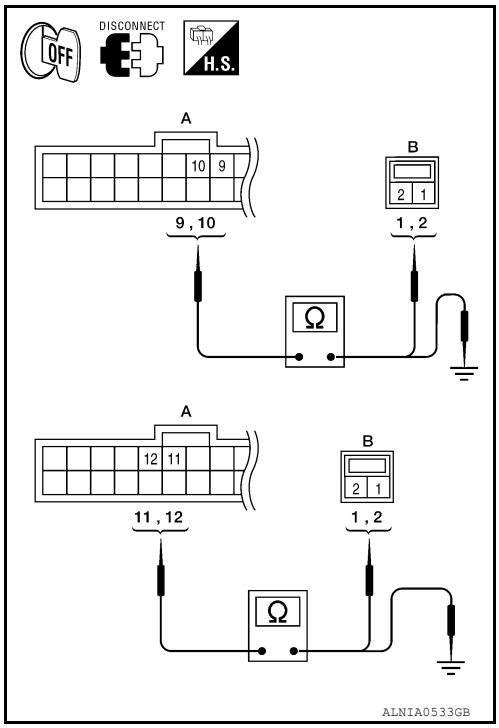
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors B75 and suspect tweeter connector.
2. Check continuity between BOSE speaker amp. harness connectors B75 (A) and suspect tweeter harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
B75	9	D208	1	Yes
	10		2	
	11	D308	1	
	12		2	



3. Check continuity between BOSE speaker amp. harness connectors B75 (A) and ground.

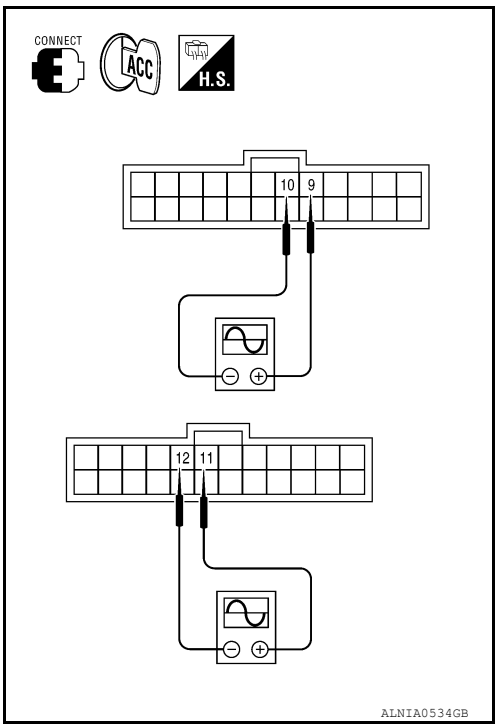
Connector	Terminal	-	Continuity
B75	9	Ground	No
	10		
	11		
	12		

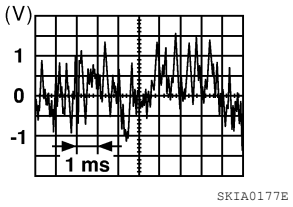
Are the continuity test results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.REAR TWEETER SIGNAL CHECK

1. Connect BOSE speaker amp. connectors and suspect tweeter connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connectors B75 terminals with CONSULT or oscilloscope.



Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B75	9	10	Receive audio signal	
	11	12		

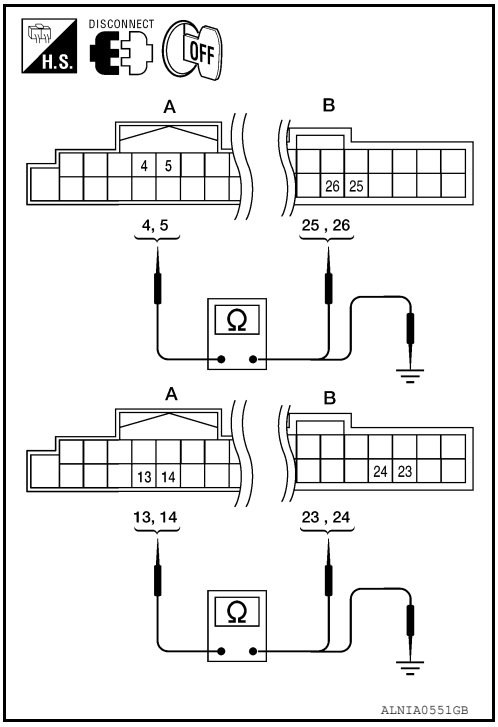
Are audio signal voltage readings as specified?

YES >> Replace suspect tweeter. Refer to AV-425, "Removal and Installation of Rear Door Speaker".

NO >> GO TO 4

4. HARNESS CHECK

1. Disconnect AV control unit connector M39 and BOSE speaker amp. connector B75.
2. Check continuity between AV control unit harness connector M39 (A) and BOSE speaker amp. harness connector B75 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M39	4	B75	26	Yes
	5		25	
	13		24	
	14		23	

3. Check continuity between AV control unit harness connector M39 (A) and ground.

A		—	Continuity
Connector	Terminal		
M39	4	Ground	No
	5		
	13		
	14		

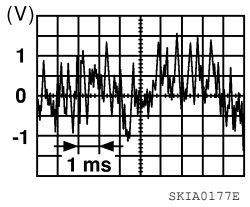
Are the continuity test results as specified?

YES >> GO TO 5

NO >> Repair harness or connector.

5. REAR TWEETER SIGNAL CHECK

1. Connect AV control unit connector M39 and BOSE speaker amp. connector B75.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M39 terminals with CONSULT or oscilloscope.

Connector	Terminals (+)	Terminals (-)	Condition	Reference signal
M39	4	5	Receive audio signal	
	13	14		

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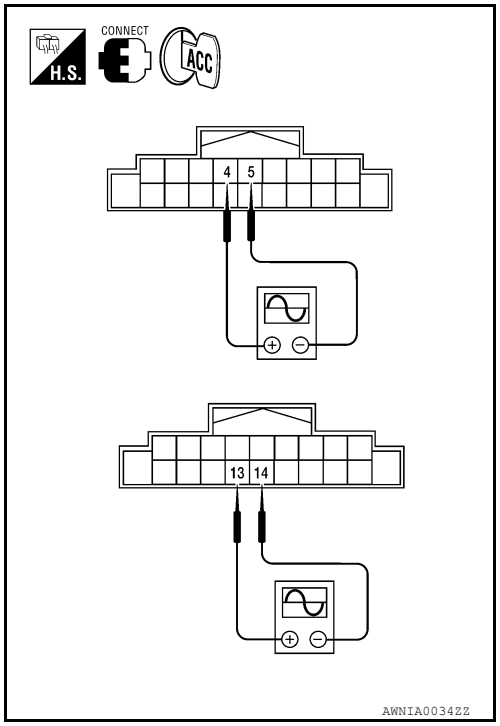

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Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to AV-427, "Removal and Installation".

NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

SUBWOOFER

Description

INFOID:0000000007347918

The AV control unit sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the subwoofer using the audio signal circuits.

Diagnosis Procedure

INFOID:0000000007347919

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

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.VERIFY SUBWOOFER POWER AND GROUND SUPPLY

Check power and ground supply to the subwoofer. Refer to AV-338, "SUBWOOFER : Diagnosis Procedure"

Did the power and ground supply check OK?

YES >> GO TO 3
NO >> Repair harness or connector.

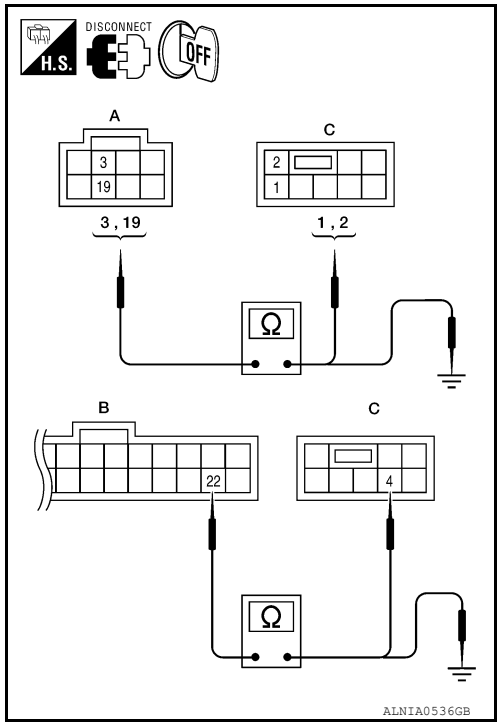
3.HARNESS CHECK

1. Disconnect BOSE speaker amp. connectors and subwoofer connector.
2. Check continuity between BOSE speaker amp. harness connectors B74 (A) and B75 (B) and subwoofer harness connector B72 (C).

Connector	Terminal	Connector	Terminal	Continuity
A: B74	3	C: B72	1	Yes
	19		2	
B: B75	22		4	

3. Check continuity between BOSE speaker amp. harness connector B74 (A) and B75 (B) and ground.

Connector	Terminal	-	Continuity
A: B74	3	Ground	No
	19		
B: B75	22		

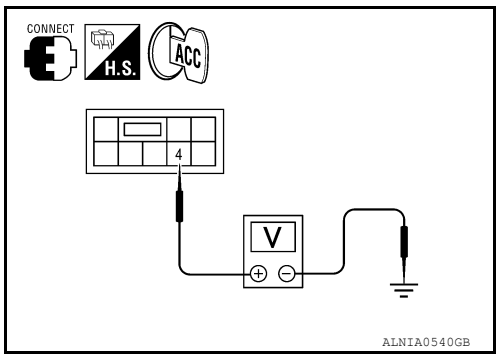


Are the continuity test results as specified?

YES >> GO TO 4
NO >> Repair harness or connector.

4.SUBWOOFER AMP ON SIGNAL CHECK

1. Connect BOSE speaker amp. connector B74.
2. Turn ignition switch to ACC.
3. Push "POWER" switch.
4. Check voltage between subwoofer connector B72 terminal 4 and ground.



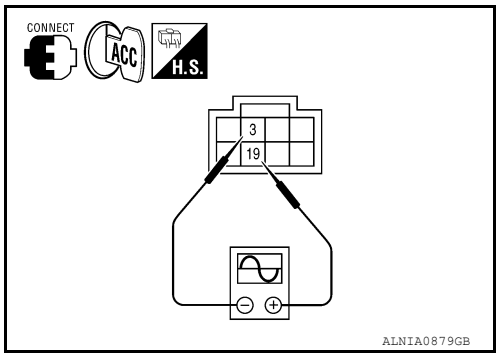
(+)		(-)	Voltage
Connector	Terminal		
B72	4	Ground	Battery voltage

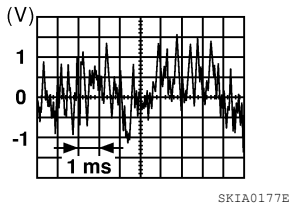
Are the voltage readings as specified?

YES >> GO TO 5
NO >> Replace BOSE speaker amp. Refer to AV-427, "Removal and Installation"

5. SUBWOOFER AUDIO SIGNAL CHECK

1. Connect BOSE speaker amp. connectors and subwoofer connector.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between BOSE speaker amp. harness connector B74 terminals with CONSULT or oscilloscope.



Connector	Terminals		Condition	Reference signal
	(+)	(-)		
B74	19	3	Receive audio signal	

Is the audio signal voltage as specified?

YES >> Replace subwoofer. Refer to AV-428, "Removal and Installation".
NO >> GO TO 6

6. HARNESS CHECK

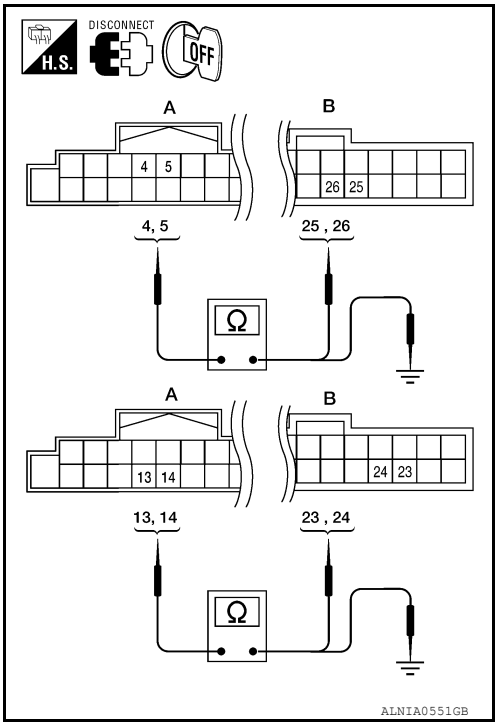
1. Turn ignition switch OFF.

2. Disconnect AV control unit connector M39 and BOSE speaker amp. connector B75.
3. Check continuity between AV control unit harness connector M39 (A) and BOSE speaker amp. harness connector B75 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M39	4	B75	26	Yes
	5		25	
	13		24	
	14		23	

4. Check continuity between AV control unit harness connector M39 (A) and ground.

A		—	Continuity
Connector	Terminal		
M39	4	Ground	No
	5		
	13		
	14		

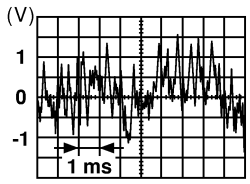


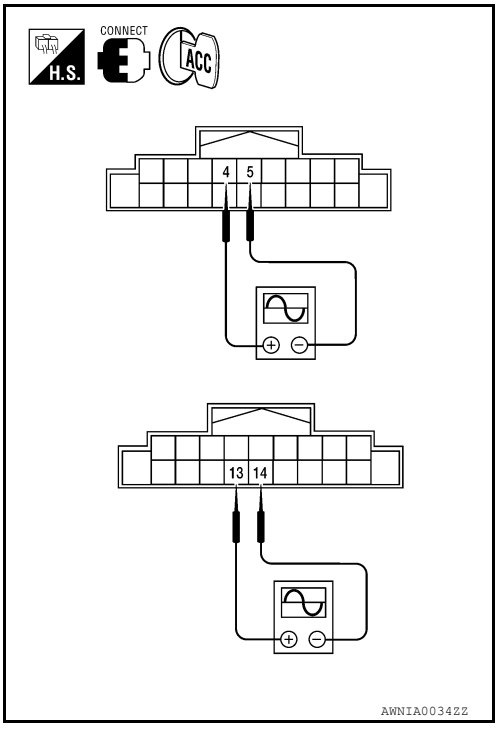
Are the continuity test results as specified?

YES >> GO TO 7
NO >> Repair harness or connector.

7. BACK DOOR SPEAKER SIGNAL CHECK

1. Connect AV control unit connector M39 and BOSE speaker amp. connector B75.
2. Turn ignition switch to ACC.
3. Push “POWER” switch.
4. Check the signal between AV control unit harness connector M39 terminals with CONSULT or oscilloscope.

Connector	Terminals		Condition	Reference signal
	(+)	(-)		
M39	4	5	Receive audio signal	
	13	14		



Is the audio signal voltage reading as specified?

YES >> Replace BOSE speaker amp. Refer to AV-427, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

AMP ON SIGNAL CIRCUIT

Description

INFOID:0000000007347920

When the audio system is turned on, a voltage signal is supplied from the AV control unit to the BOSE speaker amp. When this signal is received, the BOSE speaker amp. will turn on.

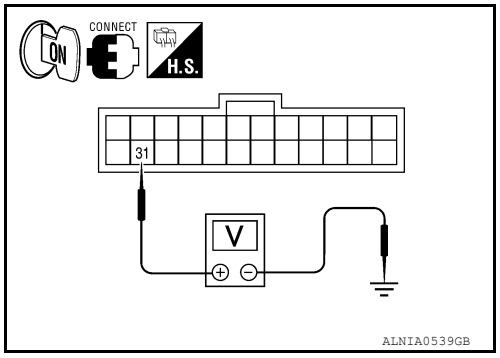
Diagnosis Procedure

INFOID:0000000007347921

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1. CHECK AMP ON SIGNAL (BOSE SPEAKER AMP)

1. Turn audio system ON.
2. Check voltage between BOSE speaker amp. harness connector B75 terminal 31 and ground.



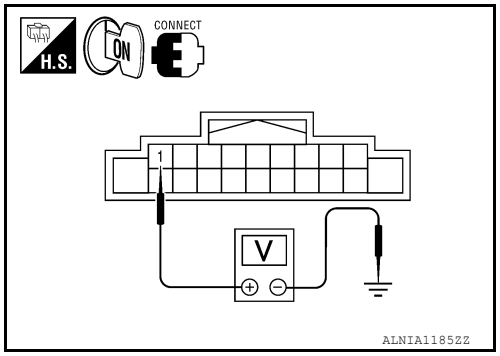
(+)		(-)	Value (Approx.)
Connector	Terminal		
B75	31	Ground	Battery Voltage

Is battery voltage present?

