SECTION AV
AUDIO, VISUAL & NAVIGATION SYSTEM

CONTENTS

BASE AUDIO

PRECAUTION

PRECAUTIONS

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

INFOID:0000000008487452

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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. 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.**

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

INFOID:0000000008360052

CAUTION:

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

NOTE:

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

Precaution for Trouble Diagnosis

INFOID:0000000008360053

AV COMMUNICATION SYSTEM

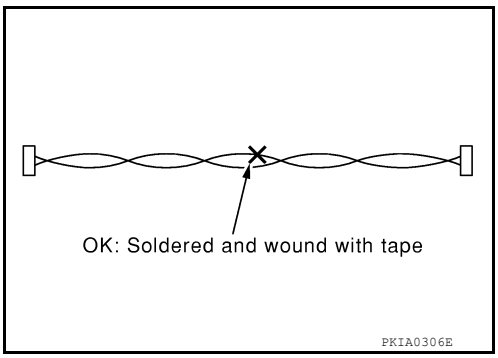
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

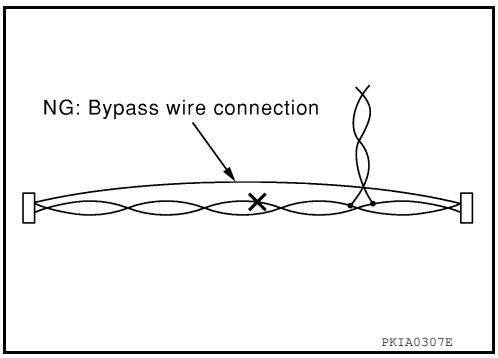
INFOID:0000000008360054

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:0000000008360055

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt: Dip a soft cloth into lukewarm water 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.

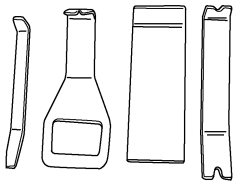
PREPARATION

PREPARATION

Special Service Tool

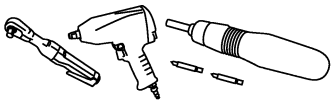
INFOID:0000000008360056

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:0000000008360057

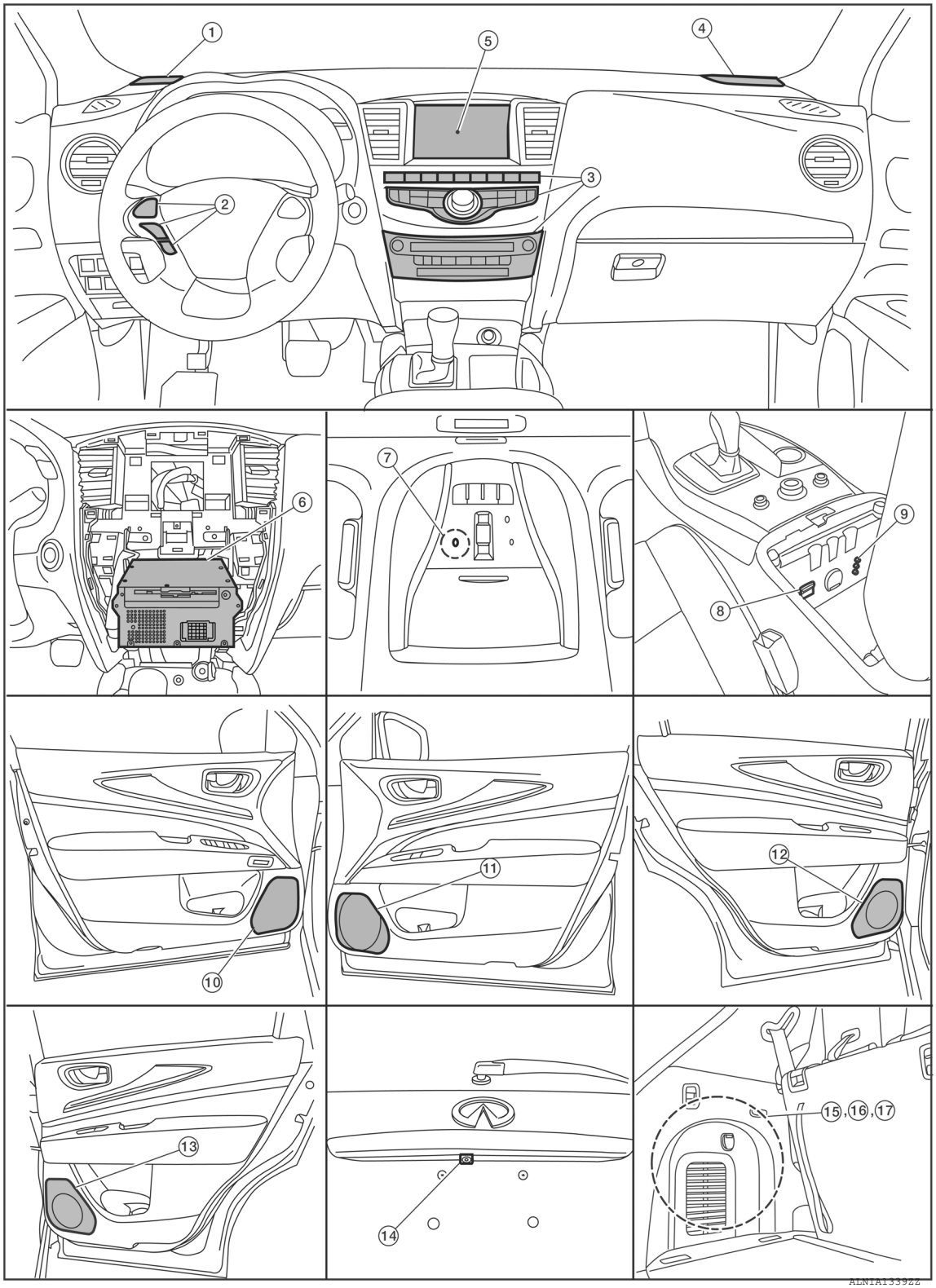
(Kent-Moore No.) Tool name	Description
(—) Power tools  PIIB1407E	Loosening nuts, screws and bolts

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000008202455



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

Component Description

INFOID:0000000008202456

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

Part name	Description
Bluetooth® antenna	Receives TEL voice signal and outputs it to Bluetooth® control unit.
USB connector	USB sound and data input signals are transmitted to AV control unit.

SYSTEM
MULTI AV SYSTEM
MULTI AV SYSTEM : System Diagram

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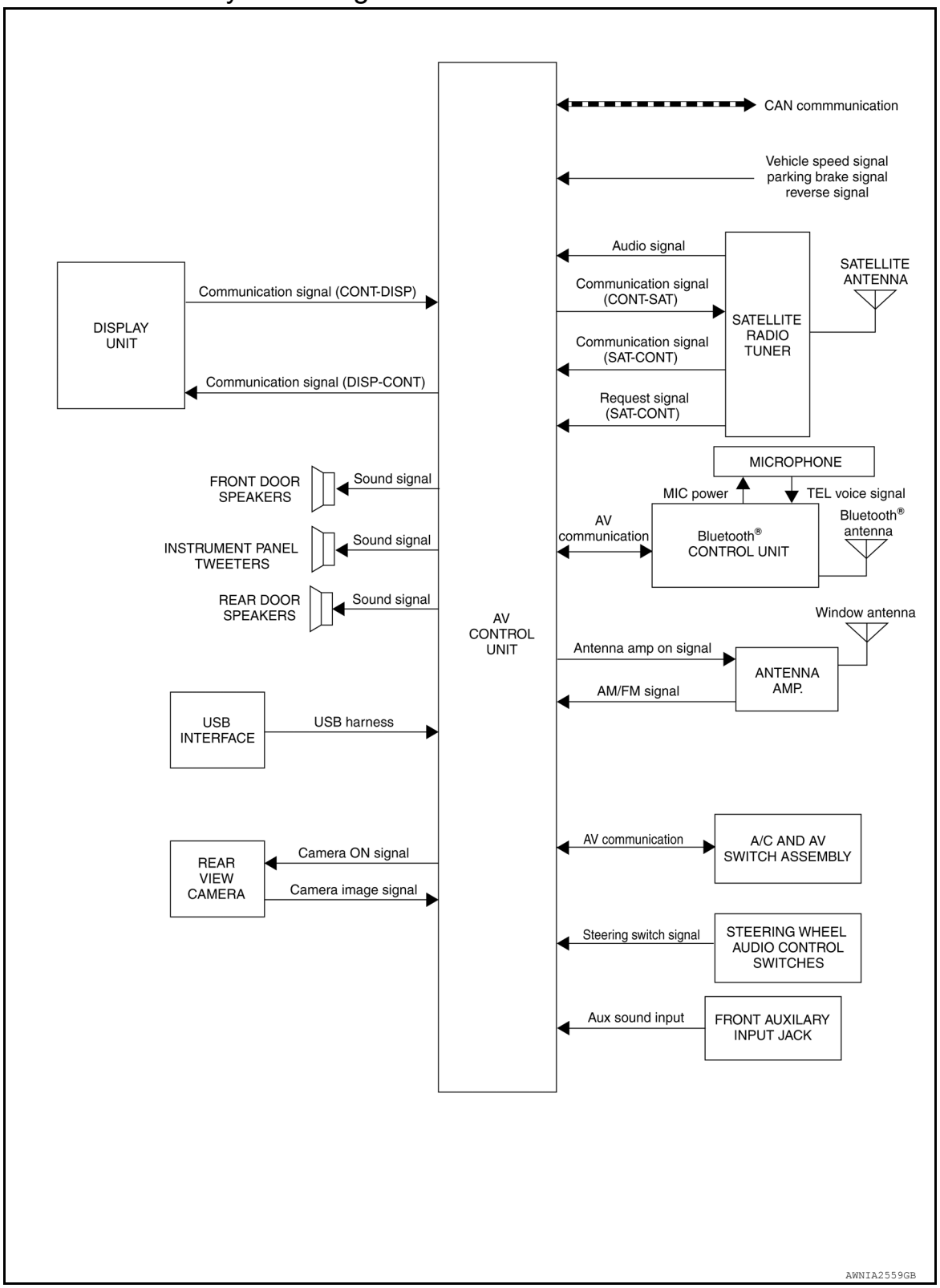


MULTI AV SYSTEM : System Description

INFOID:0000000008227252

AUDIO SYSTEM

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

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, instrument panel tweeters and rear door speakers.
Refer to Owner's Manual for audio system operating instructions.

SATELLITE RADIO SYSTEM

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

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

HANDS-FREE PHONE SYSTEM

System Operation

NOTE:

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

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

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

Bluetooth® Control Unit

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

Microphone

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

AV Control Unit

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

REAR VIEW CAMERA SYSTEM

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

SPEED SENSITIVE VOLUME SYSTEM

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:0000000008297152

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

- A/C and AV switch assembly self diagnosis that checks the ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly.
  NOTE:
  The hazard switch and disk eject switch are not included in this operation check.
- AV control unit on board diagnosis performs the following functions listed in the table below:

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

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

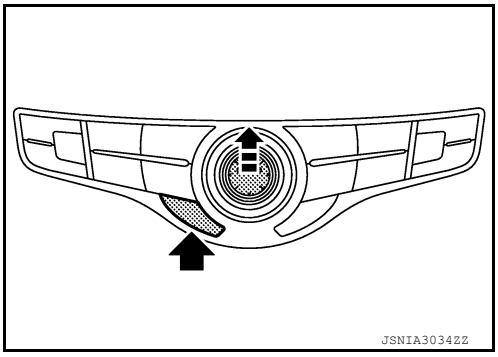
On Board Diagnosis Function

INFOID:0000000008297153

METHOD OF STARTING

A/C and AV Switch Assembly Self Diagnosis

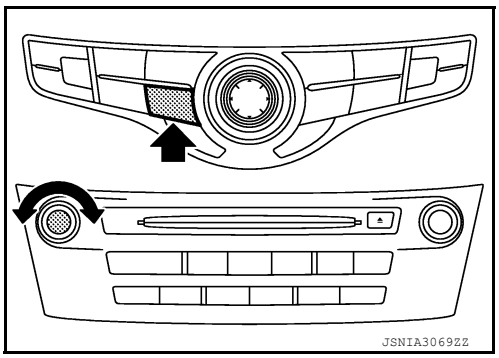
- Press the BACK and UP switches within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more.
- The buzzer sounds, all indicators of the switches illuminate, and the self-diagnosis mode begins.
- The ON position continuity of each switch can be checked by pressing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



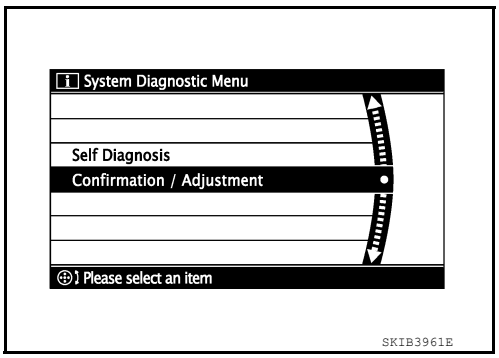
AV Control Unit Self Diagnosis

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

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



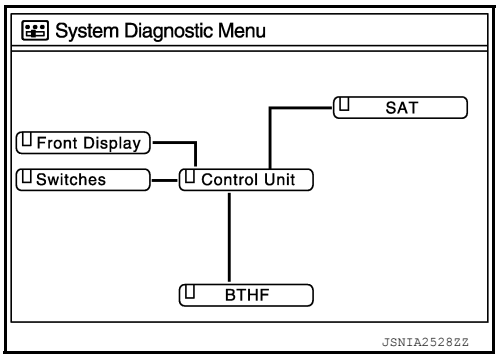
4. The trouble diagnosis initial screen is displayed, and Self Diagnosis or Confirmation/Adjustment can be selected.



SELF DIAGNOSIS MODE

AV Control Unit Self Diagnosis

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

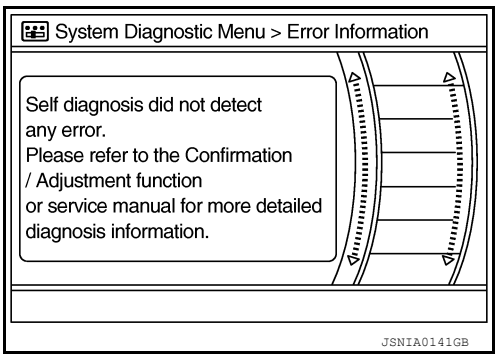


Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction [1]	Red	Green

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

- Replace AV control unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is AV control unit internal error. Refer to AV-128, "Removal and Installation - AV Control Unit".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

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



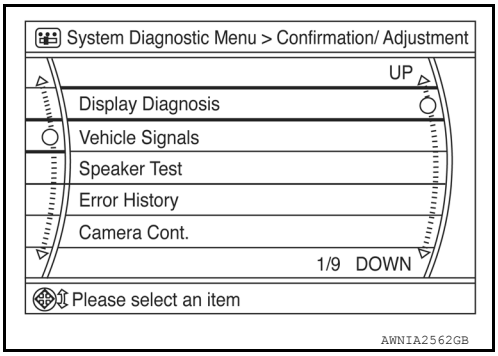
AV Control Unit Self Diagnosis Results

Only Unit Part Is Displayed In Red		
Screen switch	Description	Possible cause
Control unit	Malfunction is detected in AV control unit power supply or ground circuit.	• AV control unit power supply or ground circuits. Refer to AV-89. • If no malfunction is detected in AV control unit power supply and ground circuits, replace AV control unit. Refer to AV-128.

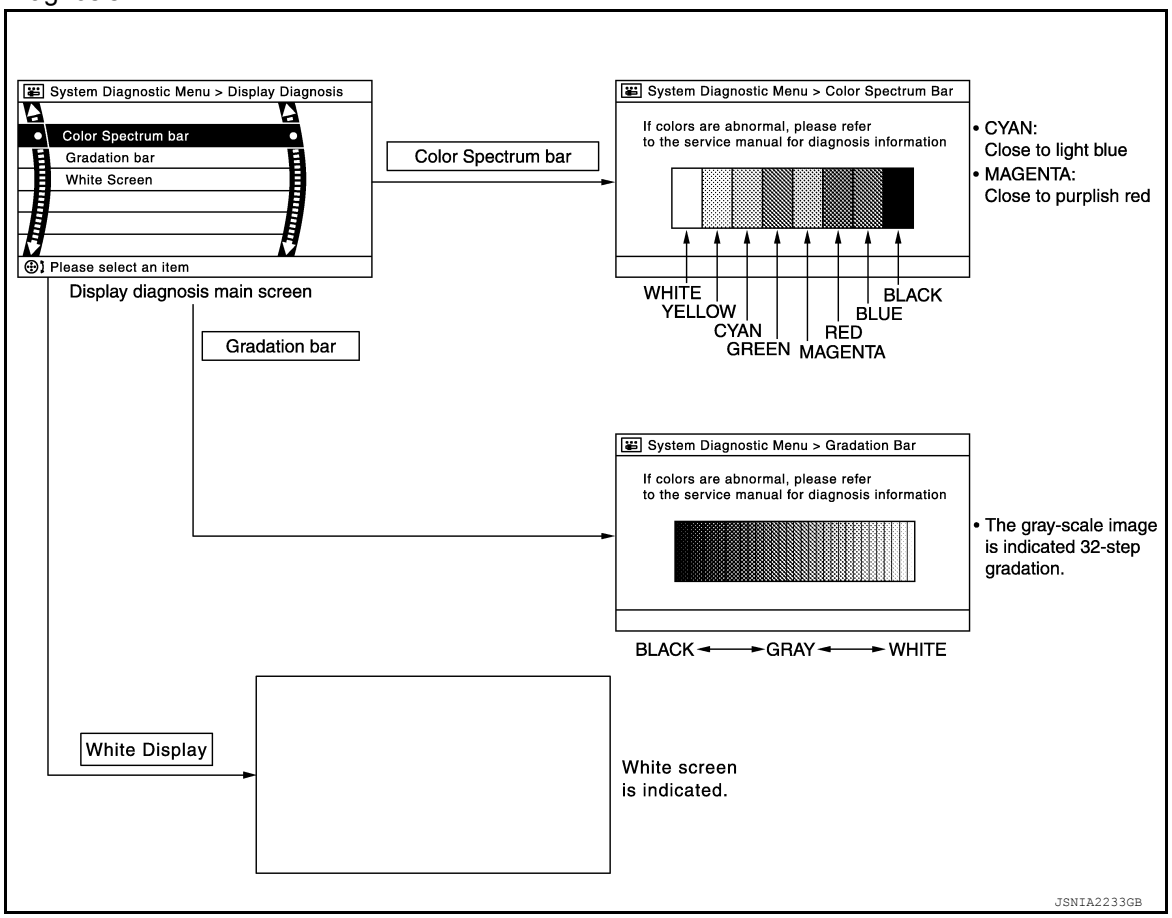
A Connecting Cable Between Units Is Displayed In Yellow		
Area with yellow connection lines	Description	Possible cause
Control unit ⇔ Front Display	Malfunction is detected in serial communication circuits between AV control unit and display unit.	Serial communication circuits between AV control unit and display unit. Refer to AV-83.
Control unit ⇔ SAT	When any of the following is detected: • satellite radio tuner power supply or ground circuit malfunction. • communication circuit malfunction between AV control unit and satellite radio tuner. • request signal circuit malfunction between AV control unit and satellite radio tuner.	• Satellite radio tuner power supply or ground circuits. Refer to AV-91. • Communication circuit between AV control unit and satellite radio tuner. Refer to AV-85. • Request signal circuit between AV control unit and satellite radio tuner. Refer to AV-85.
Control unit ⇔ BTHF	When any of the following is detected: • Bluetooth® control unit power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and Bluetooth® control unit.	• Bluetooth® control unit power supply or ground circuits. Refer to AV-92. • AV communication circuits between AV control unit and Bluetooth® control unit.

AV Control Unit Confirmation/Adjustment

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

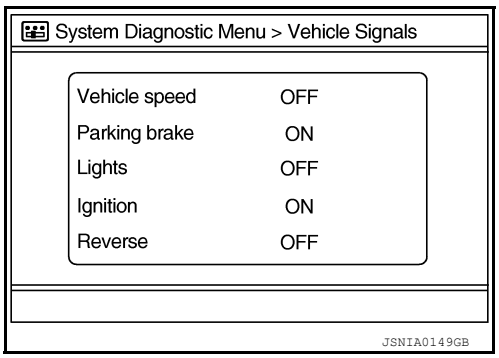


Display Diagnosis



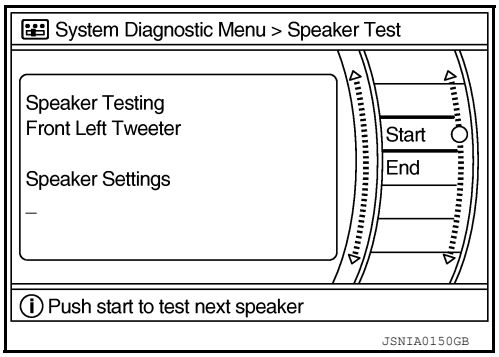
Vehicle Signals

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



Speaker Test

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



Error History

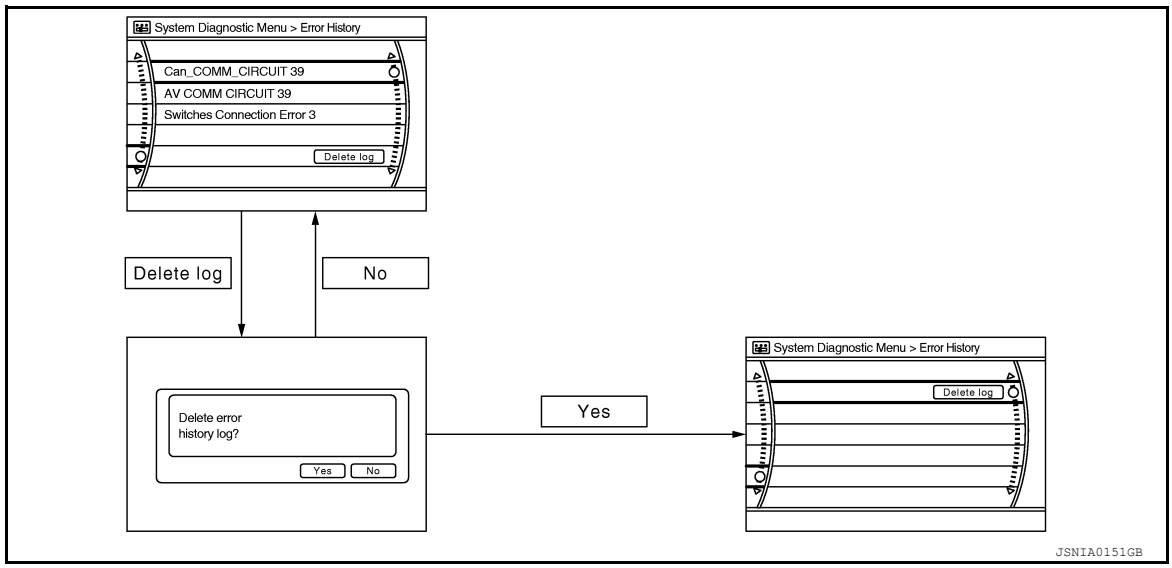
The self diagnosis results are judged depending on whether any error occurs from when Self diagnosis is selected until the self diagnosis results are displayed.

However, the diagnosis results are judged normal if an error has occurred before the ignition switch is turned ON and then no error has occurred until the self
diagnosis start. Check the Error Record to detect any error that may have occurred before the self diagnosis start because of this situation.
The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

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

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

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



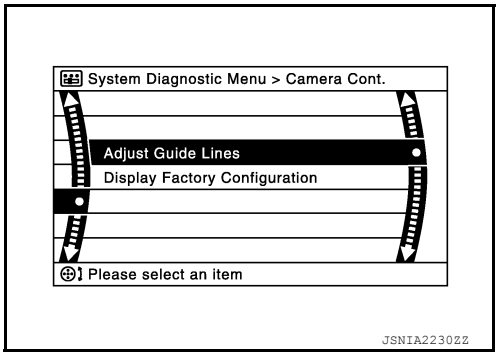
Error item
Some error items may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items

Error item	Description	Possible cause
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, then repair the malfunctioning components according to diagnosis results. Refer to AV-30
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-128.
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
CAN Controller Memory Error		
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor. Refer to BRC-59.

Error item	Description	Possible cause
Display Connection Error	When any of the following is detected: • display unit power supply or ground circuits malfunction. • communication circuit malfunction between AV control unit and display unit.	• Display unit power supply or ground circuits. Refer to AV-89. • Communication circuits between AV control unit and display unit. Refer to AV-83.
XM Connection Error	When any of the following is detected: • satellite radio tuner power supply or ground circuit malfunction. • communication circuit malfunction between AV control unit and satellite radio tuner. • request signal circuit malfunction between AV control unit and satellite radio tuner.	• Satellite radio tuner power supply or ground circuits. Refer to AV-91. • Communication circuit between AV control unit and satellite radio tuner. Refer to AV-85. • Request signal circuit between AV control unit and satellite radio tuner. Refer to AV-85.
• AV COMM CIRCUIT • Switches Connection Error	When any of the following is detected: • A/C and AV switch assembly power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	• A/C and AV switch assembly power supply or ground circuits. Refer to AV-93. • AV communication circuits between AV control unit and A/C and AV switch assembly.
• AV COMM CIRCUIT • H/F Unit Connection Error	When any of the following is detected: • Bluetooth® control unit power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and Bluetooth® control unit.	• Bluetooth® control unit power supply or ground circuits. Refer to AV-92. • AV communication circuits between AV control unit and Bluetooth® control unit.
• AV COMM CIRCUIT • Switches Connection Error • H/F Unit Connection Error	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.

Camera Cont.

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

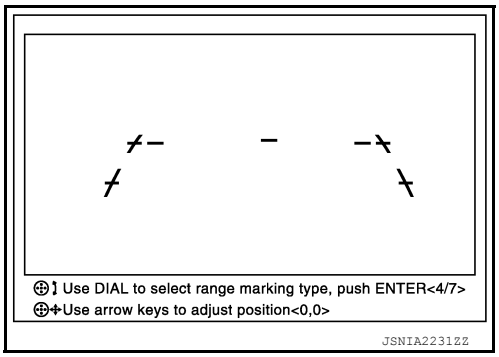


Adjust Offset of Rear view Camera

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

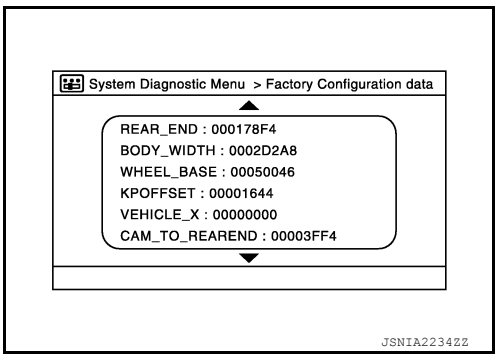
CAUTION:

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



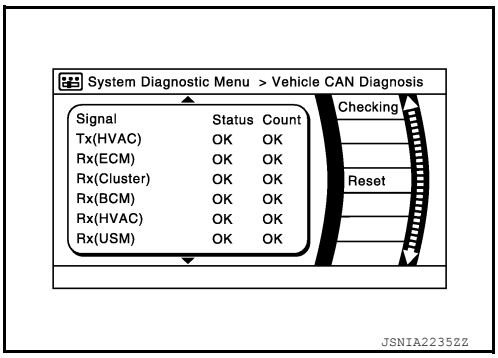
Factory Configuration Confirmation

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



Vehicle CAN Diagnosis

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

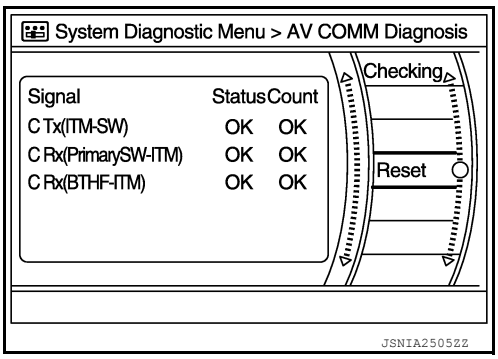


Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(BCM)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(VDC)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39

NOTE:
“???” indicates UNKWN.

AV COMM Diagnosis

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

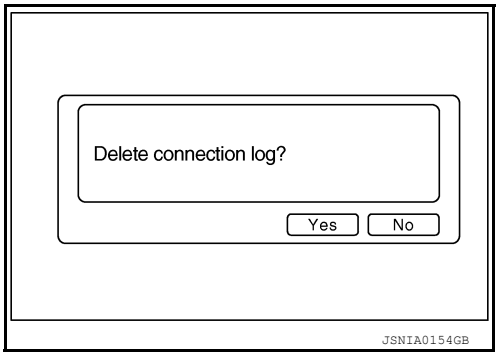


Items	Status (Current)	Counter (Past)
C Tx(ITM-SW)	OK / ???	OK / 0 – 39
C Rx(PrimarySW-ITM)	OK / ???	OK / 0 – 39
C Rx(BTHF-ITM)	OK / ???	OK / 0 – 39

NOTE:
“???” indicates UNKWN.

Delete Unit Connection Log

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

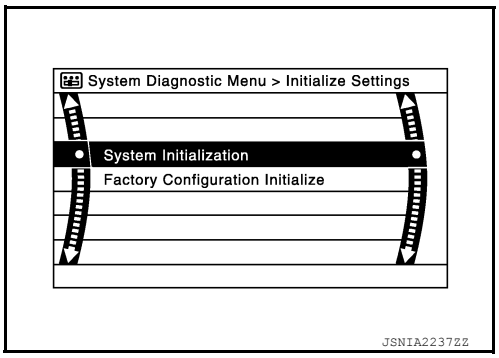


Initialize Settings

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

CAUTION:

- **Never perform Accessory Number Initialization except when configuration is unsuccessful.**
- **Accessory Number Initialization requires configuration. For details, refer to AV-76, "CONFIGURATION (AV CONTROL UNIT) : Description".**



CONSULT Function

INFOID:0000000008297154

CONSULT FUNCTIONS

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

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Work support	The settings for AV control unit functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing AV control unit.
CAN Diag Support Mntr	• The result of transmit/receive diagnosis of AV communication is displayed. • The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSTIC RESULT

Refer to AV-39, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	• On: vehicle speed > 0 km/h (0 MPH). • Off: vehicle speed = 0 km/h (0 MPH).
PKB SIG [On/Off]	• On: parking brake applied. • Off: parking brake released.
ILLUM SIG [On/Off]	• On: optical sensor signal is received. • Off: optical sensor signal is not received.

Monitor Item [Unit]	Description
IGN SIG [On/Off]	• On: ignition switch ON. • Off: ignition switch ACC.
REV SIG [On/Off]	• On: selector lever in R position. • Off: selector lever in any position other than R.

WORK SUPPORT

Conditions	Description
ST ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed. Refer to BRC-59, "Description".

CONFIGURATION

Refer to AV-76, "CONFIGURATION (AV CONTROL UNIT) : Description".

CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

DIAGNOSIS SYSTEM (BLUETOOTH® CONTROL UNIT)

Diagnosis Description

INFOID:0000000008282670

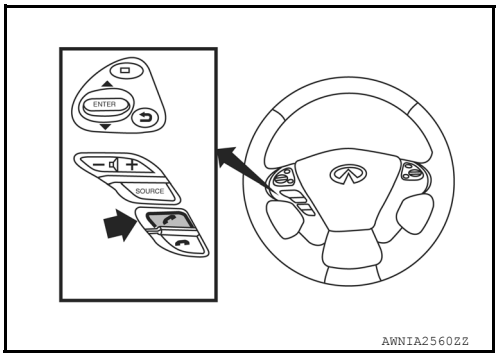
The Bluetooth® control unit has two diagnostic checks. The first diagnostic check is performed automatically every ignition cycle during control unit initialization. The second diagnostic check is performed by the technician using the steering wheel audio control switches prior to trouble diagnosis.

Bluetooth® CONTROL UNIT INITIALIZATION CHECKS

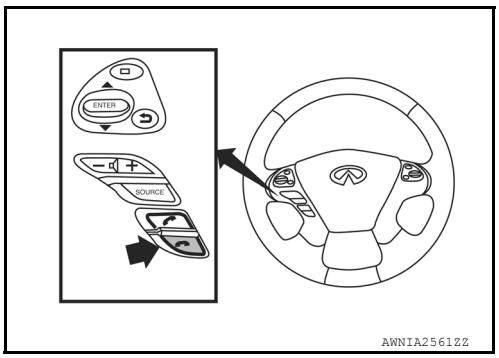
- Internal control unit failure
- Bluetooth® antenna connection open or shorted
- Steering wheel audio control switches [(PHONE/SEND), (PHONE/END)] stuck closed
- Vehicle speed pulse count
- Microphone connection test (with playback to operator)
- Bluetooth® inquiry check

OPERATION PROCEDURE

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



4. While the prompt is playing, press and hold the steering wheel audio control switch (PHONE/END) button until you hear the “Diagnostics mode” prompt. The Bluetooth® system will sound a 5-second beep.
5. While the beep is sounding, press and hold the steering wheel audio control switch (PHONE/END) button again until you hear prompts.
6. The Bluetooth® system has now entered into the diagnostic mode. Results of the diagnostic checks will be verbalized to the technician. Refer to AV-32, "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-32, "Work Flow".



Work Flow

INFOID:0000000008282671

Failure Message	Action
“Internal failure”	Replace Bluetooth® control unit. Refer to AV-138, "Removal and Installation".
“Bluetooth® antenna open”	1. Inspect harness connection. 2. Replace Bluetooth® antenna. Refer to AV-138, "Removal and Installation".
“Bluetooth® antenna shorted”	
“Phone/Send for Hands Free System is stuck”	Check steering wheel audio control switches. Refer to AV-123, "Diagnosis Procedure".
“Phone/End for the Hands Free System is stuck”	
“Microphone test” (failed interactive test)	1. Inspect harness between Bluetooth® control unit and microphone. 2. Replace microphone. Refer to AV-139, "Removal and Installation" .

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

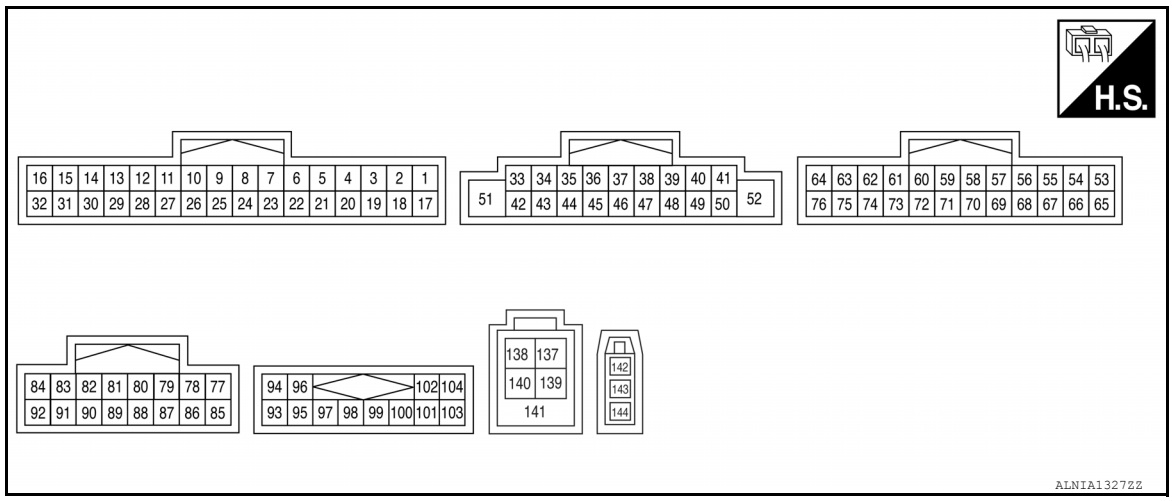
Reference Value

INFOID:0000000008227256

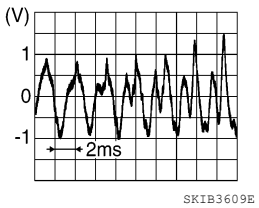
VALUES ON THE DIAGNOSIS TOOL

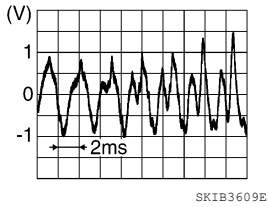
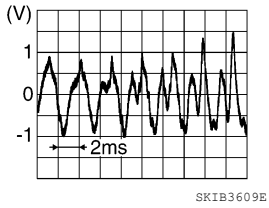
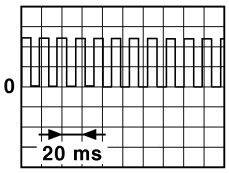
Monitor Item	Condition	Value/Status
VHCL SPD SIG	Vehicle speed = 0 km/h (0 MPH).	Off
	Vehicle speed > 0 km/h (0 MPH).	On
PKB SIG	Parking brake released.	Off
	Parking brake applied.	On
ILLUM SIG	Optical sensor signal is not received.	Off
	Optical sensor signal is received.	On
IGN SIG	Ingnition switch OFF or ACC.	Off
	Ignition switch ON.	On
REV SIG	Selector lever in any position other than R.	Off
	Selector lever in R position.	On

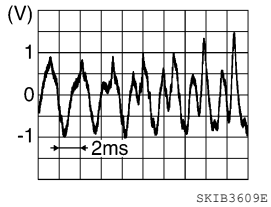
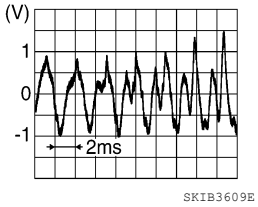
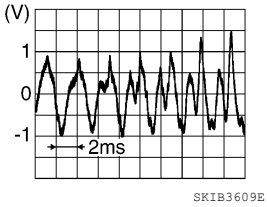
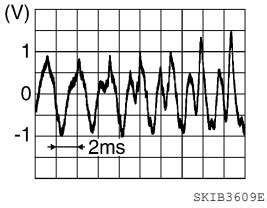
TERMINAL LAYOUT

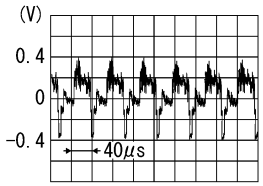
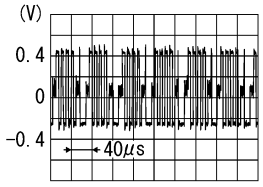
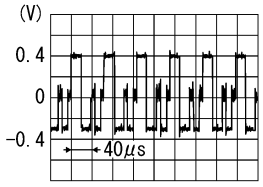
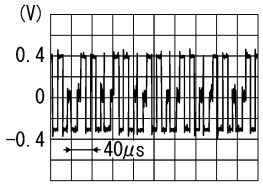
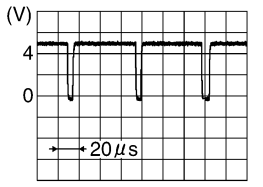


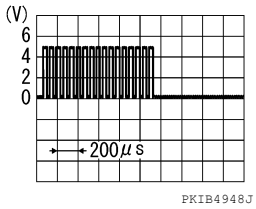
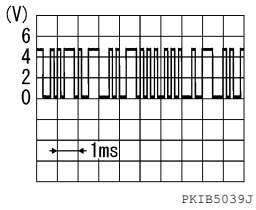
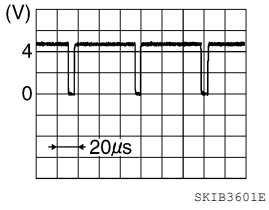
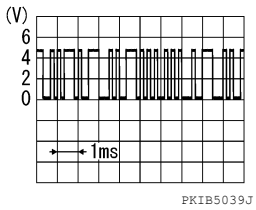
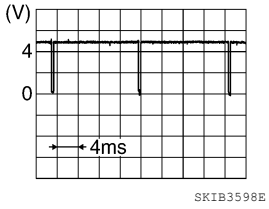
PHYSICAL VALUES

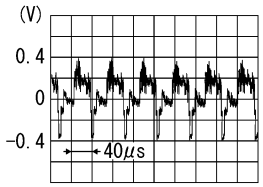
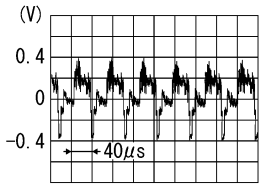
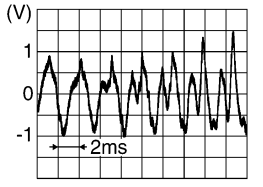
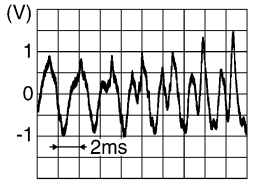
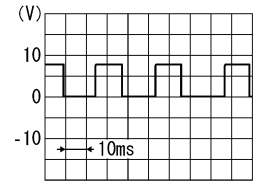
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
5 (W)	4 (B)	Bluetooth® voice signal	Input	Ignition switch ON	During voice guide output with switch pressed.	
6	—	Shield	—	—	—	—
10 (V)	Ground	Switch ground	—	Ignition switch ON		0 V

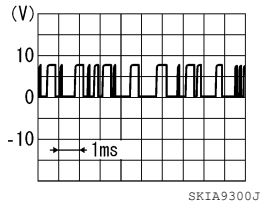
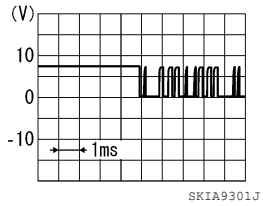
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
11 (L)	—	CAN–H	Input/ Output	—	—	—
12 (P)	—	CAN–L	Input/ Output	—	—	—
13 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
14 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
15 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
16 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
20 (R)	22 (B)	AUX sound signal RH	Input	Ignition switch ON	AUX mode selected.	 SKIB3609E
21 (W)	22 (B)	AUX sound signal LH	Input	Ignition switch ON	AUX mode selected.	 SKIB3609E
25	—	Shield	—	—	—	—
28 (Y)	Ground	Disk eject signal	Input	Ignition switch ON	Pressing eject switch.	0 V
					Except above.	5.0 V
29 (LG)	Ground	Ignition signal	Input	Ignition switch ON		Battery voltage
30 (R)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever in R position.	Battery voltage
					Selector lever in any position other than R.	0 V
31 (G)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake applied.	4.5 V
					Parking brake released.	0 V
32 (BG)	Ground	Vehicle speed signal	Input	Ignition switch ON	Vehicle speed approx. 40 km/h (25 MPH)	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB

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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
51 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
52 (GR)	Ground	Ground	—	Ignition switch ON		0 V
53 (B)	Ground	Composite image signal	Output	Ignition switch ON	Camera image or AUX image displayed	 SKIB2251J
54 (W)	Ground	Composite image signal ground	—	Ignition switch ON		0 V
55 (W)	Ground	RGB signal (B: blue)	Output	Ignition switch ON	Begin Confirmation/Adjustment mode, then select “Color Spectrum Bar”	 SKIB2237J
56 (B)	Ground	RGB signal (G: green)	Output	Ignition switch ON	Begin Confirmation/Adjustment mode, then select “Color Spectrum Bar”	 SKIB2236J
57 (R)	Ground	RGB signal (R: red)	Output	Ignition switch ON	Begin Confirmation/Adjustment mode, then select “Color Spectrum Bar”	 SKIB2238J
58 (B)	Ground	RGB synchronizing signal	Output	Ignition switch ON		 SKIB3603E
59	—	Shield	—	—	—	—

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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
82 (W)	Ground	Camera image signal	Input	Ignition switch ON	Camera image displayed	 SKIB2251J
83 (W)	Ground	AUX image signal	Input	Ignition switch ON	AUX image displayed	 SKIB2251J
87 (R)	Ground	Camera power supply	Output	Ignition switch ON	Selector lever in “R” position	6.0 V
88 (B)	Ground	Camera ground	—	Ignition switch ON		0 V
89	—	Shield	—	—	—	—
90	—	Shield	—	—	—	—
91 (B)	Ground	AUX image signal ground	—	Ignition switch ON		0 V
94 (B)	93 (W)	Satellite radio sound signal LH	Input	Ignition switch ON	Satellite radio mode selected	 SKIB3609E
96 (G)	95 (R)	Satellite radio sound signal RH	Input	Ignition switch ON	Satellite radio mode selected	 SKIB3609E
97	—	Shield	—	—	—	—
98	—	Shield	—	—	—	—
100 (W)	Ground	Request signal (SAT→CONT)	Input	Ignition switch ON	Satellite radio mode selected	 SKIA9299J

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
101 (B)	Ground	Communication signal (SAT→CONT)	Input	Ignition switch ON	Satellite radio mode selected	 SKIA9300J
102 (R)	Ground	Communication signal (CONT→SAT)	Output	Ignition switch ON	Satellite radio mode selected	 SKIA9301J
137 (G)	—	V BUS signal	—	—	—	—
138 (W)	—	USB ground	—	—	—	—
139 (R)	—	USB D+ signal	—	—	—	—
140 (L)	—	USB D– signal	—	—	—	—
141	—	Shield	—	—	—	—
142 (B)	—	Antenna amp. ON signal	Output	Ignition switch ON		Battery voltage
143 (B)	—	AM - FM main	Input	—	—	—
144 (B)	—	FM sub	Input	—	—	—

DTC Index

INFOID:0000000008227257

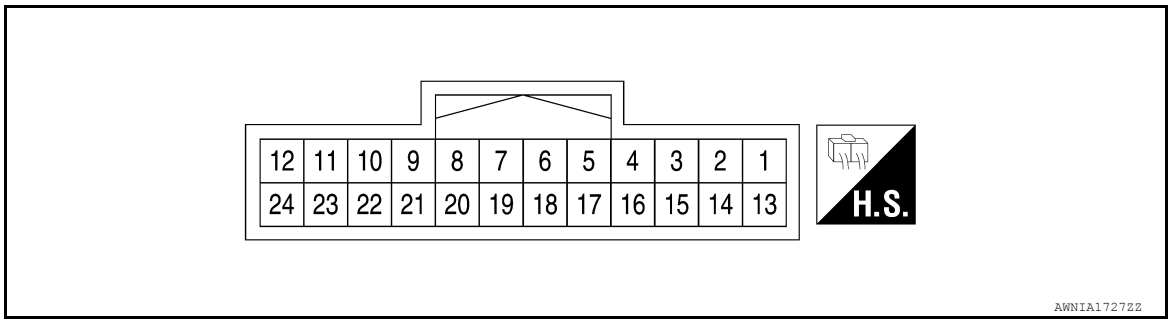
CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-78, "DTC Logic"
U1010: CONTROL UNIT	AV-79, "DTC Logic"
U1200: CONT UNIT	AV-80, "DTC Logic"
U1216: CAN CONT	AV-81, "DTC Logic"
U1232: ST ANGLE SEN CALIB	AV-82, "DTC Logic"
U1240: SWITCH CONN	AV-87, "Description"
U1243: FRONT DISP CONN	AV-83, "DTC Logic"
U1255: SAT CONN	AV-85, "DTC Logic"
U1256: HAND FREE CONN	AV-87, "Description"
U1300: AV COMM CIRCUIT	AV-87, "Description"
U1310: CONTROL UNIT	AV-88, "DTC Logic"

DISPLAY UNIT

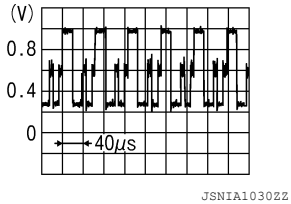
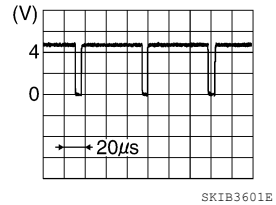
Reference Value

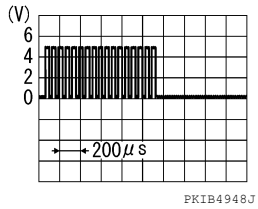
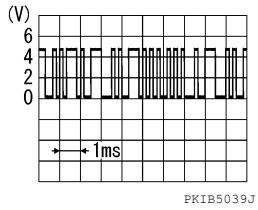
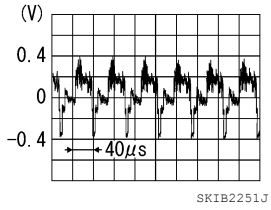
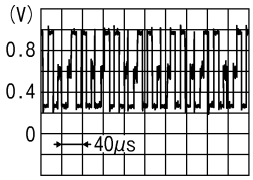
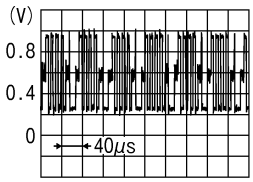
INFOID:0000000008282653

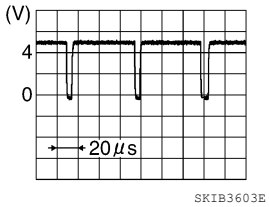
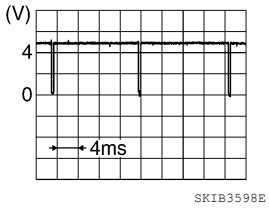
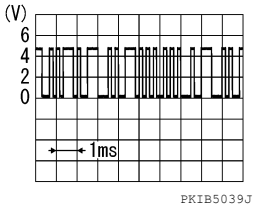
TERMINAL LAYOUT



PHYSICAL VALUES

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

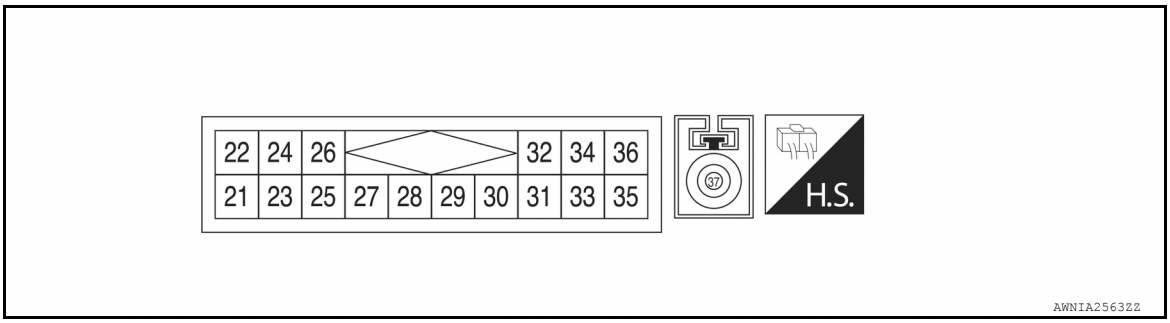
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (W)	Ground	RGB area (YS) signal	Input	Ignition switch ON	At RGB image is displayed.	5V
					At DVD image is displayed.	 PKIB4948J
11 (W)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch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

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

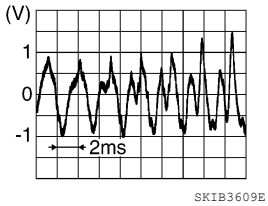
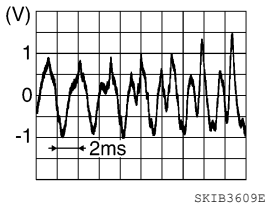
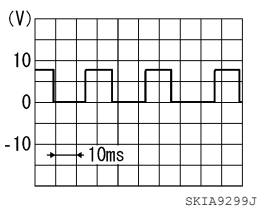
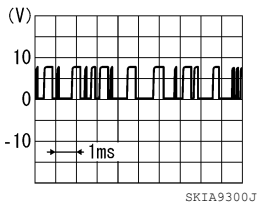
SATELLITE RADIO TUNER

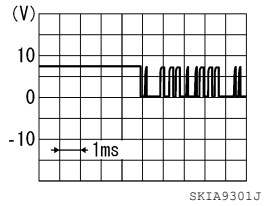
Reference Value

INFOID:0000000008282651



PHYSICAL VALUES

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

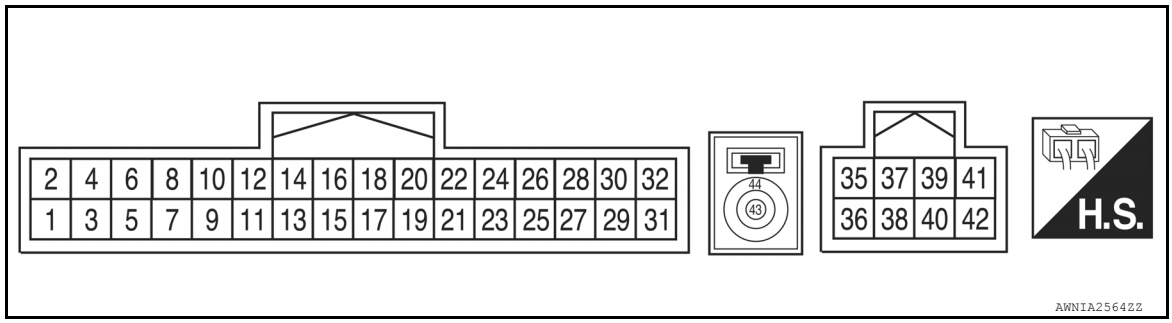
Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
30 (B)	Ground	Communication signal (CONT→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	
32 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
35 (GR)	Ground	Ground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

BLUETOOTH® CONTROL UNIT

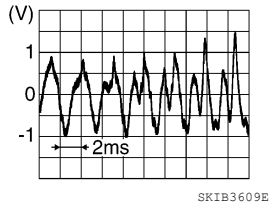
Reference Value

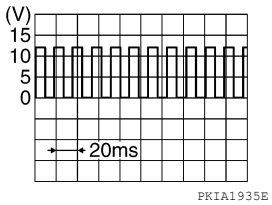
INFOID:0000000008282652

TERMINAL LAYOUT



PHYSICAL VALUES

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

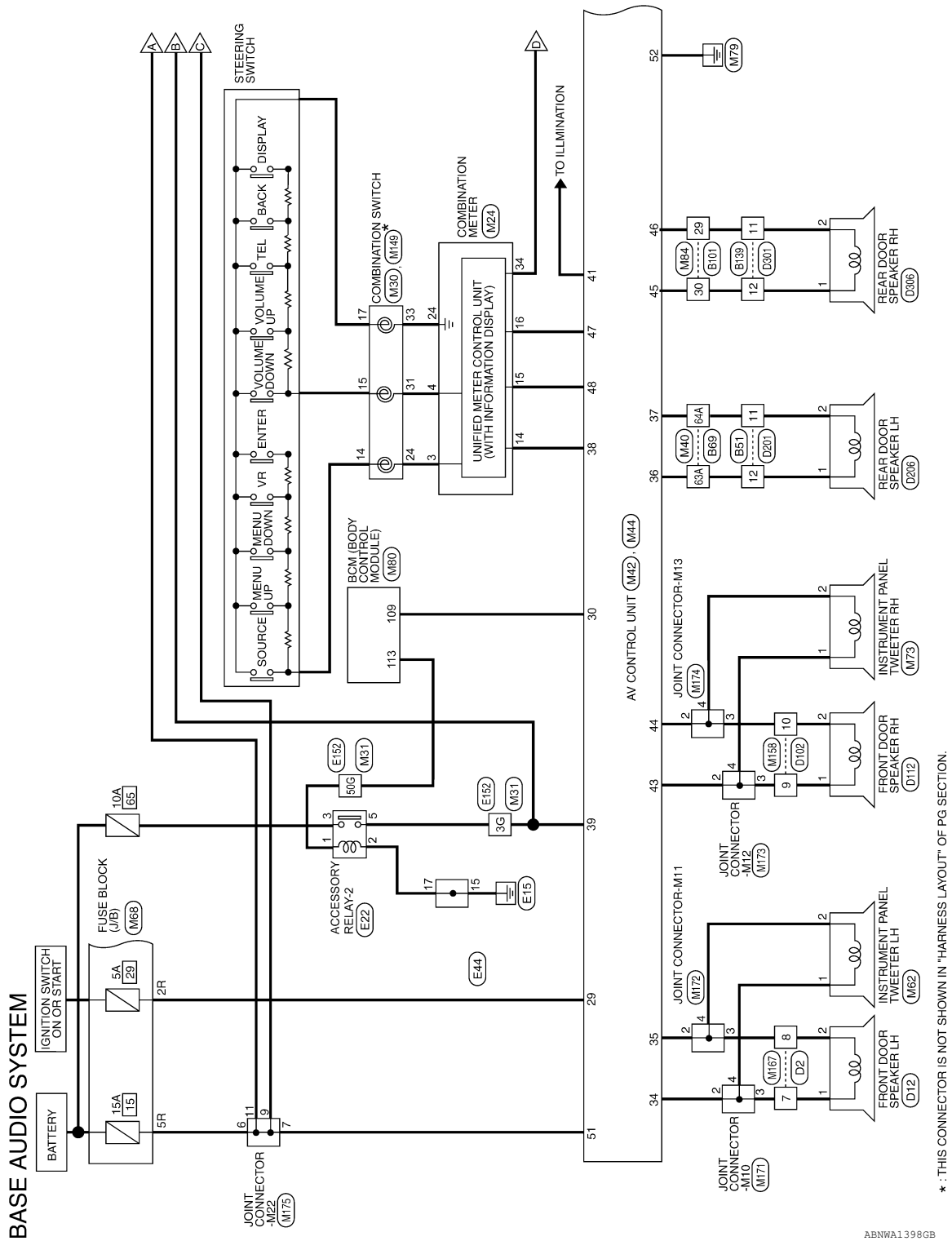
Terminal (wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/output			
28 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	
29 (W)	Ground	Microphone power	Output	Ignition switch ON	–	5V
35 (SB)	–	M-CAN1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