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

2. CHECK AMP ON SIGNAL (AV CONTROL UNIT)

Check voltage between AV control unit harness connector M39 terminal 1 and ground.



(+)		(-)	Value (Approx.)
Connector	Terminal		
M39	1	Ground	Battery Voltage

Is battery voltage present?

YES >> Repair harness or connector.
NO >> Replace AV control unit. Refer to AV-420, "Removal and Installation".

STEERING SWITCH

Description

INFOID:0000000007347922

When one of the steering wheel audio control switches is pushed, the resistance in the steering wheel audio control switch circuit changes depending on which button is pushed.

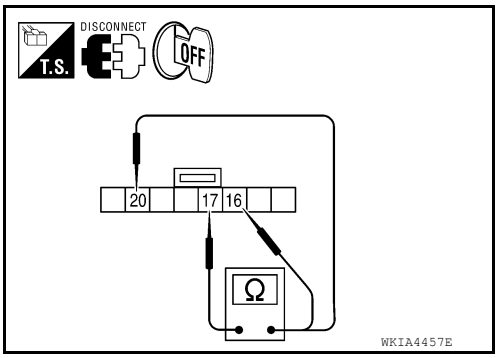
Diagnosis Procedure

INFOID:0000000007347923

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect steering wheel audio control switch connector M102.
3. Check resistance between steering switch connector terminals.



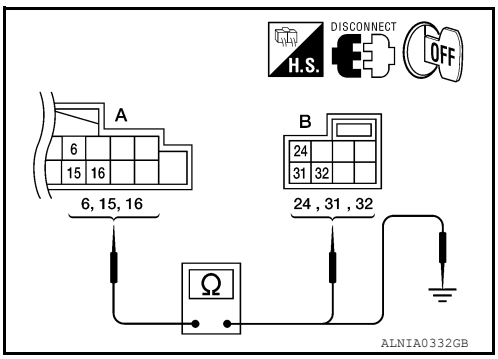
Terminal		Signal name	Condition	Resistance (Ω) (Approx.)
16	17	Seek (down)	Depress ▽ switch.	165
		Volume (down)	Depress VOL down switch.	652
		Mode/End	Depress MODE switch.	0
20	17	Seek (up)	Depress △ switch.	165
		Volume (up)	Depress VOL up switch.	652
		Phone/Send	Depress switch.	0

Do the steering wheel audio control switches check OK?

YES >> GO TO 2
NO >> Replace steering wheel audio control switch. Refer to AV-436, "Removal and Installation".

2.CHECK HARNESS

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M39 and spiral cable connector M30.
3. Check continuity between AV control unit harness connector M39 (A) and spiral cable harness connector M30 (B).



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M39	6	M30	24	Yes
	15		31	
	16		32	

4. Check continuity between AV control unit connector M39 (A) and ground.

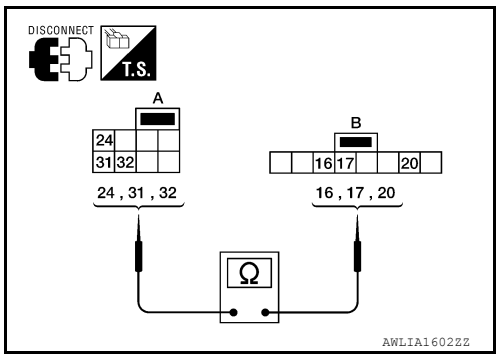
A		—	Continuity
Connector	Terminal		
M39	6	Ground	No
	15		
	16		

Are the continuity results as specified?

YES >> GO TO 3
NO >> Repair harness.

3. SPIRAL CABLE CHECK

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



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

Does continuity exist?

YES >> Inspection End.
NO >> Replace spiral cable. Refer to SR-7, "Removal and Installation".

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000007347924

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

Diagnosis Procedure

INFOID:0000000007347925

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.VERIFY MICROPHONE POWER AND GROUND SUPPLY

Check power and ground supply to the microphone. Refer to AV-341, "MICROPHONE : Diagnosis Procedure".

Did the power and ground supply check OK?

YES >> GO TO 2
NO >> • Check connector housings for disconnected or loose terminals.
• Repair harness or connector.

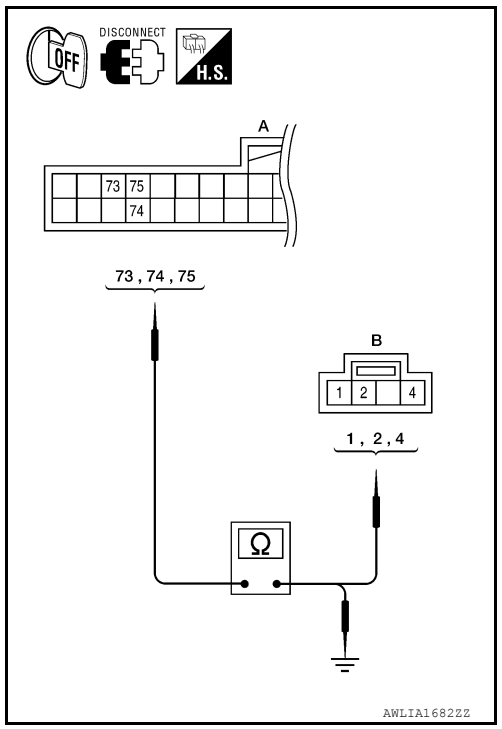
2.CHECK HARNESS BETWEEN AV CONTROL UNIT AND MICROPHONE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and microphone connector.
3. Check continuity between AV control unit harness connector M48 (A) and microphone harness connector R8 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M48	75	R8	1	Yes
	74		2	
	73		4	

4. Check continuity between AV control unit harness connector M48 (A) and ground.

A		—	Continuity
Connector	Terminal		
M48	75	Ground	No
	74		
	73		

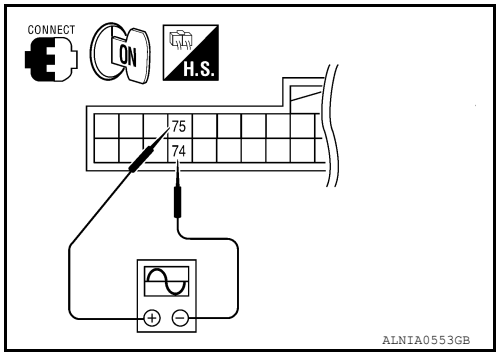


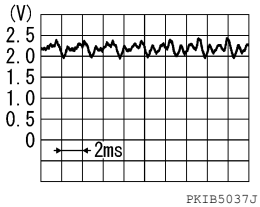
Are the continuity results as specified?

YES >> GO TO 3
NO >> Repair harness or connector.

3.CHECK MICROPHONE SIGNAL

Check signal between AV control unit harness connector M48 terminals 74 and 75 with CONSULT or oscilliscope.



Connector	(+) Terminal	(-) Terminal	Reference signal
M48	75	74	While speaking into MIC 

Are voltage readings as specified?

YES >> Replace AV control unit. Refer to AV-420, "Removal and Installation".
NO >> Replace microphone. Refer to AV-437, "Removal and Installation".

REAR VIEW CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000007347926

Rear view camera signals are transmitted from the rear view camera to the display unit using the camera signal circuits.

Diagnosis Procedure

INFOID:0000000007347927

Regarding Wiring Diagram information, refer to AV-385, "Wiring Diagram - With Navigation System".

1.CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

NOTE:
Apply parking brakes before proceeding.

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and rear view camera connector D551.
3. Check continuity between display unit harness connector M92 terminals 12, 14, 24 and rear view camera harness connector D551 terminals 3, 5 and 6.

12 - 6	**: Continuity should exist.**
14 - 5	**: Continuity should exist.**
24 - 3	**: Continuity should exist.**

4. Check continuity between display unit harness connector M92 terminals 14, 12, 24 and ground.

12, 14, 24 - Ground	**: Continuity should not exist.**

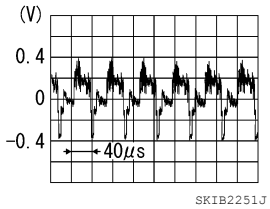
Is inspection result OK?

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

2.CHECK CAMERA IMAGE SIGNAL

1. Connect display unit connector M92 and rear view camera connector D551.
2. Turn ignition switch ON.
3. Shift transmission into reverse.
4. Check signal between display unit harness connector M92 terminals 12 and 14.

12 - 14 **:**



Is inspection result OK?

YES >> Replace display unit. Refer to AV-422, "Removal and Installation".
NO >> Replace rear view camera. Refer to AV-438, "Removal and Installation".

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

Reference Value

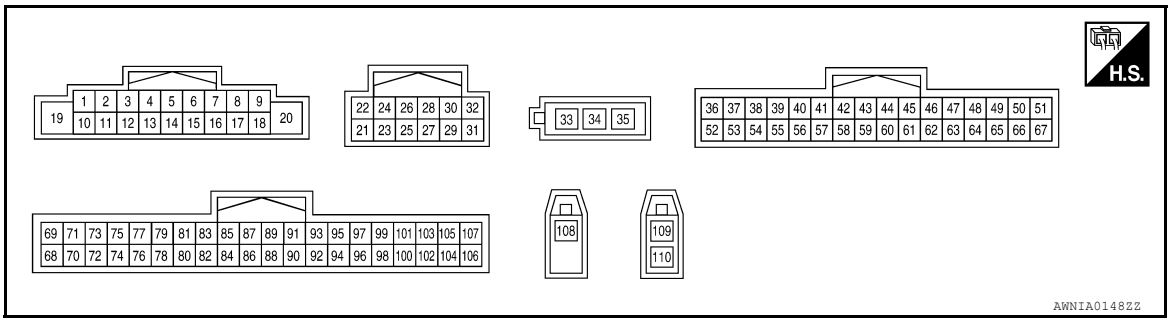
INFOID:0000000007347928

VALUES ON THE DIAGNOSIS TOOL

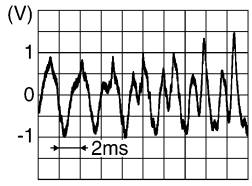
CONSULT data monitor item

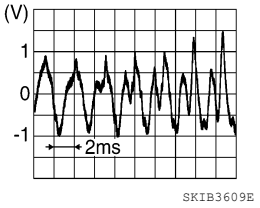
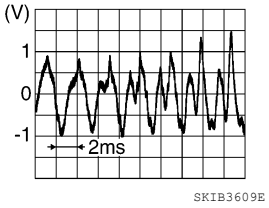
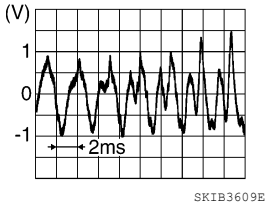
Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	ON	Vehicle speed >0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed =0 km/h (0 MPH)	
PKB SIG	ON	Parking brake is applied.	Changes in indication may be delayed. This is normal.
	OFF	Parking brake is released.	
ILLUM SIG	ON	Block the light beam from the auto light optical sensor when the light SW is ON.	—
	OFF	Expose the auto light optical sensor to light when the light SW is OFF or ON.	
IGN SIG	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
REV SIG	ON	Selector lever in R position	Changes in indication may be delayed. This is normal.
	OFF	Selector lever in any position other than R	

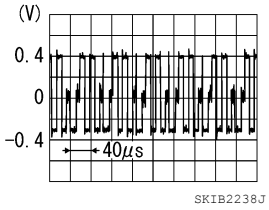
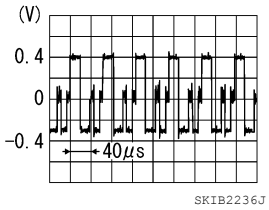
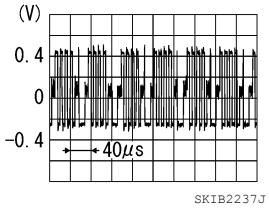
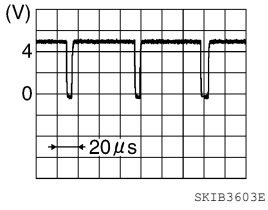
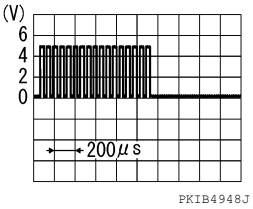
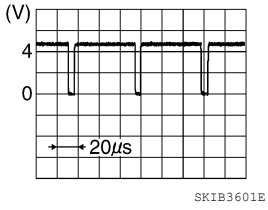
TERMINAL LAYOUT

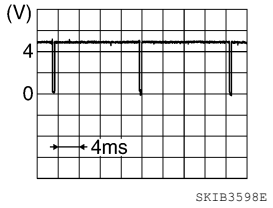
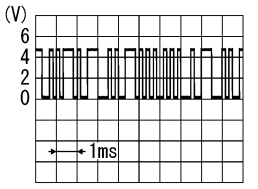
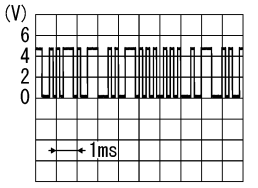
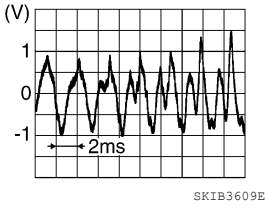
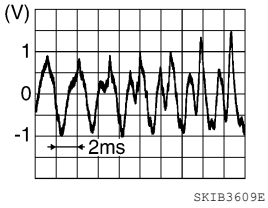
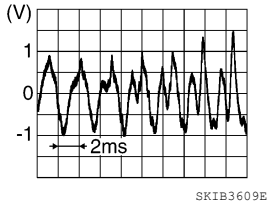


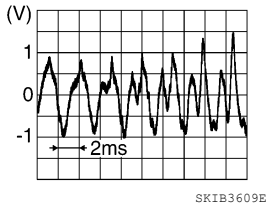
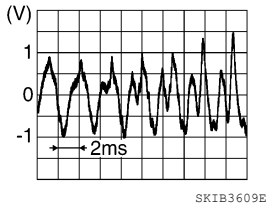
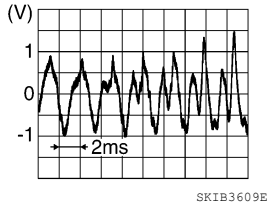
PHYSICAL VALUES

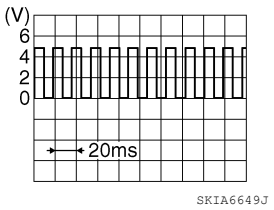
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (SB)	Ground	Amp. ON signal	Output	Ignition switch ON	—	Battery voltage
2 (BR)	3 (B)	Pre-amp. audio signal front LH	Output	Ignition switch ON	Audio output	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
4 (BR/W)	5 (BR/Y)	Pre-amp. audio signal rear LH	Output	Ignition switch ON	Audio output	 SKIB3609E
6 (Y)	15 (L)	Steering switch signal A	Input	Ignition switch ON	Pressing switch	0V
					Pressing △ switch	0.75V
					Pressing VOL up switch	2V
					Except for above	5V
7 (G/Y)	Ground	ACC power supply	Input	Ignition switch ACC	–	Battery voltage
9 (V)	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0V
					Lighting switch is ON.	Battery voltage
11 (G/Y)	12 (G/O)	Pre-amp. audio signal front RH	Output	Ignition switch ON	Audio output	 SKIB3609E
13 (G/R)	14 (B)	Audio signal rear RH	Output	Ignition switch ON	Audio output	 SKIB3609E
15 (L)	Ground	Steering switch signal ground	—	Ignition switch ON	—	0V
16 (G)	15 (L)	Steering switch signal B	Input	Ignition switch ON	Pressing MODE switch	0V
					Pressing ▽ switch	0.75V
					Pressing VOL down switch	2V
					Except for above	5V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
21 (L)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2238J
22 (G)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2236J
23 (Y)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting “Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2237J
25 (R)	Ground	RGB synchronizing signal	Output	Ignition switch ON	—	 SKIB3603E
27 (G)	Ground	RGB area (YS) signal	Output	Ignition switch ON	At RGB image displayed	5V
					At rear view camera image displayed	 PKIB4948J
28 (B)	Ground	Horizontal synchronizing (HP) signal	Input	Ignition switch ON	—	 SKIB3601E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
29 (W)	Ground	Vertical synchronizing (VP) signal	Input	Ignition switch On	—	 SKIB3598E
30 (V)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness	 PKIB5039J
31 (LG)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness	 PKIB5039J
34	—	Antenna main	—	—	—	—
35	—	Antenna B+	—	—	—	—
42 (W)	58 (B)	DVD audio signal LH	Input	Ignition switch ON	When DVD player is operating	 SKIB3609E
43 (R)	59 (G)	DVD audio signal RH	Input	Ignition switch ON	When DVD player is operating	 SKIB3609E
48 (SB)	Ground	CD/DVD eject signal	Input	—	Pressing the eject switch	0V
					Except for above	3.3V
50 (B)	51 (R)	AUX jack audio signal LH	Input	Ignition switch ON	When AUX mode is selected	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
61 (G)	45 (W)	Headphone LH audio signal	Output	Ignition switch ON	When DVD player is operating	 SKIB3609E
62 (R)	46 (B)	Headphone RH audio signal	Output	Ignition switch ON	When DVD player is operating	 SKIB3609E
65 (GR)	Ground	A/C and AV switch assembly ground	—	Ignition switch ON	—	0V
66 (W)	51 (R)	AUX jack audio signal RH	Input	Ignition switch ON	When AUX mode is selected	 SKIB3609E
68 (B)	Ground	Ground	—	Ignition switch ON	—	0V
69 (R/B)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
70 (B)	Ground	Ground	—	Ignition switch ON	—	0V
71 (R/B)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
72 (G/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
73 (G)	Ground	MIC power	Output	Ignition switch ON	—	5V
74	—	Shield	—	—	—	—
75 (R)	—	MIC signal	Input	Ignition switch ON	—	—
76	—	Shield	—	—	—	—
82 (W/G)	Ground	IGN ON or START power supply	Input	Ignition switch ON or START	—	Battery voltage