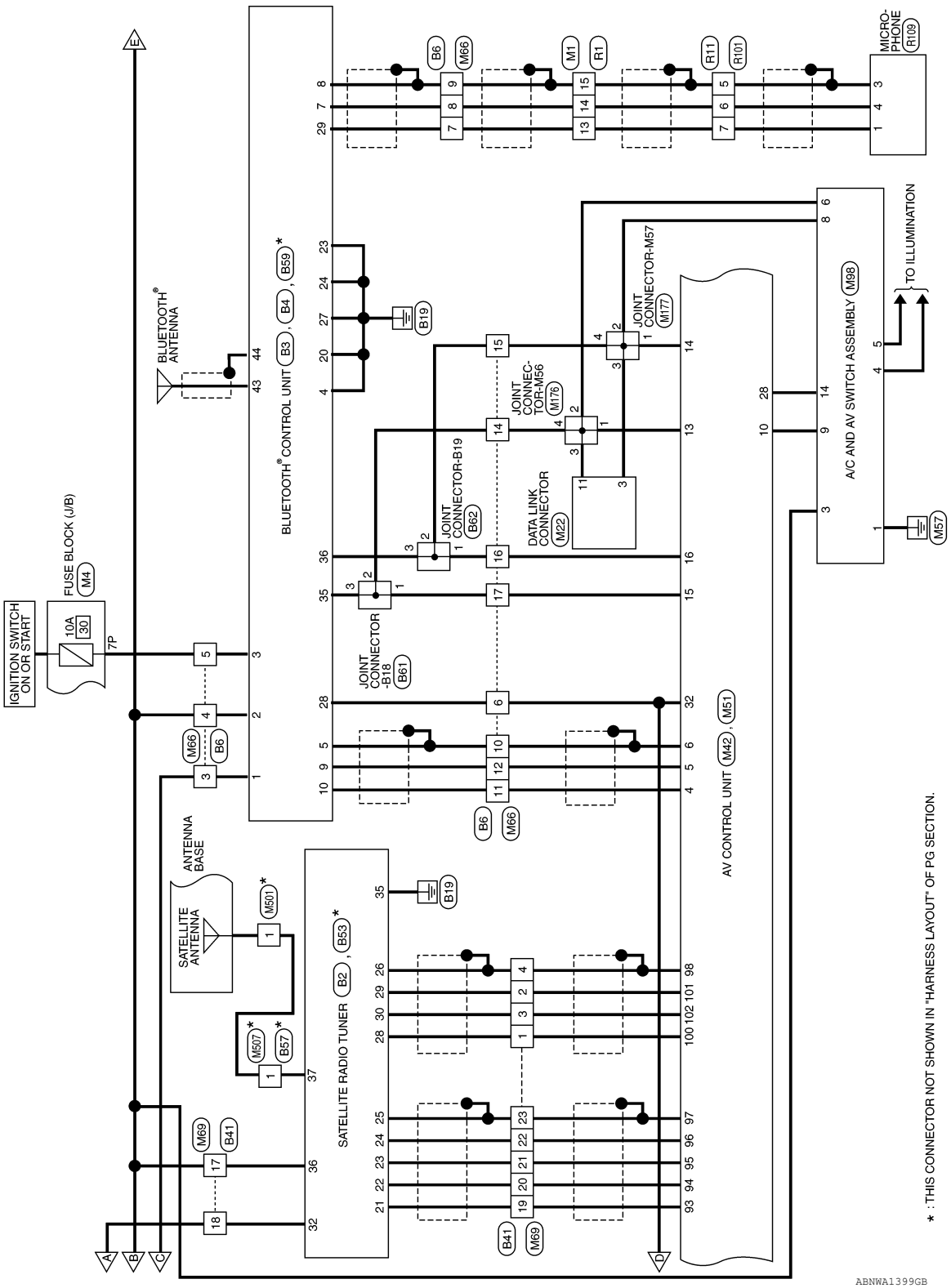
WIRING DIAGRAM

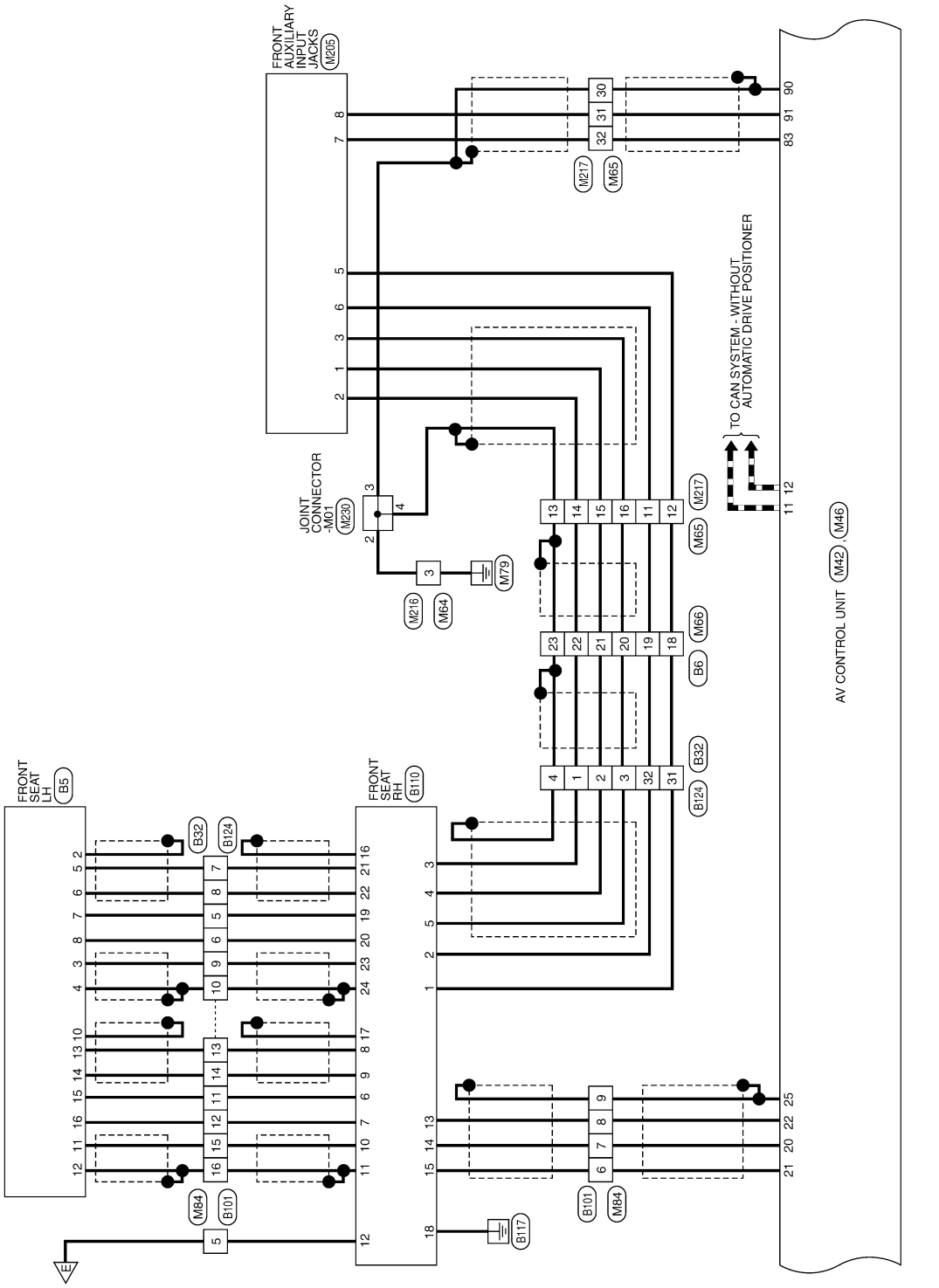
BASE AUDIO

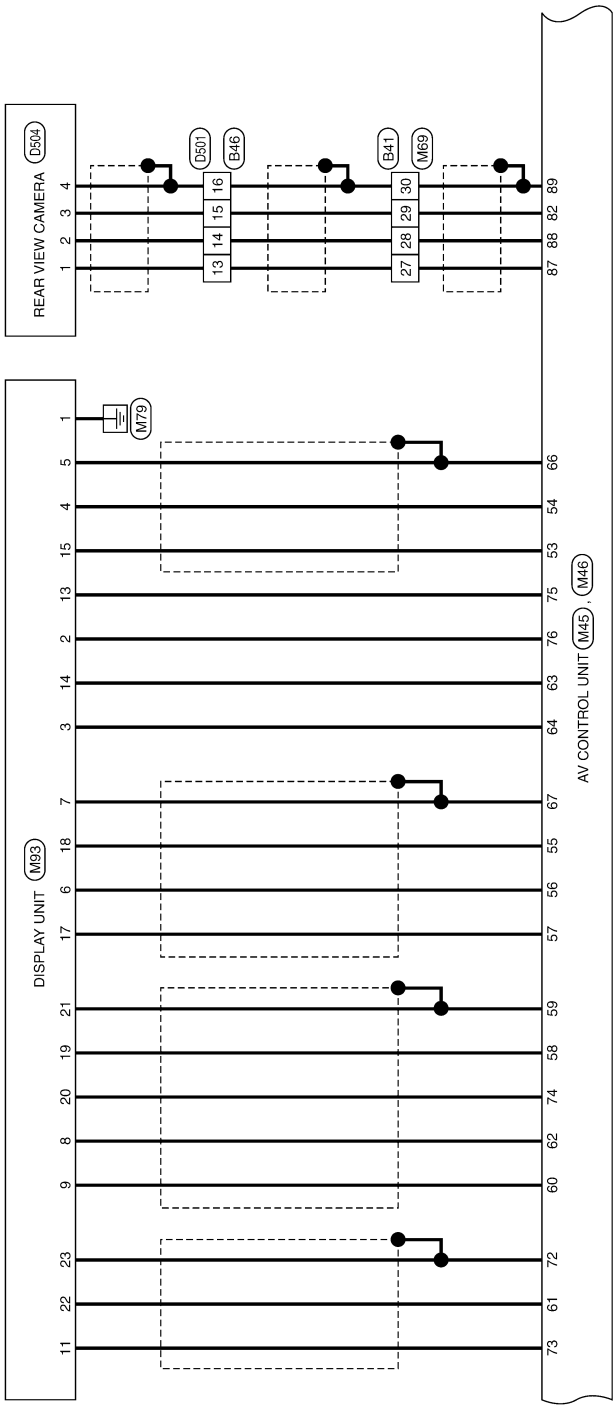
Wiring Diagram

INFOID:0000000007913449

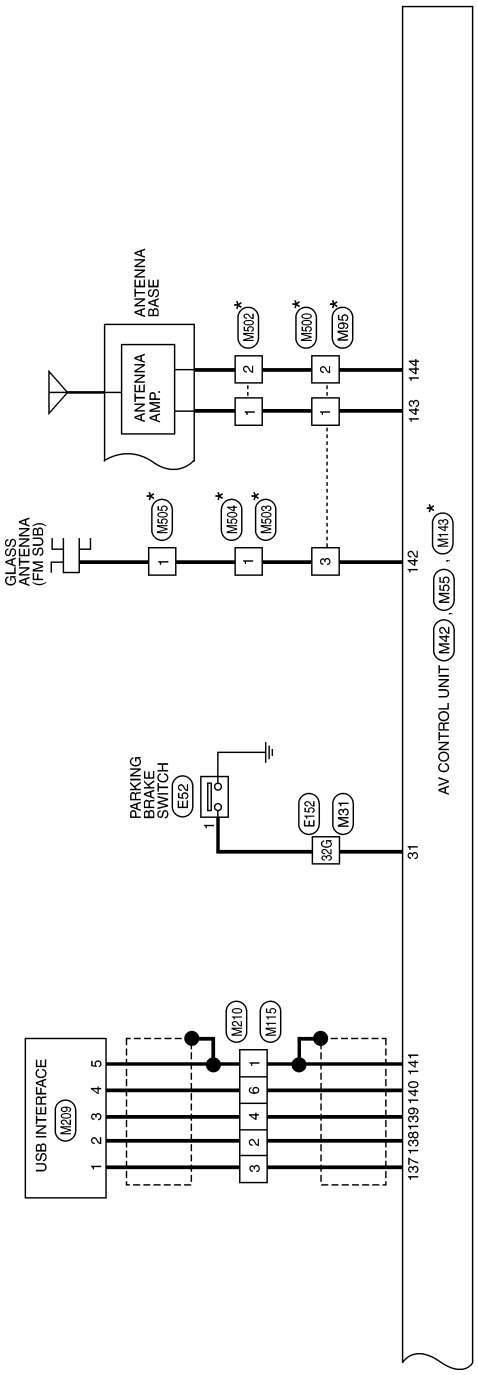



IGNITION SWITCH ON OR START
FUSE BLOCK (J/B) M4
10A 30
7P
BLUETOOTH® ANTENNA
BLUETOOTH® CONTROL UNIT B3, B4, B59*
JOINT CONNECTOR -B18 B61
JOINT CONNECTOR-B19 B62
JOINT CONNEC-TOR-M56 M176
JOINT CONNECTOR-M57 M177
DATA LINK CONNECTOR M22
ANTENNA BASE
SATELLITE ANTENNA
SATELLITE RADIO TUNER B2, B53*
AV CONTROL UNIT M42, M51
A/C AND AV SWITCH ASSEMBLY M98
TO ILLUMINATION
MICRO-PHONE R109
B6 M66
M1 R1
R11 R101
B19
M57
M501*
M507* B57*
M69 B41
A B C D E
* : THIS CONNECTOR NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
ABNWA1399GB


FRONT AUXILIARY INPUT JACKS M205
JOINT CONNECTOR -M01 M230
TO CAN SYSTEM -WITHOUT AUTOMATIC DRIVE POSITIONER
AV CONTROL UNIT M42 M46
FRONT SEAT LH B5
FRONT SEAT RH B110
M217
M65
M66
B6
B32
B124
M216
M64
M79
M84
B101
B117
E
ABNWA1400GB



ABNWA1401GB

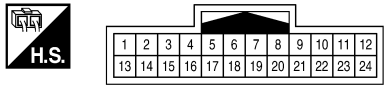


∗ : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

ABNWA1402GB

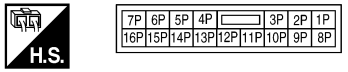
BASE AUDIO SYSTEM CONNECTORS

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



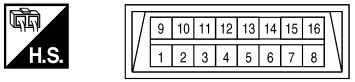
Terminal No.	Color of Wire	Signal Name
13	W	–
14	B	–
15	SHIELD	–

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



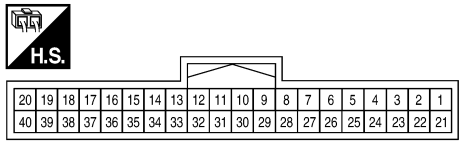
Terminal No.	Color of Wire	Signal Name
7P	LG	–

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



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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



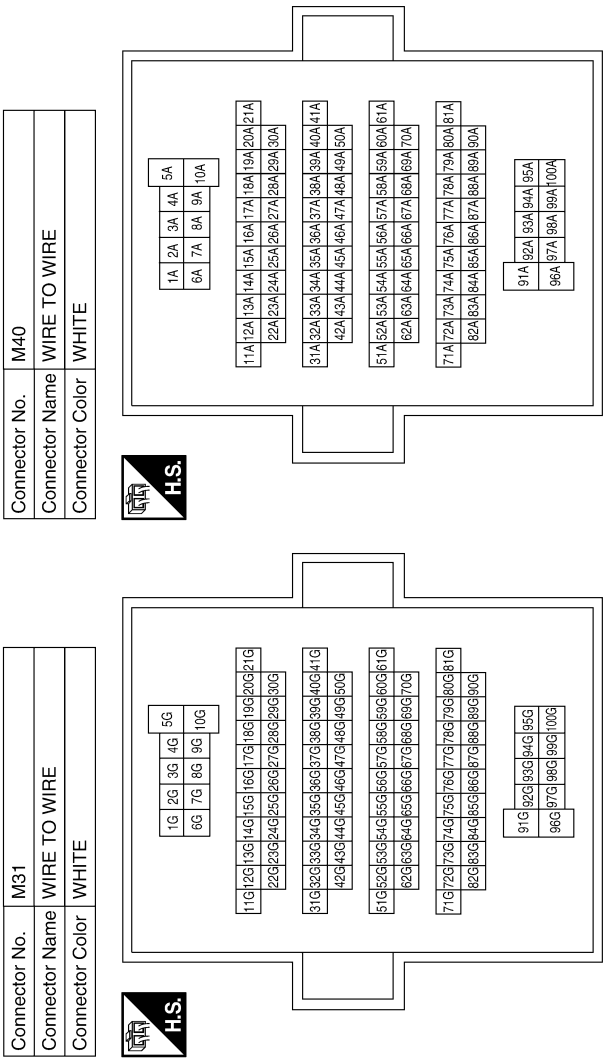
Terminal No.	Color of Wire	Signal Name
3	P	STRG SW INPUT1
4	BG	STRG SW INPUT 2
14	G	STRG SW OUTPUT1
15	W	STRG SW OUTPUT2
16	B	STRG SW OUTPUT GND

Terminal No.	Color of Wire	Signal Name
24	R	STRG SW GND
34	GR	SPEED 8 P/R

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

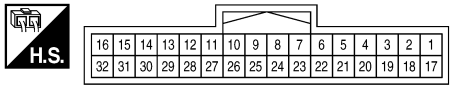
Terminal No.	Color of Wire	Signal Name
24	P	–
31	BG	–
33	R	–

ABNIA3483GB



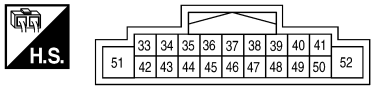
ABNIA3484GB

Connector No.	M42
Connector Name	AV CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	–	–
4	B	TEL VOICE-
5	W	TEL VOICE+
6	SHIELD	SHIELD
7	–	–
8	–	–
9	–	–
10	V	GND
11	L	CAN-H
12	P	CAN-L
13	SB	M-CAN1 H
14	LG	M-CAN1 L
15	SB	M-CAN2 H TRM
16	LG	M-CAN2 L TRM
17	–	–
18	–	–
19	–	–
20	R	AUX AUDIO RH+
21	W	AUX AUDIO RLH+
22	B	AUX GND
23	–	–
24	–	–
25	SHIELD	SHIELD
26	–	–
27	–	–
28	Y	CD(DVD) EJECT
29	LG	IGN
30	R	REVERSE SIG
31	G	PKB SIG
32	BG	SPEED 8P

Connector No.	M44
Connector Name	AV CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
33	–	–
34	SB	FR LH SP+
35	V	FR LH SP-
36	BR	RR LH SP+
37	Y	RR LH SP-
38	G	STRG SW
39	P	ACC
40	–	–
41	R	ILL
42	–	–
43	BR	FR RH SP+
44	Y	FR RH SP-
45	L	RR RH SP+
46	SB	RR RH SP-
47	B	STRG SW GND
48	W	STRG SW B
49	–	–
50	–	–
51	Y	+B
52	GR	GND

ABNIA3485GB

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

Terminal No.	Color of Wire	Signal Name
58	B	RGB SYN
59	SHIELD	RGB SYN GND
60	W	YS
61	B	DISP IT
62	G	HP
63	B	SIG GND
64	V	SIG VC
65	–	–
66	SHIELD	SHIELD
67	SHIELD	SHIELD
68	–	–
69	–	–
70	–	–

Terminal No.	Color of Wire	Signal Name
83	W	COMP1 IN +
84	–	–
85	–	–
86	–	–
87	R	CAM 6.2
88	B	CAM GN
89	SHIELD	SHIELD
90	SHIELD	SHIELD
91	B	COMP IN
92	–	–

Connector No.	M45
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

64	63	62	61	60	59	58	57	56	55	54	53
76	75	74	73	72	71	70	69	68	67	66	65

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

Connector No.	M46
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

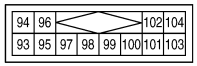
84	83	82	81	80	79	78	77
92	91	90	89	88	87	86	85

Terminal No.	Color of Wire	Signal Name
77	–	–
78	–	–
79	–	–
80	–	–
81	–	–
82	W	COMP2 IN +

ABNIA3486GB

Connector No.	M51
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

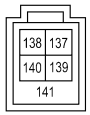


Terminal No.	Color of Wire	Signal Name
93	W	N BUS LH-
94	B	N BUS LH+
95	R	N BUS RH-
96	G	N BUS RH+
97	SHIELD	SHIELD

Terminal No.	Color of Wire	Signal Name
98	SHIELD	SHIELD
99	–	–
100	W	REQ1
101	B	TX
102	R	RX
103	–	–
104	–	–

Connector No.	M55
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
137	G	VBUS
138	W	USB GND
139	R	USB D+
140	L	USB D-
141	SHIELD	SHIELD

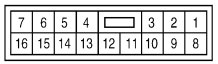
Connector No.	M62
Connector Name	INSTRUMENT PANEL TWEETER LH
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	V	–

Connector No.	M64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

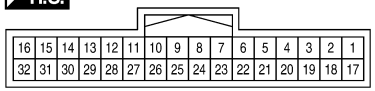
H.S.



Terminal No.	Color of Wire	Signal Name
3	B	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
11	P	–
12	G	–
13	SHIELD	–
14	B	–
15	R	–
16	W	–
30	SHIELD	–
31	B	–
32	W	–

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Connector No.	M66
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	Y	–
4	P	–
5	LG	–
6	BG	–
7	W	–
8	B	–

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

H.S.

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

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

Terminal No.	Color of Wire	Signal Name
9	SHIELD	–
10	SHIELD	–
11	B	–
12	W	–
14	SB	–
15	LG	–
16	LG	–
17	SB	–
18	G	–
19	P	–
20	W	–
21	R	–
22	B	–
23	SHIELD	–

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

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	BR	–
2	Y	–

Connector No.	M69
Connector Name	WIRE TO WIRE
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	W	–
2	B	–
3	R	–
4	SHIELD	–
17	P	–

Terminal No.	Color of Wire	Signal Name
18	Y	–
19	W	–
20	B	–
21	R	–
22	G	–
23	SHIELD	–
27	R	–
28	B	–
29	W	–
30	SHIELD	–

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

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
109	G	SHIFT LOCK SOLENOID OUT
113	L	ACC RELAY OUT

Connector No.	M84
Connector Name	WIRE TO WIRE
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
5	P	–
6	W	–
7	R	–
8	B	–

Terminal No.	Color of Wire	Signal Name
9	SHIELD	–
29	SB	–
30	L	–

Connector No.	M93
Connector Name	DISPLAY UNIT
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	L	INV VCC
3	V	SIG VCC
4	W	COMP GND
5	SHIELD	COMP SHIELD

Terminal No.	Color of Wire	Signal Name
6	B	G
7	SHIELD	RGB GND
8	G	HP
9	W	YS
10	–	–
11	W	UART IN
12	–	–
13	LG	INV GND
14	B	SIG GND
15	B	COMP
16	–	–
17	R	R

Terminal No.	Color of Wire	Signal Name
18	W	B
19	B	RGB SYNC
20	R	VP
21	SHIELD	SYNC GND
22	B	UART OUT
23	SHIELD	UART GND
24	–	–

ABNIA3489GB

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	GR	–
2	–	–
3	P	–
4	R	–
5	B	–
6	SB	–
7	–	–

Terminal No.	Color of Wire	Signal Name
8	LG	–
9	V	–
10	–	–
11	–	–
12	–	–
13	–	–
14	Y	–

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

H.S.

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

Connector No.	M143
Connector Name	AV CONTROL UNIT
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
142	B	ANT MAIN
143	B	ANT +B
144	B	ANT SUB

Connector No.	M149
Connector Name	COMBINATION SWTICH
Connector Color	GRAY

H.S.

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

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
9	BR	–
10	Y	–

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	SB	–
8	V	–

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	AUX AUDIO RH+
2	B	AUX AUDIO GND
3	W	AUX AUDIO LH+
4	–	–
5	G	PLOGIN DETECT
6	P	PLUGIN GND
7	W	AUX VIDEO+
8	B	AUX VIDEO-

Connector No.	M209
Connector Name	USB INTERFACE
Connector Color	GREEN

H.S.

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

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

H.S.

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

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Connector No.	M216
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

Terminal No.	Color of Wire	Signal Name
3	B	–

Connector No.	M217
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
11	P	–
12	G	–
13	SHIELD	–
14	B	–
15	R	–
16	W	–
30	SHIELD	–
31	B	–
32	W	–

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

H.S.

6	5	4	3	2	1

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

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

H.S.

1	2	3

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

Connector No.	M501
Connector Name	ANTENNA BASE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M502
Connector Name	ANTENNA BASE
Connector Color	GRAY

H.S.

1	2

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

ABNIA3494GB

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

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	LG	–

Connector No.	E152
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

81G 80G 79G 78G 77G 76G 75G 74G 73G 72G 71G
90G 89G 88G 87G 86G 85G 84G 83G 82G

95G 94G 93G 92G 91G
100G 99G 98G 97G 96G

Terminal No.	Color of Wire	Signal Name
3G	P	–
32G	LG	–
50G	G	–

ABNIA3495GB

Terminal No.	Color of Wire	Signal Name
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	–	–
20	B	CONT 1
21	–	–
22	–	–
23	B	CONT 4
24	B	CONT 5
25	–	–
26	–	–
27	B	CONT 6
28	V	SPEED
29	W	MIC POWER
30	–	–
31	–	–
32	–	–

Connector No.	B3
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	Y	B +
2	R	ACC
3	P	IGN
4	B	GND
5	SHIELD	AUDIO SHIELD
6	–	–
7	B	MIC IN +
8	SHIELD	MIC IN - (GND)
9	W	AUDIO OUT +
10	B	AUDIO OUT -
11	–	–
12	–	–
13	–	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
21	W	SAT LCH (-)
22	B	SAT LCH (+)
23	R	SAT RCH (-)
24	G	SAT RCH (+)
25	SHIELD	EARTH (SIG)
26	SHIELD	DATA EARTH
27	–	–
28	W	REQ1 (SAT-COMBI)
29	R	TXD (SAT-COMBI)
30	B	RXD COMBI-SAT)
31	–	–
32	SB	BAT
33	–	–
34	–	–
35	GR	EARTH
36	BG	ACC

ABNIA3496GB

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

H.S.

35	37	39	41
36	38	40	42

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

Connector No.	B5
Connector Name	FRONT SEAT LH
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
2	SHIELD	–
3	W	–
4	SHIELD	–
5	B	–
6	R	–
7	G	–
8	R	–

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

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
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
3	Y	–
4	R	–
5	P	–
6	V	–
7	W	–
8	B	–
9	SHIELD	–
10	SHIELD	–

Terminal No.	Color of Wire	Signal Name
11	B	–
12	W	–
14	SB	–
15	LG	–
16	LG	–
17	SB	–
18	P	–
19	BG	–
20	W	–
21	R	–
22	B	–
23	SHIELD	–

ABNIA3497GB

Connector No.	B32
Connector Name	WIRE TO WIRE
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	–
2	R	–
3	W	–
4	SHIELD	–

Terminal No.	Color of Wire	Signal Name
5	G	–
6	R	–
7	B	–
8	R	–
9	W	–
10	SHIELD	–
11	B	–
12	L	–
13	B	–
14	R	–
15	W	–
16	SHIELD	–
31	P	–
32	BG	–

Connector No.	B41
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
1	W	–
2	R	–
3	B	–
4	SHIELD	–
17	BG	–

Terminal No.	Color of Wire	Signal Name
18	SB	–
19	W	–
20	B	–
21	R	–
22	G	–
23	SHIELD	–
27	R	–
28	B	–
29	W	–
30	SHIELD	–

Connector No.	B46
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
13	R	–
14	B	–
15	W	–
16	SHIELD	–

ABNIA3498GB

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

H.S.

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

Connector No.	B53
Connector Name	SATELLITE ANTENNA
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
37	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

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

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

H.S.

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

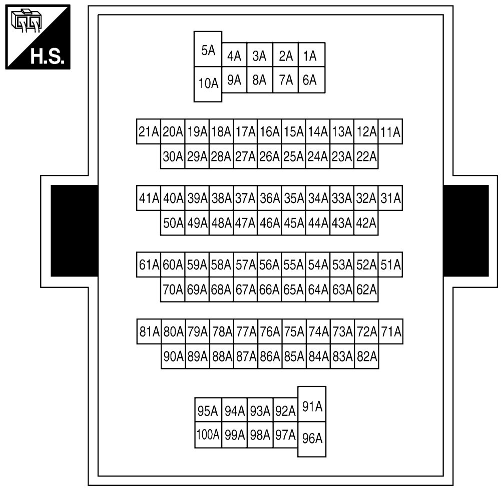
Connector No.	B62
Connector Name	JOINT CONNECTOR-B19
Connector Color	WHITE

H.S.

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

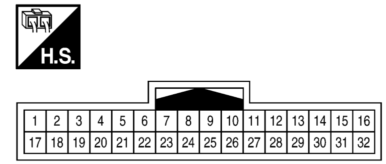
ABNIA3499GB

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



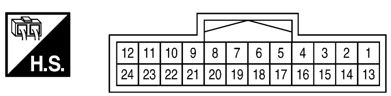
Terminal No.	Color of Wire	Signal Name
63A	P	–
64A	R	–

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



Terminal No.	Color of Wire	Signal Name
5	V	–
6	W	–
7	R	–
8	B	–
9	SHIELD	–
29	SB	–
30	LG	–

Connector No.	B110
Connector Name	FRONT SEAT RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	–
2	V	–
3	B	–
4	R	–
5	W	–

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

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

ABNIA3587GB

Connector No.	B124
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	25	26	27	28	29	30	31	32

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

Terminal No.	Color of Wire	Signal Name
7	G	–
8	R	–
9	W	–
10	SHIELD	–
11	B	–
12	L	–
13	G	–
14	R	–
15	W	–
16	SHIELD	–
31	Y	–
32	V	–

Connector No.	B139
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
11	SB	–
12	LG	–

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
13	W	–
14	B	–
15	SHIELD	–

Connector No.	R11
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
5	SHIELD	–
6	B	–
7	W	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
5	GR	–
6	L	–
7	R	–

ABNIA3588GB

Connector No.	R109
Connector Name	MICROPHONE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
3	GR	–
4	L	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

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

AANIA0730GB

Connector No.	D206
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN

H.S.

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

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

H.S.

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

Connector No.	D306
Connector Name	REAR DOOR SPEAKER RH
Connector Color	BROWN

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
13	R	– (WITH BASE AUDIO SYSTEM)
14	B	–
15	W	– (WITH BASE AUDIO SYSTEM)
16	SHIELD	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	CAMERA VCC
2	B	CAMERA GND
3	W	CAMERA COMP+
4	SHIELD	CAMERA COMP-

AANIA0731GB

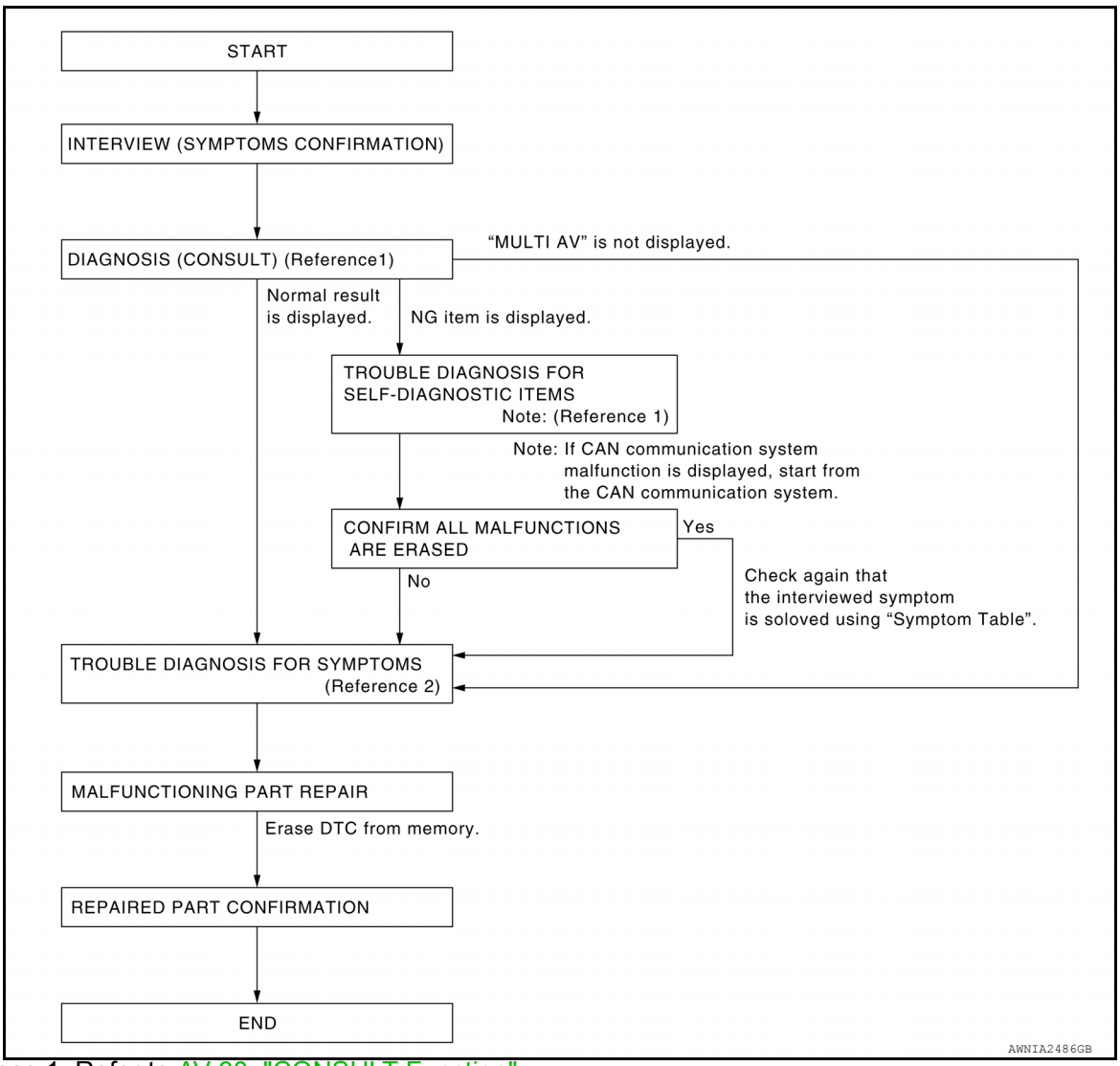
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000008282661

OVERALL SEQUENCE



Reference 1: Refer to AV-30, "CONSULT Function".
Reference 2: Refer to AV-126, "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 No. displayed?

YES >> GO TO 3
NO >> GO TO 4

3. CHECK SELF-DIAGNOSIS RESULTS (CONSULT)

1. Check the DTC No. indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC No. list. Refer to AV-39, "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-126, "Symptom Table".

>> GO TO 5

5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

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

>> GO TO 6

6. CHECK AFTER REPAIR

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

Is any DTC No. displayed?

YES >> GO TO 3
NO >> GO TO 7

7. FINAL CHECK

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

Are any symptoms present?

YES >> GO TO 4
NO >> Inspection End.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:0000000008282662

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing AV control unit.

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform “After Replace ECU” with CONSULT.

- **Complete the procedure of “After Replace ECU” in order.**
- **If you set incorrect “After Replace ECU”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Work Procedure

INFOID:0000000008282663

1. SAVING VEHICLE SPECIFICATION

-CONSULT

Enter “Re/Programming, Configuration” and perform “Before Replace ECU” to save or print current vehicle specification.

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing AV control unit.

>> GO TO 2.

2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

CONSULT

1. Enter "Re/Programming, Configuration".
2. If “Before Replace ECU” operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press “Confirm” to write vehicle specification. Refer to AV-76, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure".
3. If “Before Replace ECU” operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-76, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure".

>> GO TO 4.

4. OPERATION CHECK

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

>> Work End.

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:0000000008282664

Vehicle specification needs to be written with CONSULT because it is not written after replacing AV control unit.
Configuration has three functions as follows:

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

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

CONFIGURATION (AV CONTROL UNIT) : Work Procedure

INFOID:0000000008282665

1.WRITING MODE SELECTION

CONSULT
Select “Reprogramming, Configuration” of AV control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2.PERFORM “SAVED DATA LIST”

CONSULT
Automatically “Operation Log Selection” window will display if “Before Replace ECU” was performed. Select applicable file from the “Save Data List” and press “Confirm”.

>> Work End.

3.PERFORM “AFTER REPLACE ECU” OR “MANUAL CONFIGURATION”

CONSULT
1. Select “After Replace ECU” or “Manual Configuration”.
2. Identify the correct model and configuration list. Refer to AV-77, "CONFIGURATION (AV CONTROL UNIT) : Configuration List".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select “Next”.
   CAUTION:
   Make sure to select “Next”, confirm each setting value and press “OK” even if the indicated configuration of brand new AV control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

4.OPERATION CHECK

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

>> Work End.

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:0000000008282666

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

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

⇔: Items which confirm vehicle specifications

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Logic

INFOID:0000000008227267

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000008227268

1.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform Self Diagnostic Result for MULTI AV.

Is CAN COMM CIRCUIT displayed?

YES >> Refer to LAN-22, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-53, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000008227269

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-128, "Removal and Installation - AV Control Unit".

U1200 AV CONTROL UNIT

DTC Logic

INFOID:0000000008227270

CONSULT Display	DTC Detection Condition	Possible Cause
CONT UNIT [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-128, "Removal and Installation - AV Control Unit".

U1216 AV CONTROL UNIT

DTC Logic

INFOID:0000000008227271

CONSULT Display	DTC Detection Condition	Possible Cause
CAN CONT [U1216]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-128, "Removal and Installation - AV Control Unit".

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000008227272

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor. Refer to BRC-59, "Work Procedure".

Diagnosis Procedure

INFOID:0000000008227273

1.ADJUST THE PREDICTIVE COURSE LINE CENTER POSITION OF THE STEERING ANGLE SENSOR

When U1232 is detected, adjust the predictive course line center position of the steering angle sensor.

>> Refer to BRC-59, "Work Procedure".

U1243 DISPLAY UNIT

DTC Logic

INFOID:0000000008227274

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

Diagnosis Procedure

INFOID:0000000008227275

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuits. Refer to AV-89, "DISPLAY UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK COMMUNICATION CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect display unit connector and AV control unit connector M45.
3. Check continuity between display unit connector M93 terminals 11, 22 and AV control unit connector M45 terminals 73, 61.

Display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M93	11	M45	73	Yes
	22		61	

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

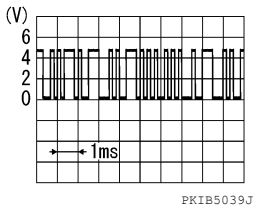
Display unit		Ground	Continuity
Connector	Terminals		
M93	11	—	No
	12		

Is the inspection result normal?

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

3.CHECK COMMUNICATION SIGNAL (DISP→CONT)

1. Connect display unit connector and AV control unit connector M45.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 11 and ground.

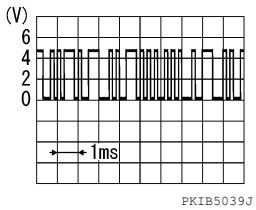
Display unit		Ground	Condition	Reference value
(+)		(−)		
Connector	Terminal			
M93	11	—	When adjusting display brightness.	 PKIB5039J

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

4. CHECK COMMUNICATION SIGNAL (CONT→DISP)

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

Display unit		Ground	Condition	Reference value
(+)		(−)		
Connector	Terminal			
M93	22	—	When adjusting display brightness.	 PKIB5039J

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace display unit. Refer to AV-131, "Removal and Installation".

U1255 SATELLITE RADIO TUNER

DTC Logic

INFOID:0000000008227276

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

Diagnosis Procedure

INFOID:0000000008227277

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1. CHECK SATELLITE RADIO TUNER POWER SUPPLY AND GROUND CIRCUIT

Check satellite radio tuner power supply and ground circuit. Refer to AV-91, "SATELLITE RADIO TUNER : Diagnosis Procedure".

Is the inspection result normal?

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

2. CHECK COMMUNICATION CIRCUIT AND REQUEST SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M51 and satellite radio tuner connector B2.
3. Check continuity between AV control unit connector M51 terminals 100, 101, 102 and satellite radio tuner connector B2 terminals 28, 29, 30.

AV control unit		Satellite radio tuner		Continuity
Connector	Terminals	Connector	Terminals	
M51	100	B2	28	Yes
	101		29	
	102		30	

4. Check continuity between AV control unit connector M51 terminals 100, 101, 102 and ground.

AV control unit			Continuity
Connector	Terminals		
M51	100	Ground	No
	101		
	102		

Is the inspection result normal?

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

3. CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M51.
2. Turn ignition switch ON.
3. Check signal between AV control unit connector M51 terminals 100, 101 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(–)	
Connector	Terminals		
M51	100	—	7.0 V
	101		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

4. CHECK SATELLITE RADIO TUNER VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M51.
3. Connect satellite radio tuner connector B2.
4. Turn ignition switch ON.
5. Check signal between satellite radio tuner connector B2 terminal 30 and ground.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace satellite radio tuner. Refer to AV-140, "Removal and Installation".

U1300 AV COMM CIRCUIT

Description

INFOID:0000000008227278

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

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

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

U1310 AV CONTROL UNIT

DTC Logic

INFOID:0000000008227279

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-128, "Removal and Installation - AV Control Unit".

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

INFOID:0000000008227280

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

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

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connectors M42 and M44.
3. Check voltage between AV control unit connectors and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M42	29	—	Ignition switch: ON	Battery voltage
M44	39		Ignition switch: ACC	
	51		Ignition switch: OFF	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between AV control unit connector M44 terminal 52 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M44	52	—	Yes

Is the inspection result normal?

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

DISPLAY UNIT
DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000008227281

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

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

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

Is the inspection result normal?

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

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

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminals 64, 76 and display unit connector M93 terminals 3, 2.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	64	M93	3	Yes
	76		2	

4. Check continuity between AV control unit connector M45 terminals 64, 76 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M45	64	—	No
	76		

Is the inspection result normal?

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

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

1. Connect the AV control unit connector M45.
2. Check voltage between AV control unit connector M45 terminals 64, 76 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(–)		
Connector	Terminal			
M45	64	—	Ignition switch: ACC	9.0 V
	76			

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

4. CHECK INVERTER GROUND AND SIGNAL GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminals 63, 75 and display unit connector M93 terminals 14, 13.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	63	M93	14	Yes
	75		13	

Is the inspection result normal?

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

5.CHECK DISPLAY UNIT GROUND CIRCUIT

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

Display unit		Ground	Continuity
Connector	Terminal		
M93	1	—	Yes

Is the inspection result normal?

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

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:0000000008227282

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
32	Battery power supply	15 (15A)
36	ACC power supply	65 (10A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner connector B2.
3. Check voltage between satellite radio tuner connector B2 terminal 32, 36 and ground.

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

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between satellite radio tuner connector B2 terminal 35 and ground.

Satellite radio tuner		Ground	Continuity
Connector	Terminal		
B2	35	—	Yes

Is the inspection result normal?

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

BLUETOOTH® CONTROL UNIT

BLUETOOTH® CONTROL UNIT : Diagnosis Procedure

INFOID:0000000008233642

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
1	Battery power supply	15 (15A)
2	ACC power supply	65 (10A)
3	Ignition signal	30 (10A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Bluetooth® control unit connector B3.
3. Check voltage between Bluetooth® control unit connector B3 and ground.

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

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between Bluetooth® control unit connector B3 and ground.

Bluetooth® control unit		Ground	Continuity
Connector	Terminal		
B3	4	—	Yes
	23		
	27		

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:0000000008282585

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuse is not blown.

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

Is the fuse blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/C and AV switch assembly connector.
3. Check voltage between A/C and AV switch assembly connector M98 terminal 3 and ground.

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

Is the inspection result normal?

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

3.CHECK CONTROL UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M42.
3. Check continuity between A/C and AV switch assembly connector M98 terminal 9 and AV control unit connector M42 terminal 10.

A/C and AV switch assembly		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M98	9	M42	10	Yes

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connectors.

4.CHECK SWITCH GROUND CIRCUIT

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

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

Is the inspection result normal?

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

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000008282587

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CONNECTOR CHECK

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

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M44 and suspect front door speaker connector.
2. Check continuity between AV control unit connector M44 and suspect front door speaker connector.

AV control unit		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M44	34	D12 (LH)	1	Yes
	35		2	
	43	D112 (RH)	1	
	44		2	

3. Check continuity between AV control unit connector M44 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M44	34	—	No
	35		
	43		
	44		

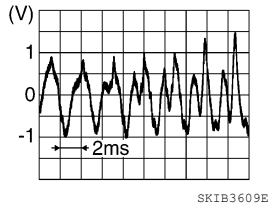
Is the inspection result normal?

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

3.CHECK FRONT DOOR SPEAKER SIGNAL

1. Connect AV control unit connector M44 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M44 and ground.

AV control unit connector M44		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

34	35	Audio signal output	
43	44		

Is the inspection result normal?

YES >> Replace front door speaker. Refer to AV-132, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

INSTRUMENT PANEL SPEAKER/TWEETER

Diagnosis Procedure

INFOID:0000000008282589

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CONNECTOR CHECK

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

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M44 and suspect instrument panel tweeter connector.
2. Check continuity between AV control unit connector M44 and suspect instrument panel tweeter connector.

AV control unit		Instrument panel tweeter		Continuity
Connector	Terminal	Connector	Terminal	
M44	34	M62 (LH)	1	Yes
	35		2	
	43	M73 (RH)	1	
	44		2	

3. Check continuity between AV control unit connector M44 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M44	34	—	No
	35		
	43		
	44		

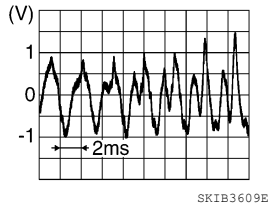
Is the inspection result normal?

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

3.CHECK INSTRUMENT PANEL TWEETER SIGNAL

1. Connect AV control unit connector M44 and suspect instrument panel tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M44 and ground.

AV control unit connector M44		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

34	35	Audio signal output	
43	44		

Is the inspection result normal?

YES >> Replace instrument panel tweeter. Refer to AV-133, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

REAR DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000008282591

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CONNECTOR CHECK

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

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect AV control unit connector M44 and suspect rear door speaker connector.
2. Check continuity between AV control unit connector M44 and suspect rear door speaker connector.

AV control unit		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
M44	36	D206 (LH)	1	Yes
	37		2	
	45	D306 (RH)	1	
	46		2	

3. Check continuity between AV control unit connector M44 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M44	36	—	No
	37		
	45		
	46		

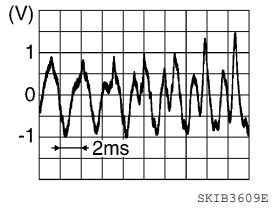
Is the inspection result normal?

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

3.CHECK REAR DOOR SPEAKER SIGNAL

1. Connect AV control unit connector M44 and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between AV control unit connector M44 and ground.

AV control unit connector M44		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

36	37	Audio signal output	
45	46		

Is the inspection result normal?

YES >> Replace rear door speaker. Refer to AV-134, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008302650

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect front auxiliary input jacks connector M205 and front seat RH connector B110.
3. Check continuity between front auxiliary input jacks connector M205 terminals 1, 3 and front seat RH connector B110 terminals 4, 5.

Front auxiliary input jacks		Front seat RH		Continuity
Connector	Terminal	Connector	Terminal	
M205	1	B110	4	Yes
	3		5	

4. Check continuity between front auxiliary input jacks connector M205 terminals 1, 3 and ground.

Front auxiliary input jacks		Ground	Continuity
Connector	Terminal		
M205	1	—	No
	3		

Is inspection result normal?

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

2.CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY 2

1. Disconnect AV control unit connector M42.
2. Check continuity between AV control unit connector M42 terminals 20, 21 and front seat RH connector B110 terminals 14, 15.

AV control unit		Front seat RH		Continuity
Connector	Terminal	Connector	Terminal	
M42	20	B110	14	Yes
	21		15	

3. Check continuity between AV control unit connector M42 terminals 20, 21 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M42	20	—	No
	21		

Is inspection result normal?

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

3.CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY 1

Check continuity between front auxiliary input jacks connector M205 terminal 2 and front seat RH connector B110 terminal 3.

Front auxiliary input jacks		Front seat RH		Continuity
Connector	Terminal	Connector	Terminal	
M205	2	B110	3	Yes

Is inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connectors.

4. CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY 2

Check continuity between AV control unit connector M42 terminal 22 and front seat RH connector B110 terminal 13.

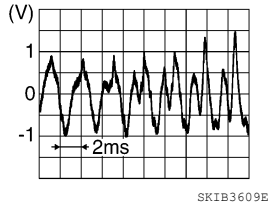
AV control unit		Front seat RH		Continuity
Connector	Terminal	Connector	Terminal	
M42	22	B110	13	Yes

Is inspection result normal?

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

5. CHECK AUX SOUND SIGNAL

1. Connect AV control unit connector M42 and front seat RH connector B110.
2. Turn ignition switch to ACC.
3. Select AUX mode.
4. Check signals between AV control unit connector M42 and ground.

AV control unit connector M42		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
20	22	AUX mode selected	
21	22		

Is the inspection result normal?

YES >> Replace front auxiliary input jacks. Refer to AV-137, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

SATELLITE AUDIO SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008302652

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK SATELLITE SOUND SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M51 and satellite radio tuner connector B2.
3. Check continuity between AV control unit connector M51 and satellite radio tuner connector B2.

AV control unit		Satellite radio tuner		Continuity
Connector	Terminals	Connector	Terminals	
M51	94	B2	22	Yes
	96		24	

4. Check continuity between AV control unit connector M51 and ground.

AV control unit		Ground	Continuity
Connector	Terminals		
M51	94		No
	96		

Is the inspection result normal?

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

2.CHECK SATELLITE SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M51 and satellite radio tuner connector B2.

AV control unit		Satellite radio tuner		Continuity
Connector	Terminals	Connector	Terminals	
M51	93	B2	21	Yes
	95		23	

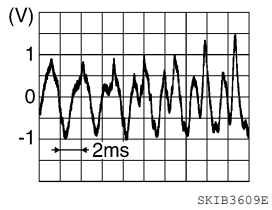
Is the inspection result normal?

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

3.CHECK SATELLITE SOUND SIGNAL

1. Connect AV control unit connector M51 and satellite radio tuner connector B2.
2. Turn ignition switch to ACC.
3. Select satellite radio mode.
4. Check signals between AV control unit connector M51 and ground.

AV control unit connector M51		Condition	Reference value
(+)	(−)		
Terminal	Terminal		

94	93	Satellite radio mode selected	
96	95		

Is the inspection result normal?

YES >> Replace satellite radio tuner. Refer to AV-140, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

BLUETOOTH® VOICE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008302654

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK BLUETOOTH® VOICE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M42 and Bluetooth® control unit connector B3.
3. Check continuity between AV control unit connector M42 terminal 5 and Bluetooth® control unit connector B3 terminal 9.

AV control unit		Bluetooth® control unit		Continuity
Connector	Terminal	Connector	Terminal	
M42	5	B3	9	Yes

4. Check continuity between AV control unit connector M42 terminal 5 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M42	5	—	No

Is inspection result normal?

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

2.CHECK BLUETOOTH® VOICE SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M42 terminal 4 and Bluetooth® control unit connector B3 terminal 10.

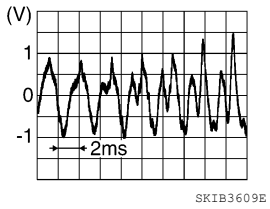
AV control unit		Bluetooth® control unit		Continuity
Connector	Terminal	Connector	Terminal	
M42	4	B3	10	Yes

Is inspection result normal?

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

3.CHECK BLUETOOTH® VOICE SIGNAL

1. Connect AV control unit connector M42 and Bluetooth® control unit connector B3.
2. Turn ignition switch to ACC.
3. Press switch.
4. Check signals between AV control unit connector M42 and ground.

AV control unit connector M42		Condition	Reference value
(+)	(–)		
Terminal	Terminal		
5	4	During voice guide output with switch pressed.	

Is the inspection result normal?

YES >> Replace Bluetooth® control unit. Refer to AV-138, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

RGB (R: RED) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227285

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminal 57 and display unit connector M93 terminal 17.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	57	M93	17	Yes

4. Check continuity between AV control unit connector M45 terminal 57 and ground.

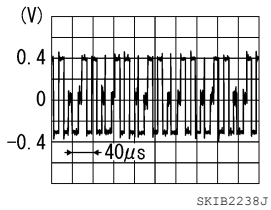
AV control unit		Ground	Continuity
Connector	Terminal		
M45	57		No

Is inspection result normal?

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

2.CHECK RGB (R: RED) SIGNAL

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

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

Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

RGB (G: GREEN) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227287

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminal 56 and display unit connector M93 terminal 6.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	56	M93	6	Yes

4. Check continuity between AV control unit connector M45 terminal 56 and ground.

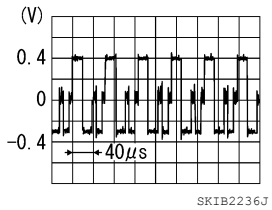
AV control unit		Ground	Continuity
Connector	Terminal		
M45	56		No

Is inspection result normal?

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

2. CHECK RGB (G: GREEN) SIGNAL

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

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

Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

RGB (B: BLUE) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227289

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

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

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminal 55 and display unit connector M93 terminal 18.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	55	M93	18	Yes

4. Check continuity between AV control unit connector M45 terminal 55 and ground.

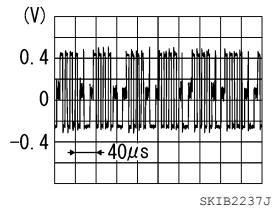
AV control unit		Ground	Continuity
Connector	Terminal		
M45	55		No

Is inspection result normal?

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

2.CHECK RGB (B: BLUE) SIGNAL

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

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

Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

RGB SYNCHRONIZING SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227291

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK RGB SYNCHRONIZING SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminal 58 and display unit connector M93 terminal 19.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	58	M93	19	Yes

4. Check continuity between AV control unit connector M45 terminal 58 and ground.

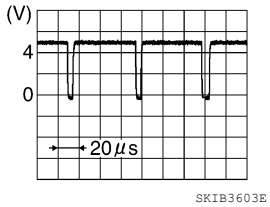
AV control unit		Ground	Continuity
Connector	Terminal		
M45	58		No

Is inspection result normal?

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

2.CHECK RGB SYNCHRONIZING SIGNAL

1. Connect AV control unit connector M45 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 19 and ground.

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

Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

RGB AREA (YS) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227293

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK RGB AREA (YS) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminal 60 and display unit connector M93 terminal 9.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	60	M93	9	Yes

4. Check continuity between AV control unit connector M45 terminal 60 and ground.

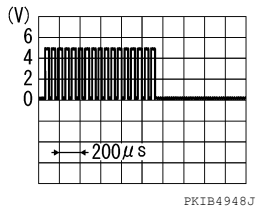
AV control unit		Ground	Continuity
Connector	Terminal		
M45	60		No

Is inspection result normal?

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

2.CHECK RGB AREA (YS) SIGNAL

1. Connect AV control unit connector M45 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 9 and ground.

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

Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227295

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminal 62 and display unit connector M93 terminal 8.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	62	M93	8	Yes

4. Check continuity between AV control unit connector M45 terminal 62 and ground.

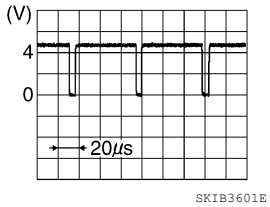
AV control unit		Ground	Continuity
Connector	Terminal		
M45	62		No

Is inspection result normal?

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

2. CHECK HORIZONTAL SYNCHRONIZING (HP) SIGNAL

1. Connect AV control unit connector M45 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 8 and ground.

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

Is inspection result normal?

YES >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".
NO >> Replace display unit. Refer to AV-131, "Removal and Installation".

VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227297

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminal 74 and display unit connector M93 terminal 20.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	74	M93	20	Yes

4. Check continuity between AV control unit connector M45 terminal 74 and ground.

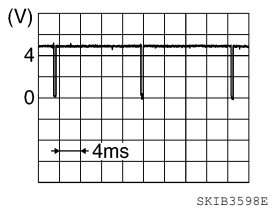
AV control unit		Ground	Continuity
Connector	Terminal		
M45	74		No

Is inspection result normal?

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

2. CHECK VERTICAL SYNCHRONIZING (VP) SIGNAL

1. Connect AV control unit connector M45 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 20 and ground.

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

Is inspection result normal?

YES >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".
NO >> Replace display unit. Refer to AV-131, "Removal and Installation".

COMPOSITE IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227299

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M45 and display unit connector.
3. Check continuity between AV control unit connector M45 terminal 53 and display unit connector M93 terminal 15.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	53	M93	15	Yes

4. Check continuity between AV control unit connector M45 terminal 53 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M45	53		No

Is inspection result normal?

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

2.CHECK COMPOSITE IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M45 terminal 54 and display unit connector M93 terminal 4.

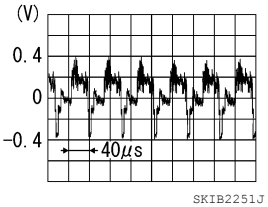
AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M45	54	M93	4	Yes

Is inspection result normal?

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

3.CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector M45 and display unit connector.
2. Turn ignition switch ON.
3. Check signal between display unit connector M93 terminal 15 and ground.

AV control unit (+)		Ground (−)	Condition	Reference value
Connector	Terminal			
M45	53	—	Camera image displayed.	

Is inspection result normal?

YES >> Replace display unit. Refer to AV-131, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

AUX IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227301

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK AUX IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M46 and front auxiliary input jacks connector.
3. Check continuity between AV control unit connector M46 terminal 83 and front auxiliary input jacks connector M205 terminal 7.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M46	83	M205	7	Yes

4. Check continuity between AV control unit connector M46 terminal 83 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M46	83		No

Is inspection result normal?

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

2.CHECK AUX IMAGE SIGNAL GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M46 and front auxiliary input jacks connector.
3. Check continuity between AV control unit connector M46 terminal 91 and front auxiliary input jacks connector M205 terminal 8.

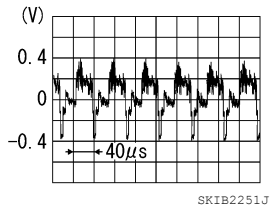
AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M46	91	M205	8	Yes

Is inspection result normal?

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

3.CHECK AUX IMAGE SIGNAL

1. Connect AV control unit connector M46 and front auxiliary input jacks connector.
2. Turn ignition switch ON.
3. Check signal between front auxiliary input jacks connector M205 terminal 7 and ground.

Front auxiliary input jacks		Ground	Condition	Reference value
(+)		(–)		
Connector	Terminal			
M205	7	—	AUX image displayed.	

Is inspection result normal?

YES >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".
NO >> Replace front auxiliary input jacks. Refer to AV-137, "Removal and Installation".

CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227303

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK CAMERA POWER SUPPLY CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M46 and rear view camera connector.
3. Check continuity between AV control unit connector M46 terminal 87 and rear view camera connector D504 terminal 1.

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M46	87	D504	1	Yes

4. Check continuity between AV control unit connector M46 terminal 87 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M46	87		No

Is inspection result normal?

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

2.CHECK CAMERA POWER SUPPLY VOLTAGE

1. Connect AV control unit connector M46 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to “R”.
4. Check voltage between AV control unit connector M46 terminal 87 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(–)		
Connector	Terminal			
M46	87	—	Selector lever is in “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

3.CHECK CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M46 and rear view camera connector.
3. Check continuity between AV control unit connector M46 terminal 82 and rear view camera connector D504 terminal 3.

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M46	82	D504	3	Yes

4. Check continuity between AV control unit connector M46 terminal 82 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M46	82		No

Is inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connectors.

4. CHECK CAMERA GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M46 terminal 88 and rear view camera connector D504 terminal 2.

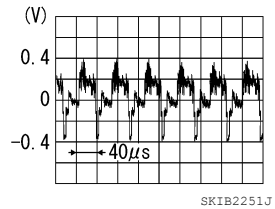
AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M46	88	D504	2	Yes

Is inspection result normal?

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

5. CHECK CAMERA IMAGE SIGNAL

1. Connect AV control unit connector M46 and rear view camera connector.
2. Turn ignition switch ON.
3. Shift the selector lever to “R”.
4. Check signal between AV control unit connector M46 terminal 82 and ground.

AV control unit (+)		Ground (–)	Condition	Reference value
Connector	Terminal			
M46	82	—	Camera image displayed.	

Is inspection result normal?

YES >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".
NO >> Replace rear view camera. Refer to AV-135, "Removal and Installation".

DISK EJECT SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227305

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1. CHECK DISK EJECT SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M42 and A/C and AV switch assembly connector.
3. Check continuity between AV control unit connector M42 terminal 28 and A/C and AV switch assembly connector M98 terminal 14.

AV control unit		A/C and AV switch assembly		Continuity
Connector	Terminal	Connector	Terminal	
M42	28	M98	14	Yes

4. Check continuity between AV control unit connector M42 terminal 28 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M42	28		No

Is inspection result normal?

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

2. CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M42 and A/C and AV switch assembly connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M42 terminal 28 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(–)		
Connector	Terminal			
M42	28	—	Pressing eject switch	0 V
			Except above	5.0 V

Is the inspection result normal?

YES >> Replace A/C and AV switch assembly. Refer to AV-129, "Removal and Installation - AV and AC Switch Assembly".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

MICROPHONE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227307

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK MICROPHONE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect Bluetooth® control unit connector B3 and microphone connector.
3. Check continuity between Bluetooth® control unit connector B3 terminals 7, 8, 29 and microphone connector R109 terminals 4, 3, 1.

Bluetooth® control unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
B3	7	R109	4	Yes
	8		3	
	29		1	

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

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

Is inspection result normal?

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

2.CHECK MICROPHONE VCC VOLTAGE

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

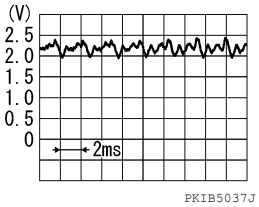
Bluetooth® control unit connector B3		Voltage (Approx.)
(+)	(–)	
Terminal	Terminal	
29	8	5.0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace Bluetoot®h control unit. Refer to AV-138, "Removal and Installation".

3.CHECK MICROPHONE SIGNAL

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

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

Is the inspection result normal?

YES >> Replace Bluetooth® control unit. Refer to AV-138, "Removal and Installation".
NO >> Replace microphone. Refer to AV-139, "Removal and Installation".

BLUETOOTH® CONTROL SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008227309

1.CHECK CONTROL SIGNAL CIRCUIT CONTINUITY

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

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

Is the inspection result normal?

YES >> Replace Bluetooth® control unit. Refer to AV-138, "Removal and Installation".
NO >> Repair or replace harness or connectors.

STEERING SWITCH

Diagnosis Procedure

INFOID:0000000008227311

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

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

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace steering wheel audio control switch. Refer to AV-130, "Removal and Installation".

2.CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

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

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

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

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

Is the inspection result normal?

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

3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M149.

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

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace spiral cable. Refer to SR-13, "Removal and Installation".

4. CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

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

Combination meter		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	14	M44	38	Yes
	15		48	
	16		47	

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

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

Is the inspection result normal?

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

5. CHECK AV CONTROL UNIT VOLTAGE

1. Connect combination meter connector M24 and AV control unit connector M44.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M44.

AV control unit M44		Voltage (Approx.)
(+)	(−)	
Terminal	Terminal	
38	47	5.0 V
48		

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-93, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

USB CONNECTOR

Diagnosis Procedure

INFOID:0000000008282593

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M55 and USB interface connector M209.
3. Check continuity between AV control unit connector M55 and USB interface connector M209.

AV control unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M55	137	M209	1	Yes
	138		2	
	139		3	
	140		4	
	141		5	

4. Check continuity between AV control unit connector M55 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M55	137	Ground	No
	139		

Is the inspection result normal?

YES >> Replace the USB interface. Refer to AV-136, "Removal and Installation".
NO >> Repair or replace harness or connectors.

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:0000000008297150

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power supply or ground circuit • AV control unit	• AV-89 • AV-23
Steering switch does not operate	• Steering switch • AV control unit	• AV-123 • AV-23
All speakers do not sound	• Speaker circuit shorted to ground • AV control unit	• AV-47 • AV-23
One or several speakers do not sound	• Front door speaker • Instrument panel tweeter • Rear door speaker	• AV-94 • AV-96 • AV-98
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-23
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 or ground circuit • Satellite radio tuner communication circuit • Satellite radio tuner	• AV-91 • AV-85 • AV-140
Right or left channel does not sound	• Satellite radio tuner audio signal circuit • Satellite radio tuner	• AV-102 • AV-140

HANDS-FREE PHONE

Symptom	Possible cause	Reference page
Inoperative	• Bluetooth® control unit power supply or ground circuit • Bluetooth® control unit	• AV-92 • AV-32
Steering switch does not operate	• Steering switch • Bluetooth® control unit	• AV-123 • AV-32
Voice activated control does not operate	• Microphone • Steering switch • Bluetooth® control unit	• AV-120 • AV-123 • AV-32

NORMAL OPERATING CONDITION

Description

INFOID:0000000008297151

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

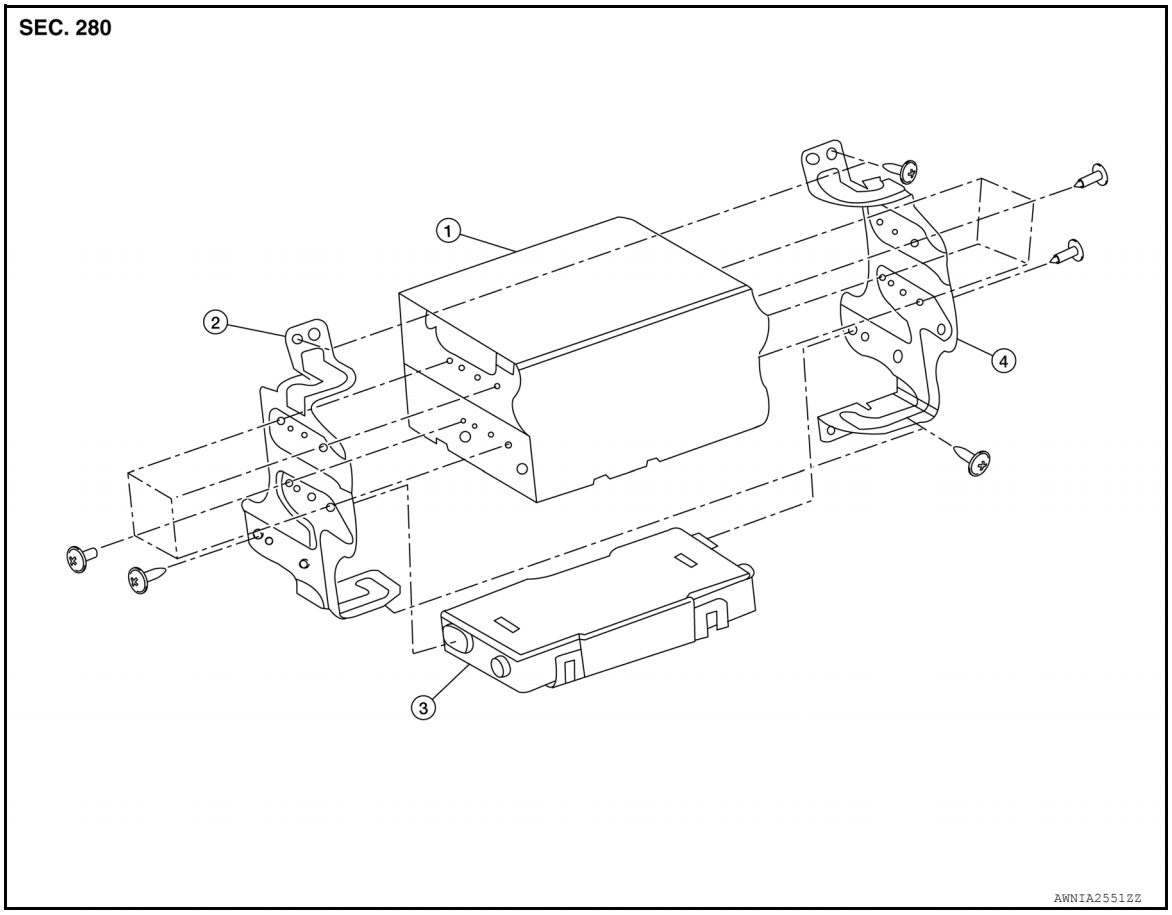
Occurrence condition		Possible cause
Occurs only when engine is ON.	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	• Ignition components
The occurrence of the noise is linked with the operation of the fuel pump.		• Fuel pump condenser
Noise only occurs 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

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

INFOID:0000000008472311



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

Removal and Installation - AV Control Unit

INFOID:0000000007913605

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to AV-76, "CONFIGURATION (AV CONTROL UNIT) : Description".

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
2. Remove cluster lid C upper. Refer to IP-21, "Removal and Installation - Cluster Lid C Upper".
3. Remove the screws, then pull out the AV control unit.
4. Disconnect the harness connectors from the AV control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to AV-76, "CONFIGURATION (AV CONTROL UNIT) : Description".**

Removal and Installation - AV and AC Switch Assembly

INFOID:0000000008273202

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to AV-76, "CONFIGURATION (AV CONTROL UNIT) : Description".

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
2. Remove cluster lid C. Refer to IP-21, "Removal and Installation - Cluster Lid C Upper".
3. Remove the AV and AC switch assembly screws (A), then separate the cluster lid C from AV and AC switch assembly.
4. Release upper pawls and remove AV and AC switch assembly.

INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

Removal and Installation

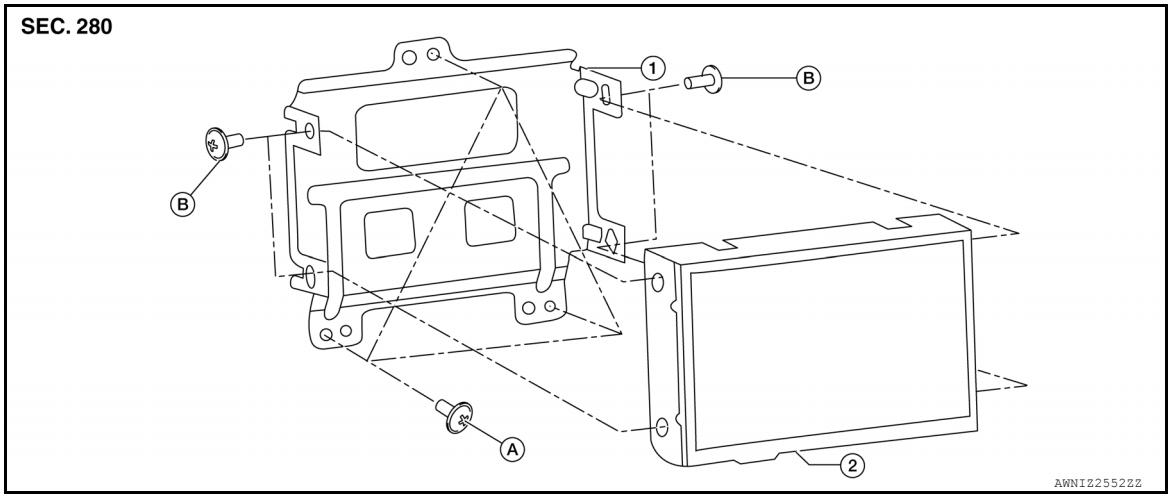
INFOID:0000000008297211

The steering switch and ICC steering switch are serviced as an assembly. Refer to CCS-190, "Removal and Installation".

DISPLAY UNIT

Exploded View

INFOID:0000000008368145



1. Display unit bracket
2. Display unit
A. Display unit bracket screws
B. Display unit screws

Removal and Installation

INFOID:0000000008368146

REMOVAL

1. Remove cluster lid D. Refer to IP-22, "Removal and Installation".
2. Remove the display unit screws, and then pull out the display unit and bracket.
3. Disconnect harness connector from the display unit, then remove the display unit and bracket.
4. Remove the display unit brackets screws, then remove the display unit from the display unit bracket.

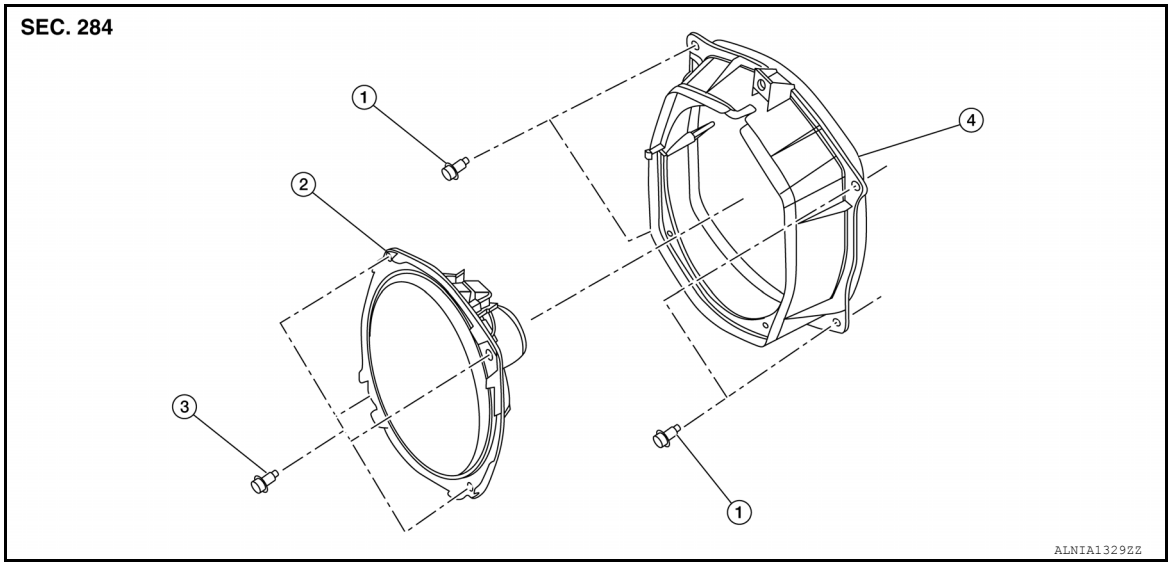
INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000008297212



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

Removal and Installation

INFOID:0000000008297213

REMOVAL

1. Remove front door finisher. Refer to INT-15, "Removal and Installation".
2. Remove front door speaker bolts.
3. Disconnect harness connector from front door speaker, then remove front door speaker from speaker bracket.
4. Remove speaker bracket bolts.
5. Remove speaker bracket from front door.

INSTALLATION

Installation is in the reverse order of removal.

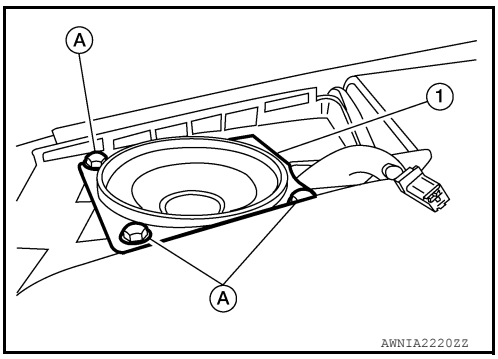
INSTRUMENT PANEL SPEAKER/TWEETER

Removal and Installation

INFOID:0000000008297215

REMOVAL

1. Remove instrument panel tweeter grille (LH/RH). Refer to IP-14, "Exploded View".
2. Remove the screws (A), then pull out the instrument panel tweeter (1).
3. Disconnect the harness connector and remove the instrument panel tweeter (1).



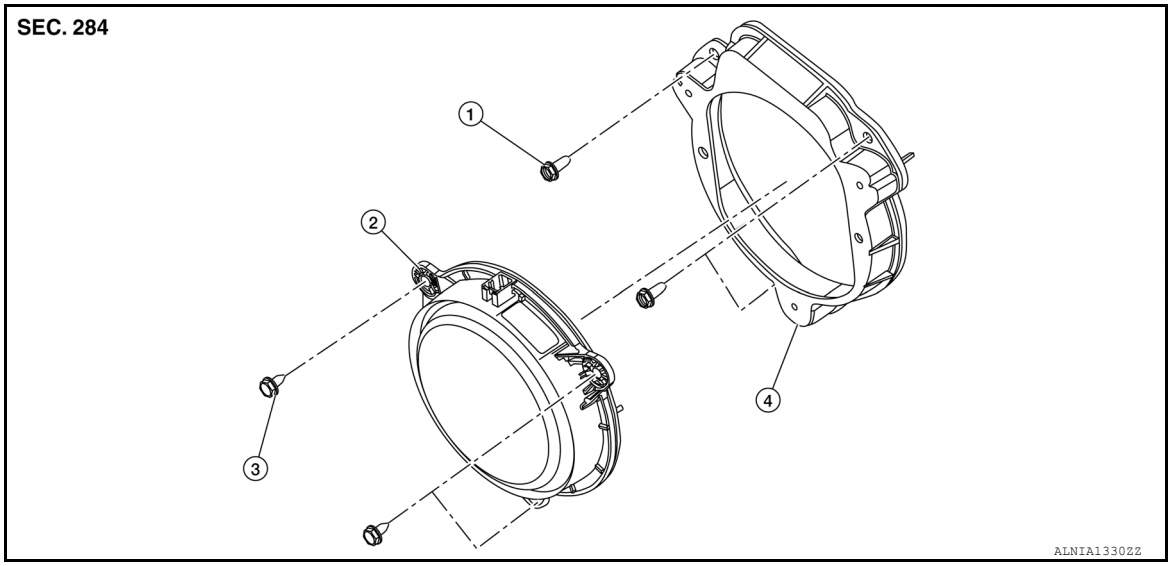
INSTALLATION

Installation is in the reverse order of removal.

REAR DOOR SPEAKER

Exploded View

INFOID:0000000008297216



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

Removal and Installation

INFOID:0000000008297217

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "Removal and Installation".
2. Remove rear door speaker bolts.
3. Disconnect harness connector from the rear door speaker, then remove rear door speaker from speaker bracket.
4. Remove speaker bracket bolts.
5. Remove rear door speaker bracket.

INSTALLATION

Installation is in the reverse order of removal.

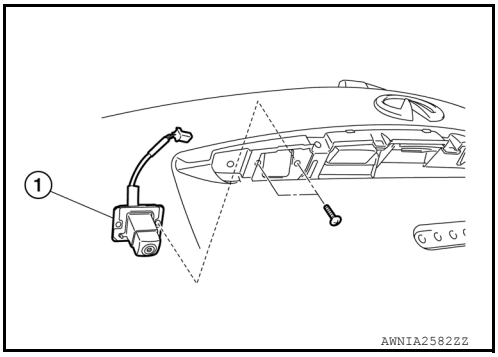
REAR CAMERA

Removal and Installation

INFOID:0000000008297219

REMOVAL

1. Remove back door outer upper finisher. Refer to EXT-41, "Removal and Installation".
2. Remove rear camera screws, then remove rear camera (1).



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Perform camera image calibration. Refer to AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

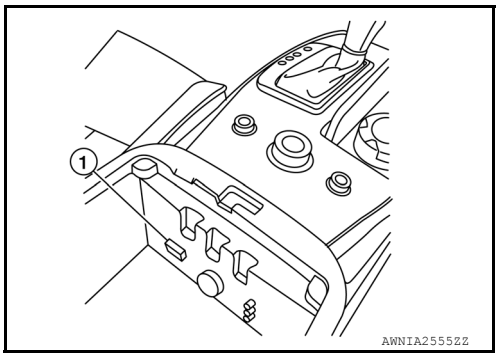
USB CONNECTOR

Removal and Installation

INFOID:0000000008297220

REMOVAL

1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
2. Disconnect harness connector from the USB connector.
3. Release the pawl from the back of USB connector (1), then remove USB connector (1).



INSTALLATION

Installation is in the reverse order of removal.

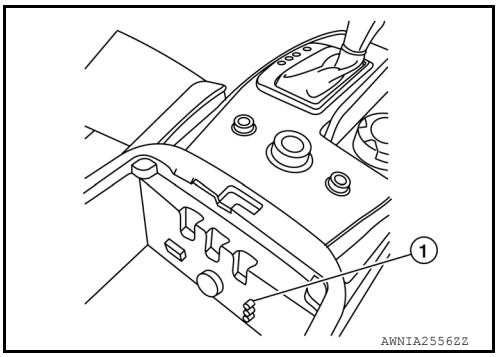
FRONT AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000008297221

REMOVAL

1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
2. Disconnect harness connector from the front auxiliary input jack.
3. Remove front auxiliary input jack screws, then remove front auxiliary input jack (1).



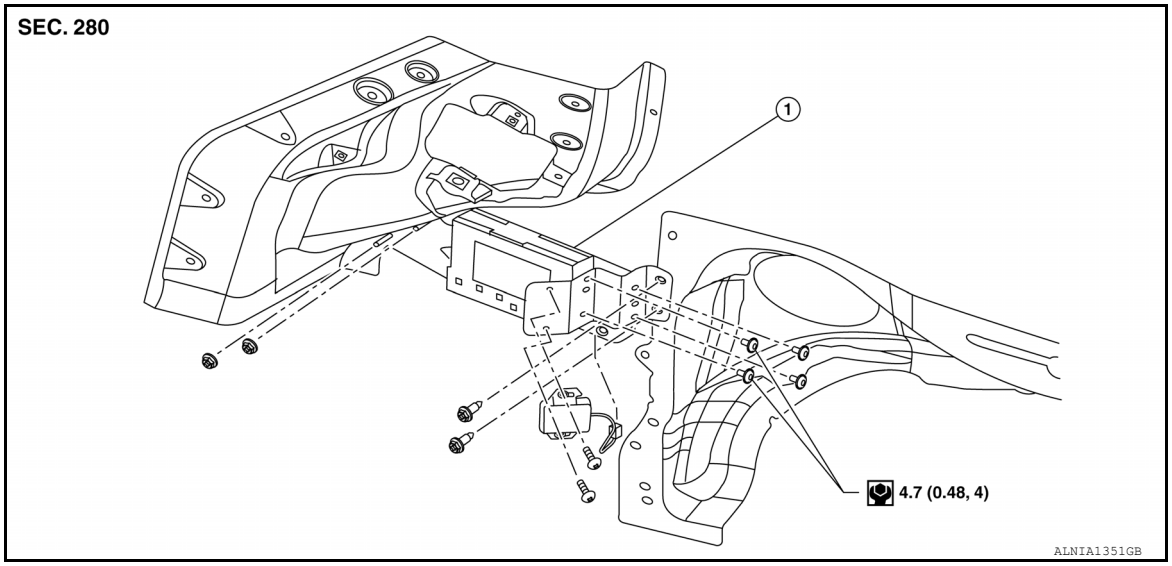
INSTALLATION

Installation is in the reverse order of removal.

BLUETOOTH CONTROL UNIT

Exploded View

INFOID:0000000008368166



1. Bluetooth control unit

Removal and Installation

INFOID:0000000008266382

REMOVAL

1. Remove satellite radio tuner. Refer to AV-140, "Removal and Installation"
2. Disconnect harness connector from bluetooth control unit.
3. Remove bluetooth control unit bolts, then remove bluetooth control unit.

INSTALLATION

Installation is in the reverse order of removal.

MICROPHONE

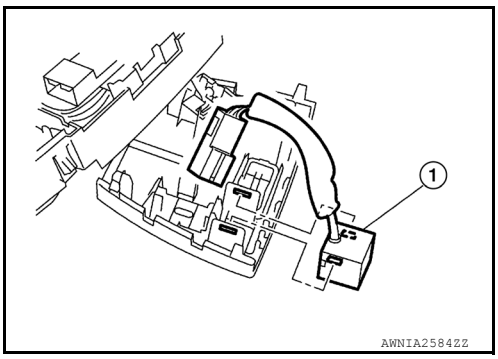
Removal and Installation

INFOID:0000000008297222

REMOVAL

1. Remove the front room/map lamp assembly. Refer to INT-24, "Exploded View".
2. Remove the microphone (1) from the front room/map lamp assembly.

CAUTION:
Carefully handle the pawl that retain the microphone because the pawl is fragile.



INSTALLATION

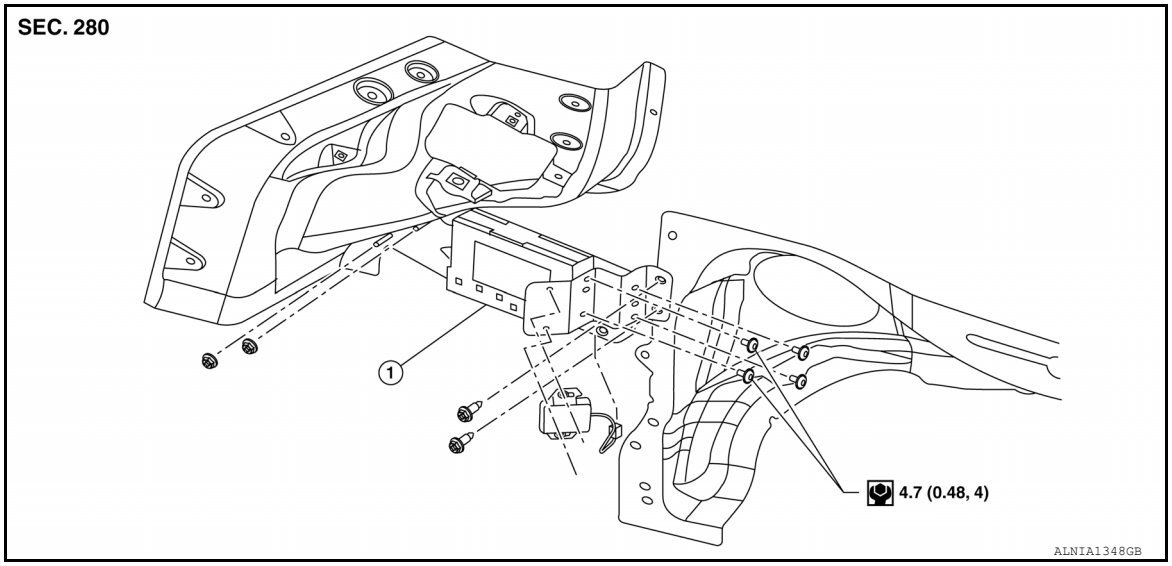
Installation is in the reverse order of removal.

NOTE:
Check the microphone for looseness after installation.

SATELLITE RADIO TUNER

Exploded View

INFOID:0000000008368164



1. Satellite radio tuner

Removal and Installation

INFOID:0000000008266384

REMOVAL

1. Remove tel antenna. Refer to AV-830, "Removal and Installation".
2. Disconnect harness connector from satellite radio antenna.
3. Remove bolts and then remove satellite radio tuner.

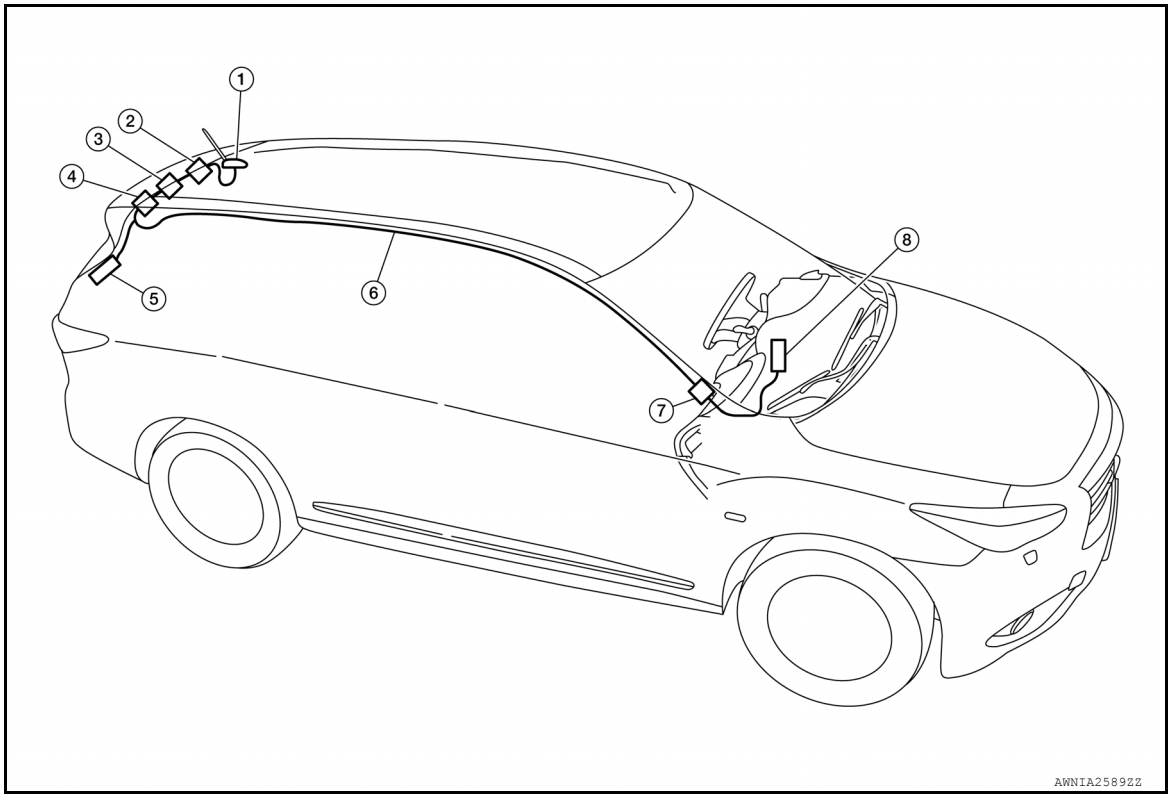
INSTALLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antennas

INFOID:0000000008487399



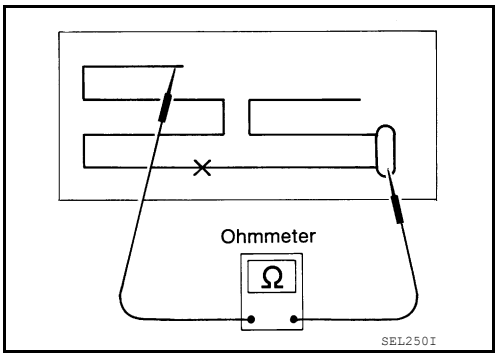
1. Antenna base (satellite antenna and antenna amp)
2. M502
3. M501
4. M503, M504
5. M505
6. Antenna Feeder
7. M95, M500
8. AV control unit M124

Window Antenna Repair

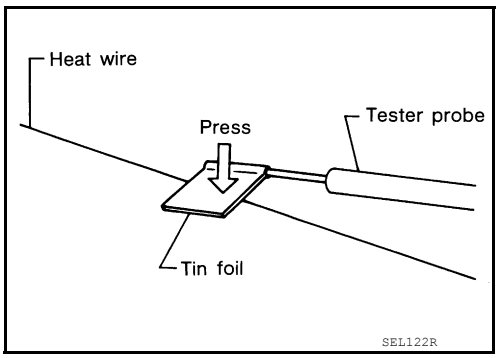
INFOID:0000000008487400

ELEMENT CHECK

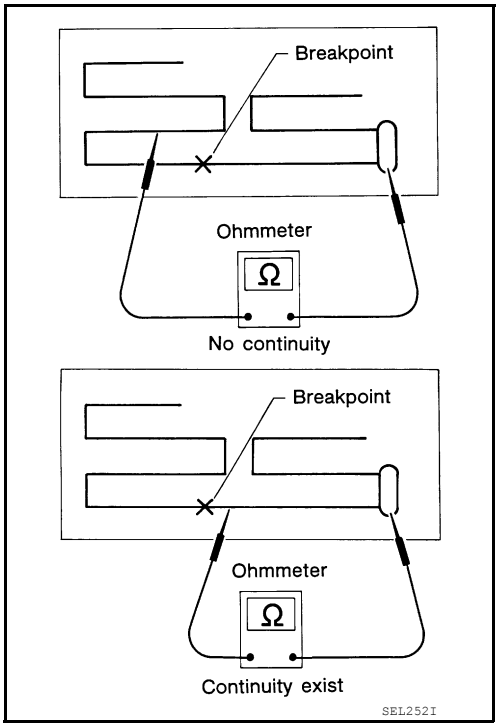
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



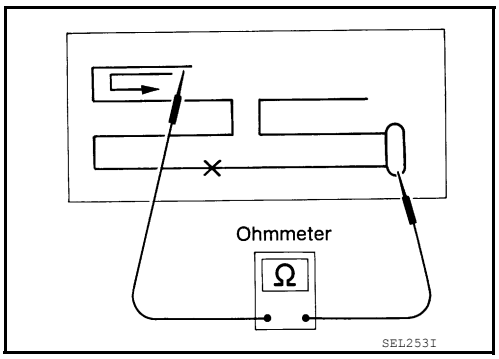
- **When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.**



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.



PRECAUTION

PRECAUTIONS

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

INFOID:0000000008487456

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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. 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.**

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

INFOID:0000000008360059

CAUTION:

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

NOTE:

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

Precaution for Trouble Diagnosis

INFOID:0000000008360060

AV COMMUNICATION SYSTEM

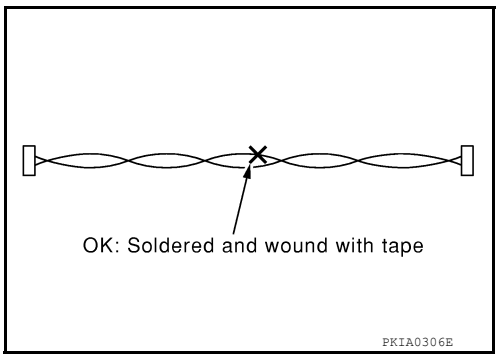
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

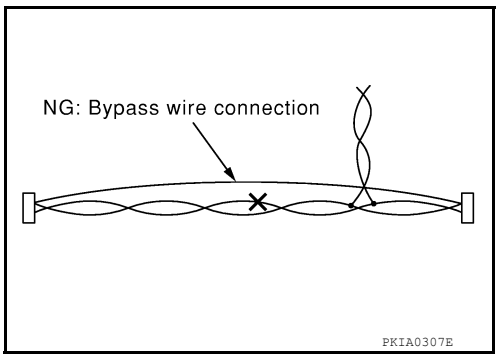
INFOID:0000000008360061

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:0000000008360062

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt: Dip a soft cloth into lukewarm water 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.

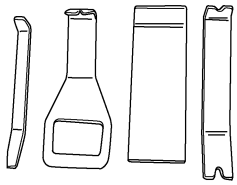
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000008360063

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:0000000008360064

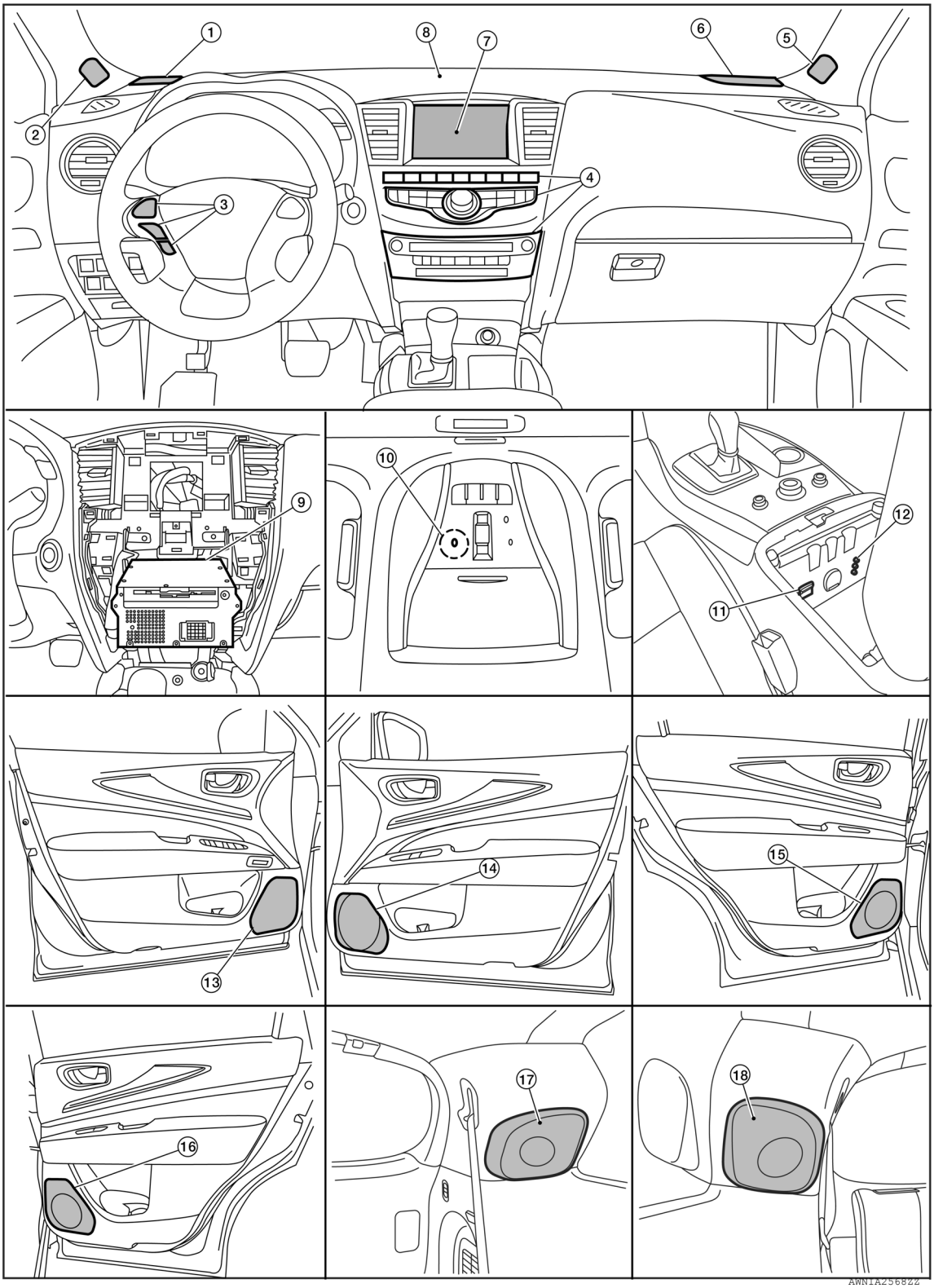
(Kent-Moore No.) Tool name	Description
(—) Power tools  PIIB1407E	Loosening nuts, screws and bolts

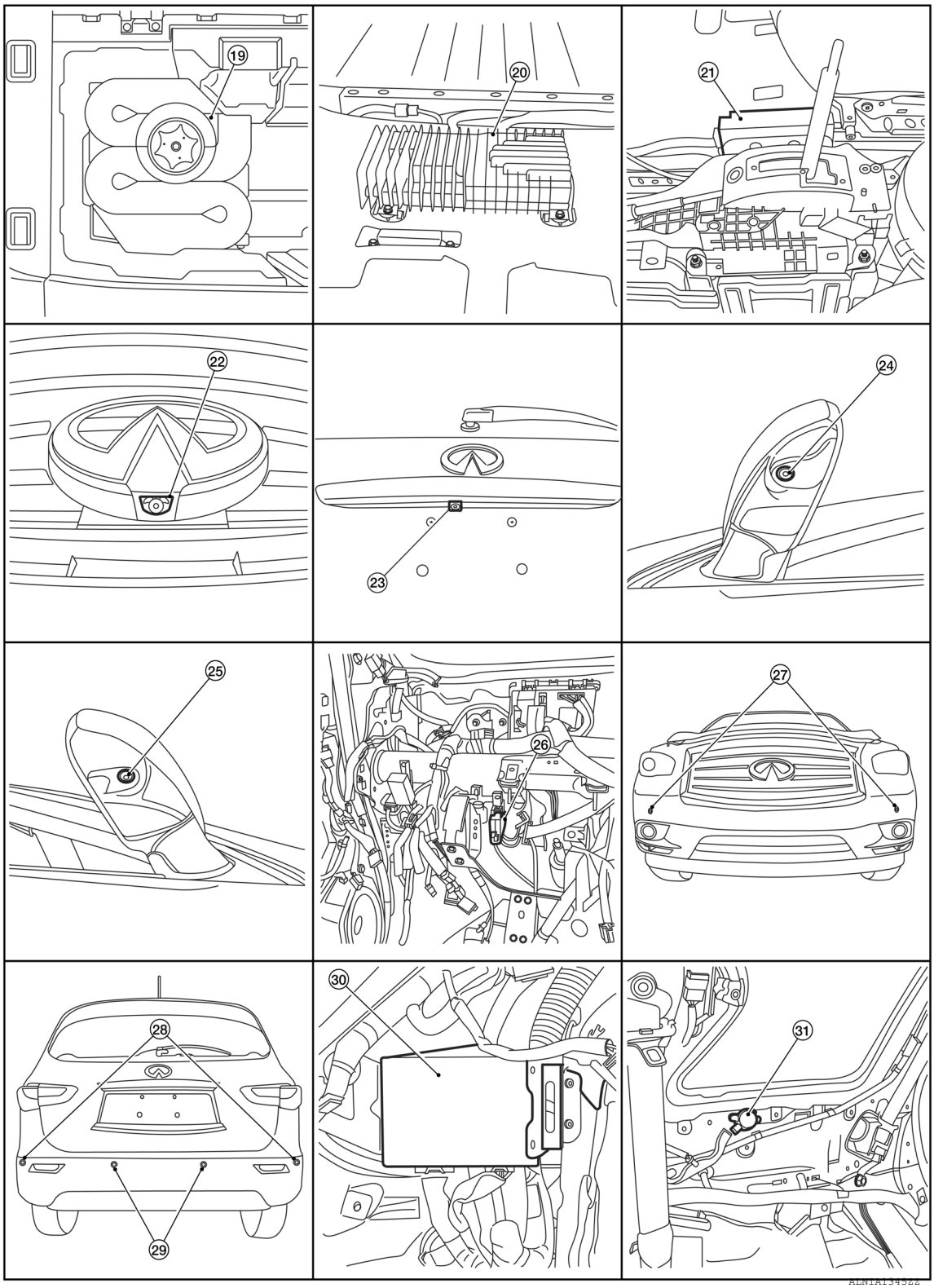
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000008360023

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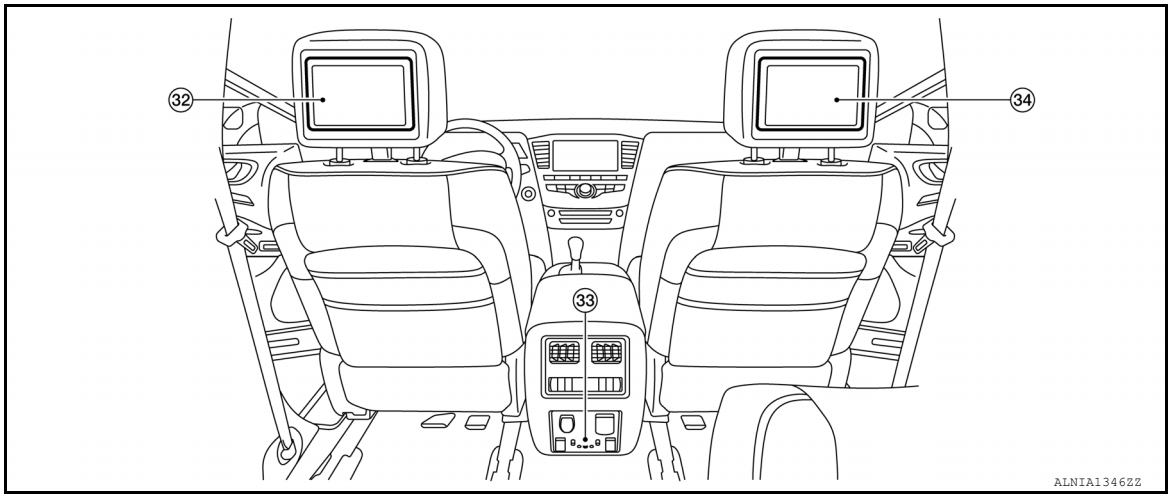


1. Instrument panel tweeter LH
2. Front tweeter LH
3. Steering switch
4. A/C and AV switch assembly
5. Front tweeter RH
6. Instrument panel tweeter RH
7. Display unit
8. Center speaker
9. AV control unit (view with center stack removed)
10. Microphone
11. USB interface
12. Front auxiliary input jacks
13. Front door speaker LH
14. Front door speaker RH
15. Rear door speaker LH
16. Rear door speaker RH
17. Rear side speaker LH
18. Rear side speaker RH
19. Subwoofer
20. Bose® speaker amp.
21. Around view monitor control unit
22. Front camera
23. Rear camera
24. Door mirror LH (side camera)
25. Door mirror RH (side camera)
26. Sonar control unit
27. Front sonar sensors outer
28. Rear sonar sensors outer
29. Rear sonar sensors inner
30. Video distributor
31. Sonar buzzer
32. Headrest display unit (driver seat)
33. Rear auxiliary input jacks
34. Headrest display unit (passenger seat)

Component Description

INFOID:0000000008360024

Part name	Description
AV control unit	• Master unit of MULTI AV system. • AV control unit includes audio, hands-free phone, navigation, USB connection, DVD play and vehicle status functions. • Integrates hard disk drive (HDD) allowing map data and music data to be stored. • Connected to MULTI AV system control units via AV communication. • Connected to other vehicle control units via CAN communication to obtain necessary information for vehicle function. • Receives steering angle signal via CAN communication from steering angle sensor and controls an expected course line during around view monitor operation. • Inputs signals for driving status recognition (vehicle speed, reverse and parking brake). • RGB digital image signal and composite image signal are output to front display unit. • Transmits image and sound output to video distributor and inputs image switch signal from headrest display units via AV communication. • Receives an intelligent key identification signal necessary for intelligent key interlocking function via hard wire from BCM. • Transmits Amp. ON signal and mode change signal to BOSE amp. • Update of map data is performed using DVD-ROM.
Display unit	• Display image is controlled by AV control unit via serial communication. • Receives power from AV control unit. • RGB and RGB digital image signals are input from AV control unit. • Composite image signals are input from AV control unit. • Synchronizing signals are output to AV control unit. • Camera image signals are input from around view monitor control unit via video output signal. • Touch panel functions can be operated by touching display directly.
BOSE speaker amp.	Receives sound signals from AV control unit and outputs sound signals to each speaker.
Instrument panel tweeter	Outputs high range sound signals from BOSE speaker amp.
Center speaker	Outputs mid and high range sound signals from BOSE speaker amp.
Front tweeter	Outputs high range sound signals from BOSE speaker amp.
Front door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Rear door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Rear side speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Subwoofer	Outputs low range sound signals from BOSE speaker amp.
A/C and AV switch assembly	• Operation panels are equipped with switches for audio and air conditioner operations. • Operation signal is transmitted via AV communication to AV control unit and around view monitor. • Disk eject operation signal is performed via hardwire.
Steering switch	• Operations for audio, hands-free phone and voice recognition are possible. • Steering switch signal (operation signal) is output to AV control unit.
Steering angle sensor	Connected to AV control unit via CAN communication and transmits steering angle sensor signal.
Video distributor	• Receives image and sound signals from AV control unit and transmits them to headrest display units. • Receives image and sound signals from rear auxiliary input jacks and transmits them to headrest display units. • Transmits image and sound signals to headrest display unit and receives image switch signal from headrest display units.
Headrest display units	• Composite image signals are input from video distributor. • Receives DVD/AUX/USB sound signals from video distributor and transmits them to headphones. • Transmits image switch signal to video distributor according to remote control operation. • Transmits image switch signal to AV control unit via AV communication according to remote control operation.

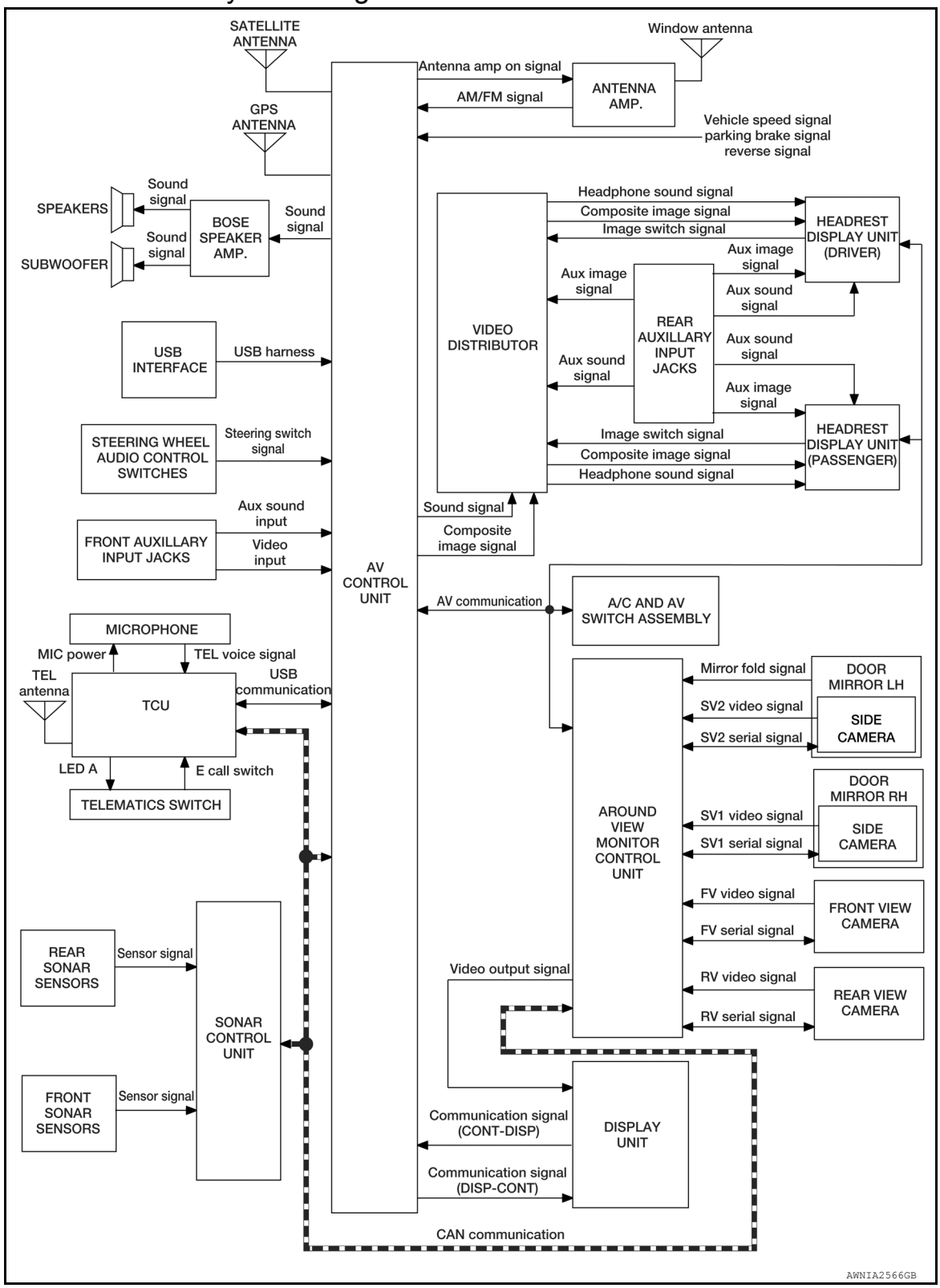
Part name	Description
Front auxiliary input jacks	Transmits image and sound signals to AV control unit.
Rear auxiliary input jacks	Transmits image and sound signals to video distributor and headrest display units.
Around view monitor control unit	• Supplies power to front, rear and side cameras. • Superimposes images from each camera and outputs them to display unit. • Superimposes guiding line, predicted course line and sonar indicator to camera image that outputs to display unit. • Performs reception/transmission of communication signals with cameras. • Transmits sonar operation signal from sonar control unit via CAN communication. • Receives sonar information from sonar control unit via CAN communication. • Transmits data received/transmitted from sonar control unit to AV control unit via CAN communication.
Front camera	• Inputs power supply from around view monitor control unit. • Outputs image of vehicle front to around view monitor control unit. • Performs reception/transmission of communication signal with around view monitor control unit.
Rear camera	• Inputs power supply from around view monitor control unit. • Outputs image of vehicle rear to around view monitor control unit. • Performs reception/transmission of communication signal with around view monitor control unit.
Side camera LH	• Inputs power supply from around view monitor control unit. • Outputs image of vehicle LH side to around view monitor control unit. • Performs reception/transmission of communication signal with around view monitor control unit.
Side camera RH	• Inputs power supply from around view monitor control unit. • Outputs image of vehicle RH side to around view monitor control unit. • Performs reception/transmission of communication signal with around view monitor control unit.
Sonar control unit	• Connected to around view monitor control unit via CAN communication. • Receives sonar operation signal from around view monitor control unit via CAN communication. • Transmits sonar detection status to around view monitor control unit via CAN communication. • Judges warning level according to signals from front and rear sensors.
Front sensors	Detects front obstacle distance and transmits signal to sonar control unit.
Rear sensors	Detects rear obstacle distance and transmits signal to sonar control unit.
Microphone	• Used for hands-free phone, voice recognition and INFINITI CONNECTIONS operations. • Microphone signal is transmitted to telematics control unit (TCU). • Power (Microphone VCC) is supplied from TCU.
Telematics control unit (TCU)	• Connected to the AV control unit via a USB harness for sound signal input/output and USB communication. • Data is sent to and received from the INFNITI CONNECTIONS data center via the TEL antenna. • Inputs TEL voice signal from TEL antenna and outputs it to AV control unit.
TEL antenna	• Receives TEL voice signals and outputs them to TCU. • Transmits TEL voice signals from TCU.
GPS antenna	GPS signal is received and transmitted to AV control unit.
Antenna amp.	• Radio signal received by window antenna is amplified and transmitted to AV control unit. • Power (antenna amp. ON signal) is supplied from AV control unit.
Satellite radio antenna	Satellite radio signal is received and transmitted to AV control unit.
USB connector	USB sound and data input signals are transmitted to AV control unit.

SYSTEM

MULTI AV SYSTEM

MULTI AV SYSTEM : System Diagram

INFOID:0000000008360025



MULTI AV SYSTEM : System Description

INFOID:0000000008360026

AUDIO SYSTEM

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

When the audio system is on, radio signals are received by the window antenna. The AV control unit then sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the speakers, tweeters and subwoofer.
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.

HANDS-FREE PHONE SYSTEM

System Operation

NOTE:

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

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

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

AV Control Unit

When the ignition switch is turned to ACC or ON, the AV control unit will power up. During power up, the AV control unit is initialized and performs various self-checks. Initialization may take up to 20 seconds. If a phone is present in the vehicle and paired with the AV control unit, Infiniti Voice Recognition will then become active. Bluetooth® telephone functions can be turned off using the Infiniti 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 Telematics Control Unit (TCU), which transmits the signal to the AV control unit via the USB communication circuits. The microphone can be actively tested during self-diagnosis.

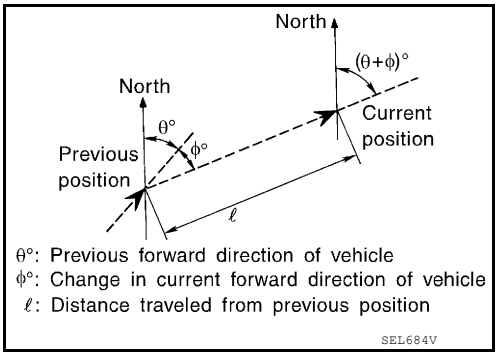
NAVIGATION SYSTEM

System Operation

NOTE:
Refer to NAVI System Owner's Manual for system operation.

The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of vehicle travel as determined by the GPS antenna (GPS information).
The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map data, which is stored in the hard disk drive (HDD) (map-matching), and indicated on the screen with a current-location mark.

By comparing the vehicle position detection results found by the GPS and by map-matching, more accurate vehicle position data can be used.
The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.



Travel Distance

Travel distance calculations are based on the vehicle speed input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance fine adjustment function has been adopted.

Travel Direction

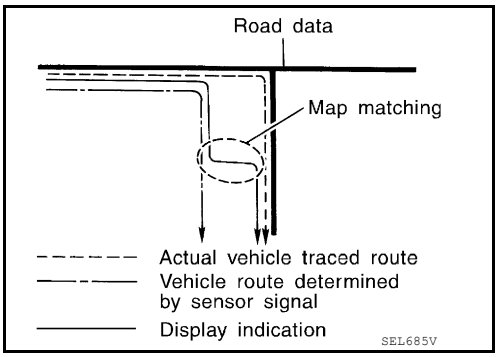
Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals from them are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

Type	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	• Can detect the vehicle's turning angle quite accurately.	• Direction errors may accumulate when the vehicle is driven for long distances without stopping.
GPS antenna (GPS information)	• Can detect the vehicle's travel direction (North/South/East/West).	• Correct direction cannot be detected when the vehicle speed is low.