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
83 (G)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake ON	0V
					Parking brake OFF	Battery voltage
84 (W)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
					Other than R position	0V
85 (LG)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	 SKIA6649J
87 (B)	—	Ground	Input	—	—	0V
89 (B)	—	Ground	Input	—	—	0V
90 (B)	—	Ground	Input	—	—	0V
95 (L)	—	AV communication signal 2 (H)	Input/ Output	—	—	—
96 (P)	—	AV communication signal 2 (L)	Input/ Output	—	—	—
97 (L)	—	AV communication signal 1 (H)	Input/ Output	—	—	—
98 (P)	—	AV communication signal 1 (L)	Input/ Output	—	—	—
99 (L)	—	CAN–H	Input/ Output	—	—	—
100 (P)	—	CAN–L	Input/ Output	—	—	—
108	—	Satellite antenna signal	Input	—	—	—
109	—	GPS antenna	Input	—	—	—
110	—	GPS antenna	Input	—	—	—

DTC Index

INFOID:0000000007347929

Self-diagnosis results display item

Error item	Refer to
CAN COMM CIRCUIT [U1000]	AV-309, "DTC Logic"
CONTROL UNIT (CAN) [U1010]	AV-310, "DTC Logic"
Control Unit FLASH-ROM [U1200]	AV-311, "DTC Logic"
Gyro NO CONN [U1201]	AV-312, "DTC Logic"
CAN CONT [U1216]	AV-317, "DTC Logic"
BLUETOOTH CONN [U1217]	AV-318, "DTC Logic"
HDD CONN [U1218]	AV-319, "DTC Logic"
HDD READ [U1219]	AV-320, "DTC Logic"

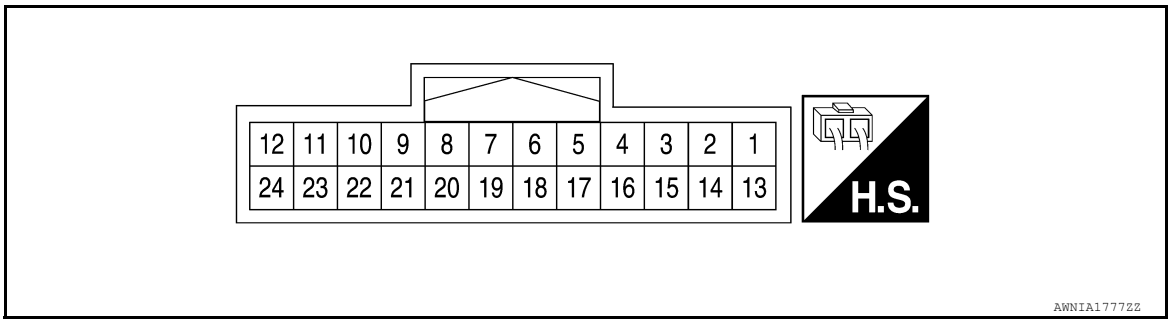
Error item	Refer to
XM SERIAL COMM [U1220]	AV-321, "DTC Logic"
HDD WRITE [U121A]	AV-322, "DTC Logic"
HDD COMM [U121B]	AV-323, "DTC Logic"
HDD ACCESS [U121C]	AV-324, "DTC Logic"
DSP CONN [U121D]	AV-325, "DTC Logic"
DSP COMM [U121E]	AV-326, "DTC Logic"
INTERNAL COMM [U121F]	AV-327, "DTC Logic"
GPS COMM [U1204]	AV-313, "DTC Logic"
GPS ROM [U1205]	AV-314, "DTC Logic"
GPS RAM [U1206]	AV-315, "DTC Logic"
GPS RTC [U1207]	AV-316, "DTC Logic"
FRONT DISP CONN [U1243]	AV-328, "DTC Logic"
GPS ANTENNA CONN [U1244]	AV-330, "DTC Logic"
XM ANTENNA CONN [U1258]	AV-331, "DTC Logic"
AV COMM CIRCUIT [U1300]	AV-332, "Description"
CONTROL UNIT (AV) [U1310]	AV-333, "DTC Logic"

DISPLAY UNIT

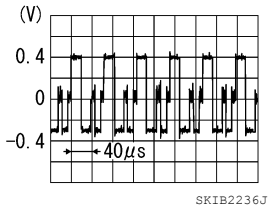
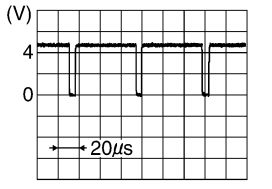
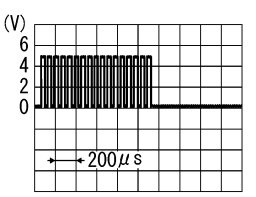
Reference Value

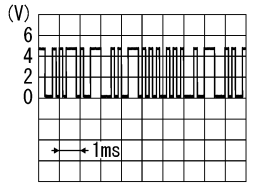
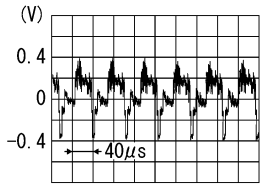
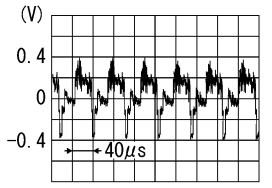
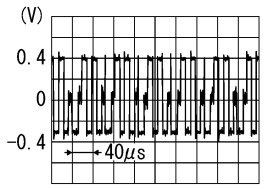
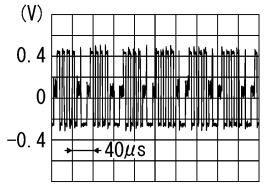
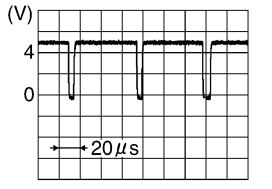
INFOID:0000000007347930

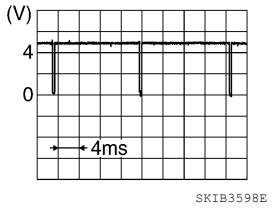
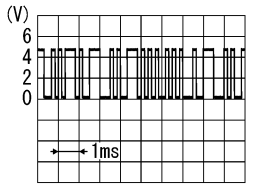
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0V
2 (Y)	Ground	Battery power	Input	—	—	Battery voltage
3 (V)	Ground	ACC power	Input	Ignition switch ACC	—	Battery voltage
4 (R)	Ground	DVD video (-)	—	Ignition switch ON	When DVD mode is selected	0V
6 (G)	Ground	RGB signal (G: green)	Input	Ignition switch ON	Start confirmation/adjustment mode, and then display color bar by selecting“Color Spectrum Bar” on DISPLAY DIAGNOSIS screen.	 SKIB2236J
8 (B)	Ground	Horizontal synchronizing (HP) signal	Output	Ignition switch ON	—	 SKIB3601E
9 (G)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image displayed	5V
					At rear view camera image displayed	 PKIB4948J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
11 (V)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness	 PKIB5039J
12 (B)	14 (W)	Rear view camera video (+)	Input	Ignition switch ON	Transmission in reverse	 SKIB2251J
13 (B)	Ground	Ground	—	Ignition switch ON	—	0V
14 (W)	Ground	Rear view camera video (-)	—	Ignition switch ON	Transmission in reverse	0V
15 (G)	4 (R)	DVD video (+)	Input	Ignition switch ON	When DVD mode is selected	 SKIB2251J
17 (L)	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.	 SKIB2238J
18 (Y)	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.	 SKIB2237J
19 (R)	Ground	RGB synchronizing signal	Input	Ignition switch ON	—	 SKIB3603E

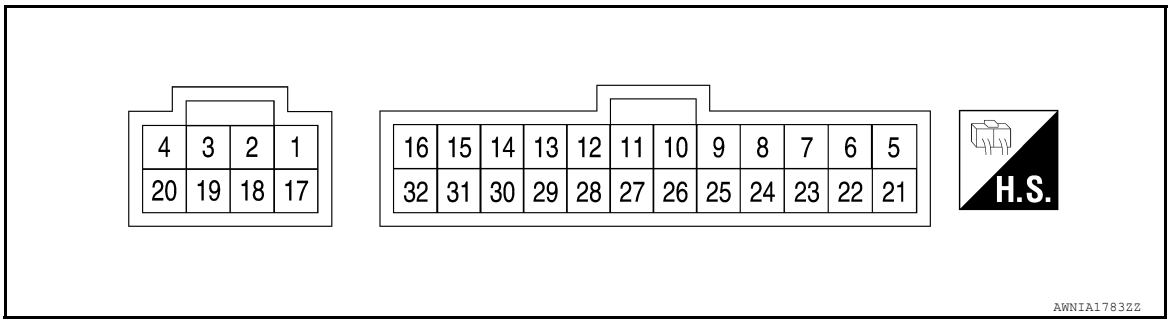
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
20 (W)	Ground	Vertical synchronizing (VP) signal	Output	Ignition switch On	—	 SKIB3598E
22 (LG)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness	 PKIB5039J
24	—	Shield	—	—	—	—

BOSE SPEAKER AMP

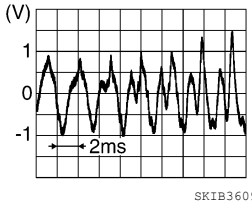
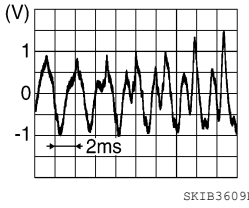
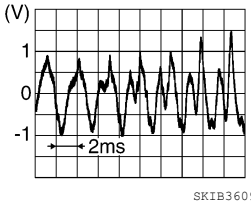
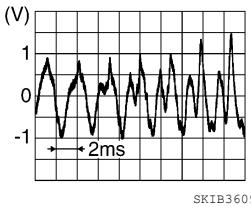
Reference Value

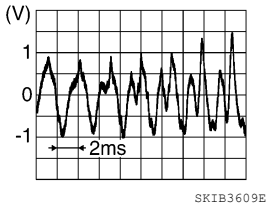
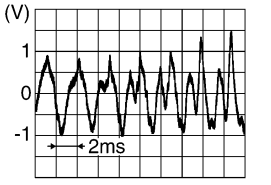
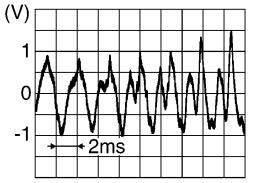
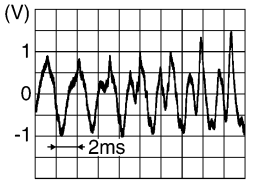
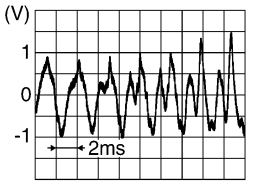
INFOID:0000000007347931

TERMINAL LAYOUT



PHYSICAL VALUES

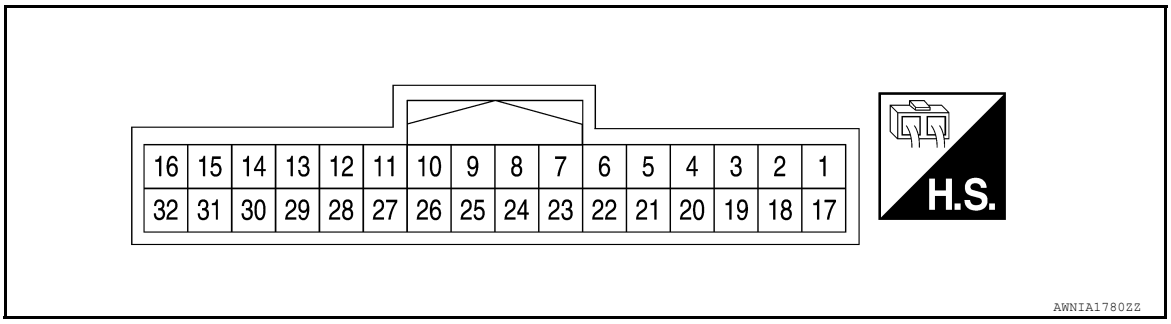
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (Y)	Ground	Battery power	Input	—	—	Battery voltage
9 (B)	10 (G)	Audio signal rear door speaker and tweeter LH	Output	Ignition switch ON	Audio output	
11 (GR)	12 (O)	Audio signal rear door speaker and tweeter RH	Output	Ignition switch ON	Audio output	
13 (LG)	14 (L)	Audio signal front door speaker and tweeter LH	Output	Ignition switch ON	Audio output	
15 (W)	16 (R)	Audio signal front door speaker and tweeter RH	Output	Ignition switch ON	Audio output	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
17 (B)	Ground	Ground	—	Ignition switch ON	—	0V
19 (SB)	3 (B)	Audio signal subwoofer	Output	Ignition switch ON	Audio output	 SKIB3609E
22 (Y)	Ground	Subwoofer amp. ON signal	Output	Ignition switch ACC	Audio output	Battery voltage
24 (G/R)	23 (B)	Audio signal rear RH	Input	Ignition switch ON	Audio input	 SKIB3609E
26 (BR/W)	25 (BR/Y)	Audio signal rear LH	Input	Ignition switch ON	Audio input	 SKIB3609E
28 (G/Y)	27 (G/O)	Audio signal front RH	Input	Ignition switch ON	Audio input	 SKIB3609E
30 (BR)	29 (B)	Audio signal front LH	Input	Ignition switch ON	Audio input	 SKIB3609E
31 (SB)	Ground	Amp. ON signal	Input	Ignition switch ON	Audio output	Battery voltage

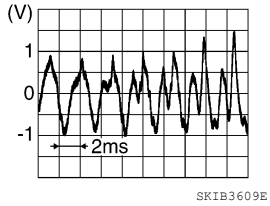
DVD PLAYER

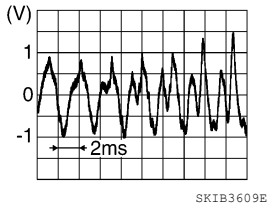
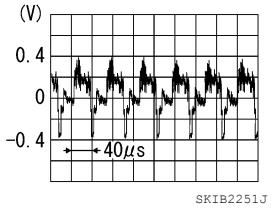
Reference Value

INFOID:0000000007347932



PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	2 (W)	DVD audio signal LH	Output	Ignition switch ON	With operation of the DVD player	
5 (B)	Ground	Ground	—	Ignition switch ON	—	0V
6 (BR)	Ground	Illumination control (pulse width modulated)	—	—	With lighting switch ON	—
7 (L)	Ground	CAN communication	Input/ Output	Ignition switch ON	—	—
9 (BR)	Ground	Video monitor power supply	Output	Ignition switch ON	With DVD player operation	12V
10 (GR)	Ground	Switch power	Output	Ignition switch ON	With DVD player operation	5V
12 (W/L)	Ground	VTR (+)	Output	Ignition switch ON	With DVD player operation	—
13 (O/L)	Ground	VTR (-)	Output	Ignition switch ON	With DVD player operation	—
14 (Y)	Ground	Display ground	—	Ignition switch ON	With DVD player operation	0V
16 (V)	—	Data receive	Input	—	—	—