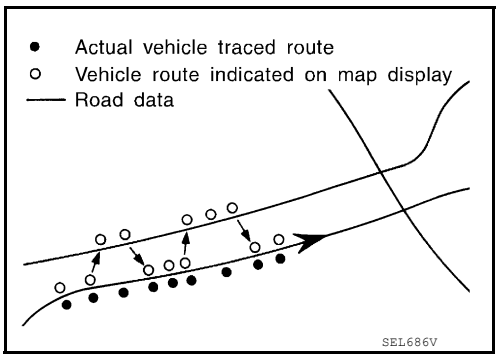
Map–Matching

Map–matching is a function that repositions the vehicle on the road map when a new location is judged to be the most accurate. This is done by comparing the current vehicle position, calculated by the method described in the position detection principle, with the road map data around the vehicle, read from the map data stored on the HDD.
Therefore, the vehicle position may not be corrected after the vehicle is driven over a certain distance or time in which GPS information is hard to receive. In this case, the current-location mark on the display must be corrected manually.

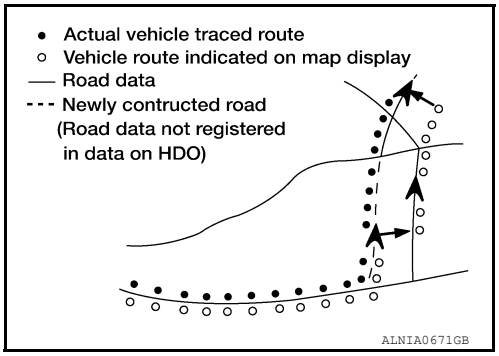
CAUTION:
The road map data is based on data stored on the HDD.



- In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the current-location mark has been repositioned.
  If there is an error in distance and/or direction, the alternative routes will be shown in different order of priority, and the wrong road can be avoided.
  If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.

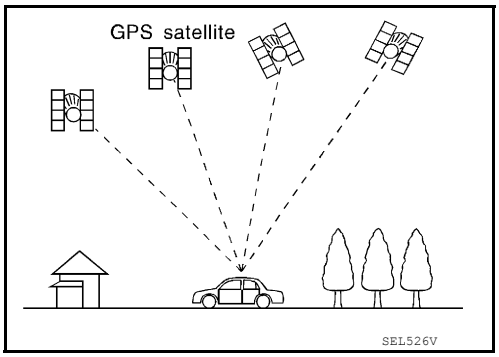


- Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded on the HDD, or when the road pattern stored in the map data and the actual road pattern are different due to repair.
  When driving on a road not present in the map, the map-matching function may find another road and position the current-location mark on it. Then, when the correct road is detected, the current-location mark may leap to it.
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the HDD is limited. Therefore, when there is an excessive gap between the current vehicle position and the position on the map, correction by map-matching is not possible.



GPS (Global Positioning System)

GPS (Global Positioning System) has been developed and controlled by the US Department of Defense. The system utilizes GPS satellite (NAVSTAR), sending out radio waves while flying on an orbit around the earth at the height of approx. 21,000 km (13,000 mi).
The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates the vehicle's position in two dimensions (latitude/longitude), utilizing the altitude data calculated previously by using radio waves from four or more GPS satellites (two-dimensional positioning).



Accuracy of the GPS will deteriorate under the following conditions.

- In two-dimensional positioning, the GPS accuracy will deteriorate when the altitude of the vehicle position changes.
- There may be an error of approximately 10 m (30 ft.) in position detected by three-dimensional positioning, which is more accurate than two-dimensional positioning. The accuracy can be even lower depending on the arrangement of the GPS satellites utilized for the positioning.
- Position detection is not possible when the vehicle is in an area where radio waves from the GPS satellite do not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from the GPS satellites may not be received when some object is located over the GPS antenna.
- Position correction by GPS is not available while the vehicle is stopped.

SPEED SENSITIVE VOLUME SYSTEM

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

FRONT AUXILIARY INPUT JACKS

- Image and sound can be output from an external device connected to the front auxiliary input jacks.
- AUX image signals are transmitted to each unit as follows:
- To the display unit via AV control unit.
- To the headrest display units via AV control unit and video distributor.
- AUX sound signals are transmitted to each unit as follows:
- To each speaker via AV control unit and BOSE speaker amp.

- To video distributor via AV control unit.
• Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

REAR ENTERTAINMENT SYSTEM

• Image and sound (DVD, USB memory-stored video data and front auxiliary input) played by AV control unit can be enjoyed in rear seat using headrest display units and headphones.
• Image and sound of an external device connected to rear auxiliary input jacks for rear seat can be enjoyed in rear seat using headrest display units and headphones. Also, image and sound from rear auxiliary input jacks can be selected and played individually on each side as well as on both sides.
• Headrest display units have a self-diagnosis function. Refer to AV-179, "On Board Diagnosis Function".

NOTE:
Image signal and sound signal from rear auxiliary input jacks are not transmitted to front display unit and each speaker.

Operation Signal

• The rear entertainment system can be controlled by the rear seat remote control.
• The rear seat remote control transmits the operation signal to the remote control receiver built into headrest display units, which then transmits it to the AV control unit and video distributor.

Headphone Sound

• Sound signals output from AV control unit or rear auxiliary input jacks are transmitted to headrest display units via video distributor.
• Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

Headrest Display Units

• Composite image signals from AV control unit are transmitted to headrest display unit via video distributor.
• Image switch signals from headrest display units are transmitted to AV control unit and video distributor, according to rear seat remote control operation.
• When image switch signal is transmitted from headrest display unit to AV control unit via AV communication, image played by AV control unit (DVD, USB memory-stored video data, and front auxiliary input) switches.
• When image switch signal is transmitted from headrest display unit to video distributor, image output from AV control unit and image output from rear auxiliary input jacks switch.

AROUND VIEW MONITOR SYSTEM

• This system is equipped with wide-angle high-resolution cameras on the front and rear of the vehicle and on both right and left door mirrors. The images from front view, rear view, front-side view (RH side), and birds-eye view that shows the view from the top of the vehicle are displayed to monitor the vehicle surroundings.
• Around view monitor control unit cuts out and expands the image received from each camera to create each view.
• The sonar indicator is viewed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warn of the approach of an obstacle.
• In front view and rear view, the vehicle width, distance lines and predictive course lines are superimposed and displayed. In front-side view, the vehicle distance guiding line and vehicle width guiding line are displayed.
• The Birds-Eye view converts the images from 4 cameras into the overhead view and displays the status of the vehicle. The vehicle icon and sonar indicator on the Birds-Eye view display are rendered by around view monitor control unit.

Around View Monitor Screen

• Around view monitor combines and displays the travel direction view and Birds-Eye view, Front-Side view and then displays the sonar indicator on the Birds-Eye view, Front-Side view, Rear wide view.
• AV control unit renders the Change View switch, view icon, warning message on display.

Operation Description

NOTE:
The first, second, and third camera image displayed when switched to the camera image display depends on the settings of Camera View Priority.

• Around view monitor operates by pressing the CAMERA switch on the A/C and AV switch assembly and shifting the selector lever to the R position.
• When the selector lever is in any position other than R, the screen is switched to the around view monitor by pressing the CAMERA switch.
• The screen is switched to the around view monitor by shifting the selector lever to the R position.

- The around view monitor's, Birds-Eye view, Front-side view or rear wide view (rear only) can be switched by pressing the CAMERA switch.
- The around view monitor is cancelled 3 minutes after pressing the CAMERA switch, and the display returns to the previous screen.
- ON/OFF setting of sonar indicator display on the Front-Side view screen can be performed.
- In Birds-Eye view, the invisible area is displayed on the image to specify the boundary of the 4 cameras. The invisible area is displayed in yellow in the Birds-Eye view after turning the ignition switch ON.
- The sonar operates only when the camera screen is displayed.

SONAR SYSTEM

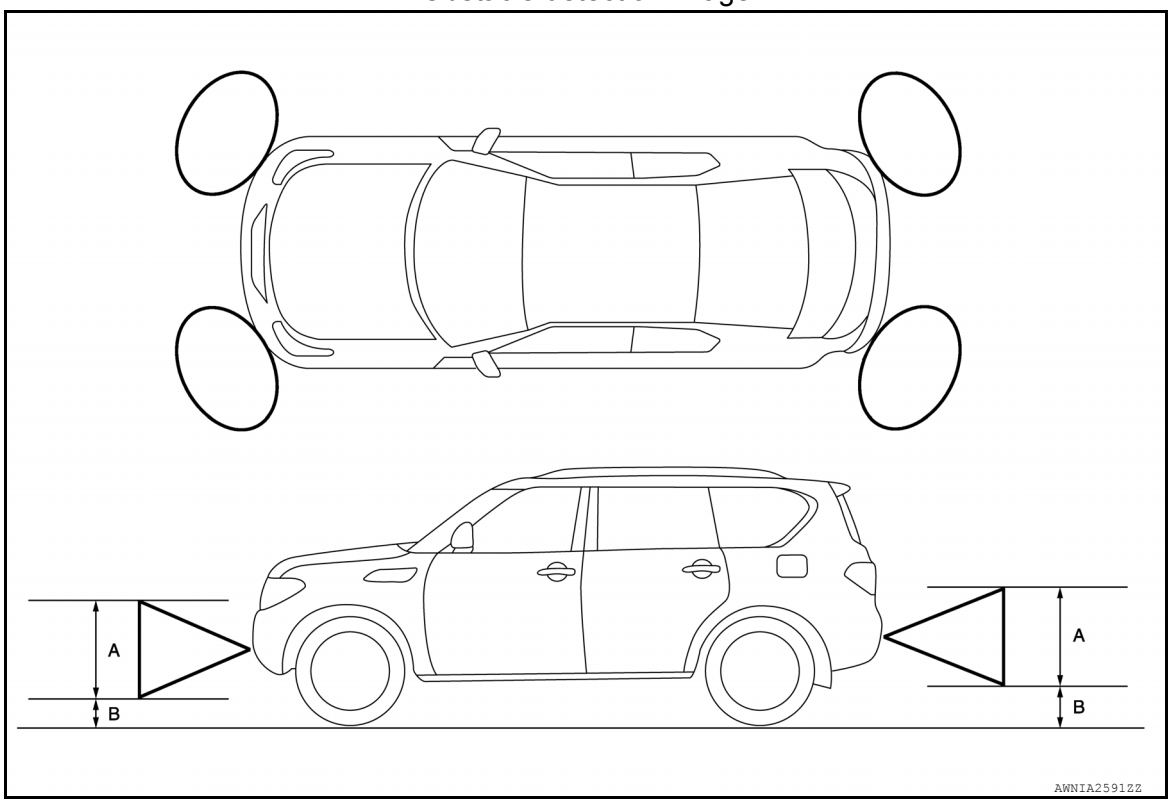
System Operation Description

- Around view monitor control unit transmits the sonar operation signal via CAN communication to sonar control unit to control the operation of sonar indicator and sonar buzzer.
- Sonar control unit transmits the detection signal and detection distance signal via CAN communication to around view monitor control unit. Around view monitor control unit operates the applicable sonar indicator.
- When receiving a sonar operation signal from the around view monitor control unit, the sonar control unit converts the signal into a detection distance signal and transmits it to the AV control unit via CAN communication. When receiving the detection signal, the AV control unit activates the speakers via the BOSE speaker amp.
- The sonar control unit is capable of self diagnosis. It can detect sensor malfunction or sensor harness open circuits. It transmits the diagnosis results to around view monitor control unit and always displays the sonar indicator in red to inform the vehicle operator.

Obstacle Detection Distance

- Sonar control unit changes the outputs of the sonar indicator and warning buzzer in 3 stages according to the obstacle detection distance from the corner sensor.
- The sonar control unit can change the setting of obstacle detection distance in 4 stages.

Obstacle detection image



A. Approx. 50 cm (19.6 in) B. Approx. 15 cm (5.9 in)

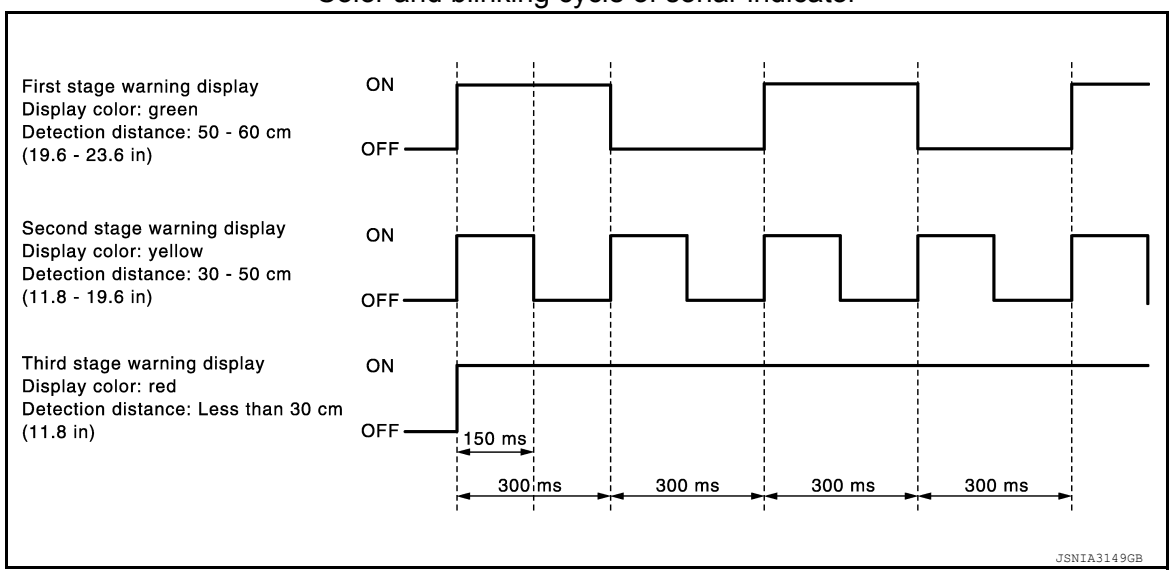
Detection distance

Warning item	Sensitivity level 1 (Fastest warning)	Sensitivity level 2 (Faster warning)	Sensitivity level 3 (Default value)	Sensitivity level 4 (Slower warning)
First stage warning	70 – 80 cm (27.5 – 31.4 in)	60 – 70 cm (23.6 – 27.5 in)	50 – 60 cm (19.6 – 23.6 in)	40 – 50 cm (15.7 – 19.6 in)
Second stage warning	50 – 70 cm (19.6 – 27.5 in)	40 – 60 cm (15.7 – 23.6 in)	30 – 50 cm (11.8 – 19.6 in)	30 – 40 cm (11.8 – 15.7 in)
Third stage warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

Sonar Indicator Display

- Around view monitor control unit that receives the detection signal and detection distance signal from sonar control unit displays the sonar indicator on display.
- Around view monitor control unit changes the color or blinking cycle of the indicator according to the detection distance.

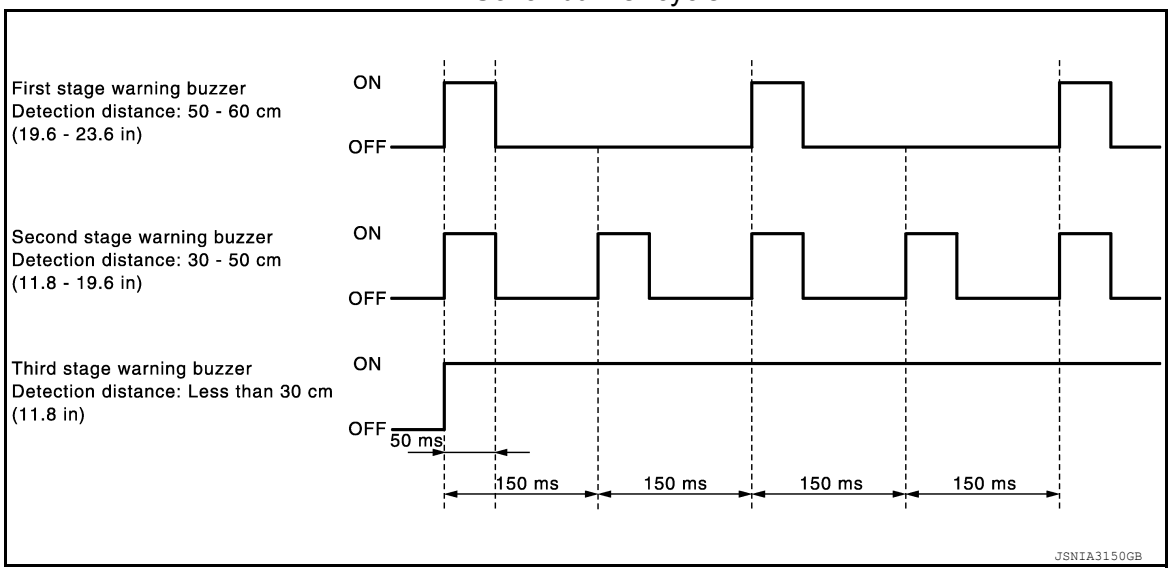
Color and blinking cycle of sonar indicator



Sonar Buzzer Operation

- Each sonar sensor transmits a sensor signal to the sonar control unit when detecting an obstacle.
- The sonar control unit converts a signal received from each sonar sensor into distance and transmits detection distance signal to the AV control unit via AV communication.
- The AV control unit transmits a buzzer signal to the BOSE amp. corresponding to each sonar sensor based on the received signal.
- When receiving a buzzer signal, the BOSE amp. transmits the buzzer signal to the each speaker. When each speaker receives a buzzer signal, a buzzer sounds.
- When the front corner sensor detects an obstacle, a buzzer is heard from the speakers on the front side.
- When the rear corner sensor detects an obstacle, a buzzer is heard from the speakers on the rear side.
- It changes the buzzer cycle in 3 stages according to the detection distance.

Sonar buzzer cycle



VEHICLE INFORMATION FUNCTION

- Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.
- AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM and combination meter.
- AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.

INTELLIGENT KEY INTERLOCKING FUNCTION

The AV control unit recognizes a door-unlocked state of Intelligent Key according to an Intelligent Key recognition signal transmitted from BCM and saves two different types of audio settings and navigation settings.

Settings saved in the AV control unit

- Map display
- Route guidance
- Locator
- Route search
- Sound quality
- Radio preset
- Language

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:0000000008360027

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

- A/C and AV switch assembly self diagnosis that checks the ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly.
  NOTE:
  The hazard switch and disk eject switch are not included in this operation check.
- AV control unit on board diagnosis performs the following functions listed in the table below:

Mode			Description
Self Diagnosis			• AV control unit diagnosis. • Diagnoses the connections across system components, between AV control unit and GPS antenna.
Confirmation/ Adjustment	Display Diagnosis		The following check functions are available: color tone check by color bar display and white display, light and shade check by gray scale display and touch panel calibration response check.
	Vehicle Signals		Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition, reverse, side view switch and room lamp.
	Speaker Test		The connection of a speaker can be confirmed by test tone.
	Navigation	Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.
		Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.
	Error History		The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.
	Synchronizer FES Clock		–
	Vehicle CAN Diagnosis		The transmitting/receiving of CAN communication can be monitored.
	AV COMM Diagnosis		The communication condition of each unit of Multi AV system can be monitored.
	Handsfree Phone/Infiniti Connection		• The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed. • Diagnosis of the Infiniti Connection system can be performed.
	XM	XM NaviTrffic	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.
		XM NavWeather	
		XM CGS	
		Diag	
	Delete Unit Connection Log		Erase the connection history of unit and error history.
	Initialize Settings		Initializes the AV control unit memory.
	Version Information		Version information of the AV control unit is displayed.

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

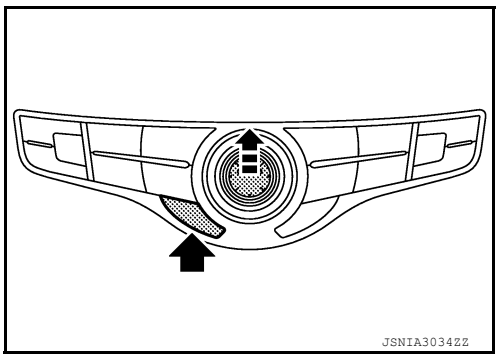
On Board Diagnosis Function

INFOID:0000000008360028

METHOD OF STARTING

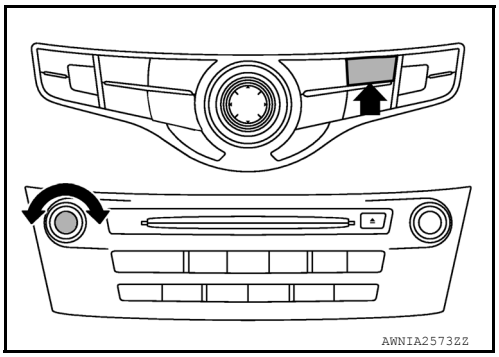
A/C and AV Switch Assembly Self Diagnosis

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

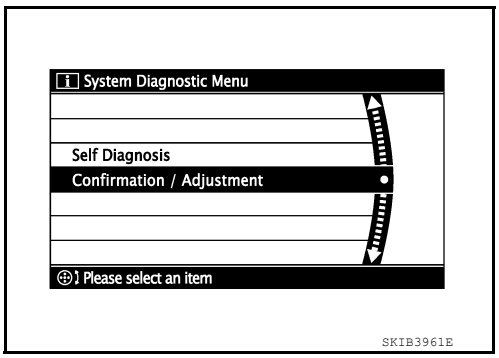


AV Control Unit Self Diagnosis

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



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

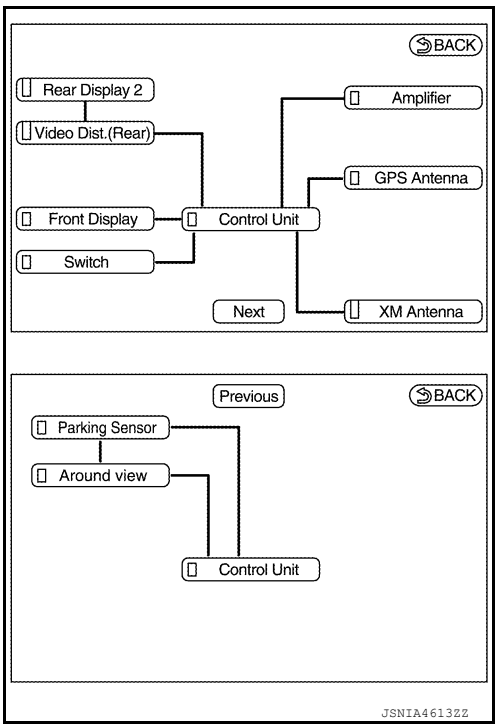


SELF DIAGNOSIS MODE

AV Control Unit Self Diagnosis

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

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

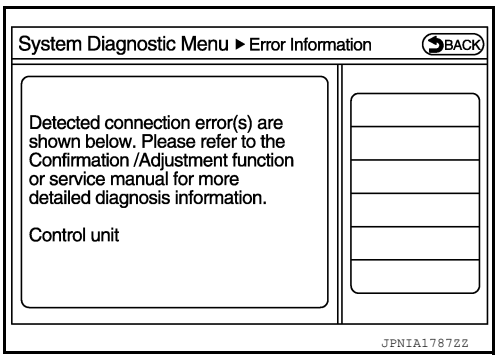


Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction [1]	Red	Green

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

- Replace AV control unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is AV control unit internal error. Refer to AV-388, "Removal and Installation - AV Control Unit".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

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



AV Control Unit Self Diagnosis Results

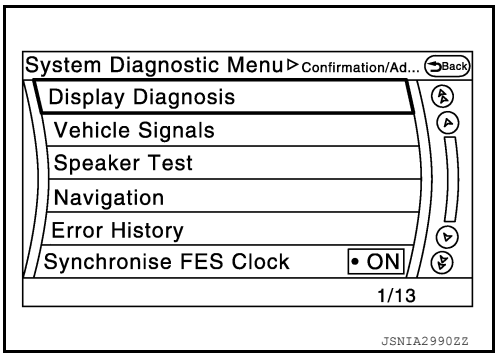
Only Unit Part Is Displayed In Red		
Screen switch	Description	Possible cause
Control Unit	Malfunction is detected in AV control unit power supply and ground circuits.	• AV control unit power supply or ground circuits. Refer to AV-334. • If no malfunction is detected in AV control unit power supply and ground circuits, replace AV control unit. Refer to AV-388.
Amplifier	When either one of the following items are detected: • sound signal circuits between BOSE amp. and each speaker are malfunctioning. • BOSE amp. malfunction is detected.	• Malfunctioning speaker circuits • Replace BOSE amp. Refer to AV-392, "Removal and Installation".

A Connecting Cable Between Units Is Displayed In Yellow		
Area with yellow connection lines	Description	Possible cause
Control unit ⇔ Front Display	Serial communication circuits between AV control unit and front display unit are malfunctioning.	Serial communication circuits between AV control unit and front display unit.
Control unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	Check the connection of the GPS antenna connector.
Control unit ⇔ XM Antenna	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection
Control unit ⇔ Amplifier	When either one of the following items are detected: • BOSE amp. power supply and ground circuits are malfunctioning. • AV communication circuits between headrest display unit LH and BOSE amp. are malfunctioning.	• BOSE amp. power supply and ground circuits. Refer to AV-335, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between headrest display unit LH and BOSE amp.
Control unit ⇔ Around view Around view ⇔ Parking Sensor	When either one of the following items are detected: • around view monitor control unit power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and around view monitor control unit are malfunctioning.	• Around view monitor control unit power supply and ground circuits. • AV communication circuits between AV control unit and around view monitor control unit.
Control unit ⇔ Parking Sensor Around view ⇔ Parking Sensor	When either one of the following items are detected: • sonar control unit power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and sonar control unit are malfunctioning.	• Sonar control unit power supply and ground circuits. • AV communication circuits between AV control unit and sonar control unit.

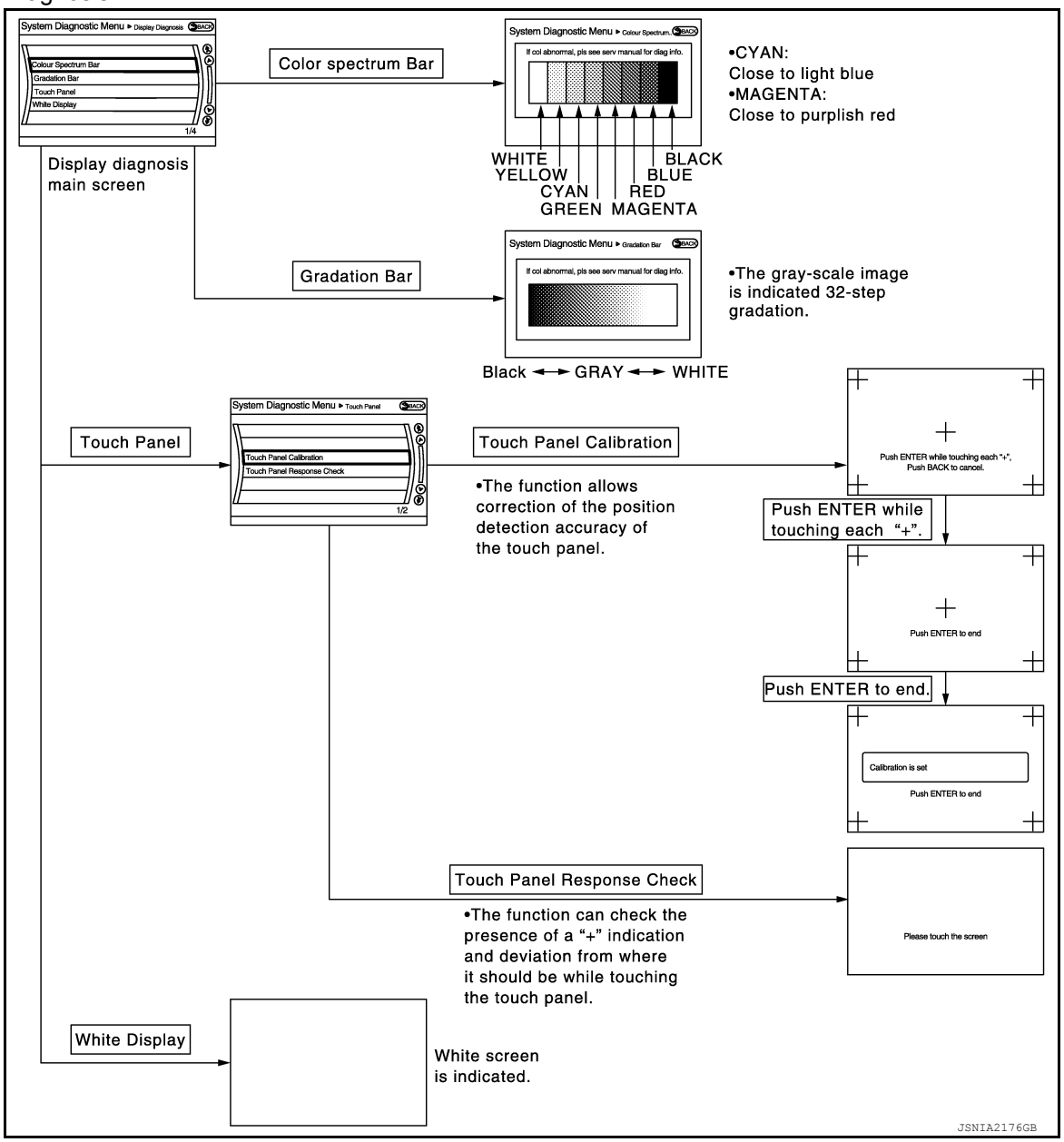
A Connecting Cable Between Units Is Displayed In Yellow		
Area with yellow connection lines	Description	Possible cause
Control unit ⇔ Video Dist.(Rear) Video Dist.(Rear) ⇔ Rear display 2	When either one of the following items are detected: • video distributor power supply and ground circuits are malfunctioning. • headrest display unit LH power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and headrest display unit LH are malfunctioning. • location recognition signal circuit between headrest display unit LH and ground is malfunctioning.	• Video distributor power supply and ground circuits. • Headrest display unit LH power supply and ground circuits. • AV communication circuits between AV control unit and headrest display unit LH. • Location recognition signal circuit between headrest display unit LH and ground.
Video Dist.(Rear) ⇔ Rear display 2	When either one of the following items are detected: • headrest display unit RH power supply and ground circuits are malfunctioning. • AV communication circuits between headrest display unit LH and headrest display unit RH are malfunctioning. • location recognition signal circuit between headrest display unit RH and ground is malfunctioning.	• Headrest display unit RH power supply and ground circuits. • AV communication circuits between headrest display unit LH and headrest display unit RH. • Location recognition signal circuit between headrest display unit RH and ground.

AV Control Unit Confirmation/Adjustment

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

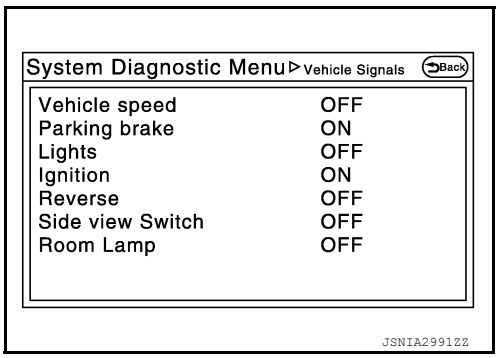


Display Diagnosis



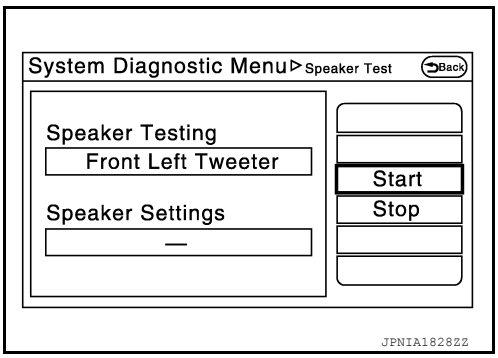
Vehicle Signals

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



Speaker Test

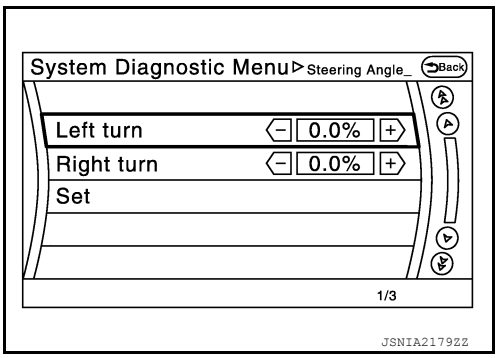
Select Speaker Test to display the Speaker Diagnosis screen. Press Start to generate a test tone in a speaker. Press Start again to generate a test tone in the next speaker. Press End to stop the test tones.



Navigation

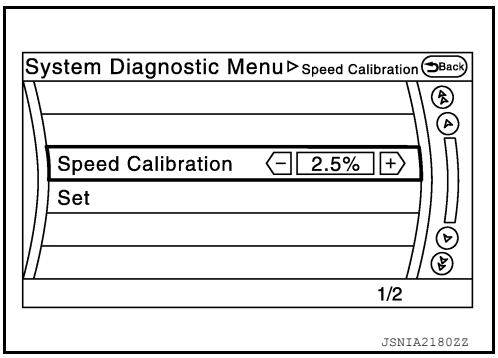
STEERING ANGLE ADJUSTMENT

The steering angle output value detected with the gyroscope is adjusted.



SPEED CALIBRATION

During normal driving, distance error caused by tire wear and tire pressure change is automatically adjusted for by the automatic distance correction function. This function, on the other hand, is for immediate adjustment, in cases such as driving with tire chain fitted on tires.



Error History

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

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

The error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.

- If there is a malfunction with the GPS antenna circuit board in the AV control unit, the correct date and time of occurrence may not be able to be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.
- The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

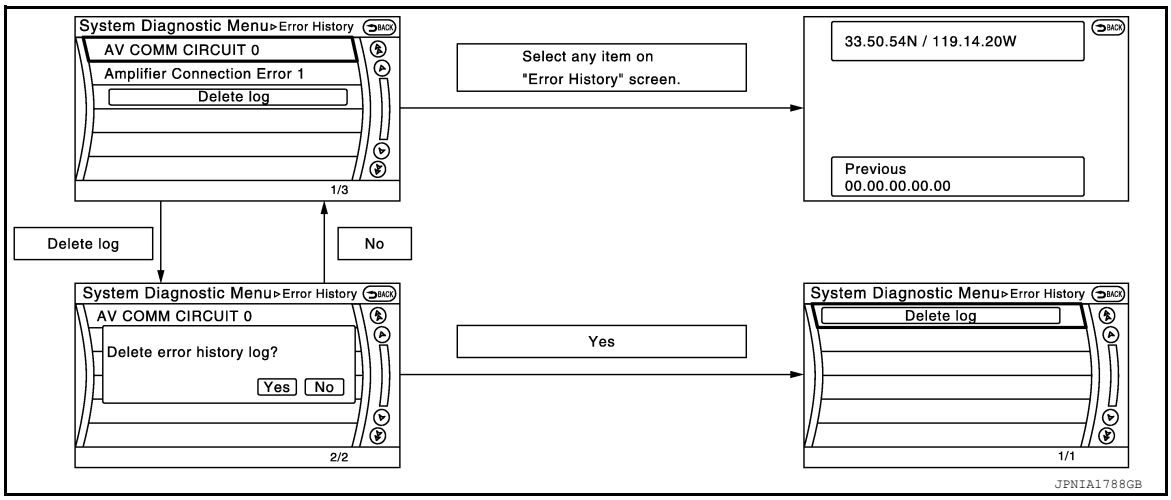
Count up method A

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

Count up method B

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

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



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-172, "CONSULT Function".
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
Connection Of Gyro		
Connection of G Sensor		
CAN Controller Memory Error		
Bluetooth® Module Connection Error		
Sub CPU Connection Error		
Audio connection error		
DSP Connection Error	AV control unit malfunction is detected.	• If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".
DSP Communication Error		

Error item	Description	Possible malfunction factor/Action to take
HDD Connection Error HDD Read Error HDD Write Error HDD Communication Error HDD Access Error	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".
GPS Communication Error GPS ROM Error GPS RAM Error GPS RTC Error	GPS malfunction is detected.	• An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT.
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DVD Mechanism Communication Error	AV control unit malfunction is detected.	• If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor. Refer to AV-172, "CONSULT Function".
Amplifier Temperature Error	BOSE amp. malfunction is detected.	Replace the BOSE amp. Refer to AV-392, "Removal and Installation".
Front Display Connection Error	When either one of the following items are detected: • front display unit power supply and ground circuits are malfunctioning. • Serial communication circuits between AV control unit and front display unit are malfunctioning.	• Front display unit power supply and ground circuits. • Serial communication circuits between AV control unit and front display unit.
• AV COMM CIRCUIT • 2nd Display Connection Error	When either one of the following items are detected: • video distributor power supply and ground circuits are malfunctioning. • headrest display unit LH power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and headrest display unit LH are malfunctioning. • location recognition signal circuit between headrest display unit LH and ground is malfunctioning.	• Video distributor power supply and ground circuits. • Headrest display unit LH power supply and ground circuits. • AV communication circuits between AV control unit and headrest display unit LH. • Location recognition signal circuit between headrest display unit LH and ground.
3rd Display Connection Error	When either one of the following items are detected: • headrest display unit RH power supply and ground circuits are malfunctioning. • AV communication circuits between headrest display unit LH and headrest display unit RH are malfunctioning. • location recognition signal circuit between headrest display unit RH and ground is malfunctioning.	• Headrest display unit RH power supply and ground circuits. • AV communication circuits between headrest display unit LH and headrest display unit RH. • Location recognition signal circuit between headrest display unit RH and ground.

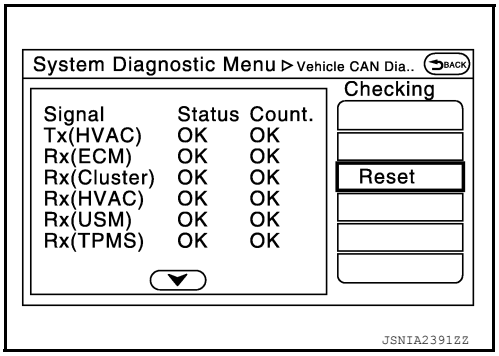
Error item	Description	Possible malfunction factor/Action to take
AM/FM antenna amplifier short to ground	Radio antenna amp. ON signal circuit malfunction is detected.	Radio antenna amp. ON signal circuit between AV control unit and antenna amp.
AM/FM antenna amplifier open		
Ext_Amp_ON output terminal short to ground	BOSE amp. ON signal circuit malfunction is detected.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.
Ext_Amp_ON output terminal :open		
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
XM Antenna Connection Error	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.
USB electric current Error	Detection of overcurrent in USB connector.	Check USB harness between the AV control unit and USB connector.
FL-DOOR SPEAKER OUT: open	When either one of the following items are detected: • sound signal circuits between BOSE amp. and front door speaker LH are malfunctioning. • sound signal circuits between BOSE amp. and front door tweeter LH are malfunctioning.	• Sound signal circuits between BOSE amp. and front door speaker LH. • Sound signal circuits between BOSE amp. and front door tweeter LH.
FL-DOOR SPEAKER OUT: short		
FL-DOOR SPEAKER: short to ground		
FL-DOOR SPEAKER: short to battery		
FL-DOOR TWEETER OUT: open		
FL-DOOR TWEETER OUT: short		
FL-DOOR TWEETER OUT: short to ground		
FL-DOOR TWEETER OUT: short to battery		
FR-DOOR SPEAKER OUT: open	When either one of the following items are detected: • sound signal circuits between BOSE amp. and front door speaker RH are malfunctioning. • sound signal circuits between BOSE amp. and front door tweeter RH are malfunctioning.	• Sound signal circuits between BOSE amp. and front door speaker RH. • Sound signal circuits between BOSE amp. and front door tweeter RH.
FR-DOOR SPEAKER OUT: short		
FR-DOOR SPEAKER OUT: short to ground		
FR-DOOR SPEAKER OUT: short to battery		
FR-DOOR TWEETER OUT: open		
FR-DOOR TWEETER OUT: short		
FR-DOOR TWEETER OUT: short to ground		
FR-DOOR TWEETER OUT: short to battery		
FL-INST TWEETER OUT: open	Sound signal circuits between BOSE amp. and tweeter LH are malfunctioning.	Sound signal circuits between BOSE amp. and tweeter LH.
FL-INST TWEETER OUT: short		
FL-INST TWEETER OUT: short to ground		
FL-INST TWEETER OUT: short to battery		
FC-INST SPEAKER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and center speaker.	Sound signal circuits between BOSE amp. and center speaker.
FC-INST SPEAKER OUT: short		
FC-INST SPEAKER OUT: short to ground		
FC-INST SPEAKER OUT: short to battery		
FR-INST TWEETER OUT: open	Sound signal circuits between BOSE amp. and tweeter RH are malfunctioning.	Sound signal circuits between BOSE amp. and tweeter RH.
FR-INST TWEETER OUT: short		
FR-INST TWEETER OUT: short to ground		
FR-INST TWEETER OUT: short to battery		
2L-DOOR SPEAKER OUT: open	Sound signal circuits between BOSE amp. and rear door speaker LH are malfunctioning.	Sound signal circuits between BOSE amp. and rear door speaker LH.
2L-DOOR SPEAKER OUT: short		
2L-DOOR SPEAKER OUT: short to ground		
2L-DOOR SPEAKER OUT: short to battery		

Error item	Description	Possible malfunction factor/Action to take
2R-DOOR SPEAKER OUT: open 2R-DOOR SPEAKER OUT: short 2R-DOOR SPEAKER OUT: short to ground 2R-DOOR SPEAKER OUT: short to battery	Sound signal circuits between BOSE amp. and rear door speaker RH are malfunctioning.	Sound signal circuits between BOSE amp. and rear door speaker RH.
RL-SPEAKER OUT: open RL-SPEAKER OUT: short RL-SPEAKER OUT: short to ground RL-SPEAKER OUT: short to battery	Sound signal circuits between BOSE amp. and rear speaker LH are malfunctioning.	Sound signal circuits between BOSE amp. and rear speaker LH.
RR-SPEAKER OUT: open RR-SPEAKER OUT: short RR-SPEAKER OUT: short to ground RR-SPEAKER OUT: short to battery	Sound signal circuits between BOSE amp. and rear speaker RH are malfunctioning.	Sound signal circuits between BOSE amp. and rear speaker RH.
SUBWOOFER OUT: open SUBWOOFER OUT: short SUBWOOFER OUT: short to ground SUBWOOFER OUT: short to battery	Sound signal circuits between BOSE amp. and subwoofer are malfunctioning.	Sound signal circuits between BOSE amp. and subwoofer.
• AV COMM CIRCUIT • Switches Connection Error	When either one of the following items are detected: • multifunction switch power supply and ground circuits were malfunctioning. • AV communication circuits between AV control unit and multifunction switch are malfunctioning.	• Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.
• AV COMM CIRCUIT • Amplifier Connection Error	When either one of the following items are detected: • BOSE amp. power supply and ground circuits are malfunctioning. • AV communication circuits between headrest display unit LH and BOSE amp. are malfunctioning.	• BOSE amp. power supply and ground circuits. Refer to AV-335, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between headrest display unit LH and BOSE amp.
• AV COMM CIRCUIT • AVM Connection Error	When either one of the following items are detected: • around view monitor control unit power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and around view monitor control unit are malfunctioning.	• Around view monitor control unit power supply and ground circuits. • AV communication circuits between AV control unit and around view monitor control unit.
• AV COMM CIRCUIT • Sonar Connection Error	When either one of the following items are detected: • sonar control unit power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and sonar control unit are malfunctioning.	• Sonar control unit power supply and ground circuits. • AV communication circuits between AV control unit and sonar control unit.

Error item	Description	Possible malfunction factor/Action to take
• AV COMM CIRCUIT • Switches Connection Error • Sonar Connection Error • AVM Connection Error • 2nd Display Connection Error	AV communication circuits between AV control unit and multifunction switch are malfunctioning.	AV communication circuits between AV control unit and multifunction switch.
• AV COMM CIRCUIT • Switches Connection Error • Amplifier Connection Error • Sonar Connection Error • AVM Connection Error • 2nd Display Connection Error		

Vehicle CAN Diagnosis

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

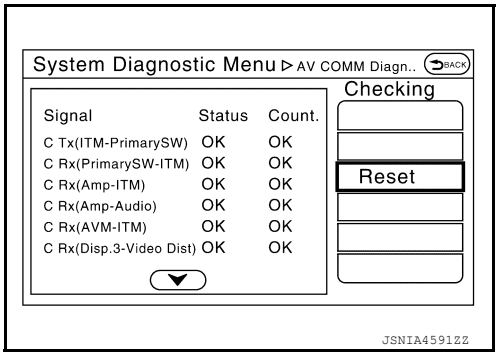


Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(TPMS)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39
Rx(ACC)	OK / ???	OK / 0 – 39
RX(VDC)	OK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

NOTE:
“???” indicates UNKWN.

AV COMM Diagnosis

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

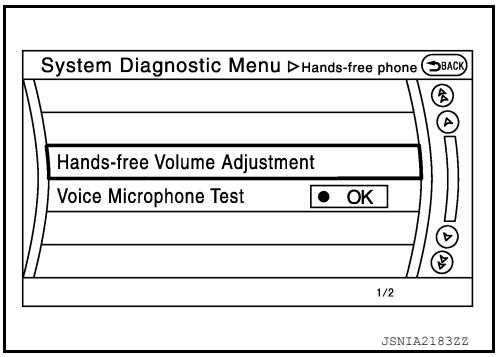


Items	Status (Current)	Counter (Past)
C Tx(ITM–PrimarySW)	OK / ???	OK / 0 – 39
C Rx(PrimarySW–ITM)	OK / ???	OK / 0 – 39
C Rx(Amp–ITM)	OK / ???	OK / 0 – 39
C Rx(Amp–Audio)	OK / ???	OK / 0 – 39
C Rx(AVM–ITM)	OK / ???	OK / 0 – 39
C Rx(Disp.3–Video Dist)	OK / ??? / –	OK / 0 – 39
C Rx(Video Dist–ITM)	OK / ???	OK / 0 – 39
C Rx(Sonar–ITM)	OK / ???	OK / 0 – 39

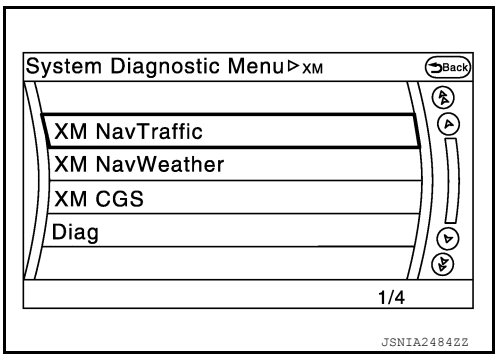
Items	Status (Current)	Counter (Past)
C Rx(Sonar–AVM)	OK / ???	OK / 0 – 39
C Rx(R.RemoteCont–ITM)	OK / ???	OK / 0 – 39

NOTE:
"???" indicates UNKWN

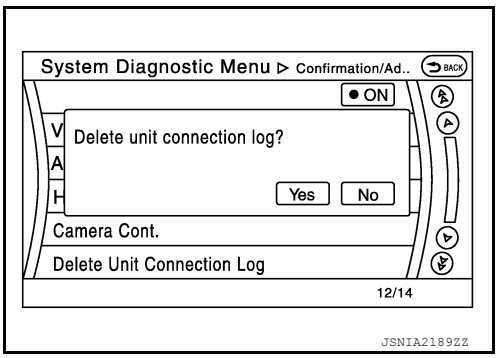
Hands-Free Phone
The hands-free phone reception volume adjustment and microphone and speaker test functions are also available.



XM
- 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.)

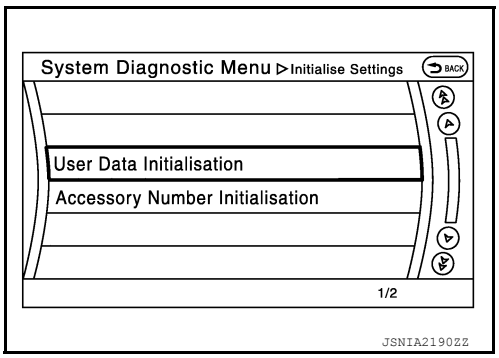


Initialize Settings

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

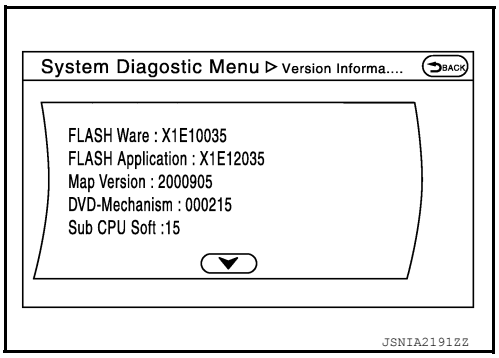
CAUTION:

- **Never perform Accessory Number Initialization except when configuration is unsuccessful.**
- **Accessory Number Initialization requires configuration. For details, refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Description".**



Version Information

Version information of the AV control unit is displayed.



CONSULT Function

INFOID:0000000008360029

CONSULT FUNCTIONS

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

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Work support	The settings for AV control unit functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing AV control unit.
CAN Diag Support Mntr	• The result of transmit/receive diagnosis of AV communication is displayed. • The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSTIC RESULT

Refer to AV-187, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	• On: vehicle speed > 0 km/h (0 MPH). • Off: vehicle speed = 0 km/h (0 MPH).
PKB SIG [On/Off]	• On: parking brake applied. • Off: parking brake released.
ILLUM SIG [On/Off]	• On: optical sensor signal is received. • Off: optical sensor signal is not received.

Monitor Item [Unit]	Description
IGN SIG [On/Off]	• On: ignition switch ON. • Off: ignition switch ACC.
REV SIG [On/Off]	• On: selector lever in R position. • Off: selector lever in any position other than R.

WORK SUPPORT

Conditions	Description
ST ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed. Refer to BRC-59, "Description".

CONFIGURATION

Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Description".

CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

CONSULT Function

INFOID:0000000008374952

CONSULT FUNCTIONS

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

Direct Diagnostic Mode	Description
Ecu Identification	The around view monitor control unit part number is displayed.
Self Diagnostic Result	The around view monitor control unit self diagnostic results are displayed.
Data Monitor	The around view monitor control unit input/output data is displayed in real time.
Work support	The settings for around view monitor control unit functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing around view monitor control unit.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

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

SELF DIAGNOSTIC RESULT

Refer to AV-204, "DTC Index".

DATA MONITOR

Monitor Item	Description
ST ANGLE SENSOR SIGNAL [On/Off]	Indicates condition of steering angle sensor signal.
REVERSE SIGNAL [On/Off]	Indicates selector lever position.
VEHICLE SPEED SIGNAL [mph/km/h]	Indicates condition of vehicle speed signal.
CAMERA SWITCH SIGNAL [On/Off]	Indicates condition of camera switch signal.
CAMERA OFF SIGNAL [On/Off]	Indicates condition of camera OFF signal.
ST ANGLE SENSOR TYPE [Absolute]	Indicates steering angle sensor type.
ST GEAR RATIO TYPE [Type O]	Indicates steering gear ratio type.
STEERING POSITION [LHD/RHD]	Indicates drive type.
REAR CAMERA IMAGE SIGNAL [OK]	Indicates condition of camera image signal.
R-CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
R-CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
F-CAMERA IMAGE SIGNAL [OK]	Indicates condition of camera image signal.
F-CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
F-CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
DR-SIDE CAMERA IMAGE SIG [OK]	Indicates condition of camera image signal.
DR CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
DR-SIDE CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
PA-SIDE CAMERA IMAGE SIG [OK]	Indicates condition of camera image signal.
PA CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
PA-SIDE CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
ACC [OK]	indicates condition of accessory signal.
FOLDING MOTOR VOLT 1 [On/Off]	indicates condition of mirror folding motor.
FOLDING MOTOR VOLT 2 [On/Off]	indicates condition of mirror folding motor.

WORK SUPPORT

Support Item	Description
NON-VIEWABLE AREA REMINDER	ON/OFF setting of non-viewable area can be performed.
INITIALIZE CAMERA IMAGE CALIBRATION	Factory image calibration restoration can be performed.
STEERING ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed.
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	Performs calibration of front camera.
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	Performs calibration of passenger side camera.
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	Performs calibration of driver side camera.
CALIBRATING CAMERA IMAGE (REAR CAMERA)	Performs calibration of rear camera.
FINE TUNING OF BIRDS-EYE VIEW	Confirmation and adjustment of difference between each camera can be performed.
REAR WIDE-VIEW FIXED GUIDE LINE CORRECTION	Performs calibration of rear wide-view guide line correction.
TURNING RADIUS CORRECTION	Performs calibration of turning radius correction.
PARTS WITH DOOR MIRROR AUTO FOLD FUNC	ON/OFF setting of auto fold mirror function can be performed.
SONAR Off POP-UP DISPLAY SETTING CHANGE	ON/OFF setting of sonar pop-up display can be performed.
FRONT WIDE-VIEW FIXED GUIDE LINE CORRECTION	Performs calibration of front wide-view guide line correction.
ZOOM FUNCTION	Adjustment of magnification setting of camera can be performed.

CONFIGURATION

Refer to AV-264, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Description".

CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

CONSULT Function

INFOID:0000000008368196

APPLICATION ITEMS

CONSULT can display each diagnostic item using the diagnostic test modes shown as follows:

Test mode	Function
Ecu Identification	Sonar control unit part number can be read.
Self Diagnostic Result	Sonar control unit checks the conditions and displays memorized error.
Data Monitor	Sonar control unit input/output data in real time.
Active Test	Gives a drive signal to a load to check the operation.
Work support	Changes setting of each function.

ECU IDENTIFICATION

Displays the part number of sonar control unit.

SELF-DIAGNOSTIC RESULTS

For details, refer to AV-210, "DTC Index".

DATA MONITOR

Monitor Item	Display	Description
VEHICLE SPEED	(mph)	Vehicle speed
SONAR C/U POWER SUPPLY	(v)	Supply voltage for the Sonar C/U
SENSOR VOLTAGE	(v)	Sensor voltage
DETECTION MODE	(Mode)	Displays detection mode display
SW OPRT AFTR IGN ON	Yes	Switch operation after ignition ON
	No	
SONAR TEMPORARY OFF	Yes	Sonar system temporary Off
	No	Sonar system On
SONAR PERMANENT OFF	Yes	Sonar system malfunction
	No	Sonar system without malfunction
P N RANGE	Yes	Selector lever is in “P” or “N” position
	No	Selector lever is another position other than “P” or “N”
LED	Yes	Led On
	No	Led Off
TRAILER CONNECT	CON	Trailer connector is in use
	N CON	Trailer connector is not in use
REVERSE RANGE	On	Selector lever is in the “R” position
	Off	Selector lever is in another position other than “R”

Monitor Item	Display	Description
COR[RL]	(cm)	Measures the distance in cm to the obstacle.
COR[RL]-> CEN[RL]/ CEN[R]		
CEN[RL]/CEN[R]-> COR[RL]		
CEN[RL]/CEN[R]		
CEN[RL]-> CEN[RR]		
CEN[RR]-> CEN[RL]		
CEN[RR]		
CEN[RR]-> CEN[RR]/ COR[RR]		
COR[RR]-> CEN[RR]/ CEN[R]		
COR[RR]		
COR[FL]		
COR[FL]-> CEN[FL]/ CEN[F]		
CEN[FL]/CEN[F] ->COR[FL]		
CEN[FL]/CEN[F]		
CEN[FL]-> CEN[FR]		
CEN[FR]-> CEN[FL]		
CEN[FR]		
CEN[FR]/CEN[F]-> COR[FR]		
COR[FR]-> CEN[FR]/ CEN[F]		
COR[FR]		
CEN[FR]/CEN[F]-> COR[FR]		
COR[FR]-> CEN[FR]/ CEN[F]		
COR[FR]		
RVRB TIME COR[RL]	(ms)	Measures the distance in ms to the obstacle.
RVRB TIME COR[RR]		
RVRB TIME CEN[RL]		
RVRB TIME CEN[RR]		
RVRB TIME COR[FL]		
RVRB TIME COR[FR]		
RVRB TIME CEN[FL]		
RVRB TIME CEN[FR]		

*: Even when a buzzer (backward) is output condition, this item is indicated as OFF.

ACTIVE TEST

Active test item	Function
REAR BUZZER	This test is able to check rear buzzer operation.

WORK SUPPORT

Work support item	Function
VOLUME SETTING	Allows you to adjusts the volume of the warning tone.
TRAILER HITCH DETECTION RANGE ADJUSTMENT	Allows you to adjust the rear sonar sensors when towing a trailer.

CORNER SEN DISTANCE SET

Corner sensor warning buzzer distance can be set to 4 phases as follows.

Warning item	FARTHER	FAR	NORMAL (Default)	NEAR
Second warning	70 – 80 cm (27.5 – 31.4 in)	60 – 70 cm (23.6 – 27.5 in)	50 – 60 cm (19.6 – 23.6 in)	40 – 50 cm (15.7 – 19.6 in)
Third warning	50 – 70 cm (19.6 – 27.5 in)	40 – 60 cm (15.7 – 23.6 in)	30 – 50 cm (11.8 – 19.6 in)	30 – 40 cm (11.8 – 15.7 in)
Fourth warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

The default of this model is “NORMAL”.

DIAGNOSIS SYSTEM (HEADREST DISPLAY UNIT)

Description

INFOID:0000000008368197

Self-diagnosis of headrest display unit can be performed by operating rear seat remote controller.