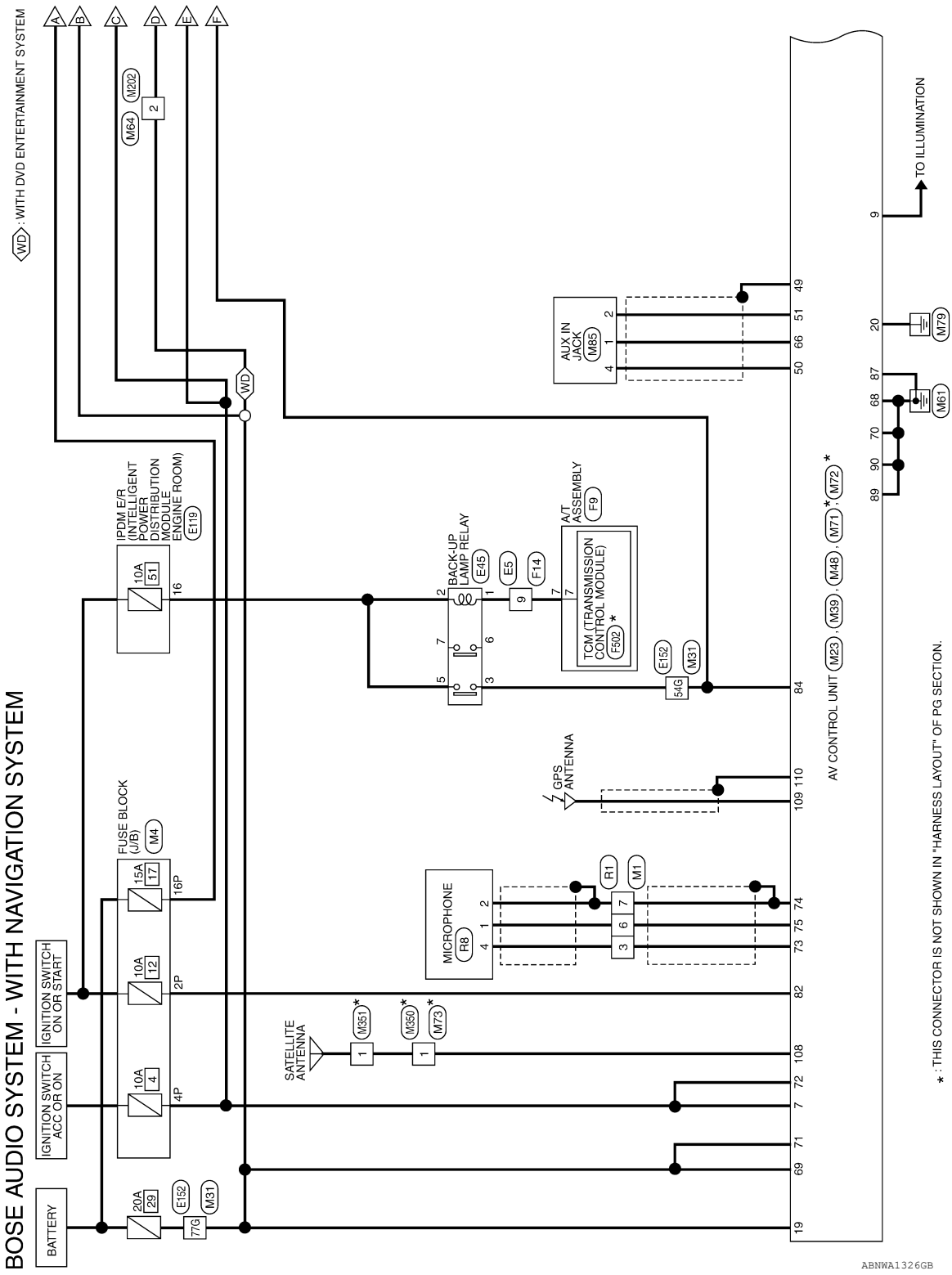
Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
17 (R)	18 (G)	DVD audio signal RH	Output	Ignition switch ON	With DVD player operation	 SKIB3609E
21 (Y)	Ground	Battery power	Input	—	—	12V
22 (SB)	Ground	Illumination power	Input	—	With instrument illumination ON	12V
23 (P)	Ground	CAN communication	Input/ Output	Ignition switch ON	—	0V
24 (G/B)	Ground	ACC power	Input	Ignition switch ACC or ON	—	12V
26 (P)	Ground	Ground	Input	Ignition switch ON	—	0V
28 (G)	Ground	Video out	Input	Ignition switch ACC or ON	—	 SKIB2251J
32 (LG)	—	Data transmit	Output	—	—	—

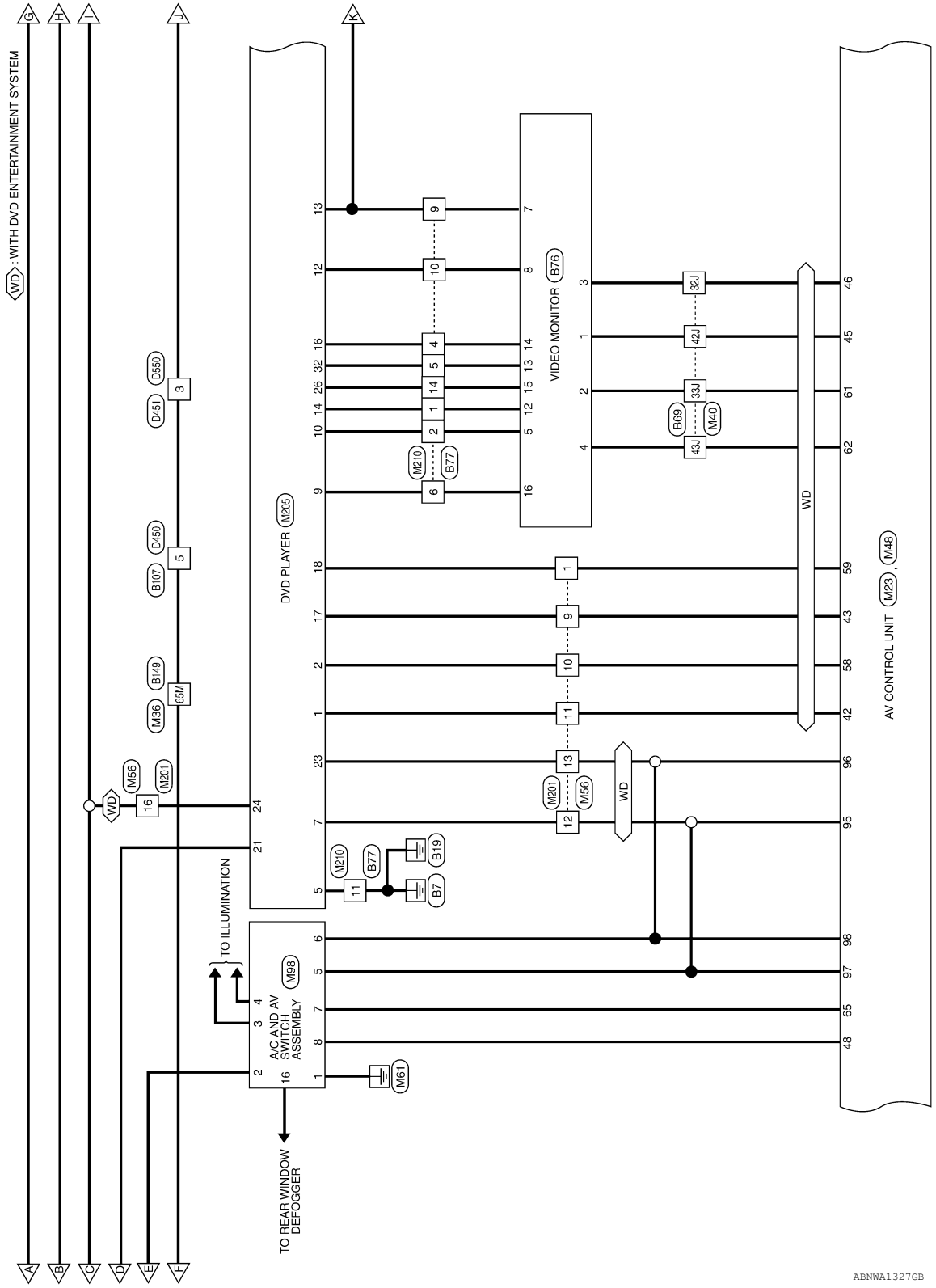
WIRING DIAGRAM

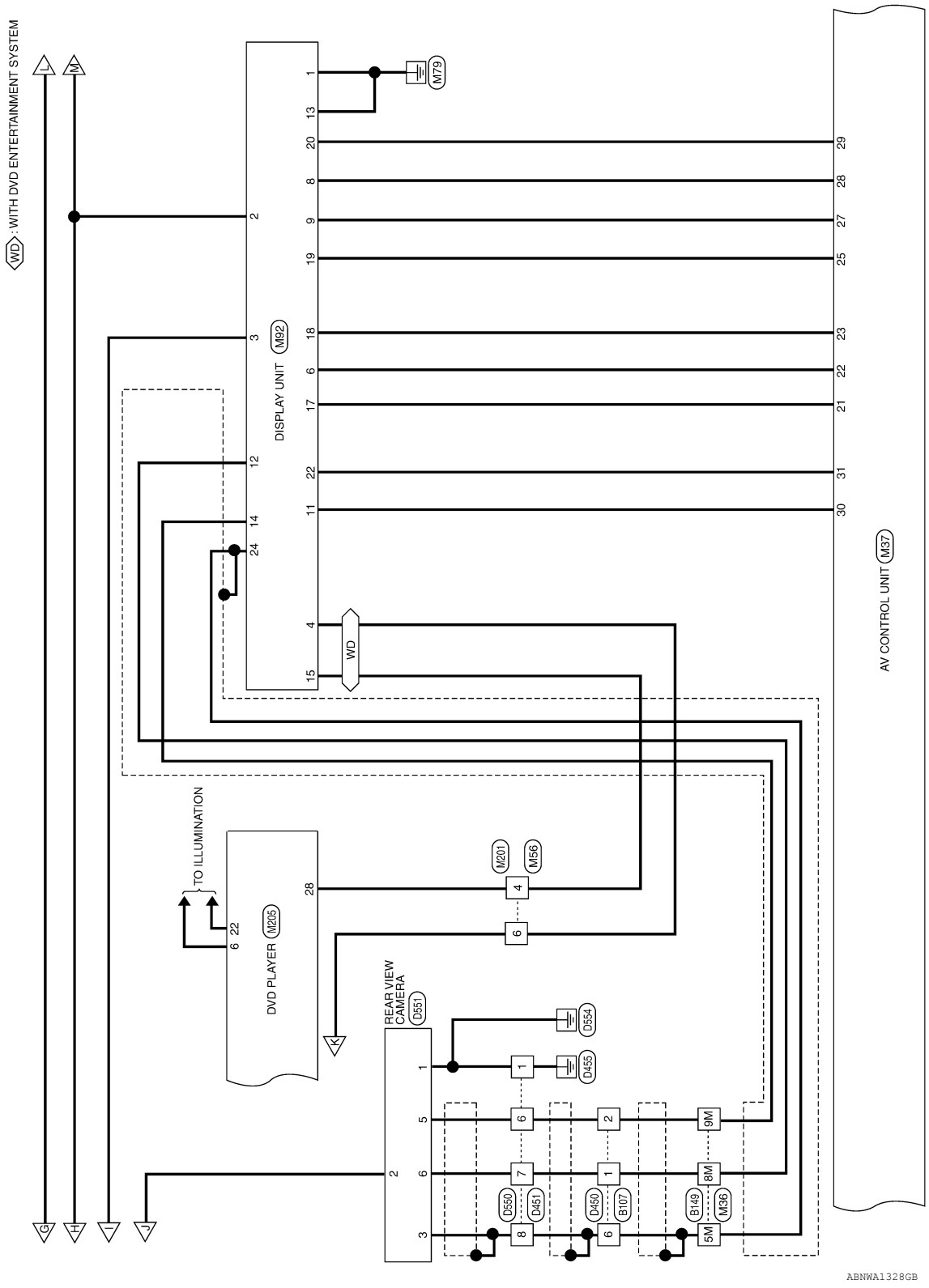
BOSE AUDIO SYSTEM

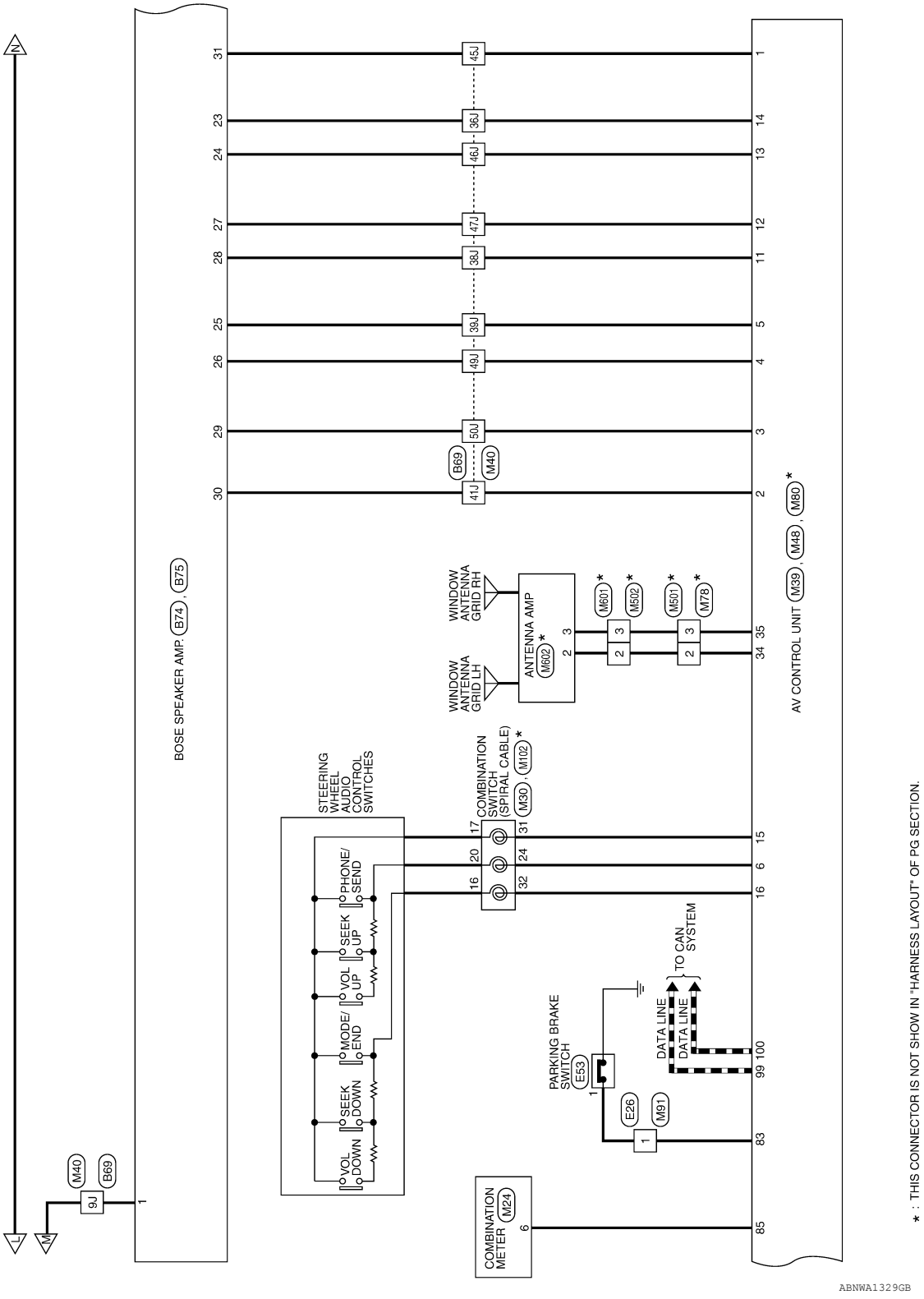
Wiring Diagram - With Navigation System

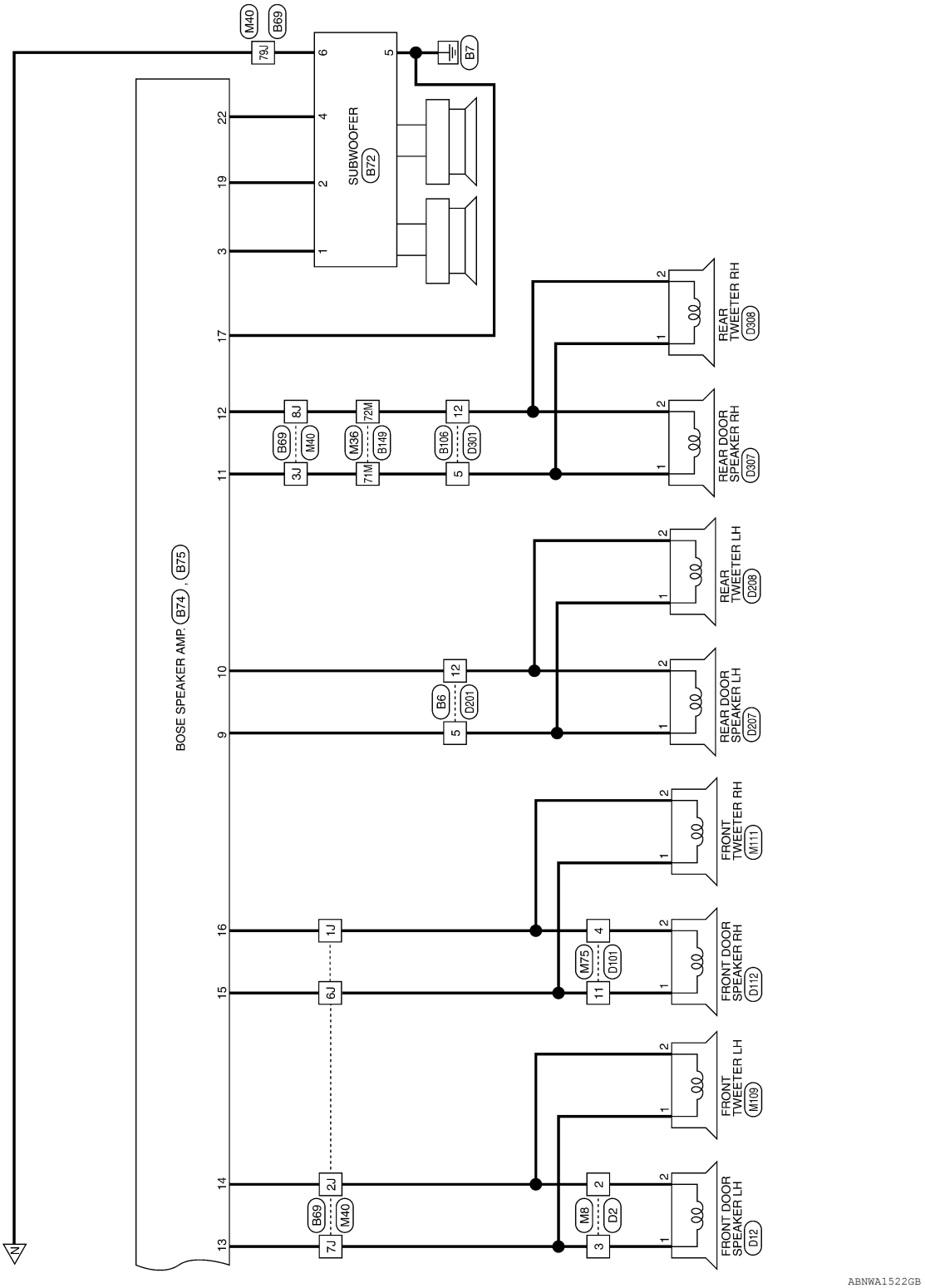
INFOID:0000000007347933




WD : WITH DVD ENTERTAINMENT SYSTEM
DVD PLAYER M205
VIDEO MONITOR B76
AV CONTROL UNIT M23, M48
A/C AND AV SWITCH ASSEMBLY M98
TO ILLUMINATION
TO REAR WINDOW DEFOGGER
WD
ABNWA1327GB

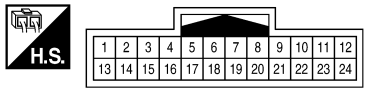

WD : WITH DVD ENTERTAINMENT SYSTEM
DISPLAY UNIT M92
AV CONTROL UNIT M37
M79
WD
TO ILLUMINATION
DVD PLAYER M205
M201
M56
REAR VIEW CAMERA D551
D554
D455
D550
D451
D450
B107
B149
M36
ABNWA1328GB


BOSE SPEAKER AMP. B74, B75
AV CONTROL UNIT M39, M48, M80 *
STEERING WHEEL AUDIO CONTROL SWITCHES
VOL DOWN
SEEK DOWN
MODE/ END
VOL UP
SEEK UP
PHONE/ SEND
COMBINATION SWITCH (SPIRAL CABLE) M30, M102 *
WINDOW ANTENNA GRID RH
WINDOW ANTENNA GRID LH
ANTENNA AMP M602 *
M601 *
M502 *
M501 *
M78 *
PARKING BRAKE SWITCH E53
E26 M91
DATA LINE
DATA LINE
TO CAN SYSTEM
COMBINATION METER M24
B69 M40
9J
45J
36J
46J
47J
38J
39J
49J
50J
41J
B69 M40
* : THIS CONNECTOR IS NOT SHOW IN "HARNESS LAYOUT" OF PG SECTION.
ABNWA1329GB


M40
B69
79J
6
5
B7
SUBWOOFER
B72
4
2
1
22
19
3
17
12
11
10
9
16
15
14
13
BOSE SPEAKER AMP. B74 , B75
8J
B69
M40
3J
72M
M36
B149
71M
12
B106
D301
5
12
B6
D201
5
1J
6J
4
M75
D101
11
2J
B69
M40
7J
2
M8
D2
3
REAR TWEETER RH D308
REAR DOOR SPEAKER RH D307
REAR TWEETER LH D208
REAR DOOR SPEAKER LH D207
FRONT TWEETER RH M111
FRONT DOOR SPEAKER RH D112
FRONT TWEETER LH M109
FRONT DOOR SPEAKER LH D12
N
ABNWA1522GB

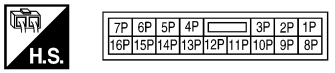
BOSE AUDIO SYSTEM CONNECTORS - WITH NAVIGATION SYSTEM

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



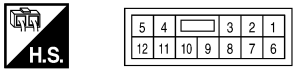
Terminal No.	Color of Wire	Signal Name
3	G	–
6	R	–
7	SHIELD	–

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



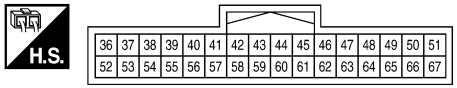
Terminal No.	Color of Wire	Signal Name
2P	W/G	–
4P	G/B	–
16P	R/B	–

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



Terminal No.	Color of Wire	Signal Name
2	L	–
3	G	– (WITH BOSE AUDIO SYSTEM)

Connector No.	M23
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–
41	–	–
42	W	AUDIO BUS LH +
43	R	AUDIO BUS RH +
44	–	–
45	W	HP LH -
46	B	HP LH -
47	–	–
48	SB	CD-DVD-EJECT
49	SHIELD	AUX SHIELD
50	B	AUX AUDIO LH +
51	R	AUX GND
52	–	–
53	–	–
54	–	–
55	–	–
56	–	–
57	–	–
58	B	AUDIO BUS LH -
59	G	AUDIO BUS RH -
60	–	–
61	G	HP LH +
62	R	HP RH +
63	–	–
64	–	–
65	GR	SW GND
66	W	AUX AUDIO RH +
67	–	–

ABNIA3314GB

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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	LG	SPEED OUT 8

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

24	25	26	27
31	32	33	34

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

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

H.S.

				5G	4G	3G	2G	1G											
				10G	9G	8G	7G	6G											
21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G									
30G	29G	28G	27G	26G	25G	24G	23G	22G											
41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G									
50G	49G	48G	47G	46G	45G	44G	43G	42G											
61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G									
70G	69G	68G	67G	66G	65G	64G	63G	62G											
				75G	74G	73G	72G	71G											
				80G	79G	78G	77G	76G											

Terminal No.	Color of Wire	Signal Name
54G	SB	–
77G	Y	–

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

H.S.

				5M	4M	3M	2M	1M											
				10M	9M	8M	7M	6M											
21M	20M	19M	18M	17M	16M	15M	14M	13M	12M	11M									
30M	29M	28M	27M	26M	25M	24M	23M	22M											
41M	40M	39M	38M	37M	36M	35M	34M	33M	32M	31M									
50M	49M	48M	47M	46M	45M	44M	43M	42M											
61M	60M	59M	58M	57M	56M	55M	54M	53M	52M	51M									
70M	69M	68M	67M	66M	65M	64M	63M	62M											
				75M	74M	73M	72M	71M											
				80M	79M	78M	77M	76M											

Terminal No.	Color of Wire	Signal Name
5M	SHIELD	–
8M	B	–
9M	W	–
65M	G/Y	–
71M	GR	–
72M	O	–

ABNIA2638GB

Connector No.	M37
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
21	L	R
22	G	G
23	Y	B
24	–	–
25	R	RGB SYNC
26	–	–
27	G	YS
28	B	HP
29	W	VP
30	V	IT DISP
31	LG	DISP IT
32	–	–

Connector No.	M39
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	AMP ON
2	BR	FR LH PRE+
3	B	FR LH PRE-
4	BR/W	RR LH PRE+
5	BR/Y	RR LH PRE-
6	Y	STRG SW A
7	G/Y	ACC
8	–	–
9	V	ILL+
10	–	–
11	G/Y	FR_RH_PRE+
12	G/O	FR_RH_PRE-
13	G/R	RR_RH_PRE+
14	B	RR_RH_PRE-
15	L	STRG_SW_GND
16	G	STRG_SW_B
17	–	–
18	–	–
19	Y	+B
20	B	GND

ABNIA2639GB

Terminal No.	Color of Wire	Signal Name
38J	G/Y	–
39J	BR/Y	–
41J	BR	–
42J	W	–
43J	R	–
45J	SB	–
46J	G/R	–
47J	G/O	–
49J	BR/W	–
50J	B	–
79J	R/B	– (WITHOUT BASE AUDIO SYSTEM)

Terminal No.	Color of Wire	Signal Name
93	–	–
94	–	–
95	L	M-CAN2-H
96	P	M-CAN2-L
97	L	M-CAN1-H
98	P	M-CAN1-L
99	L	CAN-H
100	P	CAN-L
101	–	–
102	–	–
103	–	–
104	–	–
105	–	–
106	–	–
107	–	–

Terminal No.	Color of Wire	Signal Name
1J	R	–
2J	L	–
3J	GR	– (WITH BOSE AUDIO SYSTEM)
6J	W	–
7J	LG	–
8J	O	– (WITH BOSE AUDIO SYSTEM)
9J	Y	–
32J	B	–
33J	G	–
36J	B	–

Terminal No.	Color of Wire	Signal Name
77	–	–
78	–	–
79	–	–
80	–	–
81	–	–
82	W/G	IGN
83	G	PKB SIG
84	W	REVERSE SIG
85	LG	SPEED 8P
86	–	–
87	B	RV CAM SIG
88	–	–
89	B	RESERVE 2
90	B	RESERVE 3
91	–	–
92	–	–

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

Connector No.	M48
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
68	B	GND
69	R/B	+B
70	B	GND
71	R/B	+B
72	G/Y	ACC
73	G	MIC VCC (PWR)
74	SHIELD	MIC GND (IN -)
75	R	MIC SIG (IN +)

ABNIA2640GB

Connector No.	M64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
2	Y	–

Connector No.	M73
Connector Name	WIRE TO WIRE
Connector Color	BROWN

Terminal No.	Color of Wire	Signal Name
1	–	–

Connector No.	M72
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
109	–	GPS ANT
110	SHIELD	GPS ANT

Connector No.	M71
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	VIOLET

Terminal No.	Color of Wire	Signal Name
108	–	SAT ANT

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

Terminal No.	Color of Wire	Signal Name
1	G	–
4	G	–
6	R	–
9	R	–

Terminal No.	Color of Wire	Signal Name
10	W	–
11	B	–
12	L	–
13	P	–
16	G/B	–

ABNIA2641GB

Connector No.	M80
Connector Name	AV CONTROL UNIT (WITH BOSE AUDIO SYSTEM WITH NAVI)
Connector Color	GRAY

H.S.

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

Connector No.	M78
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
4	R	–
11	W	– (WITH BOSE AUDIO SYSTEM)

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	AUX AUDIO RH+
2	R	AUX GND
4	B	AUX AUDIO LH+

ABNIA3315GB

Connector No.	M92
Connector Name	DISPLAY UNIT (WITH NAVI)
Connector Color	WHITE

H.S.

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	B	GND
2	Y	+B
3	V	ACC
4	R	COMP1 IN-
5	–	–
6	G	G
7	–	–
8	B	HP
9	G	YS
10	–	–
11	V	IT DISP
12	B	COMP2 IN+
13	B	GND
14	W	COMP2 IN-
15	G	COMP1 IN+
16	–	–
17	L	R
18	Y	B
19	R	RGB SYNC
20	W	VP
21	–	–
22	LG	DISP IT
23	–	–
24	SHIELD	COMP2 IN SHIELD

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	G/Y	ACC
3	LG	ILL
4	BR	ILL CONT GND
5	L	M CAN1-L
6	P	M CAN1-H
7	GR	SW GND
8	SB	CD DVD EJECT
9	–	–
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	–	–
16	Y	RR DEFOG

Connector No.	M102
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

14	15	16	17	18	19	20	21

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

ABNIA2643GB

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

H.S.

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

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

H.S.

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

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
4	G	–
6	R	–
9	R	–

Terminal No.	Color of Wire	Signal Name
10	W	–
11	B	–
12	L	–
13	P	–
16	G/B	–

Connector No.	M202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	Y	–

ABNIA2644GB

Connector No.	M205
Connector Name	DVD PLAYER
Connector Color	WHITE

H.S.

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	B	FES L+ OUTPUT
2	W	FES L- OUTPUT
3	–	–
4	–	–
5	B	GND
6	BR	ILL-

Terminal No.	Color of Wire	Signal Name
7	L	M CAN2 H
8	–	–
9	BR	+B
10	GR	SW POWER +5
11	–	–
12	W/L	VTR+
13	O/L	VTR-
14	Y	GND
15	–	–
16	V	DATA RX1 (LCD->DVD)
17	R	FES R+ OUTPUT
18	G	FES R- OUTPUT
19	–	–
20	–	–
21	Y	+B
22	SB	ILL+
23	P	M CAN2 L

Terminal No.	Color of Wire	Signal Name
24	G/B	ACC
25	–	–
26	P	GND
27	–	–
28	G	VIDEO OUT
29	–	–
30	–	–
31	–	–
32	LG	DATA TX1 (DVD->LCD)

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

H.S.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	GR	–
4	V	–
5	LG	–
6	BR	–
9	O/L	–
10	W/L	–
11	B	–
14	P	–

Connector No.	M350
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	–	–

Connector No.	M351
Connector Name	SATELLITE ANTENNA
Connector Color	BROWN

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	–	–

ABNIA2645GB

Connector No.	M601
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	M502
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

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

H.S.

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

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
9	LG	–

Connector No.	M602
Connector Name	ANTENNA AMP.
Connector Color	GRAY

H.S.

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

ABNIA2646GB

Connector No.	E45
Connector Name	BACK-UP LAMP RELAY
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	W/G	–
3	SB	–
5	W/G	–

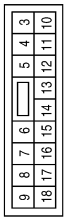
Connector No.	E53
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

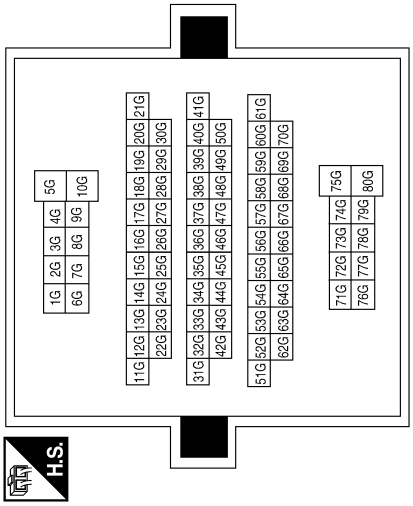
H.S.