On Board Diagnosis Function

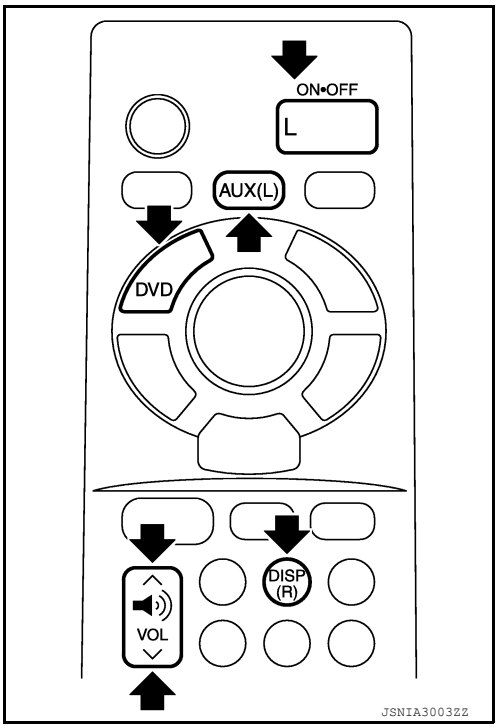
INFOID:0000000008368198

Self-diagnosis mode can check the following items.

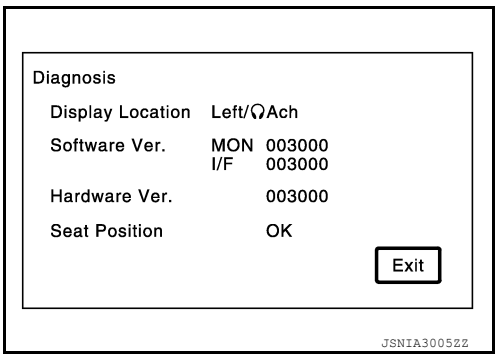
Diagnosis item	Display	Description
Display Location	Left/Right/Unknown	Installation location of headrest display unit is displayed. **NOTE:** If displayed location is different from the actual location or shown as “unknown”, check location recognition signal circuit.
Software Ver.	*****	Software version of headrest display unit is displayed.
Hardware Ver.	*****	Hardware version of headrest display unit is displayed.
Seat Position	OK	Not used for this vehicle.

METHOD OF STARTING

1. Turn ignition switch to the ON position.
2. Turn the headrest display unit OFF.
3. Press each switch of rear seat remote controller in the order shown below.
   “AUX(L)”→“VOL DOWN”→“DISP(R)”→“VOL UP”→“DVD”→“L”
   NOTE:
   - Operation must be done within 20 seconds.
   - Perform the operation of rear seat remote controller for headrest display unit of each side.

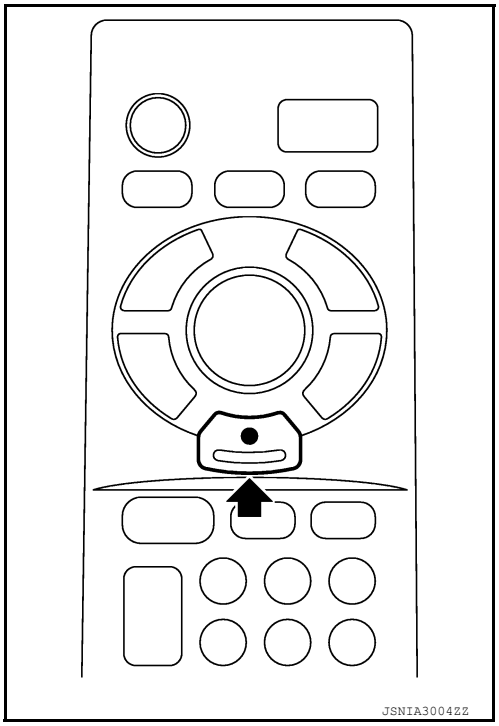


4. When the rear seat remote operation is performed as shown on procedure 3, self-diagnosis screen is displayed.



Finishing Self-diagnosis Mode

Self-diagnosis mode is canceled when pressing the enter switch of rear seat remote controller.



ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

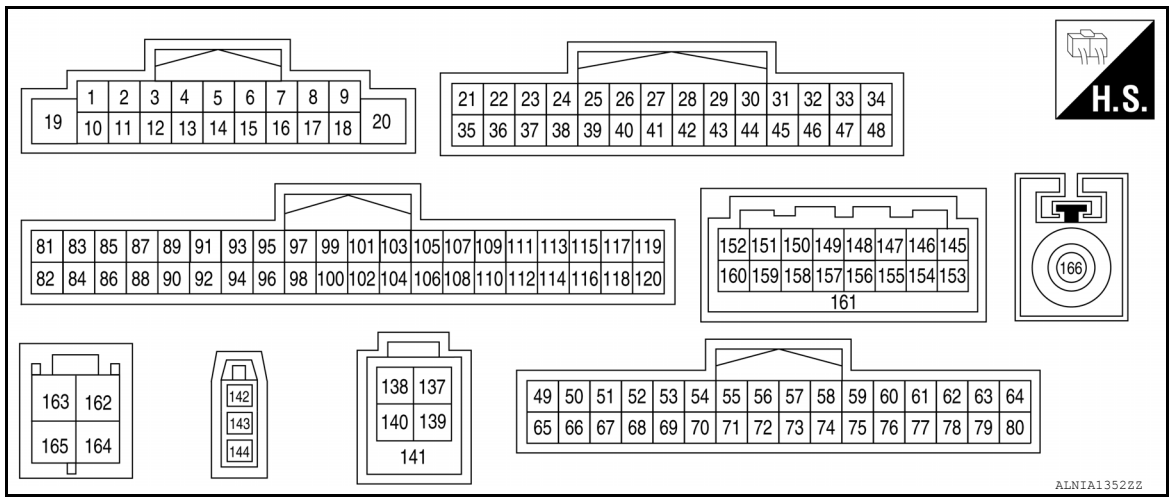
Reference Value

INFOID:0000000008360021

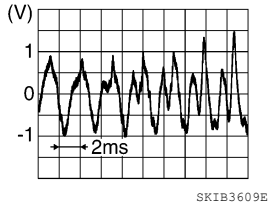
VALUES ON THE DIAGNOSIS TOOL

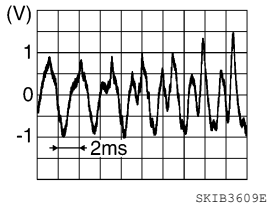
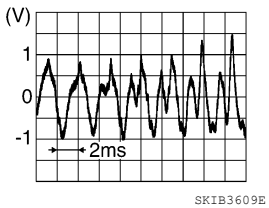
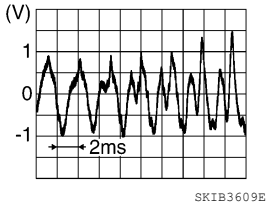
Monitor Item	Condition	Value/Status
VHCL SPD SIG	Vehicle speed = 0 km/h (0 MPH).	Off
	Vehicle speed > 0 km/h (0 MPH).	On
PKB SIG	Parking brake released.	Off
	Parking brake applied.	On
ILLUM SIG	Optical sensor signal is not received.	Off
	Optical sensor signal is received.	On
IGN SIG	Ingnition switch OFF or ACC.	Off
	Ignition switch ON.	On
REV SIG	Selector lever in any position other than R.	Off
	Selector lever in R position.	On

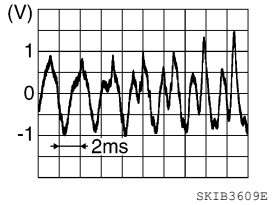
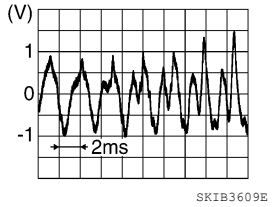
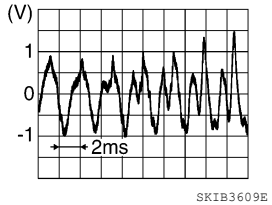
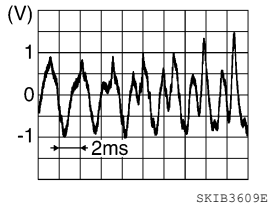
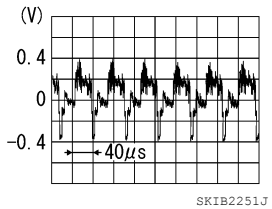
TERMINAL LAYOUT

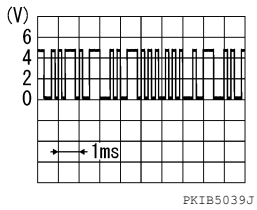
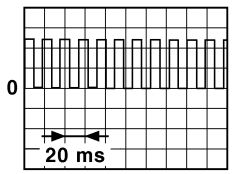
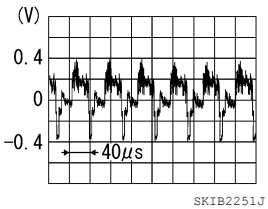


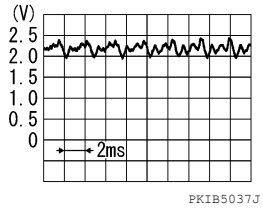
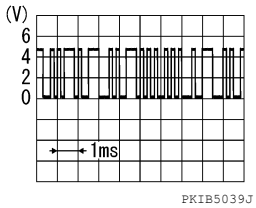
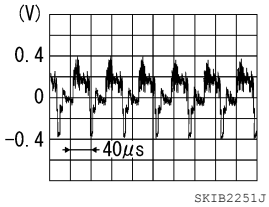
PHYSICAL VALUES

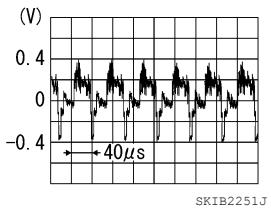
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (SB)	Ground	BOSE amp. ON signal	Output	Ignition switch ACC	—	Battery voltage
2 (B)	3 (W)	Sound signal front LH	Output	Ignition switch ON	Sound output	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
4 (B)	5 (W)	Sound signal rear LH	Output	Ignition switch ON	Sound output	 SKIB3609E
6 (G)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch.	0 V
					Keep pressing MENU UP switch.	1.0 V
					Keep pressing MENU DOWN switch.	2.0 V
					Keep pressing switch	3.0 V
					Keep pressing ENTER switch.	4.0 V
					Except for above.	5.0 V
7 (G)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
10 (BR)	—	Shield	—	—	—	—
11 (W)	12 (B)	Sound signal front RH	Output	Ignition switch ON	Sound output	 SKIB3609E
13 (B)	14 (W)	Sound signal rear RH	Output	Ignition switch ON	Sound output	 SKIB3609E
16 (W)	15 (B)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch.	0 V
					Keep pressing VOL UP switch.	1.0 V
					Keep pressing switch.	2.0 V
					Keep pressing switch.	3.0 V
					Except for above.	5.0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
20 (GR)	Ground	Ground	—	Ignition switch ON	—	0 V
24 (R)	39 (B)	AUX sound signal LH	Input	Ignition switch ON	When front AUX mode is selected.	 SKIB3609E
26 (W)	40 (R)	Sound signal LH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	 SKIB3609E
27 (B)	41 (G)	Sound signal RH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	 SKIB3609E
37	—	Shield	—	—	—	—
38 (W)	39 (B)	AUX sound signal RH	Input	Ignition switch ON	When front AUX mode is selected.	 SKIB3609E
42	—	Shield	—	—	—	—
53 (G)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is applied.	0 V
					Parking brake is released.	4.5 V
55 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
56 (B)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
57 (BG)	—	I-Key memory	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
58 (G)	—	AV-ACC (DCM)	—	—	—	—
60 (W)	Ground	Microphone VCC	Output	Ignition switch ON	—	5.0 V
61 (W)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
62 (P)	—	CAN–L	Input/ Output	—	—	—
63 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
64 (LG)	—	M CAN–L TRM	—	—	—	—
67 (P)	—	MR output	—	—	—	—
68 (LG)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
69 (R)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever is in R position.	Battery voltage
					Selector lever is in other than R position.	0 V
70 (BG)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
71	—	Shield	—	—	—	—
72 (R)	Ground	Composite image synchronizing signal	Output	Ignition switch ON	At DVD image is displayed.	 SKIB2251J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
75 (B)	59	Microphone signal	Input	Ignition switch ON	Give a voice.	 PKIB5037J
76	—	Shield	—	—	—	—
77 (B)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
78 (L)	—	CAN–H	Input/ Output	—	—	—
79 (SB)	Ground	Dimmer signal	Input	Ignition switch ON	Either of the following conditions • Lighting switch is OFF • Lighting switch is 1st or 2nd, and the area around the vehicle is bright (shine a light on the optical sensor)	0 V
					Lighting switch is 1st or 2nd, and the area around the vehicle is dark (block the light from the optical sensor)	Battery voltage
80 (SB)	—	M CAN–H TRM	—	—	—	—
91 (W)	Ground	AUX image signal	Input	Ignition switch ON	At front AUX image is displayed.	 SKIB2251J
92 (B)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
94	—	Shield	—	—	—	—
97 (Y)	Ground	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.	0 V
					Except for above.	5.0 V
98 (V)	Ground	Switch ground	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
105 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
106	—	Shield	—	—	—	—
107 (B)	Ground	Composite image signal	Output	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	
137 (G)	—	V BUS signal	—	—	—	—
138 (W)	—	USB D+ signal	—	—	—	—
139 (R)	—	USB ground	—	—	—	—
140 (L)	—	USB D− signal	—	—	—	—
141	—	Shield	—	—	—	—
142 (B)	—	FM sub	Input	—	—	—
143 (B)	Ground	Antenna amp. ON signal	Input	Ignition switch ON	—	Battery voltage
144 (B)	—	AM-FM main	Input	—	—	—
145 (W)	—	USB D− signal	Input	—	—	—
146 (L)	—	USB VBUS signal	Input	—	—	—
151 (B)	—	U-VOICE ground	Input	—	—	—
152 (B)	—	U-VOICE signal	Input	—	—	—
153 (B)	Ground	GPS antenna signal	Input	Ignition switch ON	Not connected GPS antenna connector.	5.0 V
159	—	Shield	—	—	—	—
160 (B)	—	D-VOICE signal	—	—	—	—
161	—	Shield	—	—	—	—
162	—	Shield	—	—	—	—
163	—	Shield	—	—	—	—
164 (B)	Ground	RGB digital image signal (−)	Output	Ignition switch ON	Not connected connector.	1.3 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
165 (B)	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	1.3 V
166	Ground	Satellite radio antenna signal	Input	Ignition switch ON	Not connected satellite antenna connector.	5.0 V

Fail-Safe

INFOID:0000000008486410

When the ambient temperature becomes extremely low or extremely high, AV control unit displays a message and limits the function of the AV control unit.

FAIL-SAFE CONDITIONS

When the ambient temperature is –20°C (–4°F) or lower, or when it is 70°C (158°F) or higher.

Display

The following messages are displayed during fail-safe:

Fail-safe mode	Display
When HDD temperature is low	HDD system is experiencing problems due to extreme low temperature. Normal operation will resume when temperature rises.
When HDD temperature is high	HDD system is experiencing problems due to extreme high temperature. Normal operation will resume when temperature drops.

DESCRIPTION OF CONTROLS

Function		Fail-safe mode activated
Air conditioner	Operation	A/C and AV switch assembly can be operated.
	Display	• LEDs of A/C and AV switch assembly illuminate. • Temperature, mode and blower speed are displayed in a simplified mode.
Audio	Operation	Only ON/OFF and volume control operations of A/C and AV switch assembly are available.
	Display	“Fail-safe mode” is displayed.
Camera	Operation	Image tone cannot be controlled.
	Display	Cannot be superimposed. (warning display, tone control display)
Hands-free phone	Operation	Inoperative.
Navigation	Operation	Inoperative.
Self diagnosis		Displays in a simplified mode.
CONSULT diagnosis		Inoperative.

Ability Operation Mode

If HDD data can be read, “Fail-safe mode” is displayed and functions listed above can be operated.

DTC Index

INFOID:0000000008486411

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-274, "AV CONTROL UNIT : DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-275, "AV CONTROL UNIT : DTC Logic"
U1200: CONT UNIT	AV-276, "DTC Logic"
U1201: GYRO NO CONN	AV-277, "DTC Logic"
U1202: G-SENSOR NO CONN	AV-278, "DTC Logic"

CONSULT Display	Reference Page
U1204: GPS COMM	AV-279, "DTC Logic"
U1205: GPS ROM	AV-280, "DTC Logic"
U1206: GPS RAM	AV-281, "DTC Logic"
U1207: GPS RTC	AV-282, "DTC Logic"
U1216: CAN CONT	AV-283, "DTC Logic"
U1217: BLUETOOTH MODULE	AV-284, "DTC Logic"
U1218: HDD CONN	AV-285, "DTC Logic"
U1219: HDD READ	AV-286, "DTC Logic"
U121A: HDD WRITE	AV-287, "DTC Logic"
U121B: HDD COMM	AV-288, "DTC Logic"
U121C: HDD ACCESS	AV-289, "DTC Logic"
U121D: DSP CONN	AV-290, "DTC Logic"
U121E: DSP COMM	AV-291, "DTC Logic"
U1225: USB CONTROLLER	AV-292, "DTC Logic"
U1227: DVD COMM	AV-293, "DTC Logic"
U1228: SUB CPU CONN	AV-294, "DTC Logic"
U1229: iPod CERTIFICATION	AV-295, "DTC Logic"
U122A: CONFIG UNFINISH	AV-296, "DTC Logic"
U122E: Built-in AUDIO CONN	AV-297, "DTC Logic"
U1231: AMP TEMP	AV-298, "DTC Logic"
U1232: ST ANGLE SEN CALIB	AV-299, "DTC Logic"
U1243: FRONT DISP CONN	AV-300, "DTC Logic"
U1244: GPS ANTENNA CONN	AV-302, "DTC Logic"
U1258: XM ANTENNA CONN	AV-303, "DTC Logic"
U125A: 3RD DISP CONN	AV-304, "DTC Logic"
U1263: USB OVERCURRENT	AV-305, "DTC Logic"
U1264: ANTENNA AMP TERMINAL (OPEN or SHORT)	AV-306, "DTC Logic"
U1265: AMP ON TERMINAL (GND-SHORT or VB-SHORT)	AV-307, "DTC Logic"
• U1300: AV COMM CIRCUIT • U1240: SWITCH CONN	AV-308, "Description"
• U1300: AV COMM CIRCUIT • U124E: AMP CONN	
• U1300: AV COMM CIRCUIT • U1246: VIDEO DIST CONN	
• U1300: AV COMM CIRCUIT • U125B: AROUND CAMERA CONN	
• U1300: AV COMM CIRCUIT • U125C: SONAR CONN	
• U1300: AV COMM CIRCUIT • U1240: SWITCH CONN • U125C: SONAR CONN • U125B: AROUND CAMERA CONN • U1246: VIDEO DIST CONN	
• U1300: AV COMM CIRCUIT • U1240: SWITCH CONN • U124E: AMP CONN • U125C: SONAR CONN • U125B: AROUND CAMERA CONN • U1246: VIDEO DIST CONN	

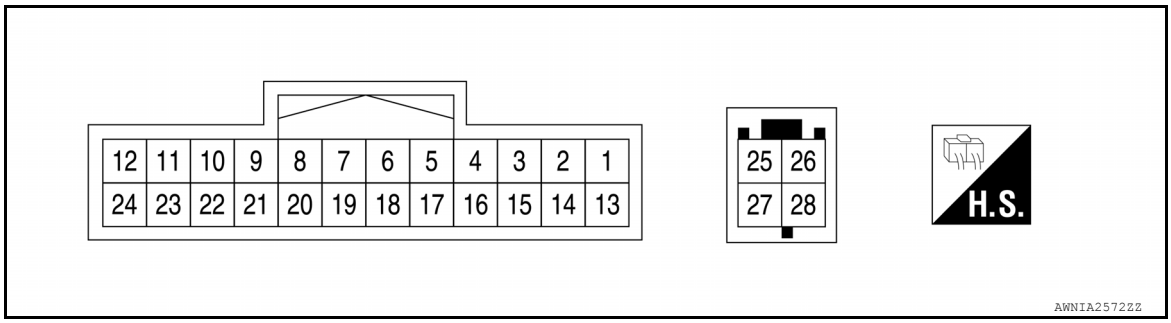
CONSULT Display	Reference Page
U1310: CONTROL UNIT (AV)	AV-318, "DTC Logic"
U1601: FL-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-319, "DTC Logic"
U1603: FL-DOOR WOOFER/TWEETER (VB-SHOR)	
U1609: FR-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)	
U160B: FR-DOOR WOOFER/TWEETER (VB-SHOR)	
U1627: F-INST L-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-320, "DTC Logic"
U162F: F-INST R-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	
U162A: F-INST C-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-321, "DTC Logic"
U1684: 2L-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-322, "DTC Logic"
U1687: 2L-DOOR SPEAKER/TWEETER (VB-SHOR)	
U162C: 2R-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)	
U162F: 2R-DOOR SPEAKER/TWEETER (VB-SHOR)	
U175D: R-LUGGAGE L-WOOFER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-323, "DTC Logic"
U176A: R-ROOF L-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-324, "DTC Logic"
U1772: R-ROOF R-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	

DISPLAY UNIT

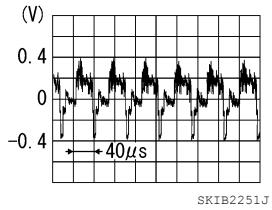
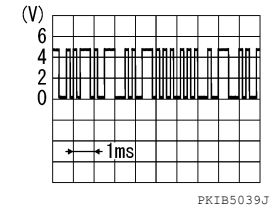
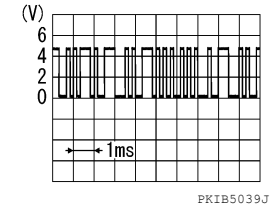
Reference Value

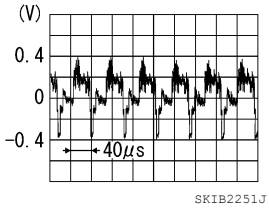
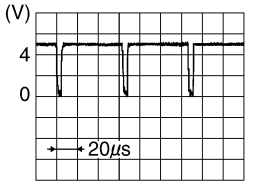
INFOID:0000000008360022

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
6	—	Shield	—	—	—	—
7	—	Shield	—	—	—	—
8 (B)	Ground	Camera image signal	Input	Ignition switch ON	At camera image is displayed.	 SKIB2251J
9 (B)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
10 (W)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V

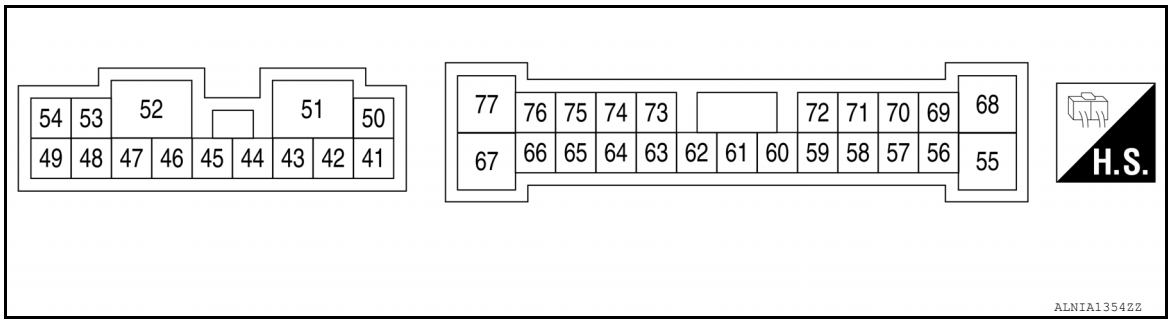
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (B)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
19 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
20 (R)	Ground	Composite image synchro-nizing signal	Input	Ignition switch ON	—	 SKIB0825E
22	—	Shield	—	—	—	—
23 (P)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
25	—	Shield	—	—	—	—
26	—	Shield	—	—	—	—
27 (B)	—	RGB digital image signal (–)	Input	—	—	—
28 (B)	—	RGB digital image signal (+)	Input	—	—	—

BOSE AMP.

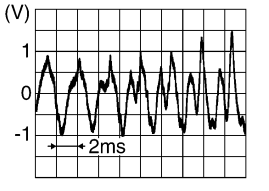
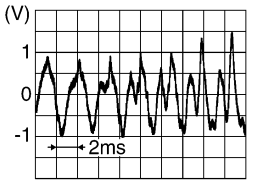
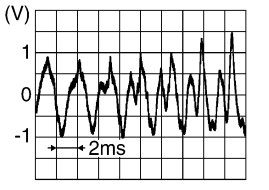
Reference Value

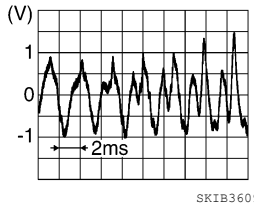
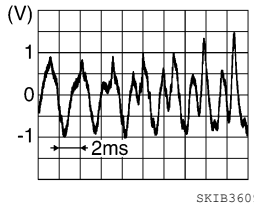
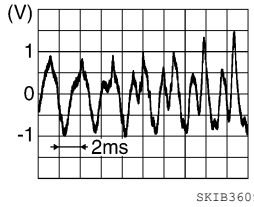
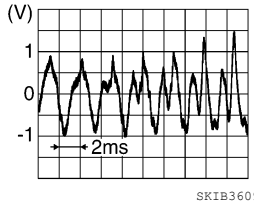
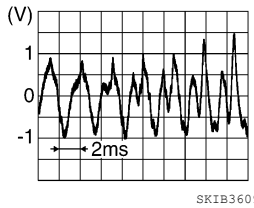
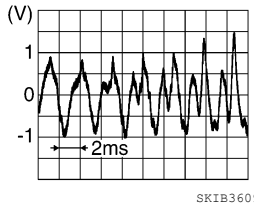
INFOID:0000000008368199

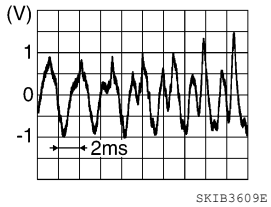
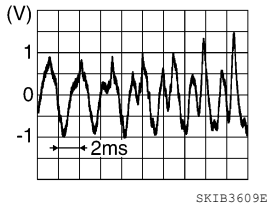
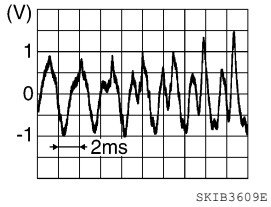
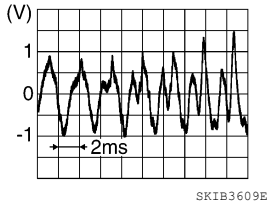
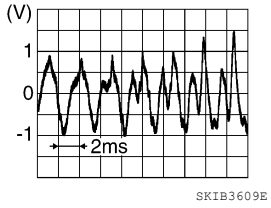
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
41 (R)	42 (G)	Sound signal tweeter LH	Output	Ignition switch ON	Sound output	
44 (G)	43 (W)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output	
45 (G)	46 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Sound output	
47 (B)	—	Ground	—	Ignition switch ON	—	0 V
50 (LG)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
51 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
52 (B)	—	Ground	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
53 (W)	48 (G)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
54 (G)	49 (W)	Sound signal rear door speaker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
57 (W)	56 (B)	Sound signal woofer	Output	Ignition switch ON	Sound output	 SKIB3609E
58 (G)	59 (R)	Sound signal front door speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
60 (W)	Ground	BOSE amp. ON signal	Input	Ignition switch ON	—	Battery voltage
61	—	Shield	—	—	—	—
62 (W)	—	—	—	—	—	—
64 (B)	63 (W)	Sound signal rear LH	Input	Ignition switch ON	Sound output	 SKIB3609E
66 (B)	65 (W)	Sound signal rear RH	Input	Ignition switch ON	Sound output	 SKIB3609E

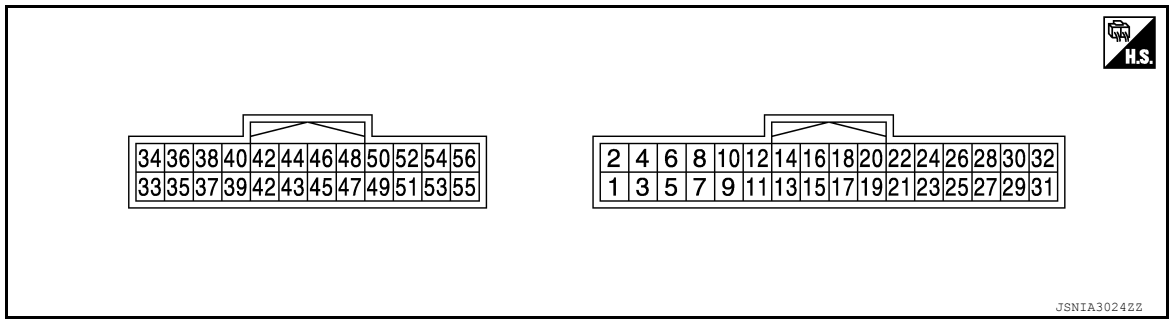
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
68 (P)	55 (R)	Sound signal rear door speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
69 (P)	70 (R)	Sound signal center speaker	Output	Ignition switch ON	Sound output	 SKIB3609E
71 (W)	72 (P)	Sound signal front door speaker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
73 (B)	74 (W)	Sound signal front RH	Input	Ignition switch ON	Sound output	 SKIB3609E
75 (B)	76 (W)	Sound signal front LH	Input	Ignition switch ON	Sound output	 SKIB3609E

VIDEO DISTRIBUTOR

Reference Value

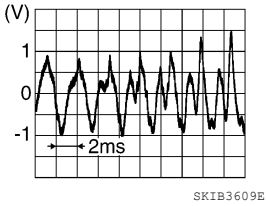
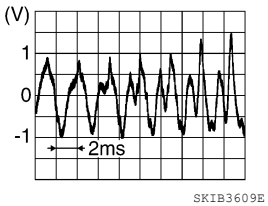
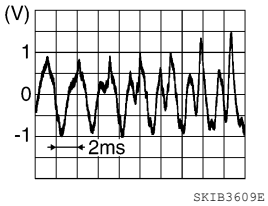
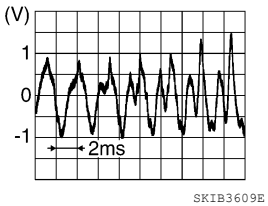
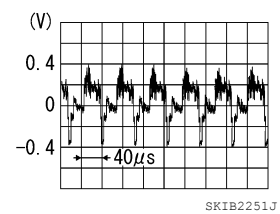
INFOID:0000000008368200

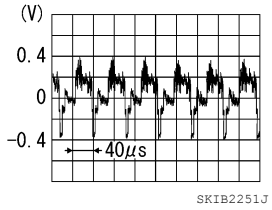
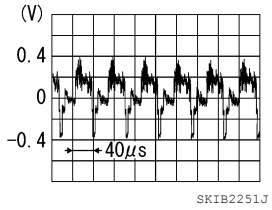
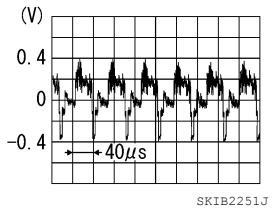
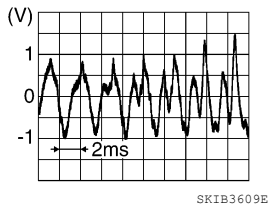
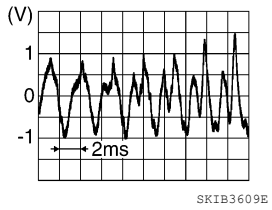
TERMINAL LAYOUT

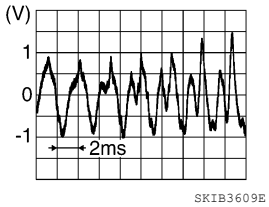
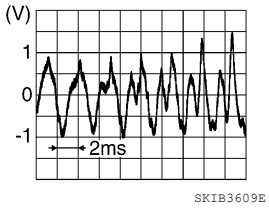


PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	—	Ground	—	Ignition switch ON	—	0 V
2 (V)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
3 (B)	—	Ground	—	Ignition switch ON	—	0 V
4 (W)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
5 (BR)	Ground	Cont. ground for headrest display unit RH	—	Ignition switch ON	—	0 V
6 (L)	Ground	ACC signal for headrest display unit RH	Output	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
7 (SB)	Ground	Cont. ground for headrest display unit LH	—	Ignition switch ON	—	0 V
8 (BR)	Ground	ACC signal for headrest display unit LH	Output	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
9 (SB)	Ground	Image switch signal for headrest display unit RH	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit RH.	0.5 V
					When rear AUX image is displayed on headrest display unit RH.	4.5 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
10 (L)	Ground	Image switch signal for headrest display unit LH	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH.	0.5 V
					When rear AUX image is displayed on headrest display unit LH.	4.5 V
14 (R)	15 (G)	Headphone sound signal RH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	 SKIB3609E
16 (B)	17 (W)	Headphone sound signal LH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	 SKIB3609E
18 (V)	Ground	AV ground for headrest display unit RH	—	Ignition switch ON	—	0 V
19 (V)	Ground	AV ground for headrest display unit LH	—	Ignition switch ON	—	0 V
20 (B)	21 (G)	Headphone sound signal RH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	 SKIB3609E
22 (W)	23 (R)	Headphone sound signal LH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	 SKIB3609E
27 (W)	Ground	Composite image signal ground for headrest display unit RH	—	Ignition switch ON	—	0 V
28 (B)	Ground	Composite image signal for headrest display unit RH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest display unit RH.	 SKIB2251J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
29	—	Shield	—	—	—	—
30	—	Shield	—	—	—	—
31 (P)	Ground	Composite image signal ground for headrest display unit LH	—	Ignition switch ON	—	0 V
32 (L)	Ground	Composite image signal for headrest display unit LH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest display unit LH.	 SKIB2251J
33 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
34 (B)	Ground	Composite image signal	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	 SKIB2251J
35	—	Shield	—	—	—	—
40 (B)	39 (W)	AUX image signal	Input	Ignition switch ON	When rear AUX image is displayed on headrest display unit LH or RH.	 SKIB2251J
41	—	Shield	—	—	—	—
45 (W)	46 (R)	Sound signal LH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E
47 (B)	48 (G)	Sound signal RH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E
49	—	Shield	—	—	—	—
53	—	Shield	—	—	—	—

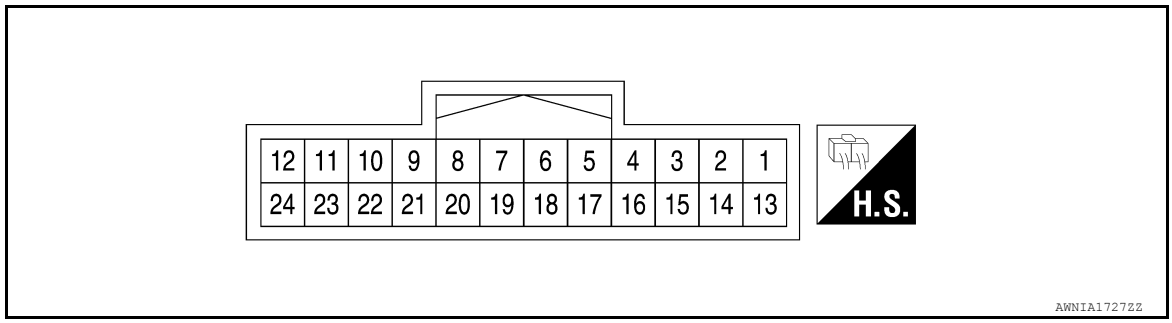
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
54 (B)	56 (W)	AUX sound signal LH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	
55 (R)	56 (W)	AUX sound signal RH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	

HEADREST DISPLAY UNIT

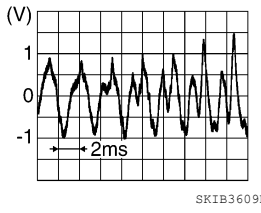
Reference Value

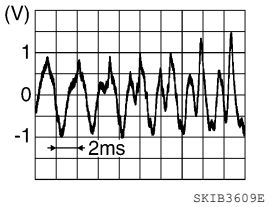
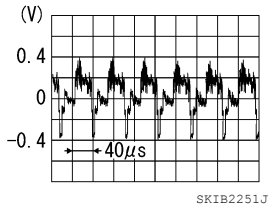
INFOID:0000000008368201

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
3	—	Shield	—	—	—	—
4 (P)*1	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
4 (Y)*2						
6 (SB)*1	Ground	Cont. ground	—	Ignition switch ON	—	0 V
6 (BR)*2						
7 (L)*1	Ground	Image switch signal	Output	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit.	0.5 V
7 (LG)*2					When rear AUX image is displayed on headrest display unit.	4.5 V
9 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
10 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
13 (B)	1 (W)	Headphone sound signal LH	Input	Ignition switch ON	Headphone sound output.	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
14 (R)	2 (G)	Headphone sound signal RH	Input	Ignition switch ON	Headphone sound output.	
15	—	Shield	—	—	—	—
16 (L)*1	Ground	Composite image signal	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit.	
16 (O)*2						
17 (P)*1	Ground	AV ground	—	Ignition switch ON	—	0 V
17 (SB)*2						
19 (BR)	Ground	ACC signal	Input	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
20*2	—	Shield	—	—	—	—
21 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
22 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
24 (SB)*1	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
24 (Y)*2						

*1: Driver seat

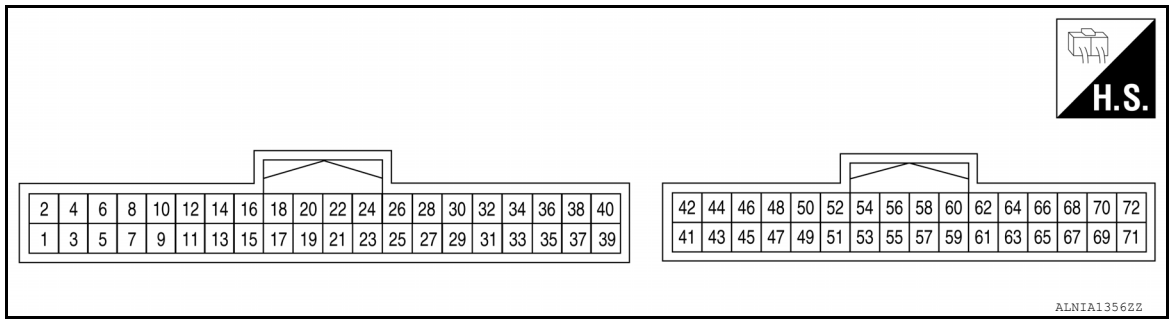
*2: Passenger seat

AROUND VIEW MONITOR CONTROL UNIT

Reference Value

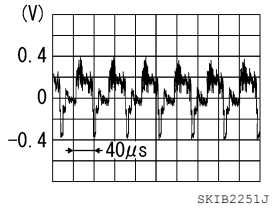
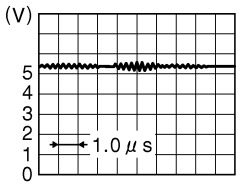
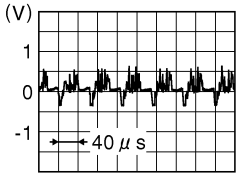
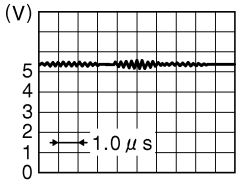
INFOID:0000000008368202

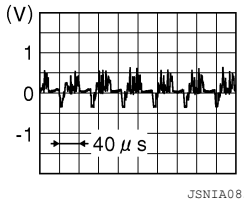
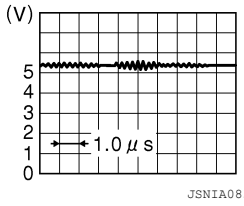
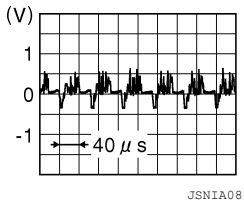
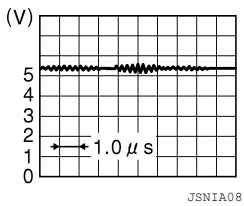
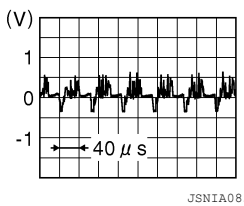
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
2 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
3 (LG)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (P)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
11 (G)	—	Signal ground	—	—	—	—
13 (P)	—	Camera direct OFF	—	—	—	—
14 (BG)	—	RX	—	—	—	—
19 (B)	—	AV communication signal (H)	Input/ Output	—	—	—
20 (W)	—	AV communication signal (L)	Input/ Output	—	—	—
23	—	Shield	—	—	—	—
25 (LG)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
					Other than R position	0 V
27 (B)	—	V-CAN (H)	—	—	—	—
28 (W)	—	V-CAN (L)	—	—	—	—
29	—	Shield	—	—	—	—
30 (W)	—	Mirror signal 2	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
32 (G)	—	Mirror signal 1	—	—	—	—
43 (B)	—	External video output	—	—	—	—
44	—	Shield	—	—	—	—
47 (B)	Ground	Camera image signal	Output	Ignition switch ON	At camera image display	 SKIB2251J
48	—	Shield	—	—	—	—
49 (W)	Ground	Rear camera communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
50 (B)	Ground	Rear camera power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
52 (R)	Ground	Rear camera ground	—	Ignition switch ON	—	0 V
53 (G)	54	Rear camera image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
55 (B)	Ground	Side camera driver side communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
56 (W)	Ground	Side camera driver side power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
58 (G)	Ground	Side camera driver side ground	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
59 (R)	60	Side camera driver side image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
61 (W)	Ground	Side camera passenger side communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
62 (B)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
64 (R)	Ground	Side camera passenger side ground	—	Ignition switch ON	—	0 V
65 (G)	66	Side camera passenger side image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
67 (B)	Ground	Front camera communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
68 (W)	Ground	Front camera power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
70 (G)	Ground	Front camera ground	—	Ignition switch ON	—	0 V
71 (R)	72	Front camera image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB

DTC Index

INFOID:0000000008376868

CONSULT Display	Reference Page
U1302: CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-310, "DTC Logic"
U1303: LED SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-314, "DTC Logic"
U1304: NON-COMPLETION OF THE CALIBRATION	AV-316, "DTC Logic"
U1305: NON-COMPLETION OF THE WRITE CONFIGURATION	AV-317, "DTC Logic"

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

Reference Value

INFOID:0000000008368203

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition		Value/Status
VEHICLE SPEED	While driving		Displays the vehicle speed
SONAR C/U POWER SUPPLY	Engine running		Power supply voltage of the Sonar C/U
SENSOR VOLTAGE	Engine running		Displays sensor voltage
DETECTION MODE	Ignition switch ON	Displays detection mode	Mode 1
			Mode 2
SW OPRT AFTR IGN ON	Ignition switch ON	Switch operation after ignition ON	Yes
			No
SONAR TEMPORARY OFF	Ignition switch ON	Sonar system not in use	Yes
		Sonar system in use	No
SONAR PERMANENT OFF	Ignition switch ON	Sonar system has malfunctioned	Yes
		Sonar system has no malfunction	No
P N RANGE	Ignition switch ON	When the selector lever is in “P”, “N” position	On
		When the selector lever is in any position other than “N”, “P”	Off
LED	Ignition switch ON	Led is illuminated	On
		Led is not illuminated	Off
TRAILER CONNECT	Ignition switch ON	If trailer connector is in use	CON
		If trailer connector is not in use	N CON
REVERSE RANGE	Ignition switch ON	When the selector lever is in “R”	On
		When the selector lever is in any position other than “R”	Off
COR[RL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[RL]/CEN[R]-> COR[RL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

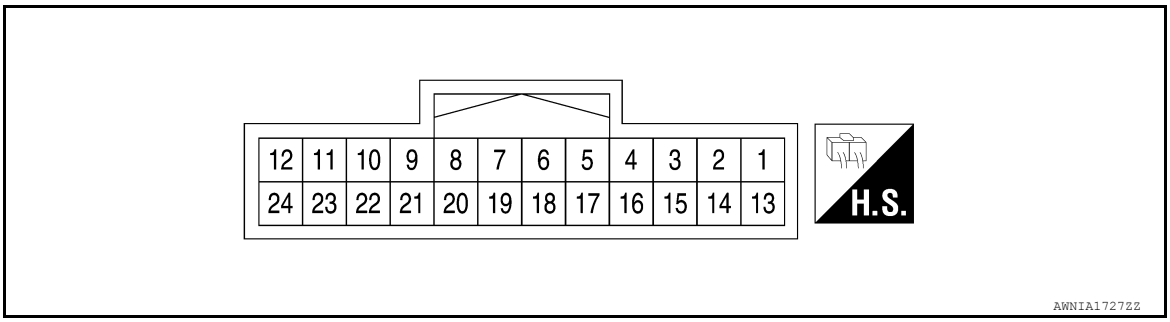
Monitor Item	Condition		Value/Status
CEN[RL]/CEN[R]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[RL]-> CEN[RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[RR]-> CEN[RL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN [RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[RR]/CEN[R]-> COR[RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR[RR]-> CEN[RR]/ CEN[R]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

Monitor Item	Condition		Value/Status
COR[RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR[FL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR[FL]-> CEN[FL]/CEN[F]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[FL]/CEN[F]-> COR[FL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.7 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[FL]/CEN[F]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 1
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 3
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 4
CEN[FL]-> CEN[FR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

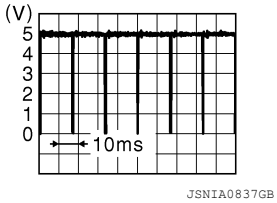
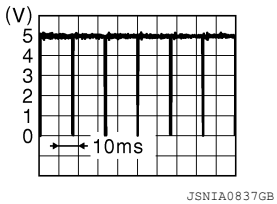
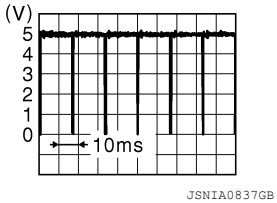
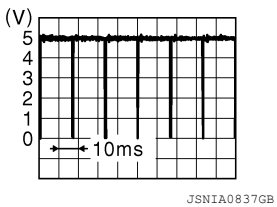
Monitor Item	Condition		Value/Status
CEN[FR]-> CEN[FL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[FR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 1
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV.3
CEN[FR]/CEN[F] ->COR[FR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV.2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR[FR]-> CEN[FR]/ CEN[F]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR [FR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
RVRB TIME COR[RL]	Ignition switch ON	Corner rear left	Distance in time to obstacle (ms)
RVRB TIME COR[RR]		Corner rear right	
RVRB TIME CEN[RL]		Center rear left	
RVRB TIME CEN[RR]		Center rear right	
RVRB TIME COR[FL]		Corner front left	
RVRB TIME COR[FR]		Corner front right	
RVRB TIME CEN[FL]		Center front left	
RVRB TIME CEN[FR]		Center front right	

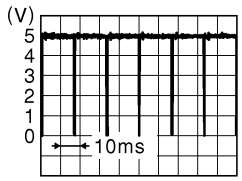
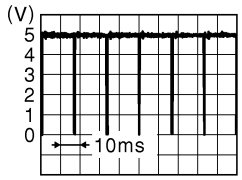
*: Even when a buzzer (backward) is output condition, this item is indicated as OFF.

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
3 (R)	13 (B)	Outer sensor signal front LH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
4 (R)	13 (B)	Outer sensor signal front RH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
5 (B)	—	V-CAN (H)	Input/ Output	—	—	—
6 (W)	—	V-CAN (L)	Input/ Output	—	—	—
9 (W)	14 (B)	Inner sensor signal rear RH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
10 (W)	14 (B)	Outer sensor signal rear RH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
12 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
15 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
19 (BR)	20 (LG)	Buzzer	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	Battery voltage
21 (W)	14 (B)	Inner sensor signal rear LH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0837GB
22 (W)	14 (B)	Outer sensor signal rear LH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0837GB

DTC Index

INFOID:0000000008368205

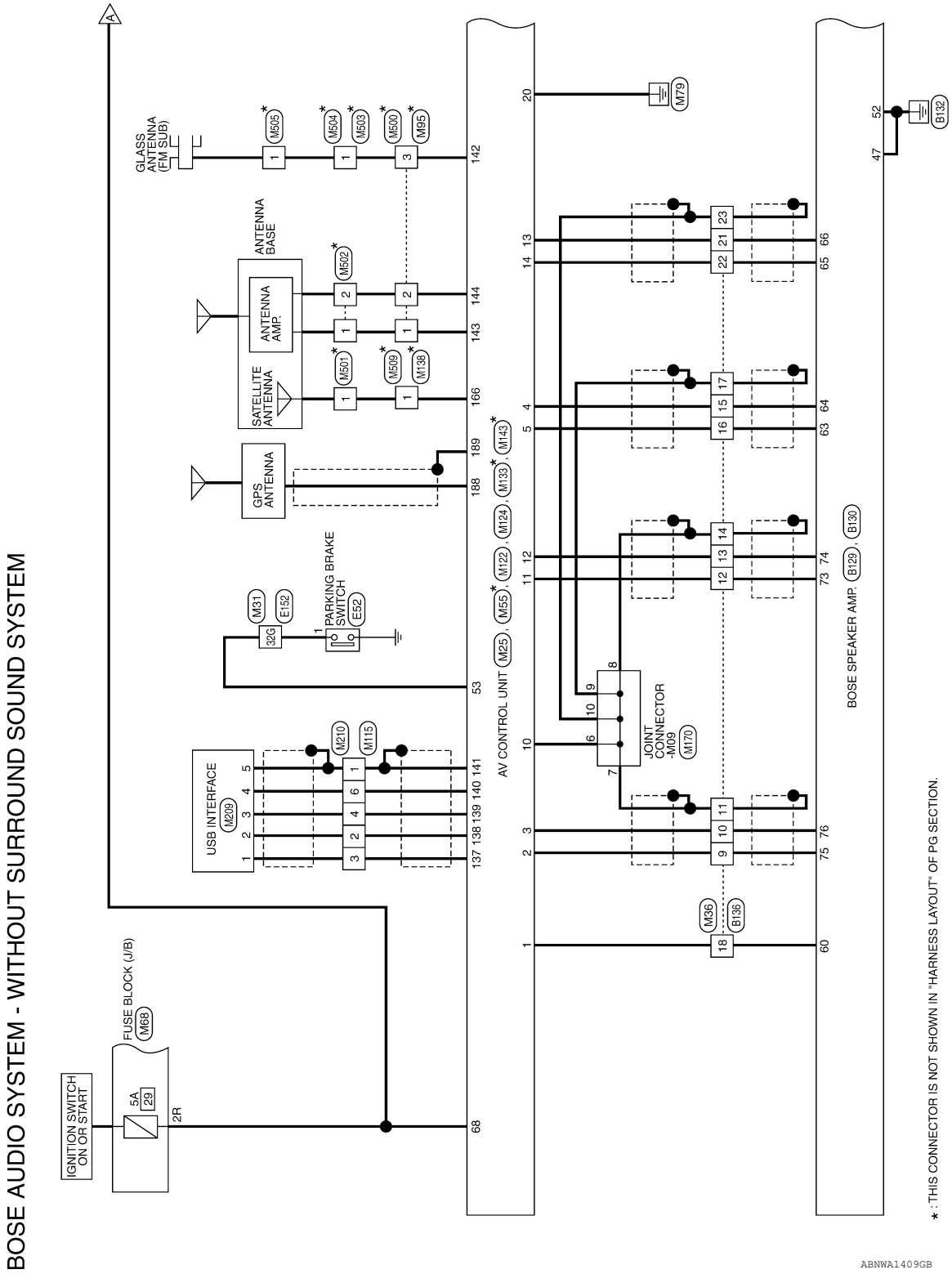
CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-274, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-275, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic"
B2720: REAR LEFT SIDE EXTERNAL SENSOR	AV-325, "DTC Logic"
B2721: REAR LEFT SIDE INTERNAL SENSOR	AV-326, "DTC Logic"
B2722: REAR RIGHT SIDE INTERNAL SENSOR	AV-327, "DTC Logic"
B2723: REAR RIGHT SIDE EXTERNAL SENSOR	AV-328, "DTC Logic"
B2724: ECU	AV-329, "DTC Logic"
B2725: REAR BUZZER	AV-330, "DTC Logic"
B2729: FRONT LEFT SIDE EXTERNAL SENSOR	AV-332, "DTC Logic"
B272C: FRONT RIGHT SIDE EXTERNAL SENSOR	AV-333, "DTC Logic"

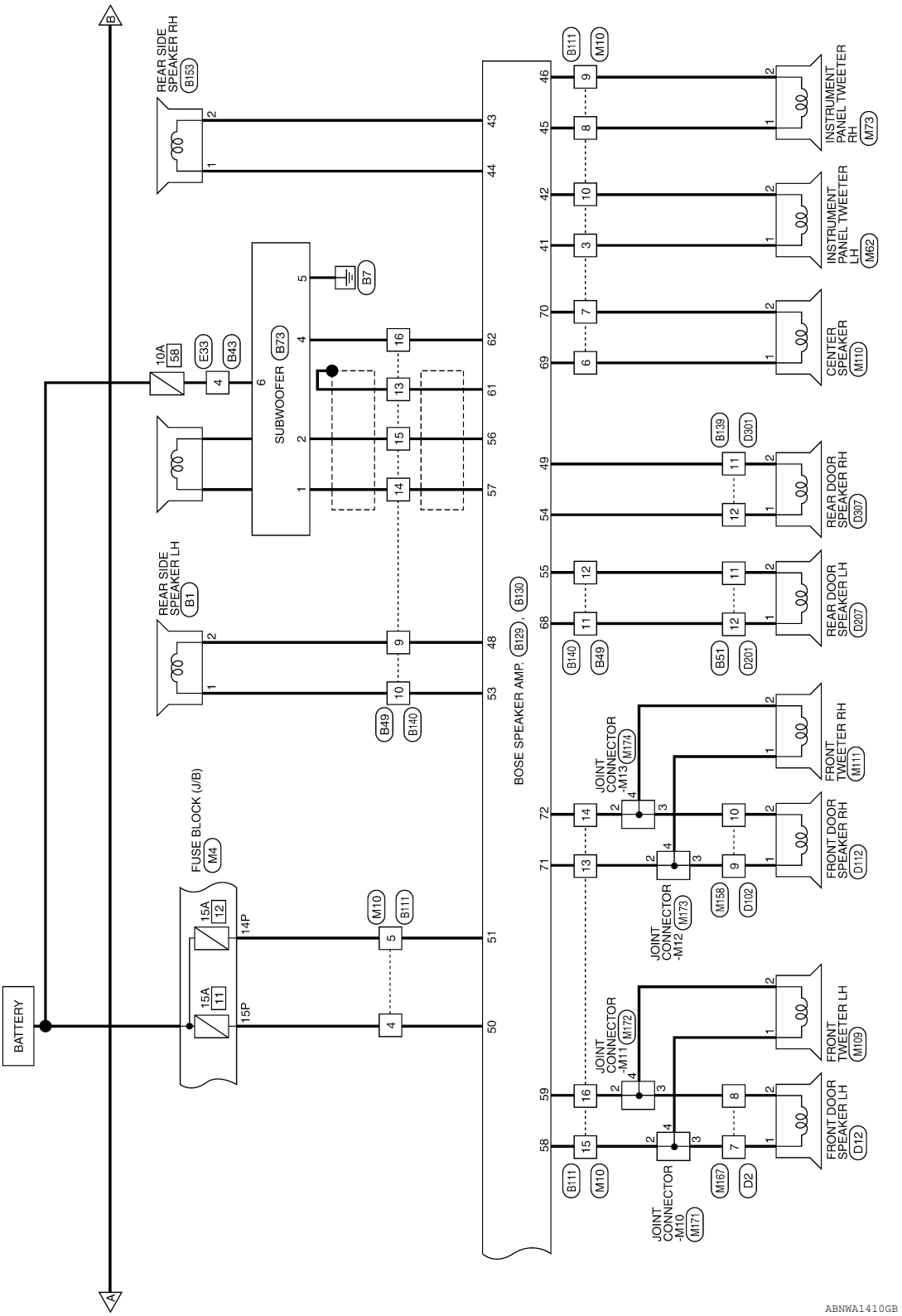
WIRING DIAGRAM

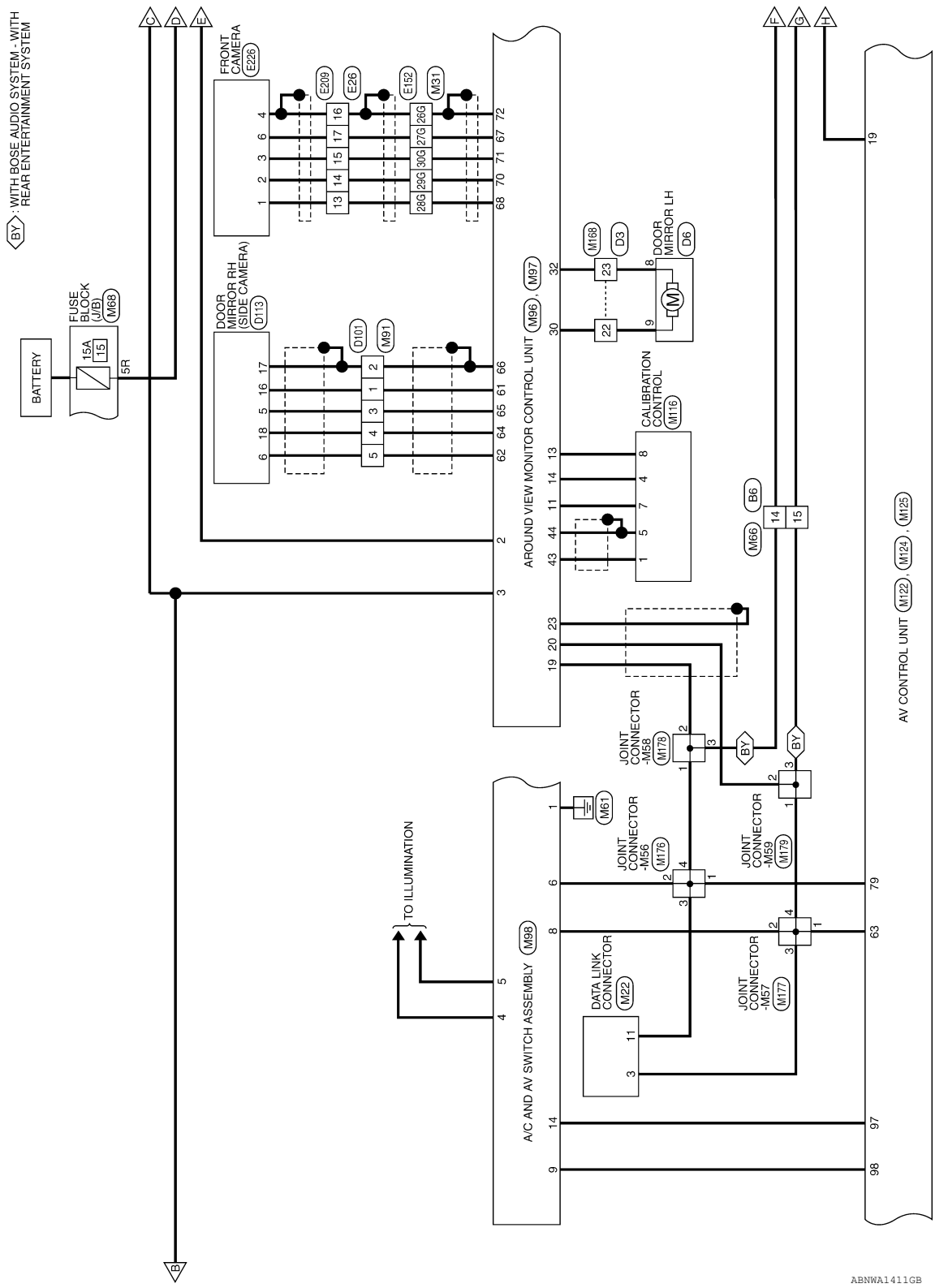
BOSE AUDIO W/O SURROUND SOUND

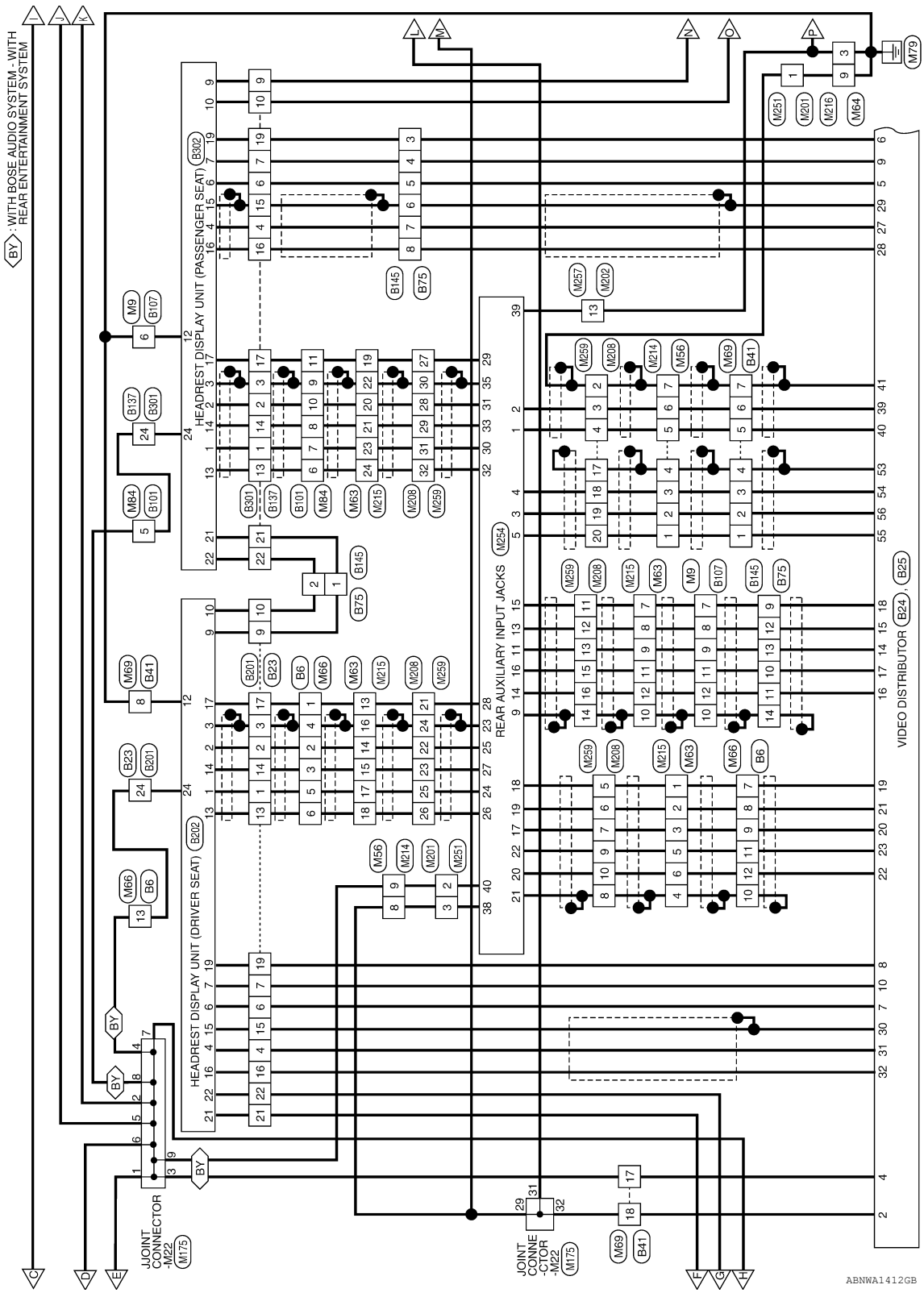
Wiring Diagram

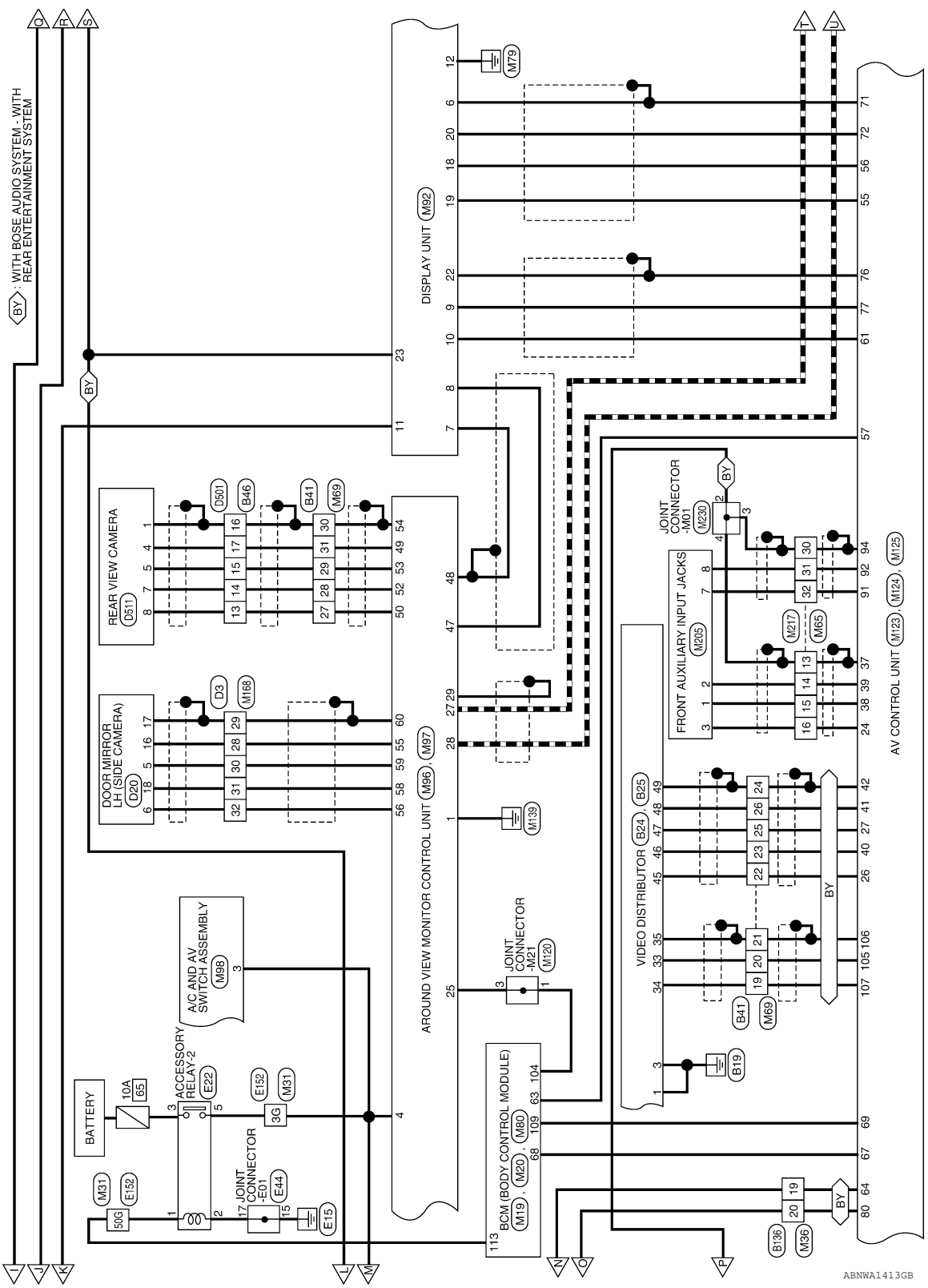
INFOID:0000000008187315

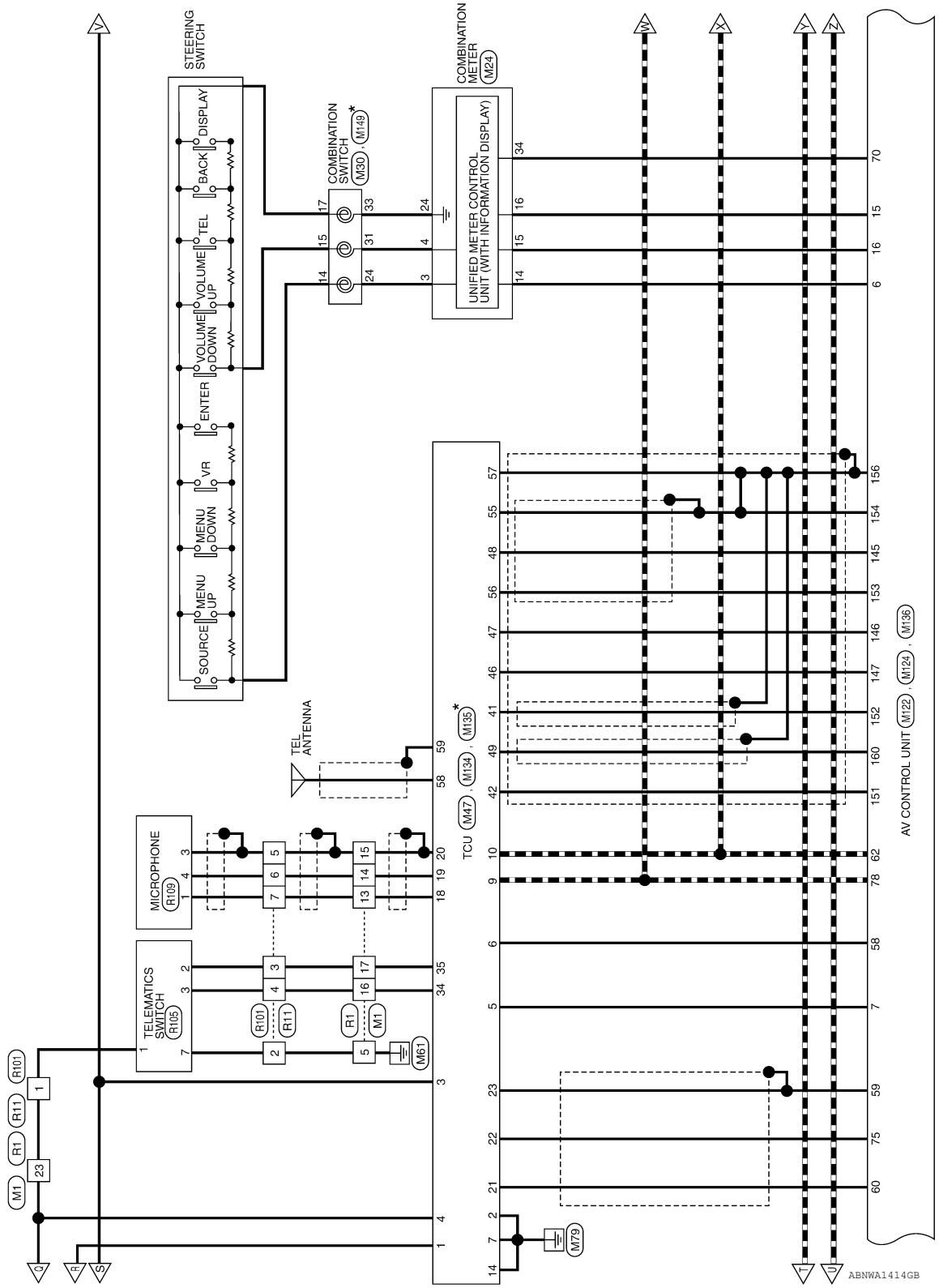


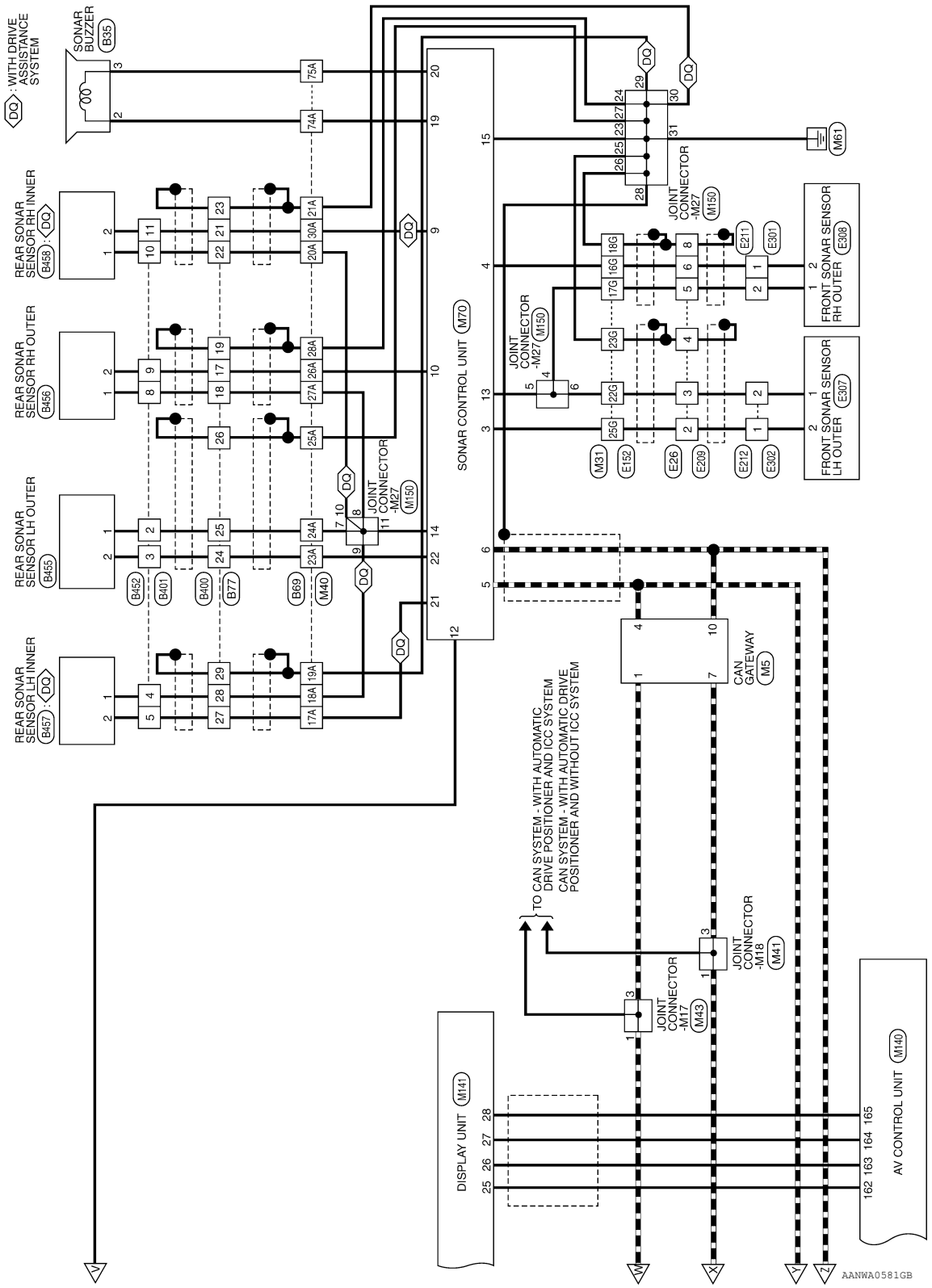

BATTERY
FUSE BLOCK (J/B)
M4
10A
58
E33
B43
15A
12
15A
11
14P
15P
REAR SIDE SPEAKER RH
B153
REAR SIDE SPEAKER LH
B1
SUBWOOFER
B73
B7
BOSE SPEAKER AMP.
B129
B130
JOINT CONNECTOR -M13
M174
JOINT CONNECTOR -M12
M173
JOINT CONNECTOR -M11
M172
JOINT CONNECTOR -M10
M171
FRONT TWEETER RH
M111
FRONT DOOR SPEAKER RH
D112
FRONT TWEETER LH
M109
FRONT DOOR SPEAKER LH
D12
INSTRUMENT PANEL TWEETER RH
M73
INSTRUMENT PANEL TWEETER LH
M62
CENTER SPEAKER
M110
REAR DOOR SPEAKER RH
D307
REAR DOOR SPEAKER LH
D207
ABNWA1410GB


BY : WITH BOSE AUDIO SYSTEM - WITH REAR ENTERTAINMENT SYSTEM
BATTERY
FUSE BLOCK (J/B) M68
15A 15
5R
FRONT CAMERA E226
E209
E26
E152
M31
DOOR MIRROR RH (SIDE CAMERA) D113
D101
M91
AROUND VIEW MONITOR CONTROL UNIT M96, M97
DOOR MIRROR LH D6
M168
D3
CALIBRATION CONTROL M116
B6
M66
JOINT CONNECTOR -M58 M178
JOINT CONNECTOR -M56 M176
JOINT CONNECTOR -M59 M179
JOINT CONNECTOR -M57 M177
DATA LINK CONNECTOR M22
M61
TO ILLUMINATION
A/C AND AV SWITCH ASSEMBLY M98
AV CONTROL UNIT M122, M124, M125
ABNWA1411GB


BY : WITH BOSE AUDIO SYSTEM - WITH REAR ENTERTAINMENT SYSTEM
HEADREST DISPLAY UNIT (PASSENGER SEAT) B302
HEADREST DISPLAY UNIT (DRIVER SEAT) B202
REAR AUXILIARY INPUT JACKS M254
VIDEO DISTRIBUTOR B24, B25
JOINT CONNECTOR -M22 M175
ABNWA1412GB

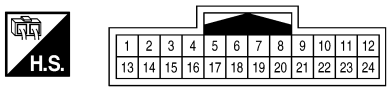

BY : WITH BOSE AUDIO SYSTEM - WITH REAR ENTERTAINMENT SYSTEM
DISPLAY UNIT M92
REAR VIEW CAMERA D511
DOOR MIRROR LH (SIDE CAMERA) D20
AROUND VIEW MONITOR CONTROL UNIT M96, M97
A/C AND AV SWITCH ASSEMBLY M98
BATTERY
10A 65
ACCESSORY RELAY-2 E22
JOINT CONNECTOR -E01
JOINT CONNECTOR -M21 M120
BCM (BODY CONTROL MODULE) M19, M20, M80
JOINT CONNECTOR -M01 M230
FRONT AUXILIARY INPUT JACKS M205
VIDEO DISTRIBUTOR B24, B25
AV CONTROL UNIT M123, M124, M125
ABNWA1413GB


STEERING SWITCH
SOURCE
MENU UP
MENU DOWN
VR
ENTER
VOLUME DOWN
VOLUME UP
TEL
BACK
DISPLAY
COMBINATION SWITCH
M30 , M149*
COMBINATION METER
M24
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
TEL ANTENNA
MICROPHONE
R109
TELEMATICS SWITCH
R105
TCU
M47 , M134 , M135*
AV CONTROL UNIT
M122 , M124 , M136
M61
M79
R101
R11
R1
M1
23
ABNWA1414GB


DQ : WITH DRIVE ASSISTANCE SYSTEM
SONAR BUZZER B35
REAR SONAR SENSOR RH INNER B458 : DQ
REAR SONAR SENSOR RH OUTER B456
REAR SONAR SENSOR LH OUTER B455
REAR SONAR SENSOR LH INNER B457 : DQ
SONAR CONTROL UNIT M70
JOINT CONNECTOR -M27 M150
JOINT CONNECTOR -M27 M150
JOINT CONNECTOR -M27 M150
FRONT SONAR SENSOR RH OUTER E308
FRONT SONAR SENSOR LH OUTER E307
M61
M31
E152
E26
E209
E211
E212
E301
E302
CAN GATEWAY M5
TO CAN SYSTEM - WITH AUTOMATIC DRIVE POSITIONER AND ICC SYSTEM
CAN SYSTEM - WITH AUTOMATIC DRIVE POSITIONER AND WITHOUT ICC SYSTEM
JOINT CONNECTOR -M18 M41
JOINT CONNECTOR -M17 M443
DISPLAY UNIT M141
AV CONTROL UNIT M140
AANWA0581GB

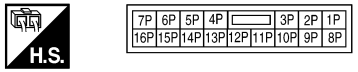
BOSE AUDIO SYSTEM - WITHOUT SURROUND SOUND SYSTEM

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



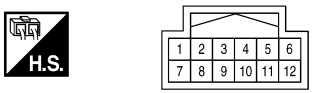
Terminal No.	Color of Wire	Signal Name
5	B	–
13	W	–
14	B	–
15	SHIELD	–
16	R	–
17	W	–
23	P	–

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



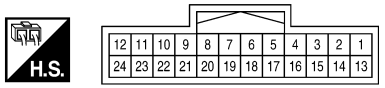
Terminal No.	Color of Wire	Signal Name
14P	Y	–
15P	L	–

Connector No.	M5
Connector Name	CAN GATEWAY
Connector Color	WHITE



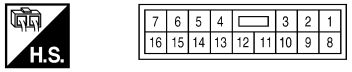
Terminal No.	Color of Wire	Signal Name
1	L	–
4	L	–
7	P	–
10	P	–

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



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

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	G	–
4	L	–
5	Y	–
6	G	–
7	W	–
8	G	–
9	W	–
10	W	–

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

ABNIA3524GB

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
63	BG	I-KEY LINK SIGNAL
68	P	MR OUTPUT

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

H.S.

92	91	90	89	88	87	86	85	84	83	82	81
104	103	102	101	100	99	98	97	96	95	94	93

Terminal No.	Color of Wire	Signal Name
104	LG	REVERSE LAMP OUT

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

H.S.

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

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

Connector No.	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
3	P	STRG SW INPUT 1
4	BG	STRG SW INPUT 2
14	G	STRG SW OUTPUT 1
15	W	STRG SW OUTPUT 2
16	B	STRG SW OUTPUT GND
24	R	STRG SW GND
34	GR	SPEED 8 P /R

Connector No.	M25
Connector Name	GPS ANTENNA
Connector Color	PINK

H.S.

Terminal No.	Color of Wire	Signal Name
188	B	–
189	SHIELD	–

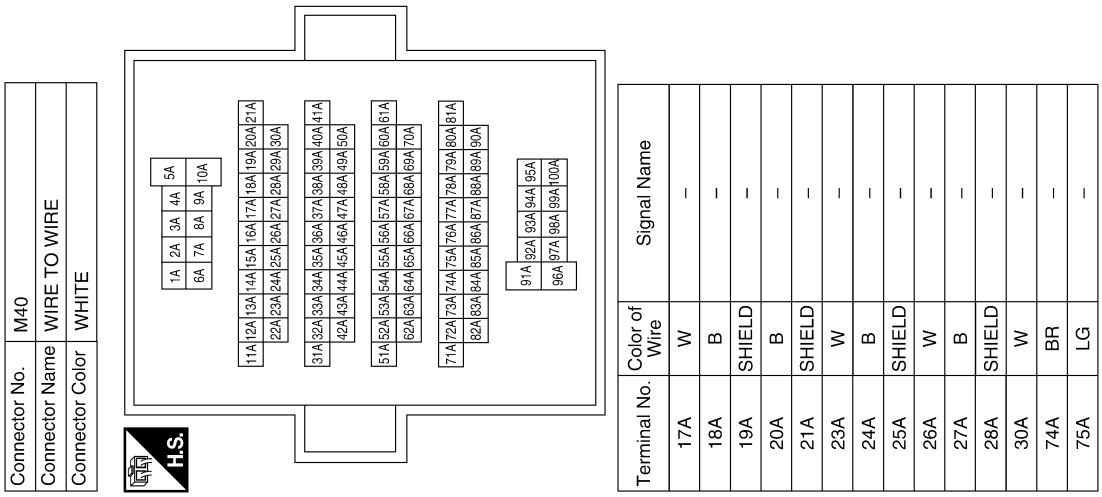
Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

25	24	31	32	33

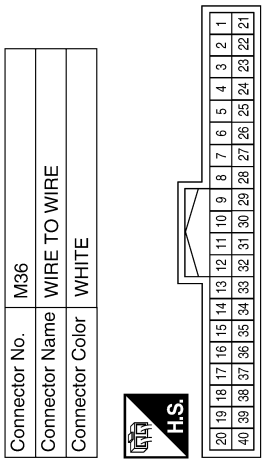
Terminal No.	Color of Wire	Signal Name
24	P	–
31	BG	–
33	R	–

ABNIA3525GB



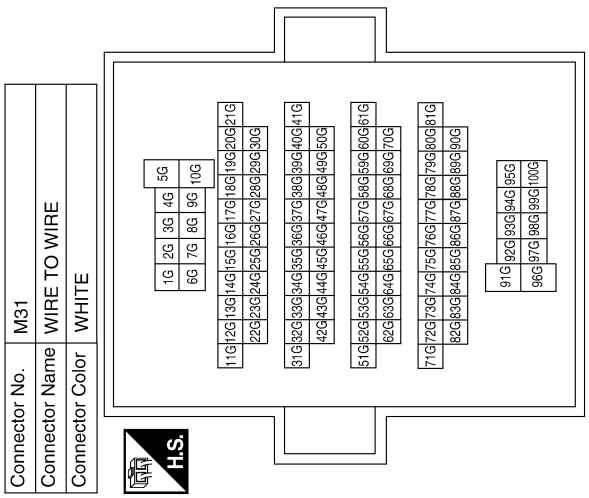
Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
17A	W	–
18A	B	–
19A	SHIELD	–
20A	B	–
21A	SHIELD	–
23A	W	–
24A	B	–
25A	SHIELD	–
26A	W	–
27A	B	–
28A	SHIELD	–
30A	W	–
74A	BR	–
75A	LG	–



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

Terminal No.	Color of Wire	Signal Name
9	B	–
10	W	–
11	SHIELD	–
12	W	–
13	B	–
14	SHIELD	–
15	B	–
16	W	–
17	SHIELD	–
18	SB	–
19	LG	–
20	SB	–
21	B	–
22	W	–
23	SHIELD	–



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

Terminal No.	Color of Wire	Signal Name
3G	P	–
16G	R	–
17G	B	–
18G	SHIELD	–
22G	B	–
23G	SHIELD	–
25G	R	–
26G	SHIELD	–
27G	B	–
28G	W	–
29G	B	–
30G	R	–
32G	G	–
50G	L	–

ABNIA3526GB

Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
3	P	–

Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
3	L	–

Connector No.	M47
Connector Name	TCU
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	B+
2	B	GND
3	P	ACC
4	LG	IGN
5	G	ACC OUT
6	G	AV ACC
7	B	GND
8	–	–
9	L	V-CAN H
10	P	V-CAN L
11	–	–
12	–	–
13	–	–
14	B	AUDIO TYPE CONFIG 1
15	–	–
16	–	–
17	–	–
18	W	MIC VCC
19	B	MIC SIG
20	SHIELD	MIC GND
21	W	MIC VCC DETECTION
22	B	DCM MIC SIG
23	SHIELD	DCM MIC GND
24	–	–
25	–	–
26	–	–
27	–	–
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	R	ECALL SW
35	W	LED A
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–

ABNIA3527GB

Connector No.	M55
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
137	G	VBUS
138	W	USB GND
139	R	USB D+
140	L	USB D-
141	SHIELD	SHIELD

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

H.S.

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

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

H.S.

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

Connector No.	M63
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	SHIELD	–
11	W	–
12	B	–
13	L	–
14	G	–
15	R	–
16	SHIELD	–
17	W	–
18	B	–
19	L	–
20	G	–
21	R	–
22	SHIELD	–
23	W	–
24	B	–

Connector No.	M64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	B	–
9	B	–

ABNIA3528GB

Connector No.	M65
Connector Name	WIRE TO WIRE
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
13	SHIELD	–
14	B	–
15	R	–
16	W	–

Terminal No.	Color of Wire	Signal Name
30	SHIELD	–
31	B	–
32	W	–

Connector No.	M66
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
1	L	–
2	G	–
3	R	– (WITH REAR ENTERTAINMENT SYSTEM)
3	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
4	SHIELD	– (WITH REAR ENTERTAINMENT SYSTEM)
4	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	W	– (WITH REAR ENTERTAINMENT SYSTEM)
5	LG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	BG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

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

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

H.S.

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

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

ABNIA3529GB

Connector No.	M69
Connector Name	WIRE TO WIRE
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	R	–
2	W	–
3	B	–
4	SHIELD	–

Terminal No.	Color of Wire	Signal Name
5	B	–
6	W	–
7	SHIELD	–
8	B	–
17	Y	–
18	P	–
19	B	–
20	W	–
21	SHIELD	–
22	W	–
23	R	–
24	SHIELD	–
25	B	–

Terminal No.	Color of Wire	Signal Name
26	G	–
27	B	–
28	R	–
29	G	–
30	SHIELD	–
31	W	–

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

H.S.

2	1

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

Connector No.	M70
Connector Name	SONAR CONTROL UNIT
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	–	–
2	–	–
3	R	FOL SENSOR SIGNAL
4	R	FOR SENSOR SIGNAL
5	B	V CAN-H
6	W	V CAN-L
7	–	–
8	–	–

Terminal No.	Color of Wire	Signal Name
9	–	–
10	W	ROR SENSOR SIGNAL
11	–	–
12	LG	IGN
13	B	FR SENSOR GND
14	B	RR SENSOR GND
15	B	GND
16	–	–
17	–	–
18	–	–
19	BR	SPEAKER PWR
20	LG	SPEAKER RR SIGNAL
21	–	–
22	W	ROL SENSOR SIGNAL
23	–	–
24	–	–

ABNIA3530GB

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

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

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

Connector No.	M84
Connector Name	WIRE TO WIRE
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
5	Y	– (WITH REAR ENTERTAINMENT SYSTEM)
5	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	W	– (WITH REAR ENTERTAINMENT SYSTEM)
7	R	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	R	– (WITH REAR ENTERTAINMENT SYSTEM)
8	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	–
10	G	–
11	L	–

Connector No.	M91
Connector Name	WIRE TO WIRE
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	W	–
2	SHIELD	–
3	G	–
4	R	–
5	B	–

ABNIA3531GB

Connector No.	M92
Connector Name	DISPLAY UNIT
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	–	–
2	–	–
3	–	–
4	–	–
5	–	–
6	SHIELD	FRONT COMP SHIELD
7	SHIELD	SHIELD
8	B	R CAMERA COMP

Terminal No.	Color of Wire	Signal Name
9	B	FRONT DISP IT
10	W	IT FRONT DISP
11	Y	BATT
12	B	GND
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	B	FRONT COMP +
19	W	FRONT COMP -
20	R	FRONT COMP SYNC
21	–	–
22	SHIELD	SHIELD
23	P	ACC
24	–	–

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

H.S.

1	2	3

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

Terminal No.	Color of Wire	Signal Name
24	–	–
25	LG	REV
26	–	–
27	B	V-CAN1 H
28	W	V-CAN1 L
29	SHIELD	V-CAN1 GND
30	W	MIRROR SIGNAL 2
31	–	–
32	G	MIRROR SIGNAL 1
33	–	–
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–

Connector No.	M96
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	Y	+B
3	LG	IGN
4	P	ACC
5	–	–
6	–	–
7	–	–

Terminal No.	Color of Wire	Signal Name
8	–	–
9	–	–
10	–	–
11	G	SIGNAL GND
12	–	–
13	P	CAMERA DIRECT OFF
14	BG	RX
15	–	–
16	–	–
17	–	–
18	–	–
19	B	MCAN-1H
20	W	MCAN-1L
21	–	–
22	–	–
23	SHIELD	MCAN GND

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Connector No.	M97
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE

H.S.

42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72
41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71

Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	B	EXTERNAL VIDEO OUTPUT +
44	SHIELD	EXTERNAL VIDEO OUTPUT -
45	–	–
46	–	–
47	B	VIDEO OUTPUT +
48	SHIELD	VIDEO OUTPUT -
49	W	RV SERIAL SIGNAL
50	B	RV POWER
51	–	–

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

H.S.

2 1

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

Terminal No.	Color of Wire	Signal Name
52	R	RV POWER GND
53	G	RV VIDEO +
54	SHIELD	RV VIDEO -
55	B	SV2 SERIAL SIGNAL
56	W	SV2 POWER
57	–	–
58	G	SV2 POWER GND
59	R	SV2 VIDEO +
60	SHIELD	SV2 POWER GND
61	W	SV1 SERIAL SIGNAL
62	B	SV1 POWER
63	–	–
64	R	SV1 POWER GND
65	G	SV1 VIDEO +
66	SHIELD	SV1 VIDEO -
67	B	FV SERIAL SIGNAL
68	W	FV POWER
69	–	–
70	G	FV POWER GND
71	R	FV VIDEO +
72	SHIELD	FV VIDEO -

Connector No.	M110
Connector Name	CENTER SPEAKER
Connector Color	BROWN

H.S.

2 1

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

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	GR	GND
3	P	ACC
4	R	ILL
5	B	ILL CONT
6	SB	M CAN-H
8	LG	M CAN-L
9	V	EJECT GND
14	Y	CD(DVD)EJECT

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

H.S.

2 1

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

ABNIA3533GB

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

H.S.

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

Connector No.	M116
Connector Name	CALIBRATION CONTROL
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
4	BG	–
5	SHIELD	–
7	G	–
8	P	–

Connector No.	M120
Connector Name	JOINT CONNECTOR-M21
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
3	LG	–

Connector No.	M122
Connector Name	AV CONTROL UNIT
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	AMP ON
2	B	FR LH PRE +
3	W	FR LH PRE -
4	B	RR LH PRE +
5	W	RR LH PRE -
6	G	STRG SW A
7	G	ACC
8	–	–
9	–	–
10	BR	SHIELD
11	W	FR RH PRE +
12	B	FR RH PRE -
13	B	RR RH PRE +
14	W	RR RH PRE -
15	B	STRG SW GND
16	W	STRG SW B
17	–	–
18	–	–
19	Y	(+)B
20	GR	GND

ABNIA3534GB

Terminal No.	Color of Wire	Signal Name
37	SHIELD	AUX SHIELD
38	W	AUX AUDIO RH
39	B	AUX AUDIO
40	R	HP 1 LH-
41	G	HP 1 RH-
42	SHIELD	HP 1 SHIELD
43	–	–
44	–	–
45	–	–
46	–	–
47	–	–
48	–	–

Terminal No.	Color of Wire	Signal Name
25	–	–
26	W	HP 1 LH+
27	B	HP 1 RH-
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	–	–
35	–	–
36	–	–

Terminal No.	Color of Wire	Signal Name
68	LG	IGN
69	R	REVERSE SIG
70	BG	SPEED
71	SHIELD	NAVI COMP 1 SHIELD
72	R	NAVI COMP 1 SYNC
73	–	–
74	–	–
75	B	MIC SIG
76	SHIELD	DISP SHIELD
77	B	DISP IT
78	L	CAN-H
79	SB	M CAN-H
80	SB	M CAN-H TRM

Terminal No.	Color of Wire	Signal Name
54	–	–
55	W	NAVI COMP 1-
56	B	NAVI COMP 1+
57	BG	I-KEY MEMORY
58	G	AV-ACC (DCM)
59	SHIELD	PKB SIGMIC GND
60	W	MIC VCC
61	W	IT DISP
62	P	CAN-L
63	LG	M CAN-L
64	LG	M CAN-L TRM
65	–	–
66	–	–
67	P	MR OUTPUT

Connector No.	M123
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

21	22	23	24	25	26	27	28	29	30	31	32	33	34			
35	36	37	38	39	40	41	42	43	44	45	46	47	48			

Terminal No.	Color of Wire	Signal Name
21	–	–
22	–	–
23	–	–
24	R	AUX AUDIO LH

Connector No.	M124
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	

Terminal No.	Color of Wire	Signal Name
49	–	–
50	–	–
51	–	–
52	–	–
53	G	PKB SIG

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Connector No.	M125
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

81	83	85	87	89	91	93	95	97	99	101	103	105	107	109	111	113	115	117	119
82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120

Terminal No.	Color of Wire	Signal Name
81	–	–
82	–	–
83	–	–
84	–	–
85	–	–
86	–	–

Terminal No.	Color of Wire	Signal Name
87	–	–
88	–	–
89	–	–
90	–	–
91	W	AUX VIDEO+
92	B	AUX VIDEO-
93	–	–
94	SHIELD	VIDEO SHIELD
95	–	–
96	–	–
97	Y	DVD EJECT
98	V	EJECT GND
99	–	–
100	–	–
101	–	–
102	–	–
103	–	–

Terminal No.	Color of Wire	Signal Name
104	–	–
105	W	NAVI COMP 2-
106	SHIELD	NAVI COMP 2 SHIELD
107	B	NAVI COMP 2+
108	–	–
109	–	–
110	–	–
111	–	–
112	–	–
113	–	–
114	–	–
115	–	–
116	–	–
117	–	–
118	–	–
119	–	–
120	–	–

Connector No.	M133
Connector Name	AV CONTROL UNIT
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
166	B	–

Connector No.	M134
Connector Name	TCU
Connector Color	WHITE

H.S.

48	47	46	45	44	43	42	41
56	55	54	53	52	51	50	49

57

Terminal No.	Color of Wire	Signal Name
41	W	U-VOICE
42	L	VOICE GND
43	–	–
44	–	–
45	–	–

Terminal No.	Color of Wire	Signal Name
46	–	–
47	B	VBUS
48	B	D-
49	B	D-VOICE
50	–	–
51	–	–
52	–	–
53	–	–
54	–	–
55	SHIELD	GND(USB GND)
56	L/W	D+
57	SHIELD	CONN CHASSIS GND

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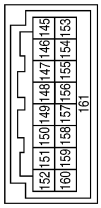
Connector No.	M135
Connector Name	TCU
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
58	B	–
59	SHIELD	–

Connector No.	M136
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

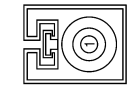


Terminal No.	Color of Wire	Signal Name
145	W	U-VOICE
146	L	VOICE GND
147	–	–
148	–	–
149	–	–

Terminal No.	Color of Wire	Signal Name
150	–	–
151	B	VBUS
152	B	D-
153	B	D-VOICE
154	–	–
155	–	–
156	–	–
157	–	–
158	–	–
159	SHIELD	GND(USB GND)
160	L/W	D+
161	SHIELD	CONN CHASSIS GND

Connector No.	M138
Connector Name	WIRE TO WIRE
Connector Color	GREEN

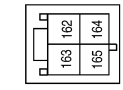
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M140
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

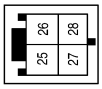
H.S.



Terminal No.	Color of Wire	Signal Name
162	SHIELD	GND
163	SHIELD	GND
164	B	GVIF-
165	B	GVIF+

Connector No.	M141
Connector Name	DISPLAY UNIT
Connector Color	BROWN

H.S.



Terminal No.	Color of Wire	Signal Name
25	SHIELD	GND
26	SHIELD	GND
27	B	GVIF+
28	B	GVIF-

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Connector No.	M143
Connector Name	AV CONTROL UNIT
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
142	B	ANT MAIN
143	B	ANT +B
144	B	ANT SUB

Connector No.	M149
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Connector No.	M150
Connector Name	JOINT CONNECTOR-M27
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	B	–
5	B	–
6	B	–

Terminal No.	Color of Wire	Signal Name
7	B	–
8	B	–
9	B	–
10	10	–
11	B	–
23	B	–
24	SHIELD	–
25	SHIELD	–
26	SHIELD	–
27	SHIELD	–
28	SHIELD	–
29	SHIELD	–
30	SHIELD	–
31	GR	–

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

H.S.

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

ABNIA3538GB

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

Connector No.	M168
Connector Name	WIRE TO WIRE
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
22	W	–
23	G	–
28	B	–
29	SHIELD	–
30	R	–
31	G	–
32	W	–

Connector No.	M170
Connector Name	JOINT CONNECTOR-M09
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	BR	–
7	SHIELD	–
8	SHIELD	–
9	SHIELD	–
10	SHIELD	–

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
4	Y	–
5	Y	–
6	Y	–
7	Y	–
8	Y	–
9	Y	–
29	P	–
31	P	–
32	P	–

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

H.S.

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

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

H.S.

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

Connector No.	M178
Connector Name	JOINT CONNECTOR-M58
Connector Color	WHITE

H.S.

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

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Connector No.	M179
Connector Name	JOINT CONNECTOR-M59
Connector Color	WHITE

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	AUX AUDIO RH+
2	B	AUX AUDIO GND
3	W	AUX AUDIO LH+
7	W	AUX VIDEO+
8	B	AUX VIDEO-

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Connector No.	M208
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	SHIELD	–
3	B	–
4	W	–
5	SB	–
6	G	–
7	R	–
8	SHIELD	–
9	W	–
10	B	–
11	V	–
12	G	–
13	R	–

Connector No.	M202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
13	B	–

Terminal No.	Color of Wire	Signal Name
14	SHIELD	–
15	W	–
16	V	–
17	SHIELD	–
18	B	–
19	R	–
20	W	–
21	L	–
22	G	–
23	R	–
24	SHIELD	–
25	W	–
26	B	–
27	L	–
28	G	–
29	R	–
30	SHIELD	–
31	W	–
32	B	–

ABNIA3541GB

Connector No.	M209
Connector Name	USB INTERFACE
Connector Color	WHITE

H.S.

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

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

H.S.

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
5	W	–
6	B	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	W	–
12	B	–
13	L	–
14	G	–
15	R	–
16	SHIELD	–
17	W	–

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

Connector No.	M215
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	G	–
3	R	–
4	SHIELD	–

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Connector No.	M216
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

Terminal No.	Color of Wire	Signal Name
3	B	–
9	B	–

Connector No.	M217
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	25	26	27	28	29	30	31	32

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

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

H.S.

6	5	4	3	2	1

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

Connector No.	M251
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

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

ABNIA3543GB

Connector No.	M257
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
13	B	–

Connector No.	M254
Connector Name	REAR AUXILIARY INPUT JACKS
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	W	–
2	B	–
3	B	–
4	R	–
5	B	–
6	–	–
7	–	–
8	–	–
9	SHIELD	–
10	–	–
11	R	–
12	–	–
13	G	–
14	B	–
15	V	–
16	W	–
17	R	–
18	BG	–
19	G	–
20	B	–
21	SHIELD	–
22	W	–
23	SHIELD	–
24	W	–
25	G	–
26	B	–
27	R	–
28	L	–
29	P	–
30	W	–
31	G	–
32	B	–
33	R	–
34	–	–
35	SHIELD	–
36	–	–
37	–	–
38	V	–
39	B	–
40	Y	–

ABNIA3544GB

Connector No.	M259
Connector Name	WIRE TO WIRE
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
2	SHIELD	–
3	B	–
4	W	–
5	BG	–
6	G	–
7	R	–
8	SHIELD	–
9	W	–
10	B	–
11	V	–
12	G	–
13	R	–

Terminal No.	Color of Wire	Signal Name
14	SHIELD	–
15	W	–
16	B	–
17	SHIELD	–
18	R	–
19	B	–
20	W	–
21	L	–
22	G	–
23	R	–
24	SHIELD	–
25	W	–
26	B	–
27	P	–
28	G	–
29	R	–
30	SHIELD	–
31	W	–
32	B	–

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M501
Connector Name	ANTENNA BASE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M502
Connector Name	ANTENNA BASE
Connector Color	GRAY

H.S.

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

ABNIA3545GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M509
Connector Name	WIRE TO WIRE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	R	–
8	SHIELD	–
13	R	–
14	B	–
15	G	–
16	SHIELD	–
17	W	–

Connector No.	E33
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	G	–

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
3G	P	–
16G	R	–
17G	B	–
18G	SHIELD	–
22G	B	–
23G	SHIELD	–
25G	W	–
26G	SHIELD	–
27G	W	–
28G	R	–
29G	B	–
30G	G	–
32G	LG	–
50G	G	–

Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	L	–
3	B	–
4	SHIELD	–
5	B	–
6	R	–
8	SHIELD	–
13	R	–
14	B	–
15	G	–
16	SHIELD	–
17	W	–

ABNIA3547GB

Connector No.	E211
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E212
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E226
Connector Name	FRONT CAMERA
Connector Color	BLACK

H.S.

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

Connector No.	E301
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E302
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E307
Connector Name	FRONT SONAR SENSOR LH OUTER
Connector Color	BLACK

H.S.

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

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Connector No.	E308
Connector Name	FRONT SONAR SENSOR RH OUTER
Connector Color	BLACK

H.S.

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

Connector No.	B1
Connector Name	REAR SIDE SPEAKER LH
Connector Color	BROWN

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	R	– (WITH REAR ENTERTAINMENT SYSTEM)
3	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
4	SHIELD	– (WITH REAR ENTERTAINMENT SYSTEM)
4	R	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	W	– (WITH REAR ENTERTAINMENT SYSTEM)
5	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	V	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	V	– (WITH REAR ENTERTAINMENT SYSTEM)
7	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	G	– (WITH REAR ENTERTAINMENT SYSTEM)
8	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	B	– (WITH REAR ENTERTAINMENT SYSTEM)
9	SHIELD	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
10	SHIELD	–
11	R	– (WITH REAR ENTERTAINMENT SYSTEM)
11	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
12	W	–
13	SB	–
14	SB	–
15	LG	–

ABNIA3549GB

Terminal No.	Color of Wire	Signal Name
15	SHIELD	–
16	L	–
17	P	–
19	BR	–
20	–	–
21	LG	–
22	SB	–
24	SB	–

Terminal No.	Color of Wire	Signal Name
6	SB	–
7	L	–
9	LG	–
10	SB	–
13	B	–
14	R	–

Terminal No.	Color of Wire	Signal Name
13	–	–
14	R	–
15	G	–
16	B	–
17	W	–
18	V	–
19	V	–
20	B	–
21	G	–
22	W	–
23	R	–
24	–	–
25	–	–
26	–	–
27	W	–
28	B	–
29	SHIELD	–
30	SHIELD	–
31	P	–
32	L	–

Connector No.	B23
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
1	W	–
2	G	–
3	SHIELD	–
4	P	–

Connector No.	B24
Connector Name	VIDEO DISTRIBUTOR
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	B	–
2	V	–
3	B	–
4	W	–
5	BR	–
6	L	–
7	SB	–
8	BR	–
9	SB	–
10	L	–
11	–	–
12	–	–

ABNIA3550GB

Connector No.	B25
Connector Name	VIDEO DISTRIBUTOR
Connector Color	WHITE

H.S.

34	36	38	40	42	44	46	48	50	52	54	56
33	35	37	39	41	43	45	47	49	51	53	55

Terminal No.	Color of Wire	Signal Name
33	W	–
34	B	–
35	SHIELD	–
36	–	–
37	–	–
38	–	–
39	W	–
40	B	–

Terminal No.	Color of Wire	Signal Name
41	SHIELD	–
42	–	–
43	–	–
44	–	–
45	W	–
46	R	–
47	B	–
48	G	–
49	SHIELD	–
50	–	–
51	–	–
52	–	–
53	SHIELD	–
54	B	–
55	R	–
56	W	–

Connector No.	B35
Connector Name	SONAR BUZZER
Connector Color	WHITE

H.S.

4	3	2	1

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

Connector No.	B41
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	25	26	27	28	29	30	31	32

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

Terminal No.	Color of Wire	Signal Name
17	V	–
18	W	–
19	B	–
20	W	–
21	SHIELD	–
22	W	–
23	R	–
24	SHIELD	–
25	B	–
26	G	–
27	W	–
28	R	–
29	G	–
30	SHIELD	–
31	B	–

Connector No.	B43
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	P	–

ABNIA3551GB

Connector No.	B51
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
11	R	–
12	P	–

Connector No.	B49
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
9	G	–
10	W	–
11	P	–
12	R	–
13	SHIELD	–
14	B	–
15	W	–
16	W	–

Connector No.	B73
Connector Name	SUBWOOFER
Connector Color	GRAY

H.S.

2	4	6
1	3	5

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

Connector No.	B46
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
13	W	–
14	R	–
15	G	–
16	SHIELD	–
17	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
17A	W	–
18A	B	–
19A	SHIELD	–
20A	W	–
21A	SHIELD	–
23A	W	–
24A	B	–
25A	SHIELD	–
26A	W	–
27A	B	–
28A	SHIELD	–
30A	B	–
74A	P	–
75A	V	–

ABNIA3552GB

Connector No.	B75
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	LG	–
2	SB	–
3	L	–

Terminal No.	Color of Wire	Signal Name
4	SB	–
5	BR	–
6	SHIELD	–
7	W	–
8	B	–
9	V	–
10	W	–
11	B	–
12	G	–
13	R	–
14	SHIELD	–

Connector No.	B77
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
17	W	–
18	B	–
19	SHIELD	–
21	B	–
22	B	–
23	B	–
24	W	–
25	B	–
26	SHIELD	–
27	B	–
28	B	–
29	B	–

Connector No.	B101
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
5	Y	– (WITH REAR ENTERTAINMENT SYSTEM)
5	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	W	– (WITH REAR ENTERTAINMENT SYSTEM)
7	LG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
8	R	– (WITH REAR ENTERTAINMENT SYSTEM)
8	BG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	–
10	G	–
11	SB	–

AANIA0739GB

Connector No.	B107
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
6	B	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	B	–
12	W	–

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	R	–
4	LG	–
5	Y	–
6	P	–
7	R	–
8	G	–
9	W	–
10	G	–
13	W	–
14	P	–
15	G	–
16	R	–

Connector No.	B129
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN

H.S.

54	53		52		51		50
49	48	47	46	45	44	43	42	41

Terminal No.	Color of Wire	Signal Name
41	R	–
42	G	–
43	G	–
44	W	–
45	G	–
46	W	–
47	B	–
48	G	–
49	W	–
50	LG	–
51	Y	–
52	B	–
53	W	–
54	G	–

Connector No.	B130
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN

H.S.

77	76	75	74	73		72	71	70	69	68
67	66	65	64	63	62	61	60	59	58	57	56	55

Terminal No.	Color of Wire	Signal Name
55	R	–
56	B	–
57	W	–
58	G	–
59	R	–
60	W	–
61	SHIELD	–
62	W	–
63	W	–
64	B	–
65	W	–
66	B	–
67	–	–
68	P	–
69	P	–
70	R	–
71	W	–
72	P	–
73	B	–
74	W	–
75	B	–
76	W	–
77	–	–

ABNIA3553GB

Connector No.	B136
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	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
9	B	–
10	W	–
11	SHIELD	–
12	B	–
13	W	–
14	SHIELD	–
15	B	–
16	W	–
17	SHIELD	–
18	W	–
19	B	–
20	W	–
21	B	–
22	W	–
23	SHIELD	–

Connector No.	B137
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
1	W	–
2	G	–
3	SHIELD	–
4	Y	–
6	BR	–
7	LG	–
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	O	–
17	SB	–
19	SB	–
20	SHIELD	–
21	LG	–
22	SB	–
24	Y	–

Connector No.	B139
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
11	W	
12	G	

ABNIA3589GB

Connector No.	B140
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

Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–
11	P	–
12	R	–
13	SHIELD	–
14	W	–
15	B	–
16	W	–

Connector No.	B145
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

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	SB	–
3	SB	–
4	L	–
5	BR	–
6	SHIELD	–

Terminal No.	Color of Wire	Signal Name
7	Y	–
8	O	–
9	V	–
10	B	–
11	W	–
12	G	–
13	R	–
14	SHIELD	–

Connector No.	B153
Connector Name	REAR SIDE SPEAKER RH
Connector Color	BROWN

H.S.

2	1

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

Connector No.	B201
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
1	W	–
2	G	–
3	SHIELD	–
4	P	–
6	SB	–
7	L	–

Terminal No.	Color of Wire	Signal Name
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	L	–
17	P	–
19	BR	–
20	–	–
21	LG	–
22	SB	–
24	SB	–

ABNIA3590GB

Connector No.	B202
Connector Name	HEADREST DISPLAY UNIT (DRIVER SEAT)
Connector Color	

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	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	P	REAR 1 COMP -
5	–	–
6	SB	CONT GND
7	L	AUX REQ. OUT
8	–	–
9	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	–	–
12	B	GND
13	B	REAR 1 HP LH+
14	R	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	L	REAR 1 COMP+
17	P	AV GND
18	–	–
19	BR	ACC DET. IN
20	–	–
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	–	–
24	SB	BAT

Connector No.	B301
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
1	W	–
2	G	–
3	SHIELD	–
4	Y	–
6	BR	–
7	LG	–
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	O	–
17	SB	–
19	SB	–
20	SHIELD	–
21	LG	–
22	SB	–
24	Y	–

Connector No.	B302
Connector Name	HEADREST DISPLAY UNIT (PASSENGER SEAT)
Connector Color	

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	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	Y	REAR 1 COMP -
5	–	–
6	BR	CONT GND
7	LG	AUX REQ. OUT
8	–	–
9	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	–	–
12	B	GND
13	B	REAR 1 HP LH+
14	R	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	O	REAR 1 COMP+
17	SB	AV GND
18	–	–
19	SB	ACC DET. IN
20	SHIELD	SHIELD M-CAN
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	–	–
24	Y	BAT

ABNIA3591GB

Connector No.	B452
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
2	P	–
3	G	–
4	L	–
5	Y	–
8	L	–
9	W	–
10	P	–
11	G	–

Connector No.	B455
Connector Name	REAR SONAR SENSOR LH OUTER
Connector Color	BLACK

H.S.

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

Connector No.	B456
Connector Name	REAR SONAR SENSOR RH OUTER
Connector Color	BLACK

H.S.

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

Connector No.	B457
Connector Name	REAR SONAR LH INNER
Connector Color	BLACK

H.S.

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

Connector No.	B458
Connector Name	REAR SONAR SENSOR RH INNER
Connector Color	BLACK

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
5	B	–
13	W	–
14	B	–
15	SHIELD	–
16	P	–
17	BG	–
24	W	–

ABNIA3592GB

Connector No.	R11
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
1	G	–
2	R	–
3	W	–
4	B	–
5	SHIELD	–
6	B	–
6	W	–

Connector No.	R101
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
1	V	–
2	R	–
3	G	–
4	P	–
5	GR	–
6	L	–
7	R	–

Connector No.	R105
Connector Name	TELEMATICS SWITCH
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	V	–
2	G	–
3	P	–
7	R	–

Connector No.	R109
Connector Name	MICROPHONE
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	R	–
3	GR	–
4	L	–

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

H.S.

1	2	3	4
5	6	7	8	9	10
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Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

Connector No.	D3
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	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
22	V	–
23	LG	–
28	G	–
29	SHIELD	–
30	R	–
31	B	–
32	W	–

AANIA0740GB

Connector No.	D6
Connector Name	DOOR MIRROR LH (WITH AUTOMATIC DRIVE POSITIONER)
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
8	LG	–
9	Y	–

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

H.S.

2	1

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

Connector No.	D20
Connector Name	DOOR MIRROR LH
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
5	R	–
6	W	–
16	G	–
17	SHIELD	–
18	B	–

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	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

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

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

H.S.

1	2	3	4
5	6	7	8	9	10
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Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–

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

H.S.

2	1

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

AANIA0741GB

Connector No.	D113
Connector Name	DOOR MIRROR RH
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
5	R	–
6	W	–
16	G	–
17	SHIELD	–
18	B	–

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

H.S.

1	2	3	4	5
6	7	8	9	10	11	12
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Terminal No.	Color of Wire	Signal Name
11	Y	–
12	LG	–

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

H.S.

2	1

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

Connector No.	D301
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
11	G	–
12	W	–

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

H.S.

2	1

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

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

H.S.

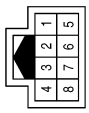
12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

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

AANIA0742GB

Connector No.	D511
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE

H.S.