Terminal No.	Color of Wire	Signal Name
16	W/G	REVERSE_LAMP

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

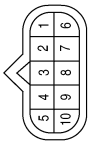
H.S.



Terminal No.	Color of Wire	Signal Name
54G	SB	–
77G	Y	–

Connector No.	F9
Connector Name	A/T ASSEMBLY
Connector Color	GREEN

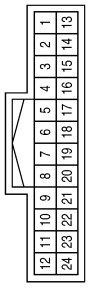
H.S.



Terminal No.	Color of Wire	Signal Name
7	LG	–

Connector No.	F14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
9	LG	–

ABNIA2647GB

Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY

H.S.

10	9	8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
7	O	REV LAMP RLY

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

H.S.

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

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1J	R	–
2J	L	–
3J	GR	– (WITH BOSE AUDIO SYSTEM)
6J	W	–
7J	LG	–
8J	O	– (WITH BOSE AUDIO SYSTEM)
9J	Y	–
32J	B	–
33J	G	–
36J	B	–

Terminal No.	Color of Wire	Signal Name
38J	G/Y	–
39J	BR/Y	–
41J	BR	–
42J	W	–
43J	R	–
45J	SB	–
46J	G/R	–
47J	G/O	–
49J	BR/W	–
50J	B	–
79J	R/B	– (WITHOUT BASE AUDIO SYSTEM)

ABNIA2648GB

Connector No.	B72
Connector Name	SUBWOOFER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	WOOFER-
2	SB	WOOFER+
4	Y	AMP ON
5	B	GND
6	R/B	BATT

Connector No.	B74
Connector Name	BOSE SPEAKER AMP.
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	BATT
2	–	–
3	B	WOOFER- OUT
4	–	–
17	B	GND
18	–	–
19	SB	WOOFER+ OUT
20	–	–

Connector No.	B75
Connector Name	BOSE SPEAKER AMP.
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
5	–	–
6	–	–
7	–	–
8	–	–
9	B	RR DR LH+ OUT
10	G	RR DR LH- OUT
11	GR	RR DR RH+ OUT
12	O	RR DR RH- OUT
13	LG	FR DR LH+ OUT
14	L	FR DR LH- OUT
15	W	FR DR RH+ OUT
16	R	FR DR RH- OUT
21	–	–
22	Y	WOOFER CTRL
23	B	RR RH- IN
24	G/R	RR RH+ IN
25	BR/Y	RR LH- IN
26	BR/W	RR LH+ IN
27	G/O	FR RH- IN
28	G/Y	FR RH+ IN
29	B	FR LH- IN
30	BR	FR LH+ IN
31	SB	AMP ON
32	–	–

ABNIA2649GB

Connector No.	B77
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

10	9	8	7	6		5	4	3	2	1
18	17	16	15	14			13	12	11	

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	GR	–
4	V	–
5	LG	–
6	BR	–
9	O/L	–
10	W/L	–
11	B	–
14	P	–

Connector No.	B76
Connector Name	VIDEO MONITOR
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	FES L CH INPUT-
2	G	FES L CH INPUT+
3	B	FES R CH INPUT-
4	R	FES R CH INPUT+
5	GR	SW POWER +5
6	–	–
7	O/L	VIDEO IN-

Terminal No.	Color of Wire	Signal Name
8	W/L	VIDEO IN+
9	–	–
10	–	–
11	–	–
12	Y	GND
13	LG	DATA RX (DVD->LCD)
14	V	DATA TX (LCD->DVD)
15	P	GND
16	BR	FILTERED BATT

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

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
5	G/Y	–
6	SHIELD	–

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

H.S.

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

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

ABNIA2650GB

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

H.S.

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

11M	12M	13M	14M	15M	16M	17M	18M	19M	20M	21M
	22M	23M	24M	25M	26M	27M	28M	29M	30M	
31M	32M	33M	34M	35M	36M	37M	38M	39M	40M	41M
	42M	43M	44M	45M	46M	47M	48M	49M	50M	
51M	52M	53M	54M	55M	56M	57M	58M	59M	60M	61M
	62M	63M	64M	65M	66M	67M	68M	69M	70M	

71M	72M	73M	74M	75M
76M	77M	78M	79M	80M

Terminal No.	Color of Wire	Signal Name
5M	SHIELD	–
8M	B	–
9M	W	–
65M	G/Y	–
71M	GR	–
72M	O	–

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

H.S.

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
3	G	–
6	R	–
7	SHIELD	–

Connector No.	R8
Connector Name	MICROPHONE
Connector Color	WHITE

H.S.

1	2	3	4

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

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

H.S.

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

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

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

H.S.

2	1

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

ABNIA2651GB

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

H.S.

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

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

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

H.S.

2	1

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

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

H.S.

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

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

Connector No.	D207
Connector Name	REAR DOOR SPEAKER LH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN

H.S.

2	1

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

Connector No.	D208
Connector Name	REAR TWEETER LH
Connector Color	BROWN

H.S.

2	1

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

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

H.S.

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

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

ABNIA3325GB

Connector No.	D307
Connector Name	REAR DOOR SPEAKER RH (WITH BOSE AUDIO SYSTEM)
Connector Color	BROWN

H.S.

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

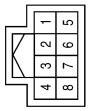
Connector No.	D308
Connector Name	REAR TWEETER RH
Connector Color	BROWN

H.S.

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

Connector No.	D450
Connector Name	WIRE TO WIRE
Connector Color	WHITE

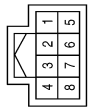
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
5	G/Y	–
6	SHIELD	–

Connector No.	D451
Connector Name	WIRE TO WIRE
Connector Color	WHITE

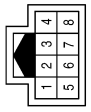
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–
3	G/Y	–
6	W	–
7	B	–
8	SHIELD	–

Connector No.	D550
Connector Name	WIRE TO WIRE
Connector Color	WHITE

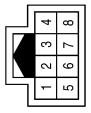
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–
3	G/Y	–
6	W	–
7	B	–
8	SHIELD	–

Connector No.	D551
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	G/Y	ACC
3	SHIELD	DRAIN
5	W	CAMERA -
6	B	CAMERA +

ABNIA3326GB

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:0000000007347934

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power supply and ground circuit • AV control unit	• AV-334 • AV-295
Steering switch does not operate	• Steering switch • AV control unit	• AV-366 • AV-295
All speakers do not sound	• Speaker circuit shorted to ground • AV control unit • BOSE speaker amp. ON signal • BOSE speaker amp. power supply and ground circuit • BOSE speaker amp.	• AV-385 • AV-295 • AV-365 • AV-337 • AV-427
One or several speakers do not sound	• Front door speaker • Front tweeter • Rear tweeter • Rear door speaker • Subwoofer	• AV-350 • AV-353 • AV-359 • AV-356 • AV-362
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.

NAVIGATION SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power supply and ground circuit • AV control unit	• AV-334 • AV-295
Steering switch does not operate	• Steering switch • AV control unit	• AV-366 • AV-295
Voice activated control does not operate	• Microphone • Steering switch • AV control unit	• AV-368 • AV-366 • AV-295

HANDS-FREE PHONE SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power supply and ground circuit • AV control unit	• AV-334 • AV-295
Steering switch does not operate	• Steering switch • AV control unit	• AV-366 • AV-295
Voice activated control does not operate	• Microphone • Steering switch • AV control unit	• AV-368 • AV-366 • AV-295

REAR VIEW MONITOR

Symptom	Possible cause	Reference page
Inoperative	• Rear view camera power supply and ground circuit • Rear view camera image signal circuit • Rear view camera	• AV-338 • AV-370 • AV-438

DVD PLAYER

Symptom	Possible cause	Reference page
DVD player inoperative	• DVD player power supply and ground circuit • DVD player	• AV-339 • AV-429
No sound when playing a DVD	• Audio signal circuits • AV control unit • DVD player	• AV-383 • AV-295 • AV-429
Video monitor is inoperative/does not display properly	• Video monitor power supply and ground circuits • Video out circuit • DVD player • Video monitor	• AV-340 • AV-383 • AV-429 • AV-429
DVD remote control is inoperative/does not operate properly	• DVD remote control • DVD player	• AV-429
Headphones inoperative	• Headphone batteries • DVD player	• AV-429

NORMAL OPERATING CONDITION

Description

INFOID:0000000007347935

AUDIO SYSTEM

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

Noise

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

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

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

NOTE:

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

Type of Noise and Possible Cause

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

NAVIGATION SYSTEM

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.
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.

Symptom	Cause	Remedy
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

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 research 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.

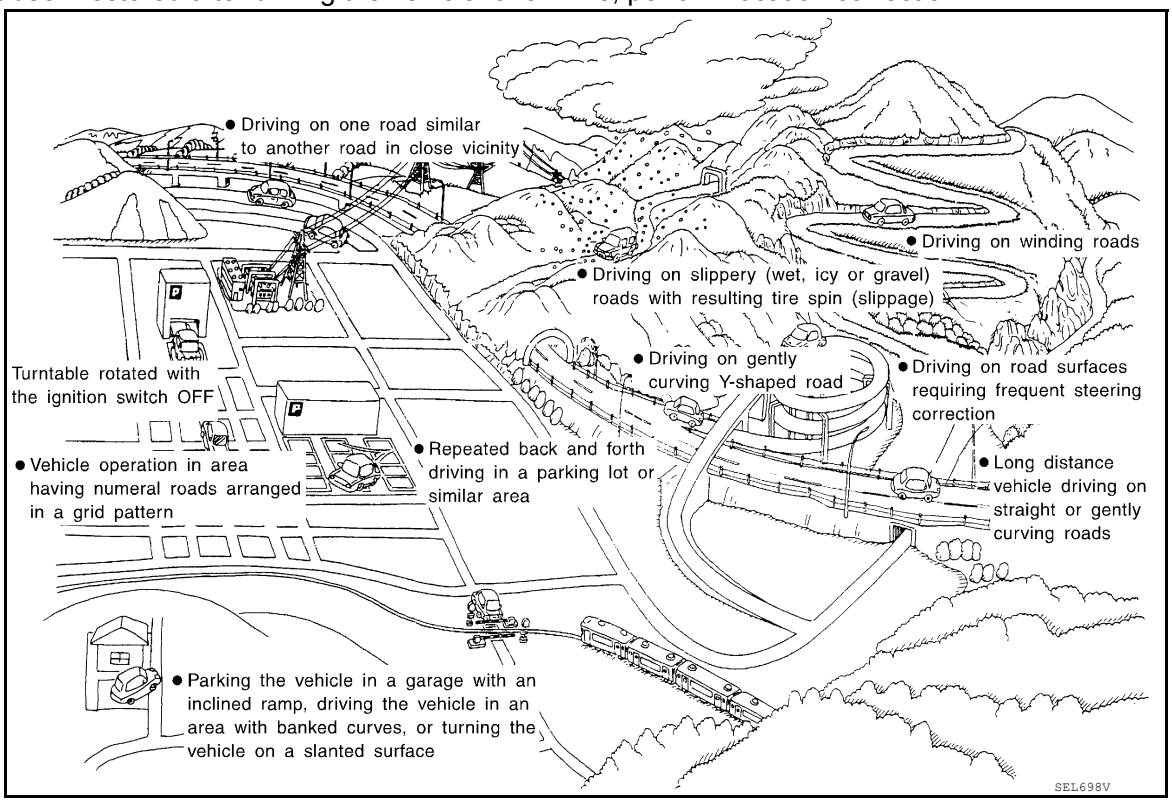
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, 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.

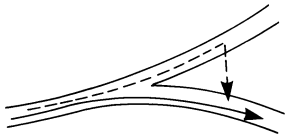
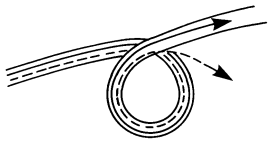
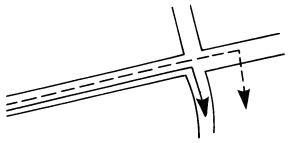
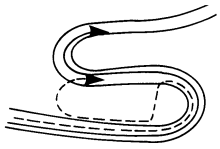
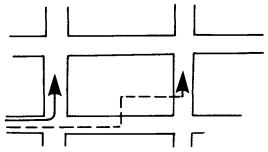
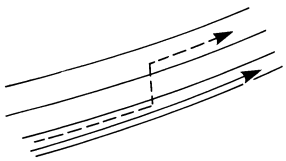
NOTE:

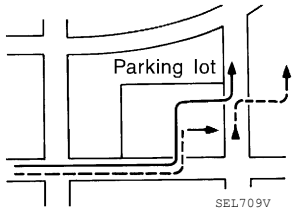
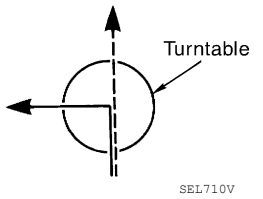
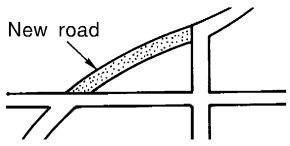
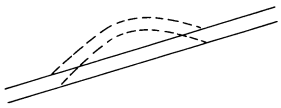
Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

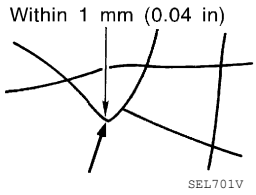
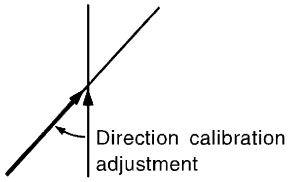
Examples of Current-Location Mark Displacement

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.



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.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
	Spiral roads  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.	
	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 sideway), the map may be matched to the other road by mistake and the vehicle mark may deviate from the correct location.	

Cause (condition) –: While driving ooo: Display		Driving condition	Remarks (correction, etc.)
Place	In a parking lot 	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 	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 	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) 	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.)

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

- 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.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000007347936

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000007347937

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the ″LOCK″ position.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.
For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.
If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Use the Intelligent Key or mechanical key to turn the ignition switch to the ″ACC″ position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

5. When the repair work is completed, return the ignition switch to the ″LOCK″ position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT.