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

AANIA0743GB

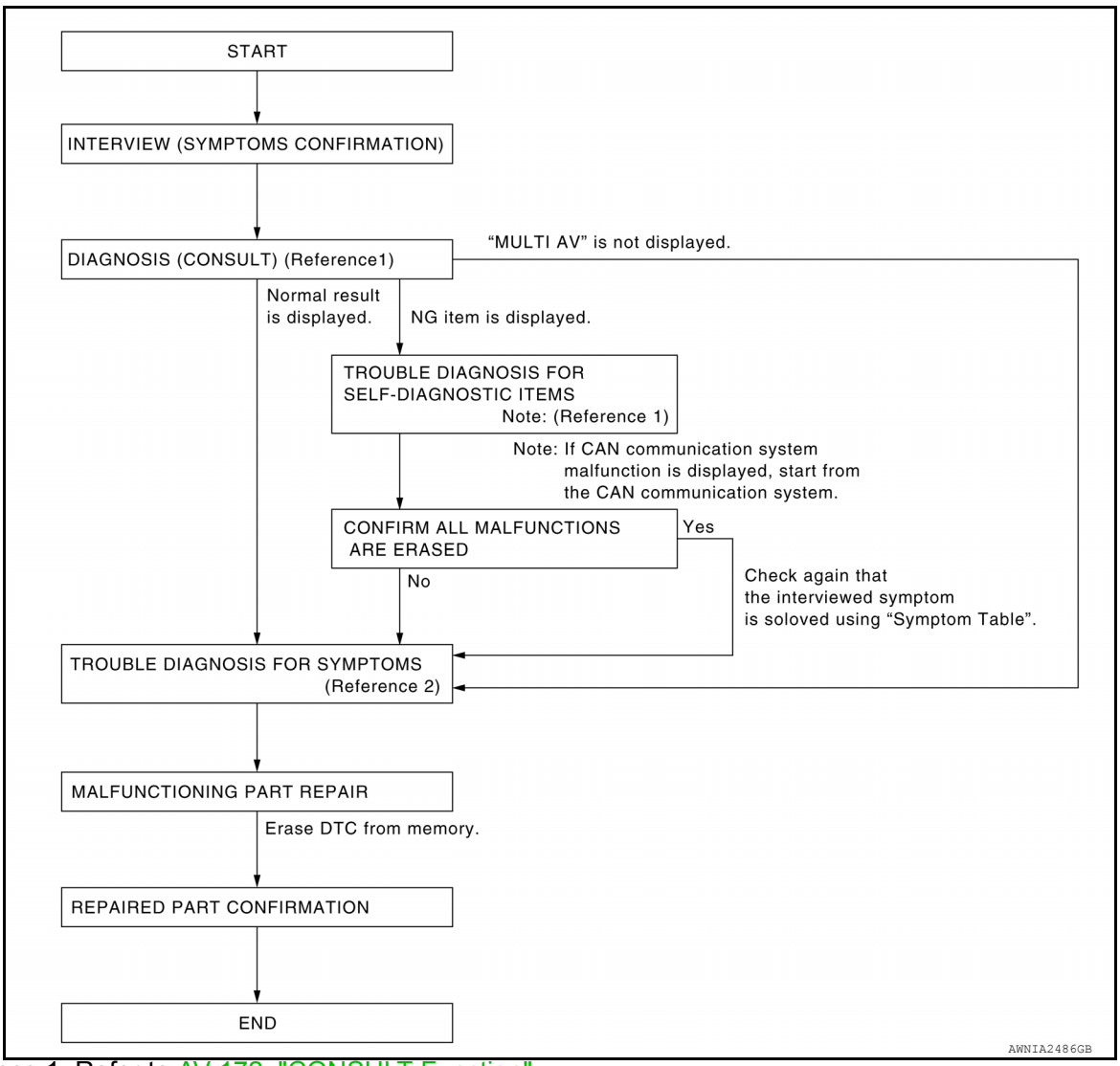
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow (Multi AV System)

INFOID:0000000008359987

OVERALL SEQUENCE



Reference 1: Refer to AV-172, "CONSULT Function".
Reference 2: Refer to AV-377, "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 No. displayed?

YES >> GO TO 3
NO >> GO TO 4

3. CHECK SELF-DIAGNOSIS RESULTS (CONSULT)

1. Check the DTC No. indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC No. list. Refer to AV-187, "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-377, "Symptom Table".

>> GO TO 5

5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

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

>> GO TO 6

6. CHECK AFTER REPAIR

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

Is any DTC No. displayed?

YES >> GO TO 3
NO >> GO TO 7

7. FINAL CHECK

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

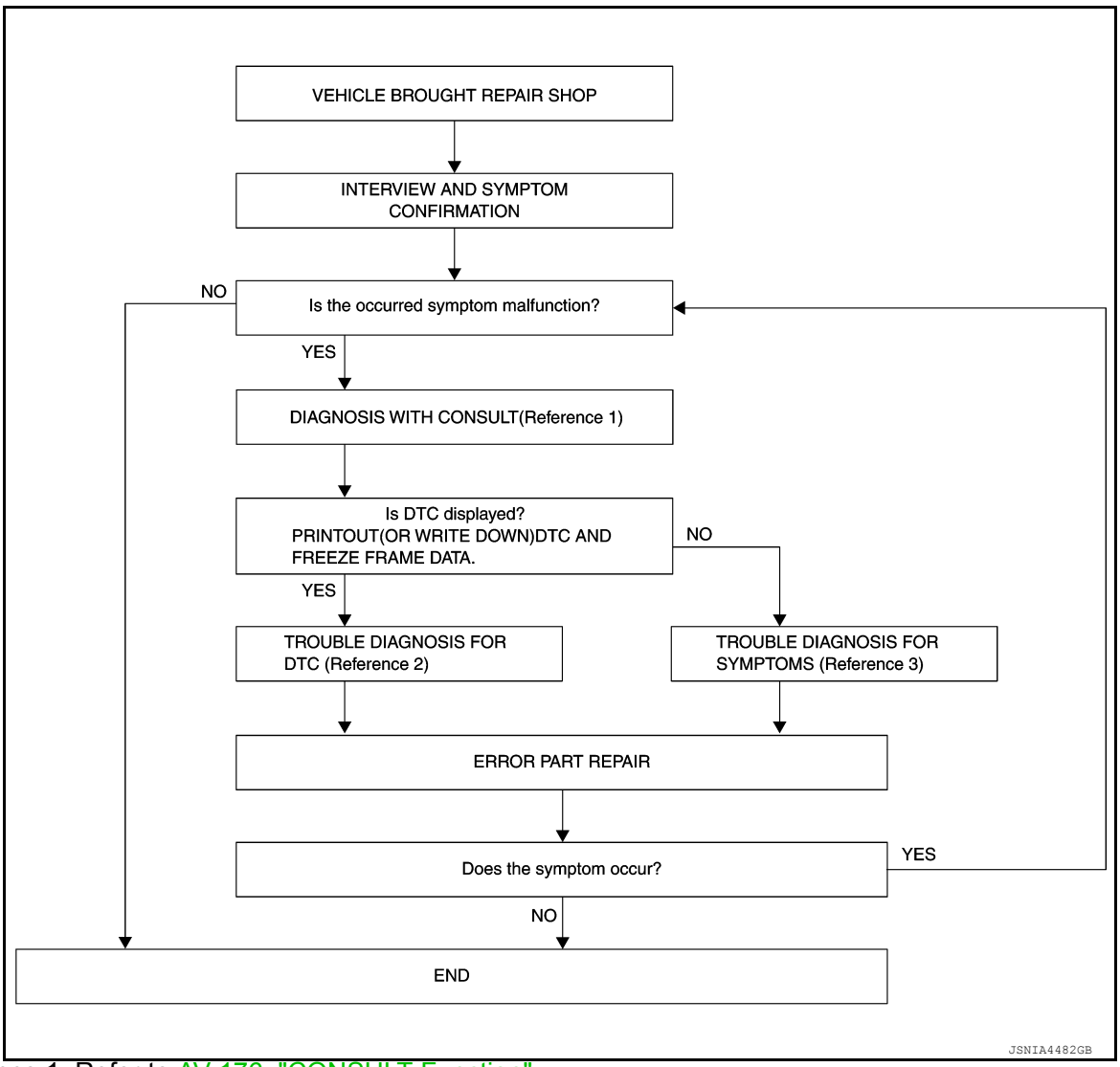
Are any symptoms present?

YES >> GO TO 4
NO >> Inspection End.

Work Flow (Camera Assistance Sonar)

INFOID:0000000008368206

OVERALL SEQUENCE



Reference 1: Refer to AV-176, "CONSULT Function".
Reference 2: Refer to AV-210, "DTC Index".
Reference 3: Refer to AV-377, "Symptom Table".

DETAILED FLOW

1.INTERVIEW AND SYMPTOM CONFIRMATION

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.

Is the occurred symptom malfunction?

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

2.DIAGNOSIS WITH CONSULT

1. Connect CONSULT and perform a self-diagnosis for “SONAR”. Refer to AV-176, "CONSULT Function".
   NOTE:
   Skip to step 4 of the diagnosis procedure if “SONAR” is not displayed.
2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Is DTC displayed?

YES >> GO TO 3.
NO >> GO TO 4.

3. TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC Index. Refer to AV-210, "DTC Index".

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-377, "Symptom Table".

>> GO TO 5.

5. ERROR PART REPAIR

1. Repair or replace the identified malfunctioning parts.
2. Perform a self-diagnosis for “SONAR” with CONSULT.
   NOTE:
   Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the self-diagnosis results.
3. Check that the symptom does not occur.

Does the symptom occur?

YES >> GO TO 1.
NO >> Inspection End.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:0000000008359988

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing AV control unit.

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform “After Replace ECU” with CONSULT.

- **Complete the procedure of “After Replace ECU” in order.**
- **If you set incorrect “After Replace ECU”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Work Procedure

INFOID:0000000008359989

1.SAVING VEHICLE SPECIFICATION

-CONSULT

Enter “Re/Programming, Configuration” and perform “Before Replace ECU” to save or print current vehicle specification.

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing AV control unit.

>> GO TO 2.

2.REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT

1. Enter "Re/Programming, Configuration".
2. If “Before Replace ECU” operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press “Confirm” to write vehicle specification. Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure".
3. If “Before Replace ECU” operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure".

>> GO TO 4.

4.OPERATION CHECK

Check that the operation of the AV control unit is normal.

>> Work End.

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:0000000008359990

Vehicle specification needs to be written with CONSULT because it is not written after replacing AV control unit.
Configuration has three functions as follows:

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

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

CONFIGURATION (AV CONTROL UNIT) : Work Procedure

INFOID:0000000008359991

1.WRITING MODE SELECTION

CONSULT
Select “Reprogramming, Configuration” of AV control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2.PERFORM “SAVED DATA LIST”

CONSULT
Automatically “Operation Log Selection” window will display if “Before Replace ECU” was performed. Select applicable file from the “Save Data List” and press “Confirm”.

>> Work End.

3.PERFORM “AFTER REPLACE ECU” OR “MANUAL CONFIGURATION”

CONSULT
1. Select “After Replace ECU” or “Manual Configuration”.
2. Identify the correct model and configuration list. Refer to AV-263, "CONFIGURATION (AV CONTROL UNIT) : Configuration List".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select “Next”.
   CAUTION:
   Make sure to select “Next”, confirm each setting value and press “OK” even if the indicated configuration of brand new AV control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

4.OPERATION CHECK

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

>> Work End.

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:0000000008359992

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

MANUAL SETTING ITEM	
Items	Setting value
ENGINE TYPE	NORMAL ⇔ HYBRID
SOUND SYSTEM	BOSE SURROUND ⇔ BOSE ⇔ BASE

⇔: Items which confirm vehicle specifications

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Description

INFOID:0000000008376938

BEFORE REPLACEMENT

When replacing around view monitor control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:
If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing around view monitor control unit.

AFTER REPLACEMENT

CAUTION:
When replacing around view monitor control unit, you must perform “After Replace ECU” with CONSULT.
- **Complete the procedure of “After Replace ECU” in order.**
- **If you set incorrect “After Replace ECU”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Work Procedure

INFOID:0000000008376939

1.SAVING VEHICLE SPECIFICATION

-CONSULT
Enter “Re/Programming, Configuration” and perform “Before Replace ECU” to save or print current vehicle specification.

NOTE:
If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing around view monitor control unit.

>> GO TO 2.

2.REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT
1. Enter "Re/Programming, Configuration".
2. If “Before Replace ECU” operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press “Confirm” to write vehicle

specification. Refer to AV-264, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure".

3. If “Before Replace ECU” operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-264, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure".

>> GO TO 4.

4.OPERATION CHECK

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

>> Work End.

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Description

INFOID:0000000008376940

Vehicle specification needs to be written with CONSULT because it is not written after replacing around view monitor control unit.
Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	• Reads the vehicle configuration of current around view monitor control unit. • Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:

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

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure

INFOID:0000000008376941

1.WRITING MODE SELECTION

CONSULT
Select “Reprogramming, Configuration” of around view monitor control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2.PERFORM “SAVED DATA LIST”

CONSULT
Automatically “Operation Log Selection” window will display if “Before Replace ECU” was performed. Select applicable file from the “Save Data List” and press “Confirm”.

>> Work End.

3.PERFORM “AFTER REPLACE ECU” OR “MANUAL CONFIGURATION”

CONSULT
1. Select “After Replace ECU” or “Manual Configuration”.

2. Identify the correct model and configuration list. Refer to AV-265, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Configuration List".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select “Next”.
   CAUTION:
   Make sure to select “Next”, confirm each setting value and press “OK” even if the indicated configuration of brand new around view monitor control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

4. OPERATION CHECK

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

>> Work End.

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Configuration List

INFOID:0000000008376942

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

MANUAL SETTING ITEM	
Items	Setting value
BCI FUNCTION	WITH ⇔ WITHOUT

⇔: Items which confirm vehicle specifications

ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT : Description

INFOID:0000000008489503

BEFORE REPLACEMENT

When replacing sonar control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:
If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing sonar control unit.

AFTER REPLACEMENT

CAUTION:
When replacing sonar control unit, you must perform “After Replace ECU” with CONSULT.
- **Complete the procedure of “After Replace ECU” in order.**
- **If you set incorrect “After Replace ECU”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**

ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT : Work Procedure

INFOID:0000000008489504

1. SAVING VEHICLE SPECIFICATION

-CONSULT
Enter “Re/Programming, Configuration” and perform “Before Replace ECU” to save or print current vehicle specification.

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing sonar control unit.

>> GO TO 2.

2.REPLACE SONAR CONTROL UNIT

Replace sonar control unit. Refer to AV-410, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT
1. Enter "Re/Programming, Configuration".
2. If “Before Replace ECU” operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press “Confirm” to write vehicle specification. Refer to AV-266, "CONFIGURATION (SONAR CONTROL UNIT) : Work Procedure".
3. If “Before Replace ECU” operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-266, "CONFIGURATION (SONAR CONTROL UNIT) : Work Procedure".

>> GO TO 4.

4.OPERATION CHECK

Check that the operation of the sonar control unit is normal.

>> Work End.

CONFIGURATION (SONAR CONTROL UNIT)

CONFIGURATION (SONAR CONTROL UNIT) : Description

INFOID:0000000008489505

Vehicle specification needs to be written with CONSULT because it is not written after replacing sonar control unit.
Configuration has three functions as follows:

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

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

CONFIGURATION (SONAR CONTROL UNIT) : Work Procedure

INFOID:0000000008489506

1.WRITING MODE SELECTION

CONSULT
Select “Reprogramming, Configuration” of sonar control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2. PERFORM “SAVED DATA LIST”

CONSULT
Automatically “Operation Log Selection” window will display if “Before Replace ECU” was performed. Select applicable file from the “Save Data List” and press “Confirm”.

>> Work End.

3. PERFORM “AFTER REPLACE ECU” OR “MANUAL CONFIGURATION”

CONSULT
1. Select “After Replace ECU” or “Manual Configuration”.
2. Identify the correct model and configuration list. Refer to AV-267, "CONFIGURATION (SONAR CONTROL UNIT) : Configuration List".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select “Next”.
   CAUTION:
   Make sure to select “Next”, confirm each setting value and press “OK” even if the indicated configuration of brand new sonar control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

4. OPERATION CHECK

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

>> Work End.

CONFIGURATION (SONAR CONTROL UNIT) : Configuration List

INFOID:0000000008489507

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

MANUAL SETTING ITEM	
Items	Setting value
BCI FUNCTION	WITH ⇔ WITHOUT

⇔: Items which confirm vehicle specifications

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Description

INFOID:0000000008368207

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

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure

INFOID:0000000008368208

1. DRIVING

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

>> END

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Description

INFOID:0000000008486412

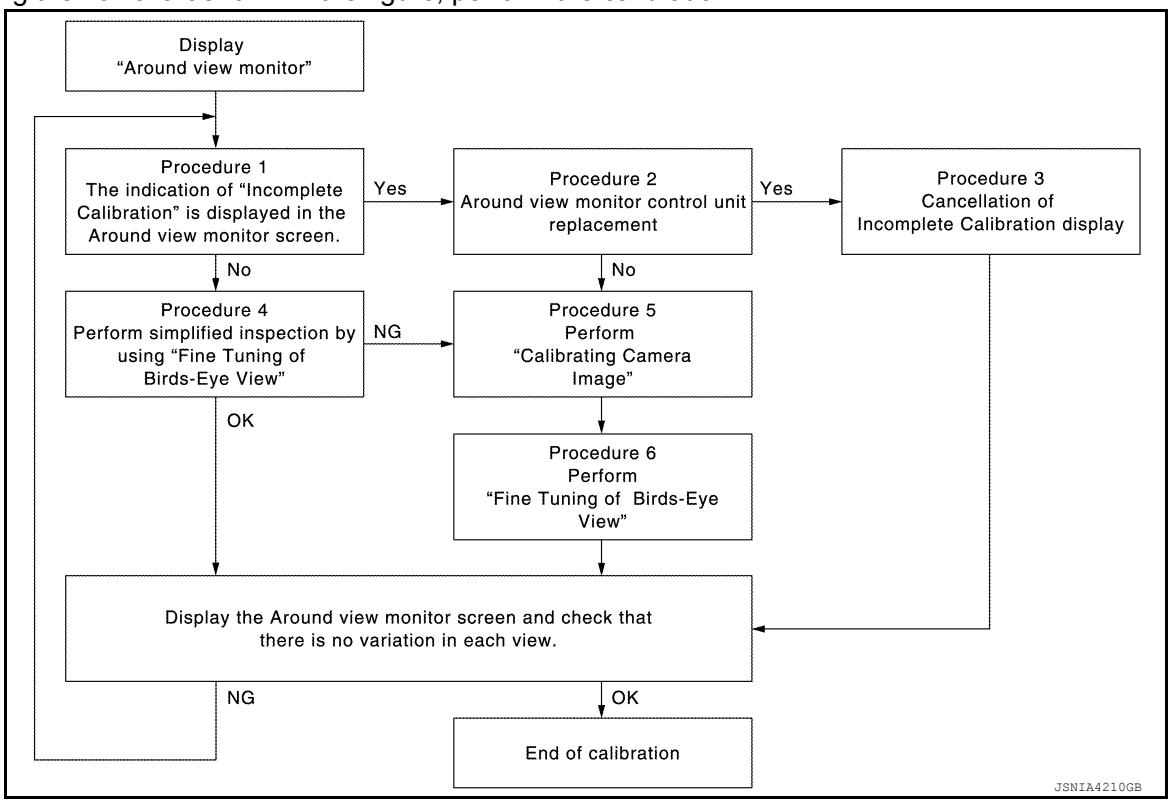
- Calibration must be performed after removing/replacing the cameras, removing parts (e.g. front grille, door mirror, and others) mounted on the cameras, or replacing the Around view monitor control unit.
- The use of CONSULT is required to perform calibration or writing of calibration results to the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

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure

INFOID:0000000008486413

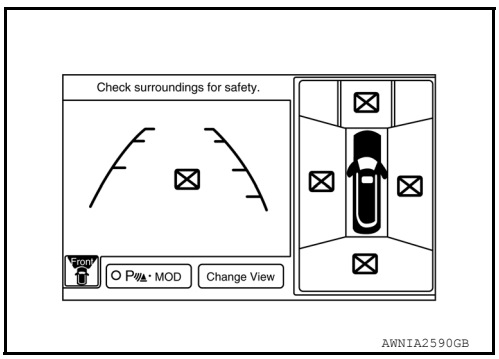
CALIBRATION FLOWCHART

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



NOTE:

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



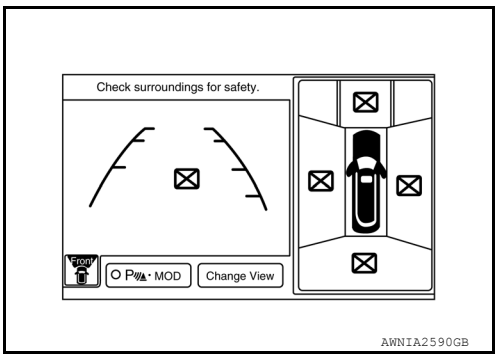
CALIBRATION PROCEDURE

1. AROUND VIEW MONITOR SCREEN CONFIRMATION

Check that there is no indication of “Incomplete calibration”.

Is the “Incomplete calibration” display visible?

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



2. CHECK THAT AROUND VIEW MONITOR CONTROL UNIT IS REPLACED

Check that the around view monitor control unit is replaced.

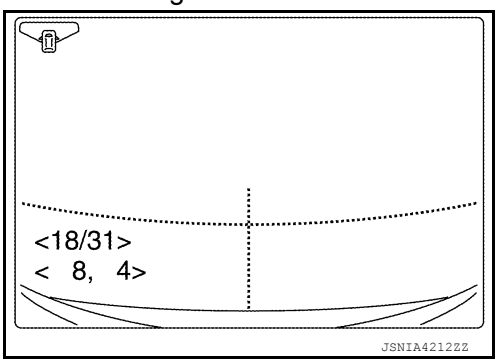
Is the around view monitor control unit replaced?

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

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

CONSULT work support

1. On the CONSULT screen, touch “CALIBRATING CAMERA IMAGE (FRONT CAMERA)”, “CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)”, “CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)”, or “CALIBRATING CAMERA IMAGE (REAR CAMERA)” to accept the selection.
   NOTE:
   To cancel the indication of Incomplete calibration, select items based on the target camera.
2. On the adjustment screen of each camera, touch “APPLY” button. After this, touch “OK” button.
   CAUTION:
   - **Never perform operations other than those mentioned above.**
   - **Never perform “Initialize Camera Image Calibration”.**
3. Display the around view monitor screen to check that there is no errors, such as deviations among the camera images.



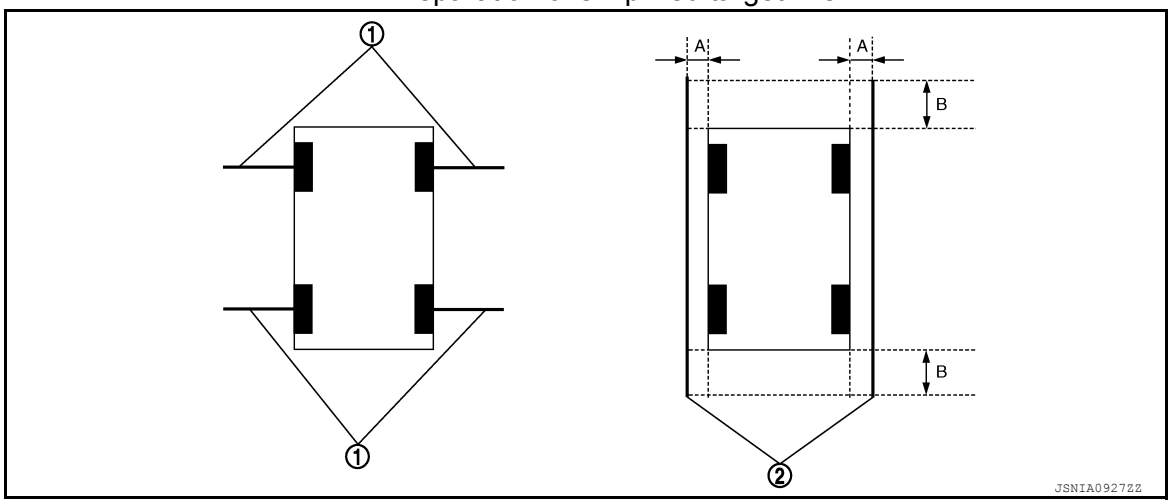
Is there a malfunction?

YES >> Calibration end
NO >> GO TO 1.

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

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

Preparation of simplified target line



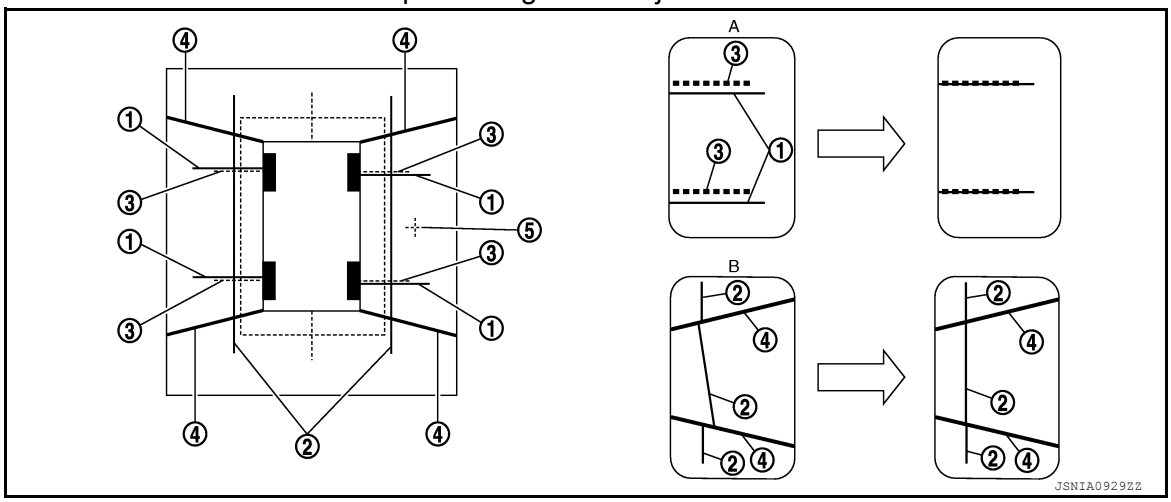
1. Target lines 1
2. Target lines 2
A. Approx. 30 cm (11.8 in)
B. Approx. 1.0 m (39.3 in)

3. CONSULT work support
   Touch “FINE TUNING OF BIRDS-EYE VIEW” on the CONSULT screen.
4. On the CONSULT screen, touch “SELECT” button to select right or left camera and perform camera calibration as instructed below:

- If the marker on the screen deviates from Target line 1, touch “AXIS X” button and “AXIS Y” button to adjust so that the marker is placed on the Target line 1.
- If Target line 2 is misaligned among the cameras, adjust each camera image to bring Target line 2 into a straight line.

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

Simplified target line adjustment method



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

5. Adjust right and left cameras. Touch "APPLY" on the CONSULT screen to display adjustment results.
6. After adjusting right and left cameras, check that the marker is properly placed on the screen and there is no deviation in Target line 1.
   NOTE:
   • It can be initialized to the NISSAN factory default condition with “Initialize Camera Image Calibration”.
   • The adjustment value is cancelled on this mode by performing “Initialize Camera Image Calibration”.

Is the difference corrected?

YES >> On the CONSULT screen, touch “OK” button to complete writing to the around view monitor control unit.

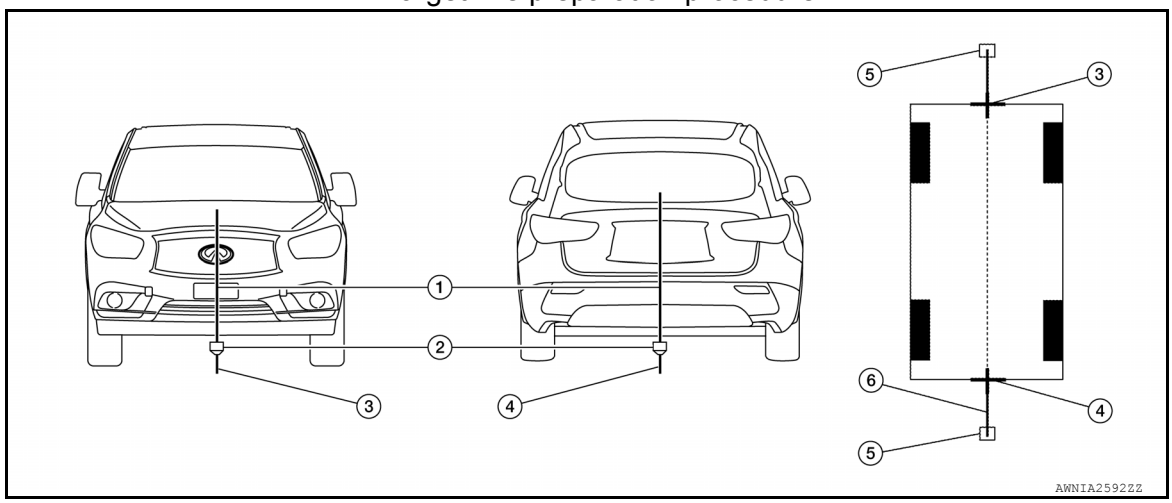
NO >> GO TO 5.

5. PERFORM “CALIBRATING CAMERA IMAGE”

Preparation of target line

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

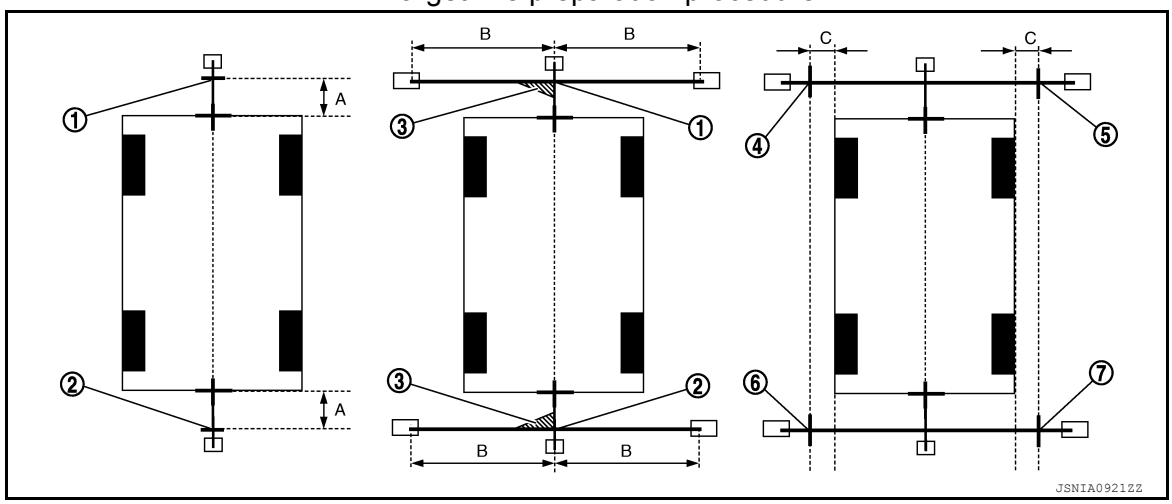
Target line preparation procedure 1



1. Thread
2. Weight
3. Point FM0 (mark)
4. Point RM0 (mark)
5. Packing tape (to fix the vinyl string)
6. Vinyl string

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

Target line preparation procedure 2



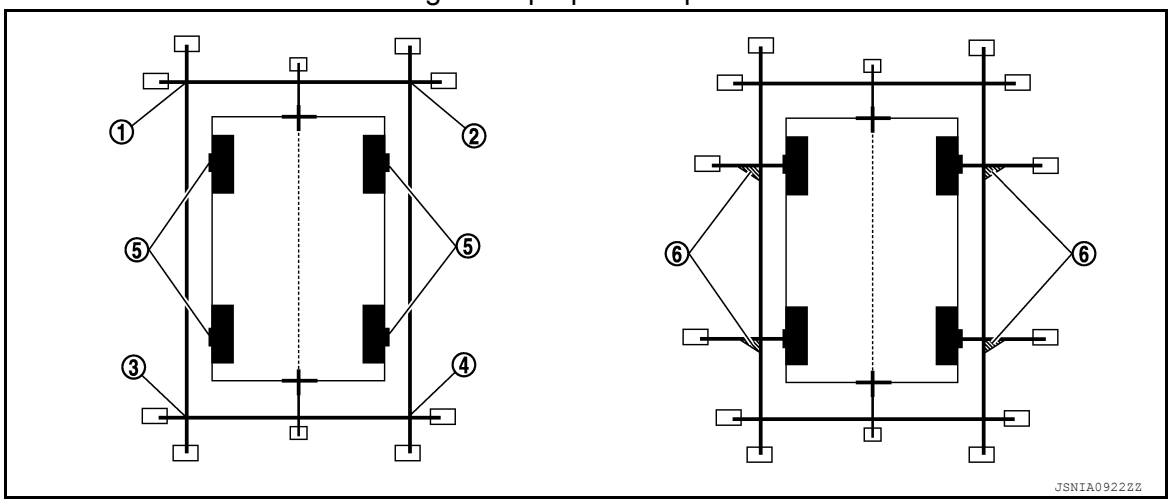
1. Point FM
2. Point RM
3. Triangle scale
4. Point FL (mark)
5. Point FR (mark)
6. Point RL (mark)

7. Point RR (mark)

A. 75 cm (29.5 in) B. Approx. 1.5 m (59 in) C. 30 cm (11.8 in) [Vehicle width/ 2 + 30 cm (11.8 in) from the points FM and RM]

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

Target line preparation procedure 3

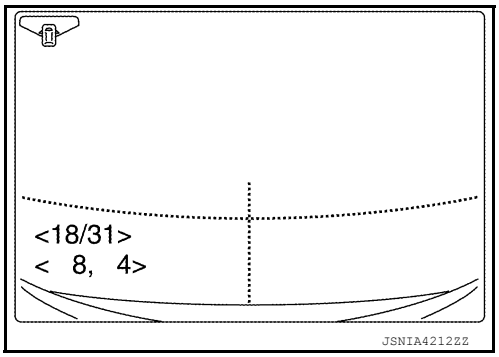


1. Point FL 2. Point FR 3. Point RL
4. Point RR 5. Center position of axle 6. Triangle scale

Perform “Calibrating Camera Image”

CONSULT work support

1. On the CONSULT screen, touch “CALIBRATING CAMERA IMAGE (FRONT CAMERA)”, “CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)”, “CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)”, or “CALIBRATING CAMERA IMAGE (REAR CAMERA)” to accept the selection.
   NOTE:
   To cancel the indication of Incomplete calibration, select items based on the target camera.
2. On the adjustment screen of each camera, adjust the parameter by touching the “AXIS X” button, “AXIS Y” button, and “ROTATE” button to place the calibration marker shown on the camera screen on the target line drawn on the ground.



Adjustment range	
Rotation direction (Center dial)	: 31 patterns (16 on the center)
Upper/lower direction (upper/lower switch)	: –22 – 22
Left/right direction (left/right switch)	: –22 – 22

3. Touch “APPLY” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are shown on the camera screen.
   CAUTION:
   Check that “PRCSNG” is displayed. Do never perform other operations while “PRCSNG” is displayed.
4. Touch “OK” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are written to the around view monitor control unit.
   CAUTION:
   Check that “PRCSNG” is displayed. Do never perform other operations while “PRCSNG” is displayed.

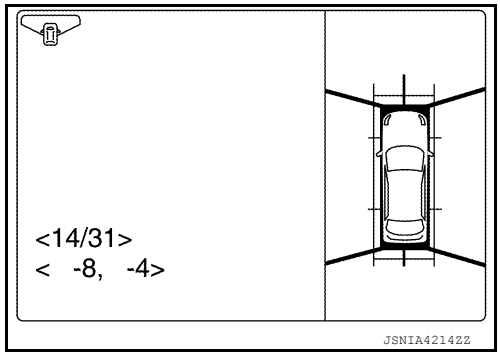
>> GO TO 6.

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

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

CONSULT work support

1. Select “FINE TUNING OF BIRDS-EYE VIEW” by touching CONSULT screen.
2. On the adjustment screen of each camera, adjust the parameter by touching the “AXIS X” button, “AXIS Y” button”, and “ROTATE” button to place the calibration marker shown on the camera screen on the target line drawn on the ground.
   NOTE:
   Touch “SELECT” button on the CONSULT screen to select the target camera.
3. Touch “APPLY” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are shown on the camera screen.
   CAUTION:
   Check that “PRCSNG” is displayed. Do never perform other operations while “PRCSNG” is displayed.



4. Touch “OK” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are written to the around view monitor control unit.
   CAUTION:
   - **Check that “PRCSNG” is displayed. Never perform other operations while “PRCSNG” is displayed.**
   - **After pressing the “OK” button, never press buttons other than the “BACK” button.**

   NOTE:
   - It can be initialized to the NISSAN factory default condition with “Initialize Camera Image Calibration”.
   - The adjustment value is cancelled in this mode by performing “Initialize Camera Image Calibration”.

>> Calibration end

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : DTC Logic

INFOID:0000000008359996

DTC DETECTION LOGIC

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

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000008359997

1. PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform Self Diagnostic Result for MULTI AV.

Is CAN COMM CIRCUIT displayed?

YES >> Refer to LAN-22, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-53, "Intermittent Incident".

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic

INFOID:0000000008368304

DTC DETECTION LOGIC

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

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : Diagnosis Procedure

INFOID:0000000008368303

1. PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform Self Diagnostic Result for SONAR.

Is CAN COMM CIRCUIT displayed?

YES >> Refer to LAN-22, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-53, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

AV CONTROL UNIT

AV CONTROL UNIT : DTC Logic

INFOID:0000000008359998

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic

INFOID:0000000008368305

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the sonar control unit if the malfunction occurs constantly. Refer to AV-410, "Removal and Installation".

U1200 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486341

CONSULT Display	DTC Detection Condition	Possible Cause
CONT UNIT [U1200]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1201 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486342

CONSULT Display	DTC Detection Condition	Possible Cause
GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1202 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486343

CONSULT Display	DTC Detection Condition	Possible Cause
G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1204 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486345

CONSULT Display	DTC Detection Condition	Possible Cause
GPS CONN [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486346

1. PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1204 detected?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".
NO >> Refer to GI-53, "Intermittent Incident".

U1205 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486348

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ROM [U1205]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486349

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1205 detected?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".
NO >> Refer to GI-53, "Intermittent Incident".

U1206 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486351

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RAM [U1206]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486352

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1206 detected?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".
NO >> Refer to GI-53, "Intermittent Incident".

U1207 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486354

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RTC [U1207]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486355

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1207 detected?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".
NO >> Refer to GI-53, "Intermittent Incident".

U1216 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486356

CONSULT Display	DTC Detection Condition	Possible Cause
CAN CONT [U1216]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1217 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486357

CONSULT Display	DTC Detection Condition	Possible Cause
BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1218 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486358

CONSULT Display	DTC Detection Condition	Possible Cause
HDD CONN [U1218]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486359

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1219 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486360

CONSULT Display	DTC Detection Condition	Possible Cause
HDD READ [U1219]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486361

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U121A AV CONTROL UNIT

DTC Logic

INFOID:0000000008486362

CONSULT Display	DTC Detection Condition	Possible Cause
HDD WRITE [U121A]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486363

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U121B AV CONTROL UNIT

DTC Logic

INFOID:0000000008486364

CONSULT Display	DTC Detection Condition	Possible Cause
HDD COMM [U121B]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486365

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U121C AV CONTROL UNIT

DTC Logic

INFOID:0000000008486366

CONSULT Display	DTC Detection Condition	Possible Cause
HDD ACCESS [U121C]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486367

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U121D AV CONTROL UNIT

DTC Logic

INFOID:0000000008486368

CONSULT Display	DTC Detection Condition	Possible Cause
DSP CONN [U121D]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486369

1.CHECK CD PLAYBACK

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

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

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U121E AV CONTROL UNIT

DTC Logic

INFOID:0000000008486370

CONSULT Display	DTC Detection Condition	Possible Cause
DSP COMM [U121E]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486371

1.CHECK CD PLAYBACK

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

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

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1225 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486372

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

U1227 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486373

CONSULT Display	DTC Detection Condition	Possible Cause
DVD COMM [U1227]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008486374

1.CHECK DVD PLAYBACK

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

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

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1228 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486375

CONSULT Display	DTC Detection Condition	Possible Cause
SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1229 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486376

CONSULT Display	DTC Detection Condition	Possible Cause
iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U122A AV CONTROL UNIT

DTC Logic

INFOID:0000000008486377

CONSULT Display	DTC Detection Condition	Possible Cause
CONFIG UNFINISH [U122A]	Configuration data is incomplete.	Write configuration data. Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure".

Diagnosis Procedure

INFOID:0000000008486378

1.PERFORM CONFIGURATION

When U122A is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure".

U122E AV CONTROL UNIT

DTC Logic

INFOID:0000000008486379

CONSULT Display	DTC Detection Condition	Possible Cause
Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1231 BOSE AMP.

DTC Logic

INFOID:0000000008486380

CONSULT Display	DTC Detection Condition	Possible Cause
AMP TEMP [U1231]	BOSE amp. malfunction is detected.	Replace BOSE amp. if malfunction occurs constantly. Refer to AV-392, "Removal and Installation".

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000008486381

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of steering angle sensor is incomplete.	Adjust predictive course line center position of steering angle sensor.

Diagnosis Procedure

INFOID:0000000008486382

1.ADJUST PREDICTIVE COURSE LINE CENTER POSITION OF STEERING ANGLE SENSOR

When U1232 is detected, the predictive course line center position of the steering angle sensor needs to be adjusted.

>> Adjust the predictive course line center position of steering angle sensor. Refer to AV-267, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure".

U1243 DISPLAY UNIT

DTC Logic

INFOID:0000000008486383

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

Diagnosis Procedure

INFOID:0000000008486384

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuits. Refer to AV-334, "DISPLAY UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK COMMUNICATION CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M124.
3. Check continuity between display unit connector M92 terminals 9, 10 and AV control unit connector M124 terminals 77, 61.

Display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M92	9	M124	77	Yes
	10		61	

4. Check continuity between display unit connector M92 terminals 9, 10 and ground.

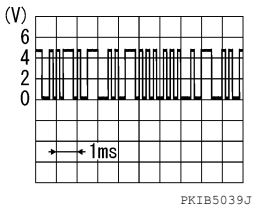
Display unit		Ground	Continuity
Connector	Terminals		
M92	9	—	No
	10		

Is the inspection result normal?

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

3.CHECK COMMUNICATION SIGNAL (DISP→CONT)

1. Connect display unit connector M92 and AV control unit connector M124.
2. Turn ignition switch ON.
3. Check signal between display unit connector M92 terminal 9 and ground.

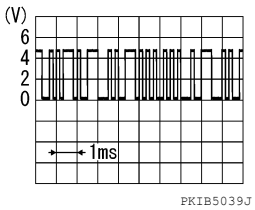
Display unit (+) Connector	Display unit (+) Terminal	Ground (−)	Condition	Reference value
M92	9	—	When adjusting display brightness.	 PKIB5039J

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

4. CHECK COMMUNICATION SIGNAL (CONT→DISP)

Check signal between display unit connector M92 terminal 10 and ground.

Display unit (+) Connector	Display unit (+) Terminal	Ground (−)	Condition	Reference value
M92	10	—	When adjusting display brightness.	 PKIB5039J

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace display unit. Refer to AV-391, "Removal and Installation".

U1244 GPS ANTENNA

DTC Logic

INFOID:0000000008486385

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna disconnection.

Diagnosis Procedure

INFOID:0000000008486386

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.GPS ANTENNA INSPECTION

Visually inspect the GPS antenna and antenna feeder. Refer to AV-416, "Removal and Installation".

Is inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect GPS antenna connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit terminal and ground.

AV control unit terminal	Ground	Voltage
(+)	(–)	
188	—	5.0 V

Is inspection result normal?

YES >> Inspection End.
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1258 SATELLITE RADIO ANTENNA

DTC Logic

INFOID:0000000008486387

CONSULT Display	DTC Detection Condition	Possible Cause
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.

Diagnosis Procedure

INFOID:0000000008486388

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.SATELLITE RADIO ANTENNA INSPECTION

Visually inspect the satellite radio antenna and antenna feeder. Refer to AV-414, "Location of Antennas".

Is inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect AV control unit connector M133.
2. Turn ignition switch ON.
3. Check voltage between AV control unit terminal 166 and ground.

AV control unit terminal	Ground	Voltage
(+)	(–)	
166	—	5.0 V

Is inspection result normal?

YES >> Inspection End.
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U125A HEADREST DISPLAY UNIT

DTC Logic

INFOID:0000000008486389

CONSULT Display	DTC Detection Condition	Possible Cause
3RD DISP CONN [U125A]	When any of the following is detected. • headrest display unit power supply or ground circuit malfunction. • AV communication circuit malfunction between headrest display units.	• Headrest display unit power supply and ground circuits. • AV communication circuits between headrest display units.

Diagnosis Procedure

INFOID:0000000008486390

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK HEADREST DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check headrest display unit power supply and ground circuits. Refer to AV-339, "HEADREST DISPLAY UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK AV COMMUNICATION CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect headrest display unit connectors.
3. Check continuity between headrest display unit (driver seat) connector B202 and headrest display unit (passenger seat) connector B302.

Headrest display unit (driver seat)		Headrest display unit (passenger seat)		Continuity
Connector	Terminals	Connector	Terminals	
B202	9	B302	21	Yes
	10		22	

4. Check continuity between headrest display unit (driver seat) connector B202 and ground.

Headrest display unit (driver seat)		Ground	Continuity
Connector	Terminals		
B202	9	—	No
	10		

Is the inspection result normal?

YES >> Replace headrest display unit (passenger seat). Refer to AV-407, "Removal and Installation".
NO >> Repair or replace harness or connectors.

U1263 USB

DTC Logic

INFOID:0000000008486391

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

Diagnosis Procedure

INFOID:0000000008486392

1.CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace USB interface harness. Refer to AV-400, "Removal and Installation".

2.CHECK USB INTERFACE HARNESS CONTINUITY

Check USB interface harness continuity. Refer to AV-368, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".
NO >> Replace USB interface harness. Refer to AV-400, "Removal and Installation".

U1264 ANTENNA AMP.

DTC Logic

INFOID:0000000008486393

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

Diagnosis Procedure

INFOID:0000000008486394

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA BASE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M143 and antenna base connector M502.
3. Check continuity between AV control unit connector M143 and antenna base connector M502.

AV control unit		Antenna base		Continuity
Connector	Terminal	Connector	Terminal	
M143	143	M502	1	Yes

4. Check continuity between AV control unit connector M143 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M143	143	—	No

Is the inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M143.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M143 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(–)	
Connector	Terminal		
M143	143	—	Battery voltage

Is the inspection result normal?

YES >> Replace antenna base. Refer to AV-417, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1265 BOSE AMP.

DTC Logic

INFOID:0000000008486395

CONSULT Display	DTC Detection Condition	Possible Cause
AMP ON TERMINAL [U1265]	BOSE amp. ON signal circuit open or short circuited.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.

Diagnosis Procedure

INFOID:0000000008486396

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND BOSE SPEAKER AMP.

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M122 and Bose speaker amp. connector B130.
3. Check continuity between AV control unit connector M122 and Bose speaker amp. connector M130.

AV control unit		Bose speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M122	1	B130	60	Yes

4. Check continuity between AV control unit connector M122 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M122	1	—	No

Is the inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M122.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M122 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(–)	
Connector	Terminal		
M122	1	—	Battery voltage

Is the inspection result normal?

YES >> Replace Bose speaker amp. Refer to AV-392, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1300 AV COMM CIRCUIT

Description

INFOID:0000000008486397

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

SELF DIAGNOSTIC RESULT DISPLAY ITEM

CONSULT Display	DTC Detection Condition	Possible Cause
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	When any of the following is detected: • A/C and AV switch assembly power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	• A/C and AV switch assembly power supply and ground circuits. Refer to AV-337, "A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure". • AV communication circuits between AV control unit and A/C and AV switch assembly.
• AV COMM CIRCUIT [U1300] • AMP CONN [U124E]	When any of the following is detected: • BOSE speaker amp. power supply or ground circuit malfunction. • AV communication circuits between AV control unit and BOSE speaker amp. are malfunctioning.	• BOSE speaker amp. power supply and ground circuits. Refer to AV-335, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between AV control unit and BOSE speaker amp.
• AV COMM CIRCUIT [U1300] • VIDEO DIST CONN [U1246]	When any of the following is detected: • video distributor power supply or ground circuit malfunction. • headrest display unit (driver seat) power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and headrest display unit (driver seat).	• Video distributor power supply and ground circuits. Refer to AV-338, "VIDEO DISTRIBUTOR : Diagnosis Procedure". • Headrest display unit (driver seat) power supply and ground circuits. Refer to AV-339, "HEADREST DISPLAY UNIT : Diagnosis Procedure". • AV communication circuits between AV control unit and headrest display unit (driver seat).
• AV COMM CIRCUIT [U1300] • AROUND CAMERA CONN [U125B]	When any of the following is detected: • around view monitor control unit power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and around view monitor control unit.	• Around view monitor control unit power supply and ground circuits. Refer to AV-339, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure". • AV communication circuits between AV control unit and around view monitor control unit.
• AV COMM CIRCUIT [U1300] • SONAR CONN [U125C]	When any of the following is detected: • sonar control unit power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and sonar control unit.	• Sonar control unit power supply and ground circuits. Refer to AV-340, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : Diagnosis Procedure". • AV communication circuits between AV control unit and sonar control unit.

CONSULT Display	DTC Detection Condition	Possible Cause
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B] • VIDEO DIST CONN [U1246]	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • AMP CONN [U124E] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B] • VIDEO DIST CONN [U1246]		

U1302 CAMERA POWER VOLT

DTC Logic

INFOID:0000000008368306

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY [U1302]	Short in camera power circuit.	• Harness or connectors. • Camera. • Around view monitor control unit.

Diagnosis Procedure

INFOID:0000000008368307

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK CAMERA DATA MONITOR

Check CAMERA IMAGE SIG, CAMERA COMM STATUS and CAMERA COMM LINE for each camera in “DATA MONITOR” of “AVM”.

Is “OK” displayed for all cameras?

YES >> Refer to GI-53, "Intermittent Incident".
NO-1 (Front camera)>>GO TO 2.
NO-2 (Rear camera)>>GO TO 4.
NO-3 (LH side camera)>>GO TO 6.
NO-4 (RH side camera)>>GO TO 8.

2.CHECK FRONT CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and camera connectors.
3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	68	E226	1	Yes
	70		2	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	68	—	No

Is the inspection result normal?

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

3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and front camera connector E226.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
68	70	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace front camera. Refer to AV-403, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

4. CHECK REAR CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
3. Check continuity between around view monitor control unit connector M97 and rear camera connector D511.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	50	D511	8	Yes
	52		7	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	50	—	No

Is the inspection result normal?

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

5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and rear camera connector D511.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
50	52	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace rear camera. Refer to AV-404, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

6. CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	

M97	56	D20	6	Yes
	58		18	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	56	—	No

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness or connectors.

7. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(−)		
Terminal	Terminal		
56	58	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace LH side camera. Refer to AV-405, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

8. CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
3. Check continuity between around view monitor control unit connector M97 and RH side camera connector D113.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	62	D113	6	Yes
	64		18	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	62	—	No

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace harness or connectors.

9. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
62	64	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace RH side camera. Refer to AV-405, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

U1303 LED POWER SUPPLY VOLT

DTC Logic

INFOID:0000000008368308

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
LED SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY [U1303]	Short in camera power circuit.	• Harness or connectors. • Camera. • Around view monitor control unit.

Diagnosis Procedure

INFOID:0000000008368309

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK CAMERA DATA MONITOR

Check CAMERA IMAGE SIG, CAMERA COMM STATUS and CAMERA COMM LINE for each camera in “DATA MONITOR” of “AVM”.

Is “OK” displayed for all cameras?

YES >> Refer to GI-53, "Intermittent Incident".
NO-1 (LH side camera)>>GO TO 2.
NO-2 (RH side camera)>>GO TO 4.

2.CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	56	D20	6	Yes
	58		18	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	56	—	No

Is the inspection result normal?

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

3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
56	58	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace LH side camera. Refer to AV-405, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

4. CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
3. Check continuity between around view monitor control unit connector M97 and RH side camera connector D113.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	62	D113	6	Yes
	64		18	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	62	—	No

Is the inspection result normal?

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

5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
62	64	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace RH side camera. Refer to AV-405, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

U1304 CAMERA IMAGE CALIBRATION

DTC Logic

INFOID:0000000008368310

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE CALIBRATION [U1304]	Camera calibration malfunction.	Cameras are not calibrated. Refer to AV-268, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

U1305 CONFIG UNFINISH

DTC Logic

INFOID:0000000008368312

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE WRITE CONFIGURATION [U1305]	Around view monitor control unit configuration malfunction.	Around view monitor control unit not configurated. Refer to AV-264, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure".

U1310 AV CONTROL UNIT

DTC Logic

INFOID:0000000008486398

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit if malfunction occurs constantly. Refer to AV-388, "Removal and Installation - AV Control Unit".

U1601, U1603, U1609, U160B FRONT DOOR SPEAKER/TWEETER

DTC Logic

INFOID:0000000008486399

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FL-DOOR WOOFER (OPEN, SHORT, GND-SHORT) [U1601] FL-DOOR WOOFER (VB-SHOR] [U1603]	When any of the following is detected: • Sound signal circuit malfunction between BOSE speaker amp. and front door speaker LH. • Sound signal circuit malfunction between BOSE speaker amp. and front tweeter LH.	• Sound signal circuits between BOSE speaker amp. and front door speaker LH. Refer to AV-348, "Diagnosis Procedure". • Sound signal circuits between BOSE speaker amp. and front tweeter LH. Refer to AV-346, "Diagnosis Procedure".
FR-DOOR WOOFER (OPEN, SHORT, GND-SHORT) [U1609] FR-DOOR WOOFER (VB-SHOR) [U160B]	When any of the following is detected: • Sound signal circuit malfunction between BOSE speaker amp. and front door speaker RH. • Sound signal circuit malfunction between BOSE speaker amp. and front tweeter RH.	• Sound signal circuits between BOSE speaker amp. and front door speaker RH. Refer to AV-348, "Diagnosis Procedure". • Sound signal circuits between BOSE speaker amp. and front tweeter RH. Refer to AV-346, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008486400

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1601, U1603, U1609 or U160B detected?

YES >> Refer to AV-348, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U1627, U162F TWEETER

DTC Logic

INFOID:0000000008486401

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST L-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR) [U1627]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter LH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter LH. Refer to AV-344, "Diagnosis Procedure".
F-INST R-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR) [U162F]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter RH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter RH. Refer to AV-344, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008486402

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1627 or U162F detected?

YES >> Refer to AV-344, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U162A CENTER SPEAKER

DTC Logic

INFOID:0000000008486403

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST C-SQUAWK (OPEN, SHORT, GND-SHORT, or VB-SHORT) [U162A]	Sound signal circuit malfunction between BOSE speaker amp. and center speaker.	Sound signal circuits between BOSE speaker amp. and center speaker. Refer to AV-342, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008486404

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U162A detected?

YES >> Refer to AV-342, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U1684, U1687, U168C, U168F REAR DOOR SPEAKER/TWEETER

DTC Logic

INFOID:0000000008486405

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
2L-DOOR SPEAKER (OPEN, SHORT, GND-SHORT) [U1684] 2L-DOOR SPEAKER (VB-SHOR) [U1687]	Sound signal circuit malfunction between BOSE speaker amp. and rear door speaker LH.	Sound signal circuits between BOSE speaker amp. and rear door speaker LH. Refer to AV-350, "Diagnosis Procedure".
2R-DOOR SPEAKER (OPEN, SHORT, GND-SHORT) [U168C] 2R-DOOR SPEAKER (VB-SHOR) [U168F]	Sound signal circuit malfunction between BOSE speaker amp. and rear door speaker RH.	Sound signal circuits between BOSE speaker amp. and rear door speaker RH. Refer to AV-350, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008486406

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1684, U1687, U168C or U168F detected?

YES >> Refer to AV-350, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U175D WOOFER

DTC Logic

INFOID:0000000008486407

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-LUGGAGE L-WOOFER (OPEN, SHORT, GND-SHORT or VB-SHOR) [U175D]	Sound signal circuit malfunction between BOSE speaker amp. and subwoofer.	Sound signal circuits between BOSE speaker amp. and subwoofer. Refer to AV-354, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008486408

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U175D detected?

YES >> Refer to AV-354, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U176A, U1772 ROOF SPEAKER

DTC Logic

INFOID:0000000008487459

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-ROOF L-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR) [U176A]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker LH.	Sound signal circuits between BOSE speaker amp. and rear side speaker LH. Refer to AV-352, "Diagnosis Procedure".
R-ROOF R-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR) [U1772]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker RH.	Sound signal circuits between BOSE speaker amp. and rear side speaker RH. Refer to AV-352, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008487460

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U176A or U1772 detected?

YES >> Refer to AV-352, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

B2720 CORNER SENSOR [RL]

DTC Logic

INFOID:0000000008368291

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR LEFT SIDE EXTERNAL SENSOR [B2720]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Rear sonar sensor LH outer.

Diagnosis Procedure

INFOID:0000000008368345

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK REAR SONAR SENSOR LH OUTER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and rear sonar sensor LH outer connector.
3. Check continuity between sonar control unit connector M70 and rear sonar sensor LH outer connector B455.

Sonar control unit		Rear sonar sensor LH outer		Continuity
Connector	Terminal	Connector	Terminal	
M70	22	B455	2	Yes
	14		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	22	—	No

Is the inspection result normal?

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

2.CHECK REAR SONAR SENSOR LH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	22	—	0V

Is the inspection result normal?

YES >> Replace rear sonar sensor LH outer. Refer to AV-411, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2721 CENTER SENSOR [RL]

DTC Logic

INFOID:0000000008368292

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR LEFT SIDE INTERNAL SENSOR [B2721]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Rear sonar sensor LH inner.

Diagnosis Procedure

INFOID:0000000008368293

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK REAR SONAR SENSOR LH INNER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and rear sonar sensor LH inner connector.
3. Check continuity between sonar control unit connector M70 and rear sonar sensor LH inner connector B457.

Sonar control unit		Rear sonar sensor LH inner		Continuity
Connector	Terminal	Connector	Terminal	
M70	21	B457	2	Yes
	14		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	21	—	No

Is the inspection result normal?

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

2.CHECK REAR SONAR SENSOR LH INNER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	21	—	0V

Is the inspection result normal?

YES >> Replace rear sonar sensor LH inner. Refer to AV-411, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2722 CENTER SENSOR [RR]

DTC Logic

INFOID:0000000008368294

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR RIGHT SIDE INTERNAL SENSOR [B2722]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Rear sonar sensor RH inner.