Precaution for Trouble Diagnosis

INFOID:0000000007347938

AV COMMUNICATION SYSTEM

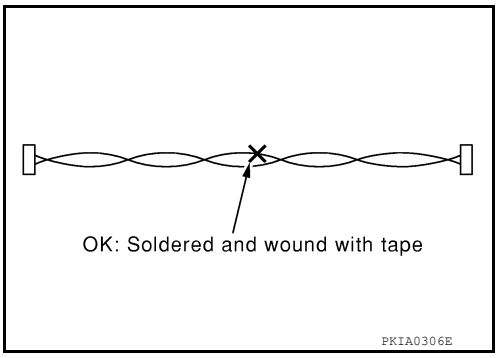
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

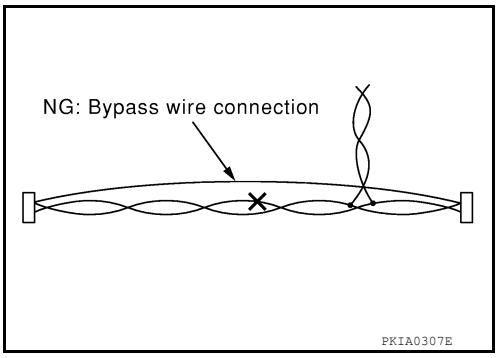
INFOID:0000000007347939

AV COMMUNICATION SYSTEM

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



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



Precaution for Work

INFOID:0000000007347940

- 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 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, and wring the water out of the cloth to wipe the dirty area.
  Then rub with a soft and 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, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

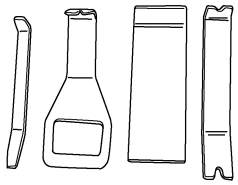
PREPARATION

PREPARATION

Special Service Tool

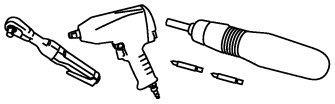
INFOID:0000000007347941

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

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

Commercial Service Tools

INFOID:0000000007347942

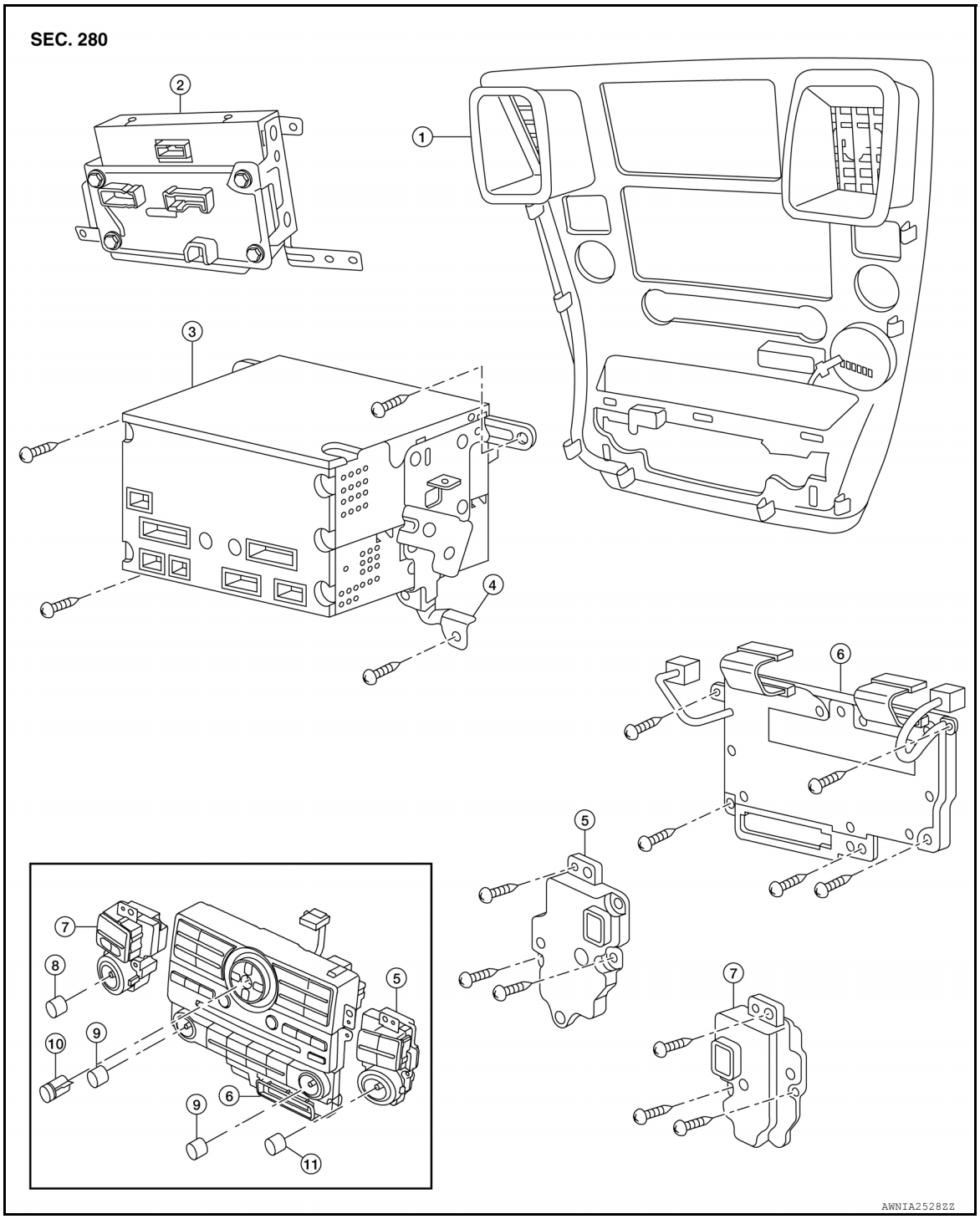
Tool name	Description
Power tool  PIIB1407E	Loosening nuts, screws and bolts

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Removal and Installation

INFOID:0000000007347943



1. Cluster lid C
2. Display unit
3. AV control unit
4. AV control unit brackets
5. Tuner knob switch
6. A/C and AV switch assembly
7. Volume knob switch
8. Volume knob
9. Temp knobs RH and LH
10. Enter button
11. Tuner knob

CAUTION:
Only remove and replace the A/C or AV switch assembly knobs if damaged or missing. The knobs must not be removed from switches when removing and installing the A/C or AV switch assembly to prevent damage to the switch assembly.

REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the cluster lid C. Refer to IP-16, "Removal and Installation".
3. Remove the AV control unit screws, using a power tool.
4. Remove the AV control unit.
5. Remove the A/C and AV switch assembly screws, then remove the A/C and AV switch assemblies as necessary.

INSTALLATION

Installation is in the reverse order of removal.

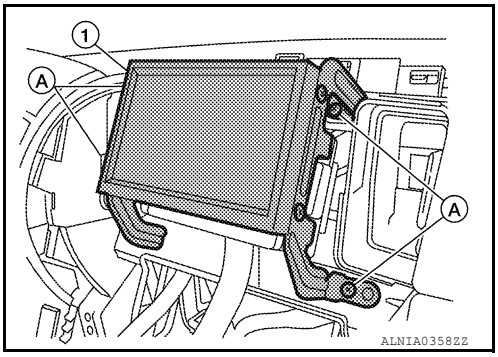
DISPLAY UNIT

Removal and Installation

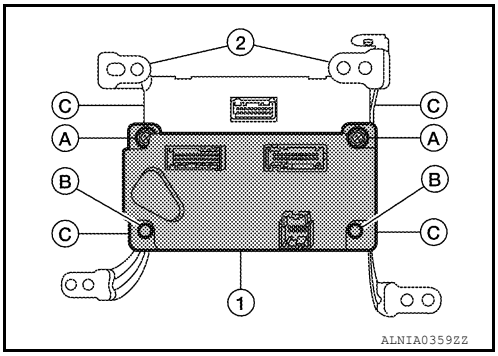
INFOID:0000000007347944

REMOVAL

1. Remove cluster lid C. Refer to IP-16, "Removal and Installation".
2. Remove the display unit screws (A).
3. Pull out the display unit (1), then disconnect the display unit connectors and remove the display unit (1).



4. Remove the A/C auto amp.screws (A), remove the (C103) fasteners (B) from the display unit assembly brackets and remove the A/C auto amp. (1).
5. Remove the display unit bracket unit screws (C) and remove the display unit brackets (2).



INSTALLATION

Installation is in reverse order of removal.

FRONT TWEETER

Removal and Installation

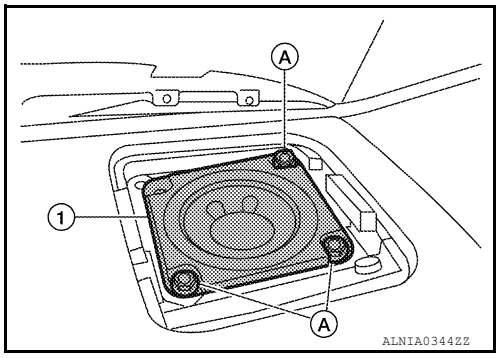
INFOID:0000000007347945

REMOVAL

CAUTION:

Use a suitable tool to prevent damage to the front tweeter speaker grille trim and the instrument panel.

1. Remove the front tweeter grille.
2. Remove the front tweeter screws (A).
3. Pull out the front tweeter speaker (1) and disconnect front tweeter connector, then remove the front tweeter speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

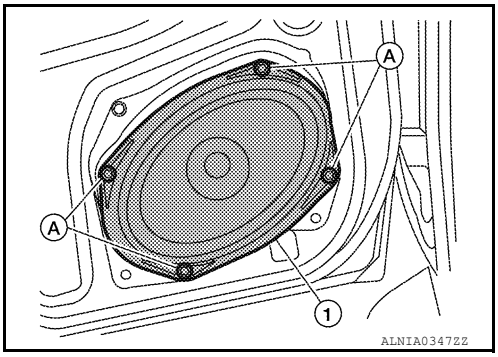
FRONT DOOR SPEAKER

Removal and Installation

INFOID:0000000007347946

REMOVAL

1. Remove the front door finisher. Refer to INT-15, "Removal and Installation".
2. Remove the front door speaker screws (A).
3. Pull out the front door speaker (1), and disconnect the front door speaker connector and remove the front door speaker (1).



INSTALLATION

Installation is in the reverse order of removal.

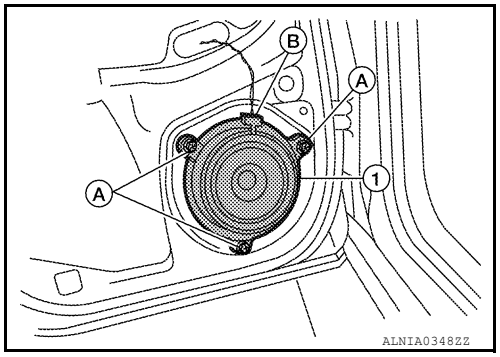
REAR DOOR SPEAKER

Removal and Installation of Rear Door Speaker

INFOID:0000000007347947

REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

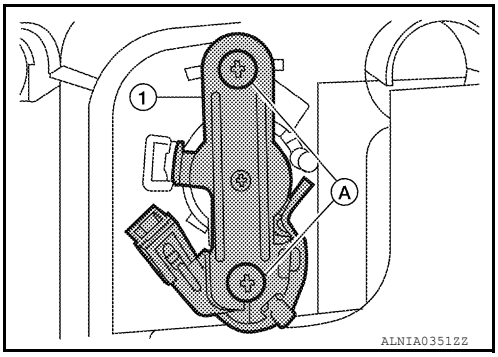
REAR DOOR TWEETER

Removal and Installation of Rear Tweeter

INFOID:0000000007347948

REMOVAL

1. Remove rear door finisher. Refer to INT-15, "Removal and Installation".
2. Remove the rear tweeter screws (A) and remove the rear tweeter (1).



INSTALLATION

Installation is in the reverse order of removal.

BOSE SPEAKER AMP

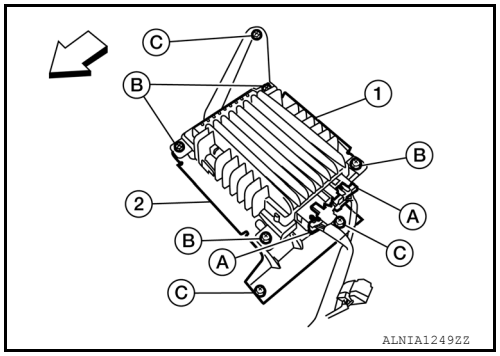
Removal and Installation

INFOID:0000000007830128

REMOVAL

NOTE:
Do not remove the LH front seat from the vehicle.

1. Remove LH front seat bolts, disconnect the LH front seat electrical harness connector. Refer to SE-33, "Removal and Installation".
2. Tilt the LH front seat back to access the BOSE speaker amp. (1), then remove the BOSE speaker amp. screws (B).
   - ⇦: Vehicle front
3. Disconnect the Bose speaker amp. connectors (A) and remove Bose speaker amp. (1) from the bracket (2).
4. Then remove the BOSE speaker amp. bracket screws (C) and remove bracket (2).



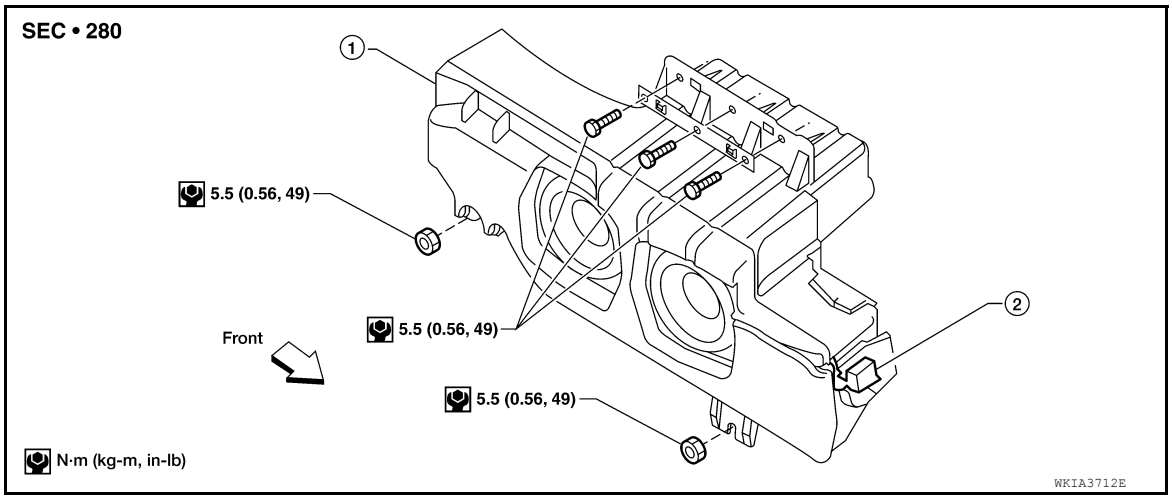
INSTALLATION
Installation is in the reverse order of removal.

SUBWOOFER

Removal and Installation

INFOID:0000000007347950

BOSE



1. Subwoofer
2. Subwoofer connector

Removal

1. Remove the luggage side lower finisher LH. Refer to INT-25, "Removal and Installation".
2. Remove subwoofer bolts and nuts.
3. Disconnect the subwoofer connector and remove the subwoofer.

Installation

Installation is in the reverse order of removal.

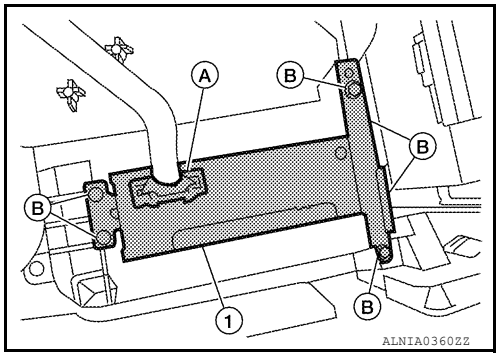
DVD ENTERTAINMENT SYSTEM

Removal and Installation of DVD Player

INFOID:0000000007347951

REMOVAL

1. Remove the center console assembly. Refer to IP-22, "Removal and Installation".
2. Disconnect the DVD player connector (A).
3. Remove the DVD player screws (B), then remove the DVD player (1).
4. Remove the DVD player bracket screws, then remove DVD player brackets.



INSTALLATION

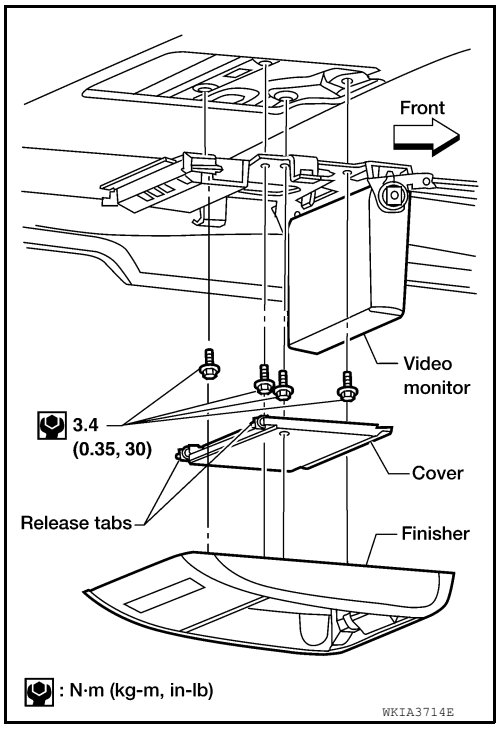
Installation is in reverse order of removal.

Removal and Installation of Video Monitor

INFOID:0000000007347952

REMOVAL

1. Release the clips and remove the video monitor finisher from headlining.
2. Press the release tabs and remove the cover.
3. Remove the video monitor screws.
4. Gently lower the assembly and disconnect the connector, then remove the video monitor from the headlining.



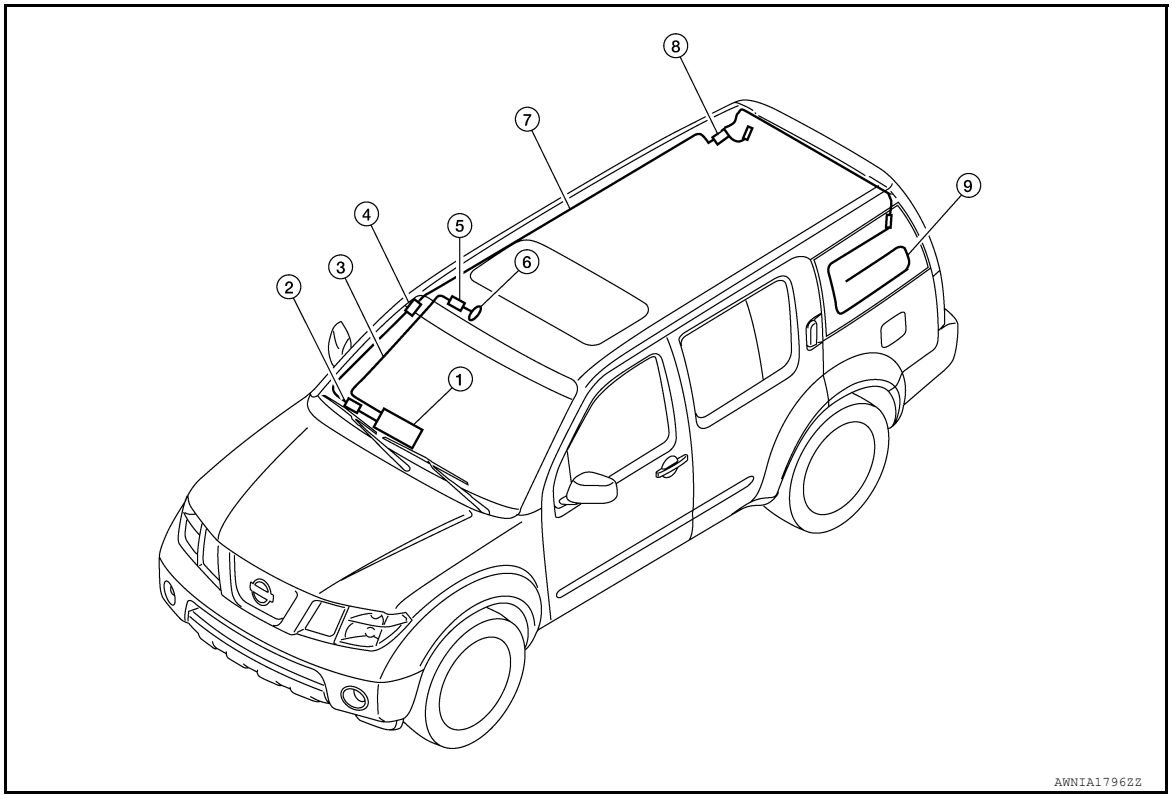
INSTALLATION

Installation is in reverse order of removal.

AUDIO ANTENNA

Location of Antenna

INFOID:0000000007347953



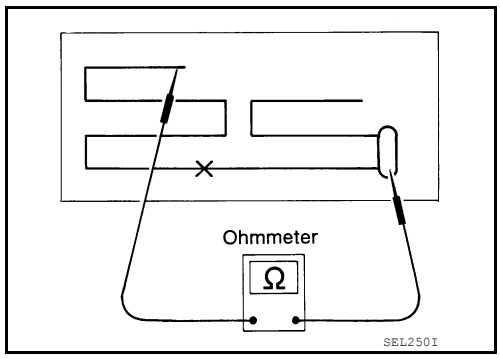
1. AV control unit M44, M71
2. Harness connector M78, M501
3. Satellite antenna feeder
4. Harness connector M502, M601
5. Harness connector M73, M350
6. Satellite antenna M351
7. Antenna feeder
8. Antenna amp. M602
9. Window antenna grid

Window Antenna Repair

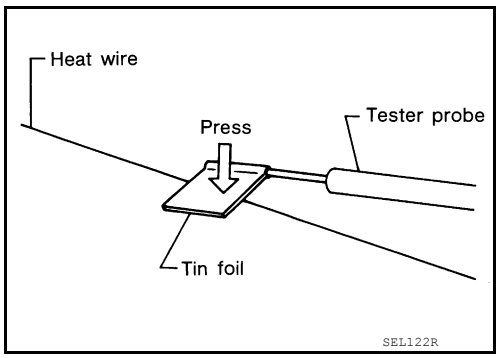
INFOID:0000000007347954

ELEMENT CHECK

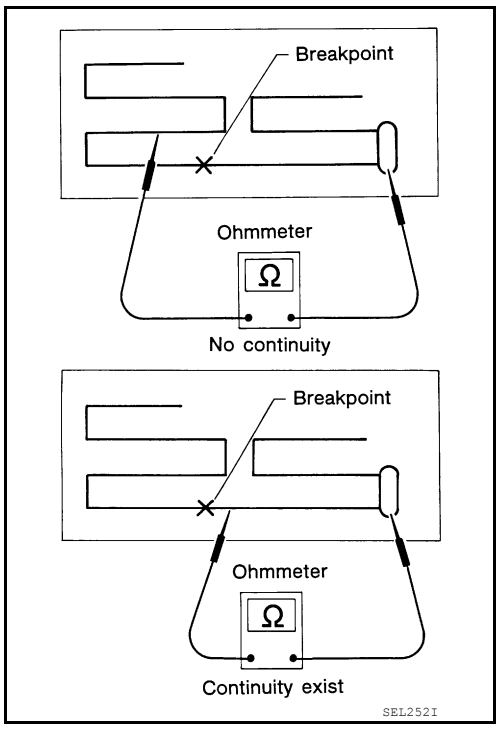
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



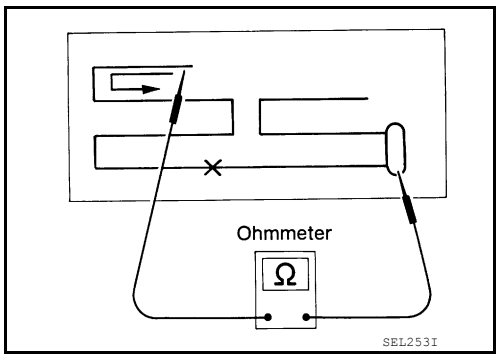
- **When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.**



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.



ELEMENT REPAIR

Refer to DEF-45, "Filament Repair".

AUXILIARY INPUT JACK

Removal and Installation

INFOID:0000000007347955

Removal

1. Remove the A/T finisher. Refer to IP-21, "Removal and Installation".
2. Remove the auxiliary input jack.

Installation

Installation is in the reverse order of removal.

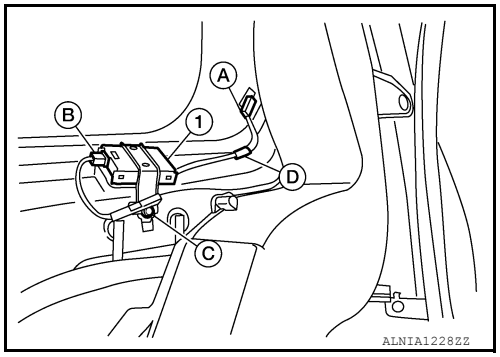
ANTENNA AMP.

Removal and Installation

INFOID:0000000007347956

REMOVAL

1. Remove the luggage side upper and lower RH finishers. Refer to INT-25, "Removal and Installation".
2. Detach the antenna amp. harness clip (D), disconnect the antenna amp. connector (A), harness connector (B), then remove the antenna amp. screw (C) and remove the antenna amp. (1).



INSTALLATION

Installation is in the reverse order of removal.

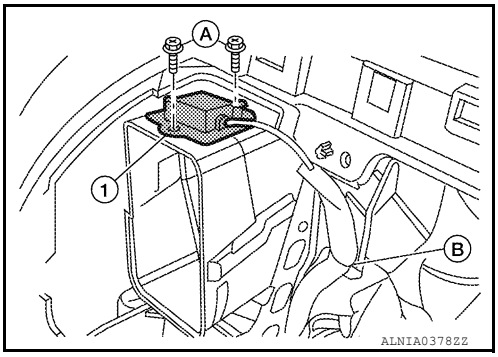
GPS ANTENNA

Removal and Installation

INFOID:0000000007347957

REMOVAL

1. Remove the cluster lid C. Refer to IP-16, "Removal and Installation".
2. Remove the GPS antenna screws (A), detach the GPS antenna harness clip (B).
3. Remove GPS antenna and feeder assembly (1) out of the instrument panel.



INSTALLATION

Installation is in the reverse order of removal.

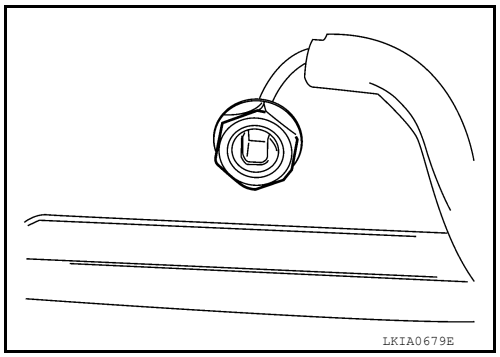
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:0000000007347958

REMOVAL

1. Remove the front roof console finisher. Refer to INT-22, "Removal and Installation".
2. Disconnect the satellite antenna connector.
3. Remove the satellite antenna nut.
4. Remove the satellite antenna.



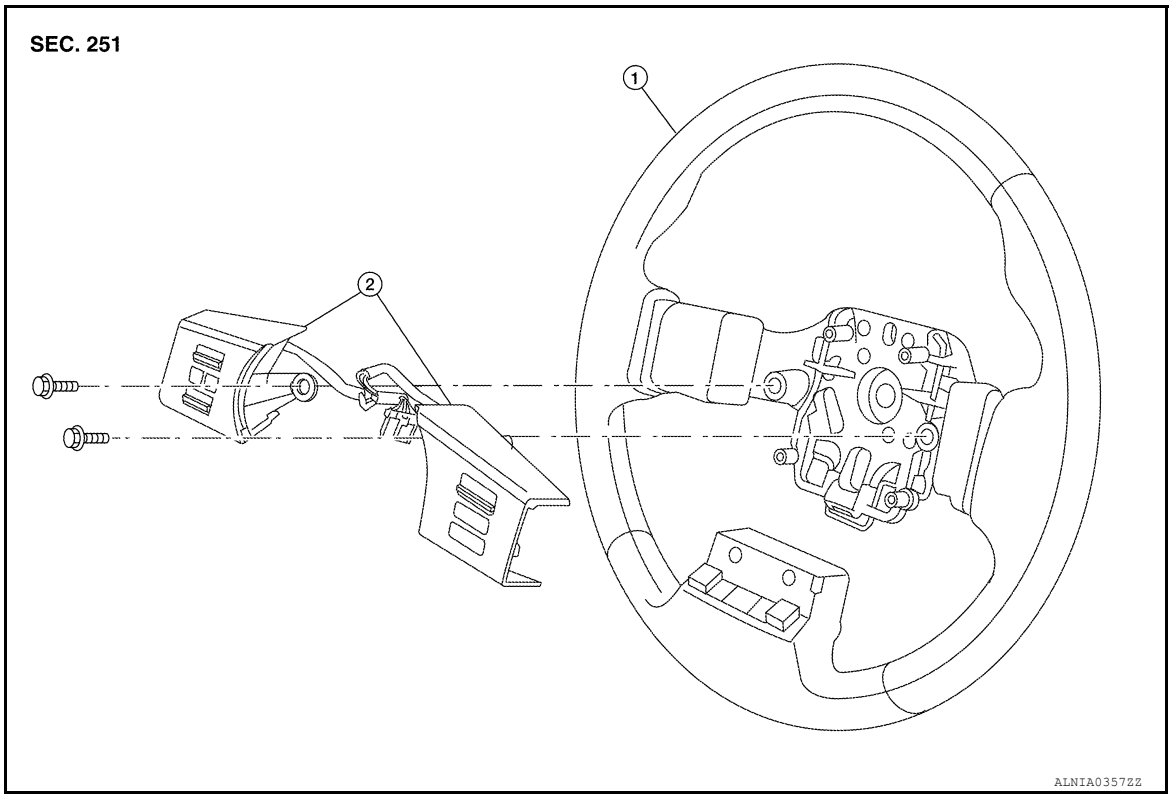
INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

Removal and Installation

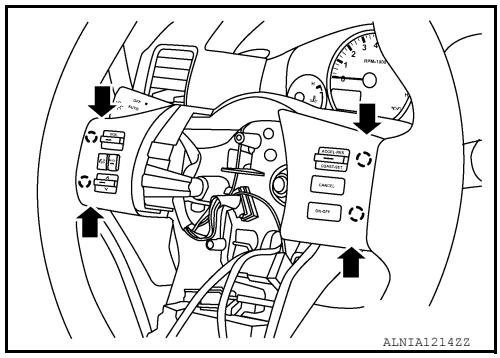
INFOID:0000000007347959



1. Steering wheel
2. Steering wheel audio control switches

REMOVAL

1. Remove the driver air bag module. Refer to SR-5, "Removal and Installation".
2. Remove the steering wheel audio control switch assembly screws.
3. Disconnect the steering wheel audio control switches connector.
4. Remove the steering wheel audio control switches by pulling on steering wheel audio control switches to release the pawls.
   CAUTION:
   Do not tilt steering wheel audio control switches during removal or damage may occur to the pawls.
   • ◌: Pawl



INSTALLATION

Installation is in the reverse order of removal.

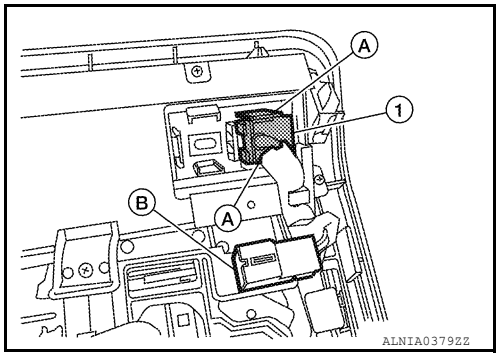
MICROPHONE

Removal and Installation

INFOID:0000000007347960

REMOVAL

1. Remove the front roof console finisher. Refer to INT-22, "Removal and Installation".
2. Detach the microphone (1) from the front console finisher tabs (A).
3. Disconnect the microphone connector (B) and remove the microphone (1).



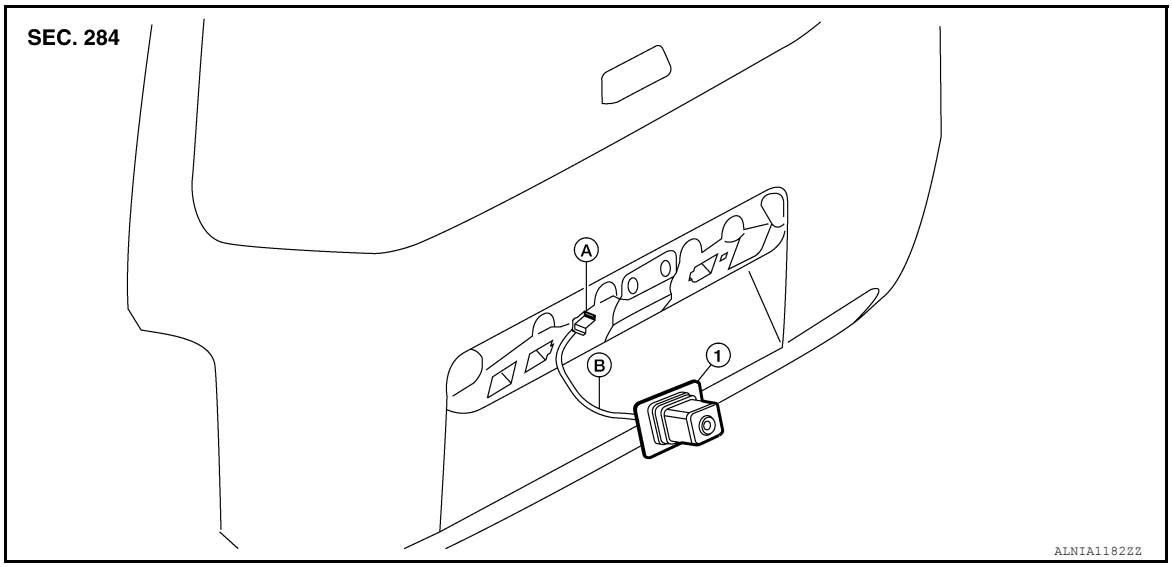
INSTALLATION

Installation is in the reverse order of removal.

REAR VIEW CAMERA

Removal and Installation

INFOID:0000000007347961



1. Rear view camera
A. Rear view camera connector
B. Rear view camera harness clip

REMOVAL

1. Remove the license lamp finisher. Refer to EXT-23, "Removal and Installation".
2. Disconnect the rear view camera connector.
3. Detach the rear view camera harness clip.
4. Detach the rear view camera to release, then pull out to remove the rear view camera while feeding the rear view camera harness and connector through the back door.

INSTALLATION

Installation is in the reverse order of removal.