Diagnosis Procedure

INFOID:0000000008368346

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK REAR SONAR SENSOR RH INNER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and rear sonar sensor RH inner connector.
3. Check continuity between sonar control unit connector M70 and rear sonar sensor RH inner connector B458.

Sonar control unit		Rear sonar sensor RH inner		Continuity
Connector	Terminal	Connector	Terminal	
M70	9	B458	2	Yes
	14		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	9	—	No

Is the inspection result normal?

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

2.CHECK REAR SONAR SENSOR RH INNER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	9	—	0V

Is the inspection result normal?

YES >> Replace rear sonar sensor RH inner. Refer to AV-411, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2723 CORNER SENSOR [RR]

DTC Logic

INFOID:0000000008368295

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR RIGHT SIDE EXTERNAL SENSOR [B2723]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Rear sonar sensor RH outer.

Diagnosis Procedure

INFOID:0000000008368296

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK REAR SONAR SENSOR RH OUTER SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and rear sonar sensor RH outer connector.
3. Check continuity between sonar control unit connector M70 and rear sonar sensor RH outer connector B456.

Sonar control unit		Rear sonar sensor RH outer		Continuity
Connector	Terminal	Connector	Terminal	
M70	10	B456	2	Yes
	14		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	10	—	No

Is the inspection result normal?

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

2.CHECK REAR SONAR SENSOR RH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	10	—	0V

Is the inspection result normal?

YES >> Replace rear sonar sensor RH outer. Refer to AV-411, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2724 SONAR CONTROL UNIT

DTC Logic

INFOID:0000000008368297

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ECU [B2724]	Sonar control module malfunction.	Replace sonar control module.

B2725 REAR BUZZER

DTC Logic

INFOID:0000000008368298

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR BUZZER [B2725]	• Buzzer is open or short circuited. • Buzzer malfunction.	• Harness or connectors. • Buzzer.

Diagnosis Procedure

INFOID:0000000008368299

Regarding Wiring Diagram information, refer to AV-47, "Wiring Diagram".

1.CHECK SONAR BUZZER SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and sonar buzzer connector.
3. Check continuity between sonar control unit connector M70 and sonar buzzer connector B35.

Sonar control unit		Sonar buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M70	20	B35	3	Yes

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	20	—	No

Is the inspection result normal?

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

2.CHECK SONAR BUZZER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	20	—	0V

Is the inspection result normal?

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

3.CHECK SONAR BUZZER SIGNAL CIRCUIT SHORT TO BUZZER POWER

1. Turn ignition switch OFF.
2. Check continuity between sonar control unit connector M70 terminals.

Sonar control unit connector M70		Continuity
Terminal	Terminal	
19	20	No

Is the inspection result normal?

YES >> Replace sonar buzzer. Refer to AV-413, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2729 CORNER SENSOR [FL]

DTC Logic

INFOID:0000000008368300

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT LEFT SIDE EXTERNAL SENSOR [B2729]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Front sonar sensor LH outer.

Diagnosis Procedure

INFOID:0000000008368347

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FRONT SONAR SENSOR LH OUTER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and front sonar sensor LH outer connector.
3. Check continuity between sonar control unit connector M70 and front sonar sensor LH outer connector E307.

Sonar control unit		Front sonar sensor LH outer		Continuity
Connector	Terminal	Connector	Terminal	
M70	3	E307	2	Yes
	13		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	3	—	No

Is the inspection result normal?

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

2.CHECK FRONT SONAR SENSOR LH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	3	—	0V

Is the inspection result normal?

YES >> Replace front sonar sensor LH outer. Refer to AV-411, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B272C CORNER SENSOR [FR]

DTC Logic

INFOID:0000000008368301

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT RIGHT SIDE EXTERNAL SENSOR [B272C]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Front sonar sensor RH outer.

Diagnosis Procedure

INFOID:0000000008368302

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FRONT SONAR SENSOR RH OUTER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and front sonar sensor RH outer connector.
3. Check continuity between sonar control unit connector M70 and front sonar sensor RH outer connector E308.

Sonar control unit		Front sonar sensor RH outer		Continuity
Connector	Terminal	Connector	Terminal	
M70	4	E308	2	Yes
	13		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	4	—	No

Is the inspection result normal?

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

2.CHECK FRONT SONAR SENSOR RH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	4	—	0V

Is the inspection result normal?

YES >> Replace front sonar sensor RH outer. Refer to AV-411, "Removal and Installation".
NO >> Repair or replace harness or connectors.

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

INFOID:0000000008359999

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
68	Ignition signal	29 (5A)
19	Battery power supply	15 (15A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connectors M122 and M124.
3. Check voltage between AV control unit connectors and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M124	68	—	Ignition switch: ON	Battery voltage
M122	7		Ignition switch: ACC	
	19		Ignition switch: OFF	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between AV control unit connector M122 terminal 20 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M122	20	—	Yes

Is the inspection result normal?

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

DISPLAY UNIT
DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000008360000

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
11	Battery power supply	15 (15A)
23	ACC power supply	65 (10A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check voltage between display connector M92 and ground.

Display unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M92	23	—	Ignition switch: ACC	Battery voltage
	11		Ignition switch: OFF	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between display unit connector M92 terminal 12 and ground.

Display unit		Ground	Continuity
Connector	Terminal		
M92	12	—	Yes

Is the inspection result normal?

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

BOSE AMP.

BOSE AMP. : Diagnosis Procedure

INFOID:0000000008202795

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
50	Battery power supply	11 (15A)
51		12 (15A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect BOSE speaker amp. connector B129.
2. Check voltage between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.		Ground	Voltage (Approx.)
Connector	Terminal		
B129	50	—	Battery voltage
	51		

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B129	47	—	Yes
	52		

Is the inspection result normal?

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

SUBWOOFER

SUBWOOFER : Diagnosis Procedure

INFOID:0000000008368278

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
6	Battery power supply	58 (10A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect subwoofer connector.
2. Check voltage between subwoofer connector B73 and ground.

Subwoofer		Ground	Voltage (Approx.)
Connector	Terminal		
B73	6	—	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between subwoofer connector B73 and ground.

Subwoofer		Ground	Continuity
Connector	Terminal		
B73	5	—	Yes

Is the inspection result normal?

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

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:0000000008360030

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuse is not blown.

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

Is the fuse blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/C and AV switch assembly connector.
3. Check voltage between A/C and AV switch assembly connector M98 terminal 3 and ground.

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

Is the inspection result normal?

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

3.CHECK CONTROL UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M125.
3. Check continuity between A/C and AV switch assembly connector M98 terminal 9 and AV control unit connector M125 terminal 98.

A/C and AV switch assembly		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M98	9	M125	98	Yes

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connectors.

4.CHECK SWITCH GROUND CIRCUIT

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

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

Is the inspection result normal?

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

VIDEO DISTRIBUTOR

VIDEO DISTRIBUTOR : Diagnosis Procedure

INFOID:0000000008360034

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
2	ACC power supply	65 (10A)
4	Battery power supply	15 (15A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector B24.
3. Check voltage between video distributor connector B24 and ground.

Video distributor		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
B24	2	—	Ignition switch: ACC	Battery voltage
	4		Ignition switch: OFF	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal		
B24	1	—	Yes
	3		

Is the inspection result normal?

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

HEADREST DISPLAY UNIT

HEADREST DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000008368245

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
24	Battery power supply	15 (15A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect headrest display unit connector.
2. Check voltage between headrest display unit connector and ground.

Headrest displayl unit		Ground	Voltage (Approx.)
Connector	Terminal		
B202 (driver seat)	24	—	Battery voltage
B302 (passenger seat)			

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between headrest display unit connector and ground.

Headrest displayl unit		Ground	Continuity
Connector	Terminal		
B202 (driver seat)	12	—	Yes
B302 (passenger seat)			

Is the inspection result normal?

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

AROUND VIEW MONITOR CONTROL UNIT

AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:0000000008360032

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
3	Ignition signal	29 (5A)

Terminal No.	Signal name	Fuse No.
4	ACC power supply	65 (10A)
2	Battery power supply	15 (15A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96.
3. Check voltage between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M96	3	—	Ignition switch: ON	Battery voltage
	4		Ignition switch: ACC	
	2		Ignition switch: OFF	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	1	—	Yes

Is the inspection result normal?

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

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : Diagnosis Procedure

INFOID:0000000008360033

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

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

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector M70.
3. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M70	12	—	Ignition switch: ACC	Battery voltage

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	15	—	Yes

Is the inspection result normal?

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

CENTER SPEAKER

Diagnosis Procedure

INFOID:0000000008360035

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B130 and center speaker connector.
2. Check continuity between BOSE speaker amp. connector B130 and center speaker connector.

BOSE speaker amp.		Center speaker		Continuity
Connector	Terminal	Connector	Terminal	
B130	69	M110	1	Yes
	70		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

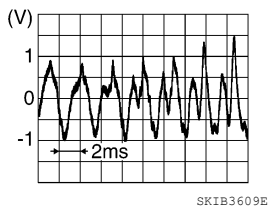
BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	69	—	No
	70		

Is the inspection result normal?

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

3.CHECK CENTER SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B130 and center speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp. connector B130		Condition	Reference value
(+)	(–)		
Terminal	Terminal		
69	70	Audio signal output	

Is the inspection result normal?

YES >> Replace center speaker. Refer to AV-396, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

INSTRUMENT PANEL SPEAKER/TWEETER

Diagnosis Procedure

INFOID:0000000008360002

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B129 and suspect instrument panel tweeter connector.
2. Check continuity between BOSE speaker amp. connector B129 and suspect instrument panel tweeter connector.

BOSE speaker amp.		Instrument panel tweeter		Continuity
Connector	Terminal	Connector	Terminal	
B129	41	M62 (LH)	1	Yes
	42		2	
	45	M73 (RH)	1	
	46		2	

3. Check continuity between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B129	41	—	No
	42		
	45		
	46		

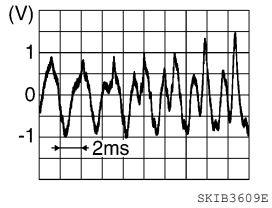
Is the inspection result normal?

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

3.CHECK INSTRUMENT PANEL TWEETER SIGNAL

1. Connect BOSE speaker amp. connector B129 and suspect instrument panel tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.		Condition	Reference value
(+)	(−)		
Terminal	Terminal		

41	42	Audio signal output	
45	46		

Is the inspection result normal?

YES >> Replace instrument panel tweeter. Refer to AV-395, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

FRONT TWEETER

Diagnosis Procedure

INFOID:0000000008360036

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK FRONT TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B130 and suspect front tweeter connector.
2. Check continuity between BOSE speaker amp. connector B130 and suspect front door speaker connector.

BOSE speaker amp.		Front tweeter		Continuity
Connector	Terminal	Connector	Terminal	
B130	58	M109 (LH)	1	Yes
	59		2	
	71	M111 (RH)	1	
	72		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	58	—	No
	59		
	71		
	72		

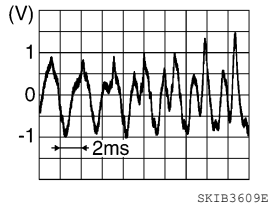
Is the inspection result normal?

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

3.CHECK FRONT TWEETER SIGNAL

1. Connect BOSE speaker amp. connector B130 and suspect front tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp. connector B130		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

58	59	Audio signal output	
71	72		

Is the inspection result normal?

YES >> Replace front tweeter. Refer to AV-394, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000008360001

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B130 and suspect front door speaker connector.
2. Check continuity between BOSE speaker amp. connector B130 and suspect front door speaker connector.

BOSE speaker amp.		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B130	58	D12 (LH)	1	Yes
	59		2	
	71	D112 (RH)	1	
	72		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	58	—	No
	59		
	71		
	72		

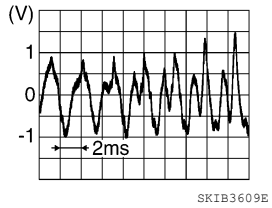
Is the inspection result normal?

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

3.CHECK FRONT DOOR SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B130 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp. connector B130		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

58	59	Audio signal output	
71	72		

Is the inspection result normal?

YES >> Replace front door speaker. Refer to AV-393, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

REAR DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000008360037

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

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

BOSE speaker amp.		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B130	68	D207 (LH)	1	Yes
	55		2	
B129	54	D307 (RH)	1	
	49		2	

3. Check continuity between BOSE speaker amp. connectors and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	68	—	No
	55		
B129	54		
	49		

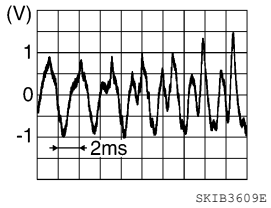
Is the inspection result normal?

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

3.CHECK REAR DOOR SPEAKER SIGNAL

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

BOSE speaker amp.			Condition	Reference value
Connector	(+)	(–)		
	Terminal	Terminal		

B130	68	55	Audio signal output	
B129	54	49		

Is the inspection result normal?

YES >> Replace rear door speaker. Refer to AV-397, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

REAR SPEAKER

Diagnosis Procedure

INFOID:0000000008360003

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK REAR SIDE SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B129 and suspect rear side speaker connector.
2. Check continuity between BOSE speaker amp. connector B129 and suspect rear side speaker connector.

BOSE speaker amp.		Rear side speaker		Continuity
Connector	Terminal	Connector	Terminal	
B129	53	B1 (LH)	1	Yes
	48		2	
	44	B153 (RH)	1	
	43		2	

3. Check continuity between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B129	53	—	No
	48		
	44		
	43		

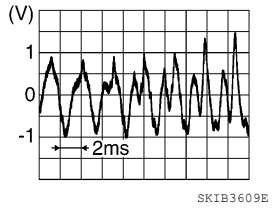
Is the inspection result normal?

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

3.CHECK REAR SIDE SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B129 and suspect rear side speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B129 and ground.

BOSE speaker amp. connector B129		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

53	48	Audio signal output	
44	43		

Is the inspection result normal?

YES >> Replace rear side speaker. Refer to AV-398, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

SUBWOOFER

Diagnosis Procedure

INFOID:0000000008368248

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and subwoofer connectors for the following:
- Proper connection
- Damage
- Disconnected or looses terminals

Is the inspection result normal?

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

2.VERIFY SUBWOOFER POWER SUPPLY AND GROUND

Check subwoofer power supply and ground. Refer to AV-336, "SUBWOOFER : Diagnosis Procedure".

Is the inspection result normal?

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

3.CHECK SUBWOOFER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B130 and subwoofer connector.
2. Check continuity between BOSE speaker amp. connector B130 and subwoofer connector.

BOSE speaker amp.		Subwoofer		Continuity
Connector	Terminal	Connector	Terminal	
B130	57	B73	1	Yes
	56		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

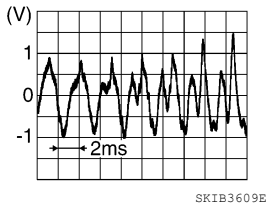
BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B130	57	—	No
	56		

Is the inspection result normal?

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

4.CHECK SUBWOOFER SIGNAL

1. Connect BOSE speaker amp. connector B130 and subwoofer connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp. connector B130		Condition	Reference value
(+)	(–)		
Terminal	Terminal		
57	56	Audio signal output	 SKIB3609E

Is the inspection result normal?

YES >> Replace subwoofer. Refer to AV-399, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".

FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008360004

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY

1. Turn ignition OFF.
2. Disconnect AV control unit connector M123 and front auxiliary input jacks connector.
3. Check continuity between AV control unit connector M123 and front auxiliary input jacks connector.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M123	24	M205	3	Yes
	38		1	

4. Check continuity between AV control unit connector M123 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M123	24	—	No
	38		

Is inspection result normal?

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

2.CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M123 and front auxiliary input jacks connector.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M123	39	M205	2	Yes

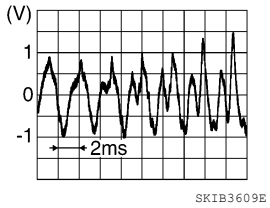
Is inspection result normal?

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

3.CHECK AUX SOUND SIGNAL

1. Connect AV control unit connector M123 and front auxiliary input jacks connector.
2. Turn ignition switch to ACC.
3. Select AUX mode.
4. Check signals between AV control unit connector M123 and ground.

AV control unit connector M123		Condition	Reference value
(+)	(−)		
Terminal	Terminal		

24	39	AUX mode selected	
38	39		

Is the inspection result normal?

YES >> Replace front auxiliary input jacks. Refer to AV-401, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

RGB DIGITAL IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368212

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK RGB DIGITAL IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M140 and display unit connector M141.
3. Check continuity between AV control unit connector M140 and display unit connector M141.

AV control unit		Display unit		Continuity
Connector	Terminals	Connector	Terminals	
M140	165	M141	28	Yes
	164		27	

4. Check continuity between AV control unit connector M140 and ground.

AV control unit		Ground	Continuity
Connector	Terminals		
M140	165	—	No

Is the inspection result normal?

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

2.CHECK RGB DIGITAL IMAGE SIGNAL

1. Connect AV control unit connector M140.
2. Turn ignition switch ON.
3. Check signal between display unit connector M141 and ground.

Display unit connector M141		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
28	27	Audio system is ON.	1.3 V

Is the inspection result normal?

YES >> Replace display unit. Refer to AV-391, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000008368214

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M124 and display unit connector M92.
3. Check continuity between AV control unit connector M124 and display unit connector M92.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M124	56	M92	18	Yes
	55		19	

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

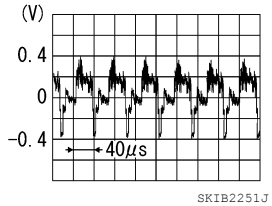
AV control unit		Ground	Continuity
Connector	Terminal		
M124	56	—	No

Is the inspection result normal?

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

2.CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector M124 and display unit connector M92.
2. Turn ignition switch ON.
3. Check signal between AV control unit connector M124 and ground.

AV control unit connector M124		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
56	55	DVD image is displayed.	

Is the inspection result normal?

YES >> Replace display unit. Refer to AV-391, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIBUTOR)

Diagnosis Procedure

INFOID:0000000008368216

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M125 and video distributor connector B25.
3. Check continuity between AV control unit connector M125 and video distributor connector B25.

AV control unit		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	
M125	107	B25	34	Yes
	105		33	

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

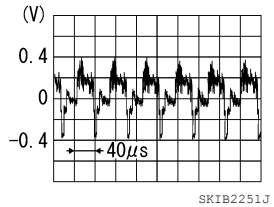
AV control unit		Ground	Continuity
Connector	Terminal		
M125	107	—	No

Is the inspection result normal?

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

2.CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector M125 and video distributor connector B25.
2. Turn ignition switch ON.
3. Check signal between video distributor connector B25 and ground.

Video distributor connector B25		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
34	33	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	

Is the inspection result normal?

YES >> Replace video distributor. Refer to AV-406, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEADREST DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000008368218

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect video distributor connector B24 and headrest display unit connectors.
3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video distributor		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	
B24	32	B202 (driver seat)	16	Yes
	31		4	
	28	B302 (passenger seat)	16	Yes
	27		4	

4. Check continuity between video distributor connector B24 and ground.

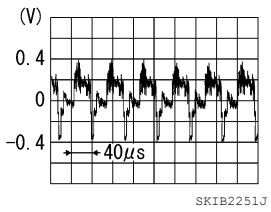
Video distributor		Ground	Continuity
Connector	Terminal		
B24	32	—	No
	28		

Is the inspection result normal?

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

2.CHECK COMPOSITE IMAGE SIGNAL

1. Connect video distributor connector B24 and headrest display unit connectors.
2. Turn ignition switch ON.
3. Check signal between headrest display unit connectors and ground.

Headrest display unit			Condition	Reference value
Connector	(+)	(−)		
	Terminal	Terminal		
B202 (driver seat)	32	31	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	
B302 (passenger seat)	28	27		

Is the inspection result normal?

YES >> Replace headrest display unit. Refer to AV-407, "Removal and Installation".
NO >> Replace video distributor. Refer to AV-406, "Removal and Installation".

AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV CONTROL UNIT)

Diagnosis Procedure

INFOID:0000000008368220

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK AUX IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M125 and front auxiliary input jacks connector M205.
3. Check continuity between AV control unit connector M125 and front auxiliary input jacks connector M205.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M125	91	M205	7	Yes
	92		8	

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

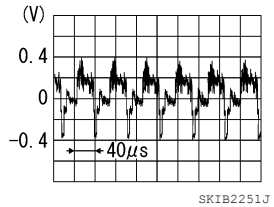
AV control unit		Ground	Continuity
Connector	Terminal		
M125	91	—	No

Is the inspection result normal?

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

2.CHECK AUX IMAGE SIGNAL

1. Connect AV control unit connector M125 and front auxiliary input jacks connector M205.
2. Turn ignition switch ON.
3. Check signal between front auxiliary input jacks connector M205 and ground.

Front auxiliary input jacks connector M205		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
7	8	Front auxiliary input jacks image is displayed.	

Is the inspection result normal?

YES >> Replace front auxiliary input jacks. Refer to AV-684, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-128, "Removal and Installation - AV Control Unit".

IMAGE SWITCH SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368224

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1. CHECK CONTINUITY IMAGE SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector B24 and headrest display unit connectors.
3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video distributor		Headrest display unit		Continuity
Connector	Terminal	Connector	Terminal	
B24	10	B202 (driver seat)	7	Yes
	7		6	
	9	B302 (passenger seat)	7	
	5		6	

4. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal		
B24	10	—	No
	9		

Is the inspection result normal?

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

2. CHECK VIDEO DISTRIBUTOR VOLTAGE

1. Connect video distributor connector B24 and headrest display unit connectors.
2. Turn ignition switch ON.
3. Check voltage between video distributor connector B24 and ground.

Video distributor connector B24		Condition	Voltage (Approx.)
(+)	(−)		
Terminal	Terminal		
10	7	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0.5 V
		DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V
9	5	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0.5 V
		DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V

Is the inspection result normal?

YES >> Replace headrest display unit. Refer to AV-407, "Removal and Installation".
NO >> Replace video distributor. Refer to AV-406, "Removal and Installation".

DISK EJECT SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368351

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK DISK EJECT SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M125 and A/C and AV switch assembly connector.
3. Check continuity between AV control unit connector M125 terminal 97 and A/C and AV switch assembly connector M98 terminal 14.

AV control unit		A/C and AV switch assembly		Continuity
Connector	Terminal	Connector	Terminal	
M125	97	M98	14	Yes

4. Check continuity between AV control unit connector M125 terminal 978 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M125	97		No

Is inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M125 and A/C and AV switch assembly connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M125 terminal 97 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(–)		
Connector	Terminal			
M125	97	—	Pressing eject switch	0 V
			Except above	5.0 V

Is the inspection result normal?

YES >> Replace A/C and AV switch assembly. Refer to AV-389, "Removal and Installation - AV and AC Switch Assembly".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

MODE CHANGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368228

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK MODE CHANGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M122 and BOSE speaker amp. connector B130.
3. Check continuity between AV control unit connector M122 and BOSE speaker amp. connector B130.

AV control unit		BOSE speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M122	1	B130	60	Yes

4. Check continuity between AV control unit connector M122 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M122	1	—	No

Is the inspection result normal?

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

2.CHECK MODE CHANGE SIGNAL

1. Connect AV control unit connector M122 and BOSE speaker amp. connector B130.
2. Turn ignition switch ON.
3. Check voltage between BOSE amp. harness connector and ground.

BOSE speaker amp.		Ground	Condition	Voltage (Approx.)
(+)		(–)		
Connector	Terminal			
B130	60	—	Driver's Audio Stage ON.	0 V
			Driver's Audio Stage OFF.	8.5 V

Is the inspection result normal?

YES >> Replace BOSE speaker amp. Refer to AV-392, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

STEERING SWITCH

Diagnosis Procedure

INFOID:0000000008368349

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

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

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace steering wheel audio control switch. Refer to AV-390, "Removal and Installation".

2.CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

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

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

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

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

Is the inspection result normal?

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

3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M149.

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

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace spiral cable. Refer to SR-13, "Removal and Installation".

4. CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

1. Disconnect AV control unit connector M122.
2. Check continuity between combination meter connector M24 and AV control unit connector M122.

Combination meter		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	14	M122	6	Yes
	15		16	
	16		15	

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

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

Is the inspection result normal?

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

5. CHECK AV CONTROL UNIT VOLTAGE

1. Connect combination meter connector M24 and AV control unit connector M122.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M122.

AV control unit M122		Voltage (Approx.)
(+)	(−)	
Terminal	Terminal	
6	15	5.0 V
16		

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-93, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit".

USB CONNECTOR

Diagnosis Procedure

INFOID:0000000008368350

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M55 and USB interface connector M209.
3. Check continuity between AV control unit connector M55 and USB interface connector M209.

AV control unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M55	137	M209	1	Yes
	138		2	
	139		3	
	140		4	
	141		5	

4. Check continuity between AV control unit connector M55 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M55	137	Ground	No
	139		

Is the inspection result normal?

YES >> Replace the USB interface. Refer to AV-400, "Removal and Installation".
NO >> Repair or replace harness or connectors.

FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368230

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and front camera connector E226.
3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	67	E226	6	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

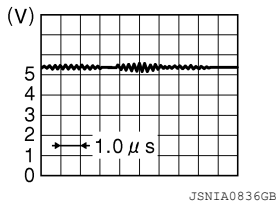
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	67	—	No

Is inspection result normal?

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

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector M97 and front camera connector E226.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit (+)		Ground (–)	Condition	Reference value
Connector	Terminal			
M97	67	—	CAMERA switch is ON or shift position is R.	

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Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".
NO >> Replace front camera. Refer to AV-403, "Removal and Installation".

FRONT CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368232

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK FRONT CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and front camera connector E226.
3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
M97	71	E226	3	Yes
	72		4	

4. Check continuity between around view monitor control unit connector M97 and ground.

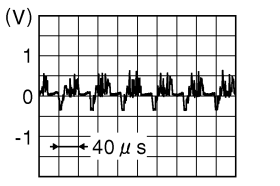
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M97	71	—	No

Is inspection result normal?

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

2.CHECK FRONT CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M97 and front camera connector E226.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 terminals.

Around view monitor control unit		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
71	72	CAMERA switch is ON or shift position is R.	

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Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".
NO >> Replace front camera. Refer to AV-403, "Removal and Installation".

REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368234

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
3. Check continuity between around view monitor control unit connector M97 and front camera connector D511.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	49	D511	4	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

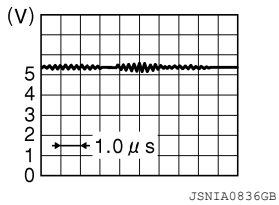
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	49	—	No

Is inspection result normal?

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

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector M97 and rear camera connector D511.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Condition	Reference value
(+)		(–)		
Connector	Terminal			
M97	49	—	CAMERA switch is ON or shift position is R.	

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".
NO >> Replace rear camera. Refer to AV-404, "Removal and Installation".

REAR CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368236

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK REAR CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
3. Check continuity between around view monitor control unit connector M97 and rear camera connector D511.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector	Terminals	
M97	53	D511	5	Yes
	54		1	

4. Check continuity between around view monitor control unit connector M97 and ground.

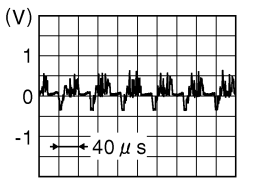
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M97	53	—	No

Is inspection result normal?

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

2.CHECK REAR CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M97 and rear camera connector D511.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 terminals.

Around view monitor control unit		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
53	54	CAMERA switch is ON or shift position is R.	

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Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".
NO >> Replace rear camera. Refer to AV-404, "Removal and Installation".

SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368238

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1. CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	55	D20	16	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

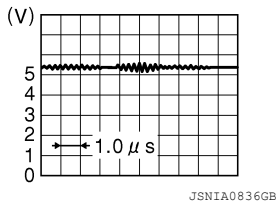
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	55	—	No

Is inspection result normal?

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

2. CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit (+)		Ground (–)	Condition	Reference value
Connector	Terminal			
M97	55	—	CAMERA switch is ON or shift position is R.	

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Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".
NO >> Replace LH side camera. Refer to AV-405, "Removal and Installation".

SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368240

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK LH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M97	59	D20	5	Yes
	60		17	

4. Check continuity between around view monitor control unit connector M97 and ground.

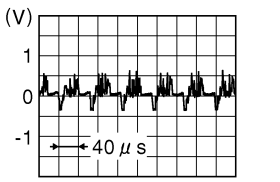
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M97	59	—	No

Is inspection result normal?

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

2.CHECK LH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 terminals.

Around view monitor control unit		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
59	60	CAMERA switch is ON or shift position is R.	

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Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".
NO >> Replace LH side camera. Refer to AV-405, "Removal and Installation".

SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368242

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
3. Check continuity between around view monitor control unit connector M97 and fRH side camera connector D113.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	61	D113	16	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

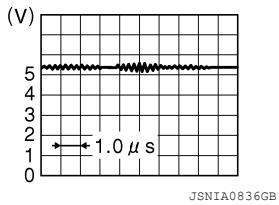
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	61	—	No

Is inspection result normal?

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

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit (+)		Ground (–)	Condition	Reference value
Connector	Terminal			
M97	61	—	CAMERA switch is ON or shift position is R.	

JSNIA0836GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".
NO >> Replace RH side camera. Refer to AV-405, "Removal and Installation".

SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008368244

Regarding Wiring Diagram information, refer to AV-211, "Wiring Diagram".

1.CHECK RH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
3. Check continuity between around view monitor control unit connector M97 and fRH side camera connector D113.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M97	65	D113	5	Yes
	66		17	

4. Check continuity between around view monitor control unit connector M97 and ground.

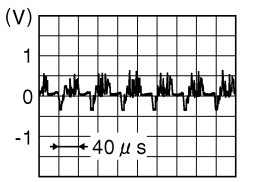
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M97	65	—	No

Is inspection result normal?

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

2.CHECK RH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 terminals.

Around view monitor control unit		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
65	66	CAMERA switch is ON or shift position is R.	

JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".
NO >> Replace RH side camera. Refer to AV-405, "Removal and Installation".

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:0000000008359993

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power and ground circuit • AV control unit	• AV-334 • AV-159
Steering switch does not operate	• Steering switch • AV control unit	• AV-366 • AV-159
All speakers do not sound	• Speaker circuit shorted to ground • AV control unit power and ground circuit • BOSE speaker amp. ON signal • BOSE speaker amp. power and ground circuit • BOSE speaker amp. • AV control unit	• AV-211 • AV-334 • AV-335 • AV-335 • AV-392 • AV-159
One or several speakers do not sound	• Front door speaker • Front tweeter • Center speaker • Instrument panel speaker/tweeter • Rear door speaker • Rear speaker • Subwoofer	• AV-348 • AV-346 • AV-342 • AV-344 • AV-350 • AV-352 • AV-354
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 and ground circuit • AV control unit	• AV-334 • AV-159
Steering switch does not operate	• Steering switch • AV control unit	• AV-366 • AV-159
Voice activated control does not operate	• Microphone • Steering switch • AV control unit	• AV-816 • AV-366 • AV-159

HANDS-FREE PHONE SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power and ground circuit • AV control unit	• AV-334 • AV-159
Steering switch does not operate	• Steering switch • AV control unit	• AV-366 • AV-159
Voice activated control does not operate	• Microphone • Steering switch • AV control unit	• AV-816 • AV-366 • AV-159

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	AV control unit	AV-159
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	• AV control unit power supply or ground circuit • AV control unit	• AV-334 • AV-388

DVD PLAYER

Symptom	Possible cause	Reference page
DVD player inoperative	• Power supply and ground circuits • DVD player	• AV-334 • AV-388
No sound when playing a DVD	• Audio signal circuits • AV control unit • DVD player	• AV-181 • AV-159 • AV-388
Video monitor is inoperative/does not display properly	• Power supply and ground circuits • Video out circuit • DVD player • Video monitor	• AV-334 • AV-181 • AV-388 • AV-391
DVD remote control is inoperative/does not operate properly	• DVD remote control • DVD player	• AV-388
Headphones inoperative	• Headphone batteries • DVD player	• AV-388

AROUND VIEW MONITOR

Symptom	Possible cause	Reference page
It does not switch to camera image even when the “CAMERA” switch is pressed or the selector lever is in the reverse position.	• Ignition signal circuit malfunction (around view monitor control unit). • Around view monitor control unit power supply and ground circuits malfunction. • AV communication circuits malfunction.	• AV-201 • AV-339 • AV-359
The screen switches when pressing the “CAMERA” switch or shifting the selector lever to the reverse position, however, all views are not displayed.	• Camera image signal circuit between around view monitor control unit and front display unit malfunction • Communication circuit between AV control unit and front display unit malfunction	• AV-359 • AV-359
Camera image is rolling.	Communication circuit between AV control unit and front display unit malfunction	AV-359
It cannot be switched to rear view monitor even when the selector lever is in the reverse position.	Reverse signal circuit malfunction. (AV control unit)	AV-201
The predicted course line display in front view and rear view is malfunctioning.	Steering angle sensor signal circuits.	AV-201
• The front view screen is not displayed. • The front of Birds-Eye view screen is not displayed.	• Front camera image signal circuit malfunction. • Front camera power supply and ground circuits malfunction. • Front camera communication signal circuit malfunction.	• AV-370 • AV-339 • AV-369
• The rear view screen is not displayed. • The rear of Birds-Eye view screen is not displayed.	• Rear camera image signal circuit malfunction. • Rear camera power supply and ground circuits malfunction. • Rear camera communication signal circuits malfunction.	• AV-372 • AV-339 • AV-371

Symptom	Possible cause	Reference page
• The front-side screen is not displayed. • The passenger side of Birds-Eye view screen is not displayed.	• Side camera RH image signal circuit malfunction. • Side camera RH power supply and ground circuits malfunction. • Side camera RH communication circuit malfunction.	• AV-376 • AV-339 • AV-375
The driver side of Birds-eye view screen is not displayed.	• Side camera LH image signal circuit malfunction. • Side camera LH power supply and ground circuits malfunction. • Side camera LH communication circuit malfunction.	• AV-374 • AV-339 • AV-373
When shift position is other than “R” the front-side and front screen or the Birds-Eye view and front screen remain displaying even if the vehicle speed increases.	Vehicle speed signal circuit malfunction (around view monitor control unit).	AV-201

CAMERA ASSISTANCE SONAR

Symptoms	Possible cause	Reference page
The malfunction is detected in only 1 indicator (Always displayed in red).	• Corner sensor malfunction in corresponding area. • Corner sensor harness circuit in corresponding area.	Perform CONSULT “self-diagnosis” of “SONAR”. Refer to AV-176.
The malfunction is detected in all 4 indicators (Always displayed in red).	Corner sensor ground circuit malfunction.	Perform CONSULT “self-diagnosis” of “SONAR”. Refer to AV-176.
	• Sonar control unit power supply and ground circuits malfunction. • AV communication circuits malfunction.	Perform CONSULT “self-diagnosis” of “MULTI AV”. Refer to AV-172.

NORMAL OPERATING CONDITION

Description

INFOID:0000000008359994

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

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.

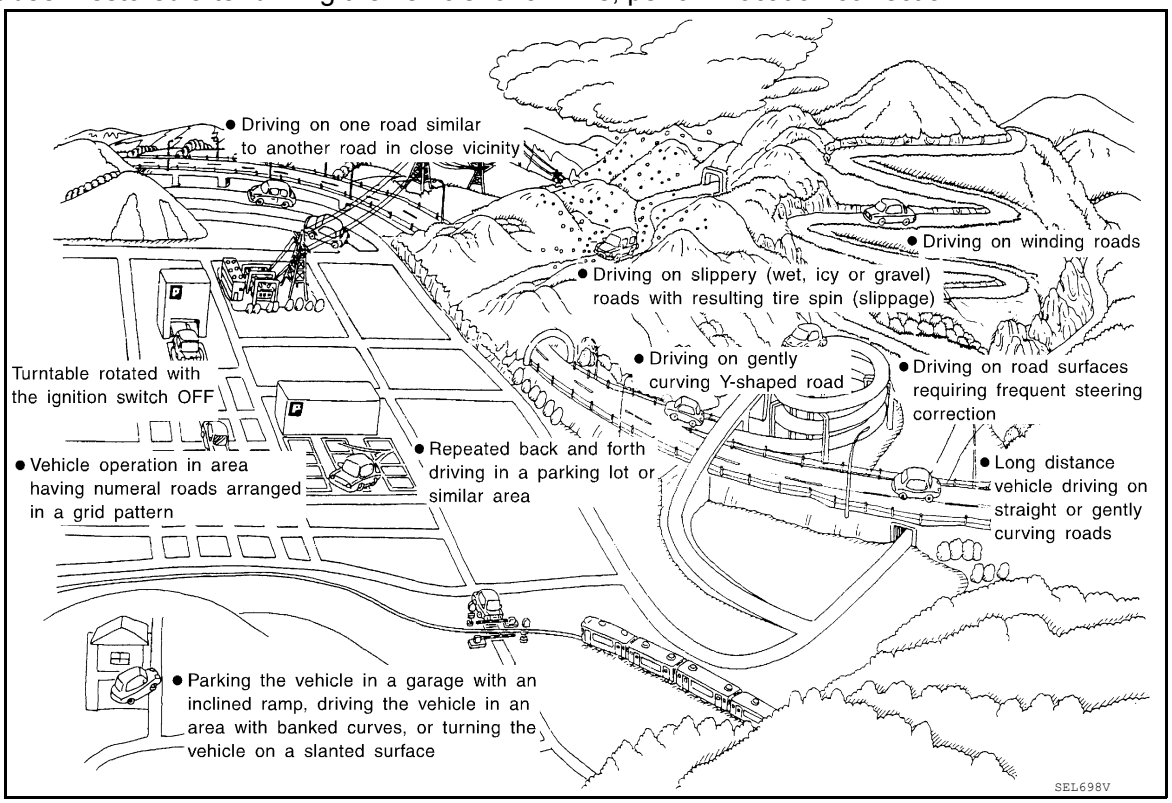
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, 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.

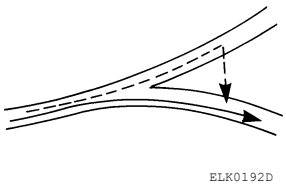
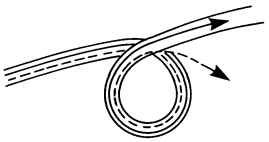
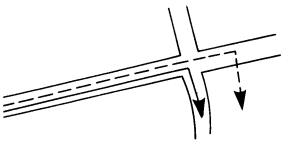
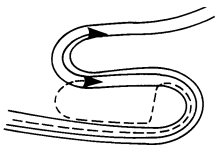
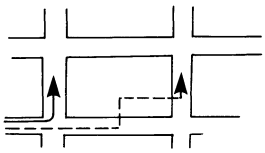
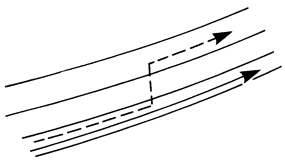
NOTE:

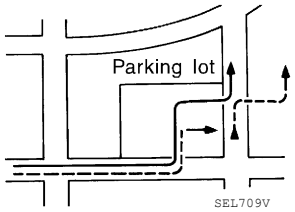
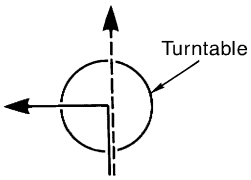
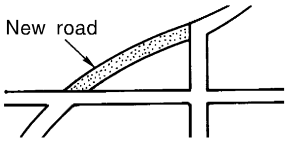
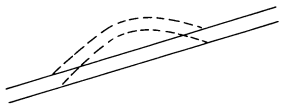
Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

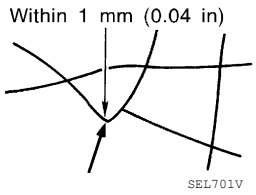
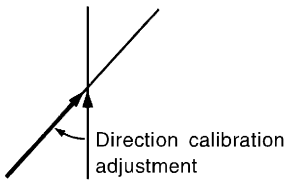
Examples of Current-Location Mark Displacement

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  SEL709V	When driving in a parking lot, or other location where there are no roads on the map, matching may place the vehicle mark on a nearby road. When the vehicle returns to the road, the vehicle mark may have deviated from the correct location. When driving in circle or turning the steering wheel repeatedly, direction errors accumulate, and the vehicle mark may deviate from the correct location.	If after travelling about 10 km (6 miles) the correct location has not been restored, perform location correction and, if necessary, direction correction.
	Turntable  SEL710V	When the ignition switch is OFF, the navigation system cannot get the signal from the gyroscope (angular speed sensor). Therefore, the displayed direction may be wrong and the correct road may not be easily returned to after rotating the vehicle on a turntable with the ignition OFF.	
	Slippery roads	On snow, wet roads, gravel, or other roads where tires may slip easily, accumulated mileage errors may cause the vehicle mark to deviate from the correct road.	
	Slopes	When parking in sloped garages, when travelling on banked roads, or in other cases where the vehicle turns when tilted, an error in the turning angle will occur, and the vehicle mark may deviate from the road.	
Map data	Road not displayed on the map screen  SEL699V	When driving on new roads or other roads not displayed on the map screen, map matching does not function correctly and matches the location to a nearby road. When the vehicle returns to a road which is on the map, the vehicle mark may deviate from the correct road.	
	Different road pattern (Changed due to repair)  ELK0201D	If the road pattern stored in the map data and the actual road pattern are different, map matching does not function correctly and matches the location to a nearby road. The vehicle mark may deviate from the correct road.	
Vehicle	Use of tire chains	When tire chains are used, the mileage is not correctly detected, and the vehicle mark may deviate from the correct road.	Drive the vehicle for a while. If the distance still deviates, adjust it by using the distance adjustment function. (If the tire chain is removed, recover the original value.)

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

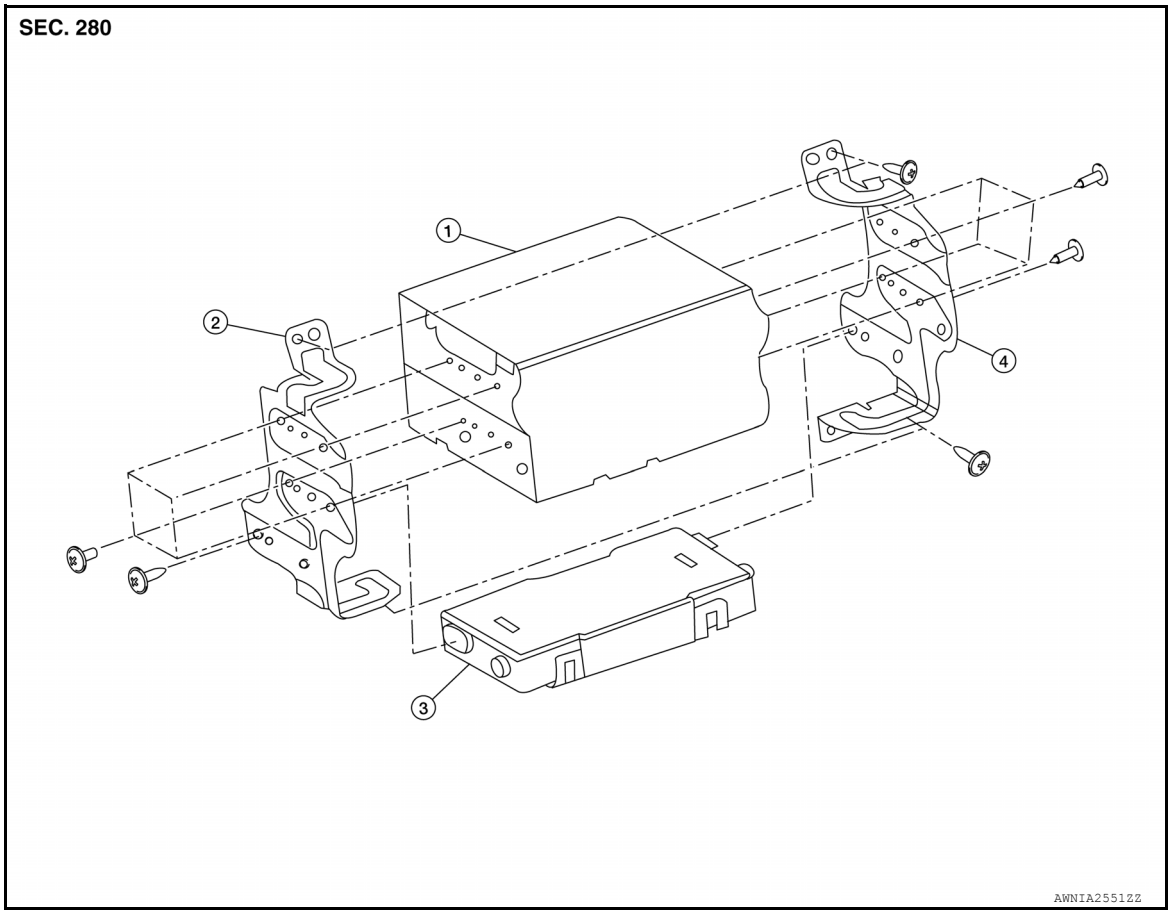
The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

INFOID:0000000008472310



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

Removal and Installation - AV Control Unit

INFOID:0000000008297223

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Description".

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
2. Remove cluster lid C upper. Refer to IP-21, "Removal and Installation - Cluster Lid C Upper".
3. Remove the screws, then pull out the AV control unit.
4. Disconnect the harness connectors from the AV control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Description".**

Removal and Installation - AV and AC Switch Assembly

INFOID:0000000008297224

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to AV-262, "CONFIGURATION (AV CONTROL UNIT) : Description".

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
2. Remove cluster lid C. Refer to IP-21, "Removal and Installation - Cluster Lid C Upper"
3. Remove the AV and AC switch assembly screws (A), then separate the cluster lid C from AV and AC switch assembly.
4. Release upper pawls and remove AV and AC switch assembly

INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

Removal and Installation

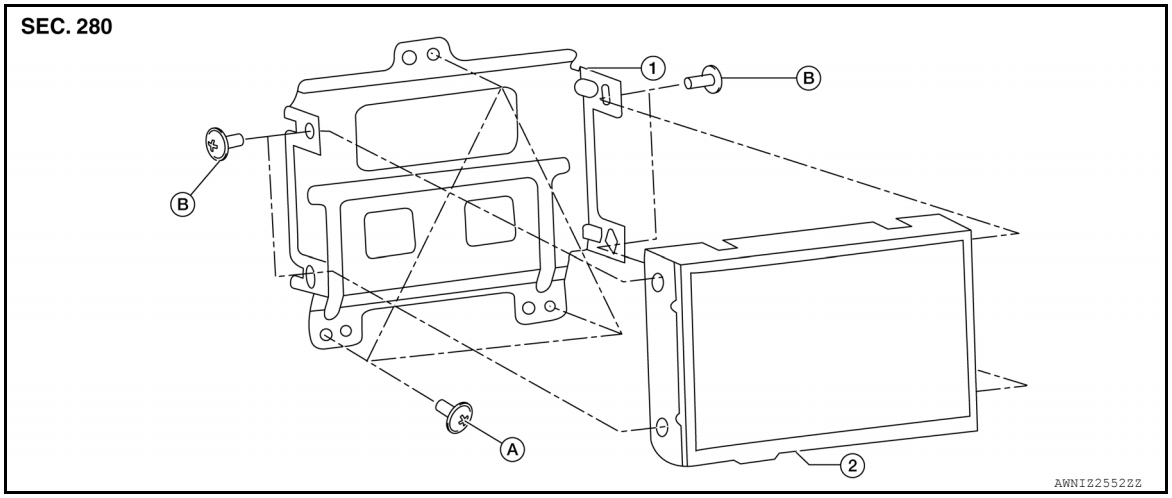
INFOID:0000000008297225

The steering switch and ICC steering switch are serviced as an assembly. Refer to CCS-190, "Removal and Installation".

DISPLAY UNIT

Exploded View

INFOID:0000000008368147



1. Display unit bracket
2. Display unit
A. Display unit bracket screws
B. Display unit screws

Removal and Installation

INFOID:0000000008368148

REMOVAL

1. Remove cluster lid D. Refer to IP-22, "Removal and Installation".
2. Remove the display unit screws, and then pull out the display unit and bracket.
3. Disconnect harness connector from the display unit, then remove the display unit and bracket.
4. Remove the display unit brackets screws, then remove the display unit from the display unit bracket.

INSTALLATION

Installation is in the reverse order of removal.

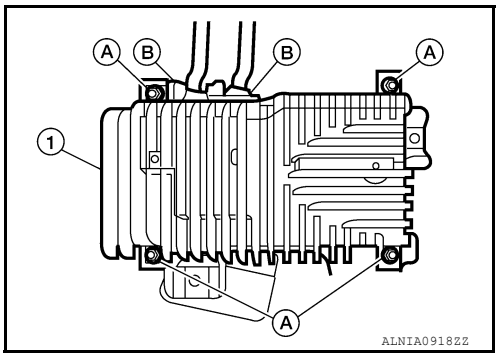
BOSE SPEAKER AMP

Removal and Installation

INFOID:0000000008297227

REMOVAL

1. Disconnect the negative battery terminal. Refer to PG-92, "Exploded View"
2. Remove third row seat. Refer to SE-95, "Removal and Installation".
3. Remove Bose speaker amp screws (A).
4. Disconnect the harness connectors (B) from the Bose speaker amp. and remove.



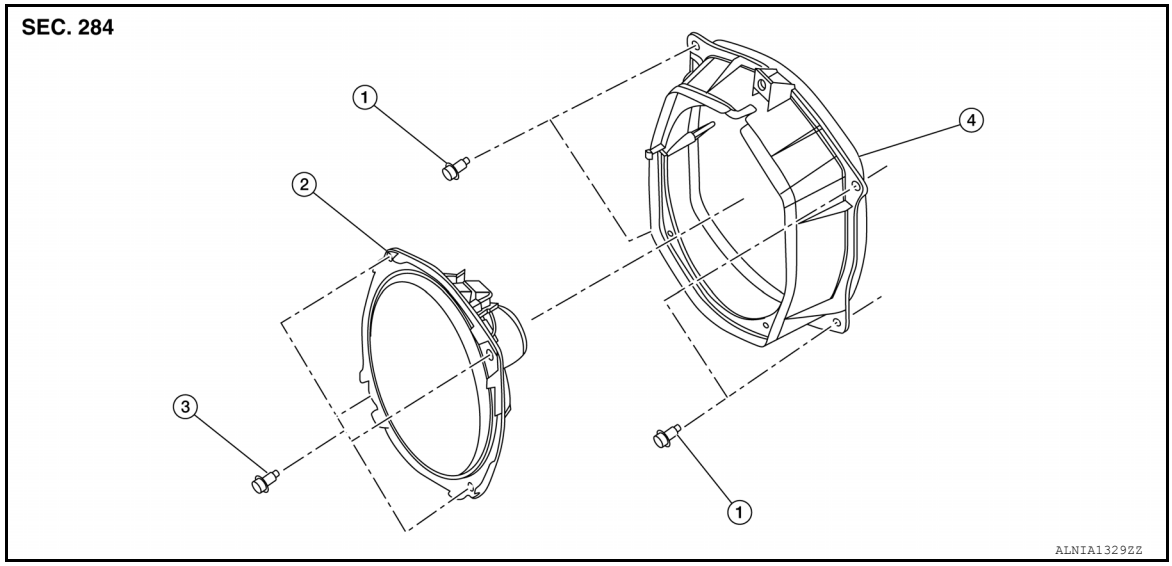
INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000008297228



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

Removal and Installation

INFOID:0000000008297229

REMOVAL

1. Remove front door finisher. Refer to INT-15, "Removal and Installation".
2. Remove front door speaker bolts.
3. Disconnect harness connector from front door speaker, then remove front door speaker from speaker bracket.
4. Remove speaker bracket bolts.
5. Remove speaker bracket from front door.

INSTALLATION

Installation is in the reverse order of removal.

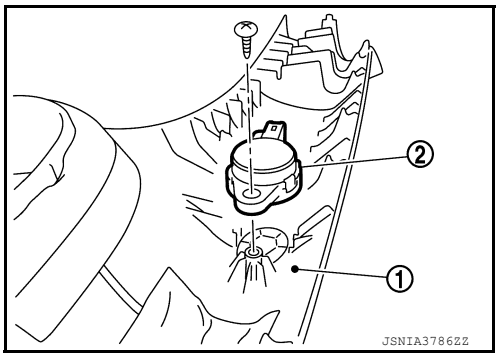
FRONT TWEETER

Removal and Installation

INFOID:0000000008360044

REMOVAL

1. Remove front pillar finisher (LH/RH). Refer to INT-17, "FRONT PILLAR FINISHER : Removal and Installation"
2. Remove front tweeter screws (2).
3. Remove front tweeter (2) from front pillar finisher (1).



INSTALLATION

Installation is in the reverse order of removal.

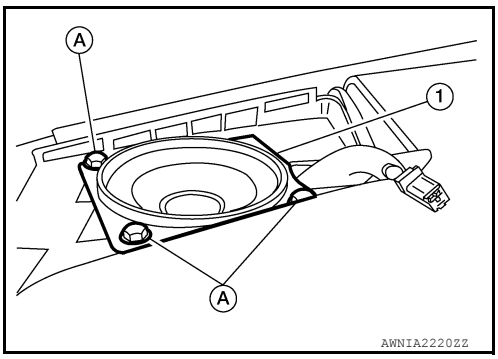
INSTRUMENT PANEL SPEAKER/TWEETER

Removal and Installation

INFOID:0000000008297231

REMOVAL

1. Remove instrument panel tweeter grille (LH/RH). Refer to IP-14, "Exploded View".
2. Remove the screws (A), then pull out the instrument panel tweeter (1).
3. Disconnect the harness connector and remove the instrument panel tweeter (1).



INSTALLATION

Installation is in the reverse order of removal.

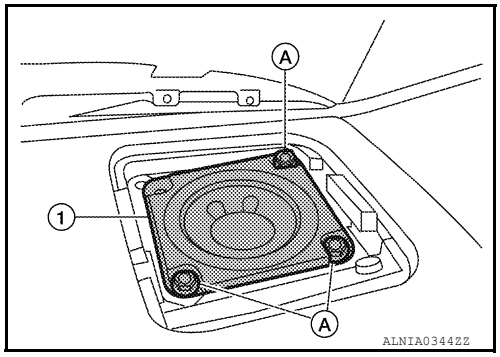
CENTER SPEAKER

Removal and Installation

INFOID:0000000008297232

REMOVAL

1. Remove center speaker grille. Refer to IP-14, "Exploded View".
2. Remove the center speaker screws (A).
3. Pull out the center speaker (1), disconnect harness connector, then remove center speaker.



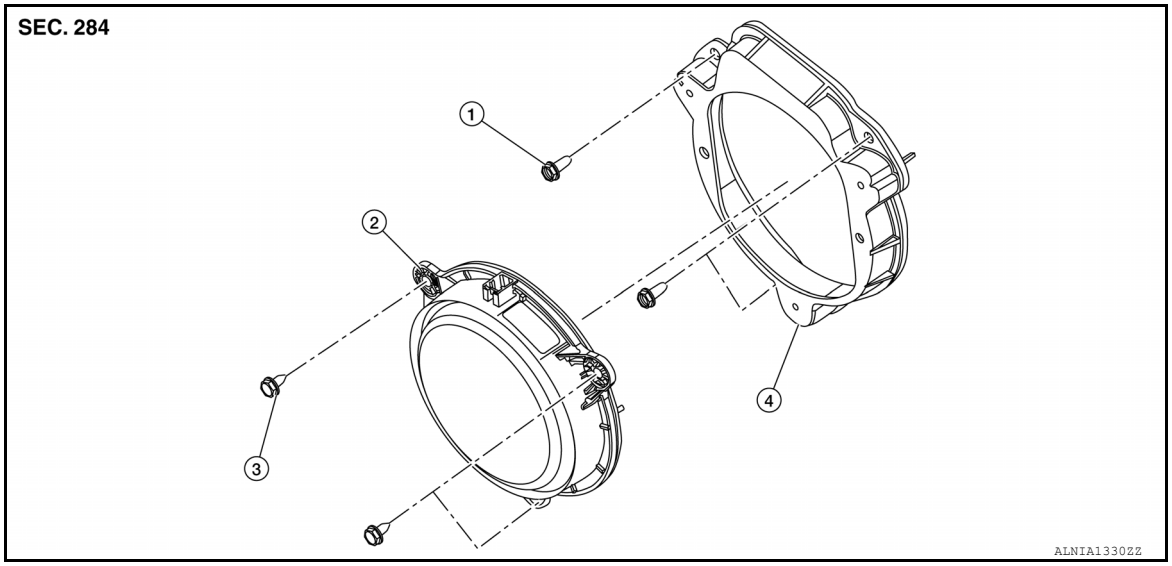
INSTALLATION

Installation is in the reverse order of removal.

REAR DOOR SPEAKER

Exploded View

INFOID:0000000008297233



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

Removal and Installation

INFOID:0000000008297234

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "Removal and Installation".
2. Remove rear door speaker bolts.
3. Disconnect harness connector from the rear door speaker, then remove rear door speaker from speaker bracket.
4. Remove speaker bracket bolts.
5. Remove rear door speaker bracket.

INSTALLATION

Installation is in the reverse order of removal.

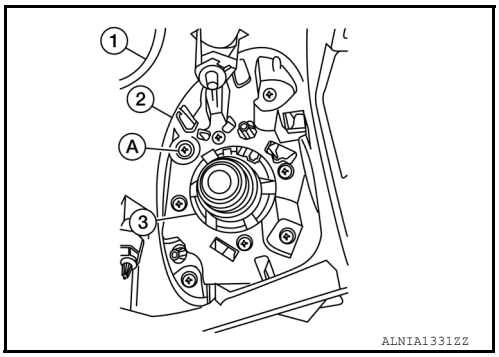
REAR SPEAKERS

Removal and Installation

INFOID:0000000008297236

REMOVAL

1. Remove back pillar finisher. Refer to INT-30, "BACK PILLAR FINISHER : Removal and Installation".
   CAUTION:
   Do not reuse back pillar finisher.
2. Remove rear speaker bolts (A).
3. Remove bracket (2), then remove rear speaker (3).



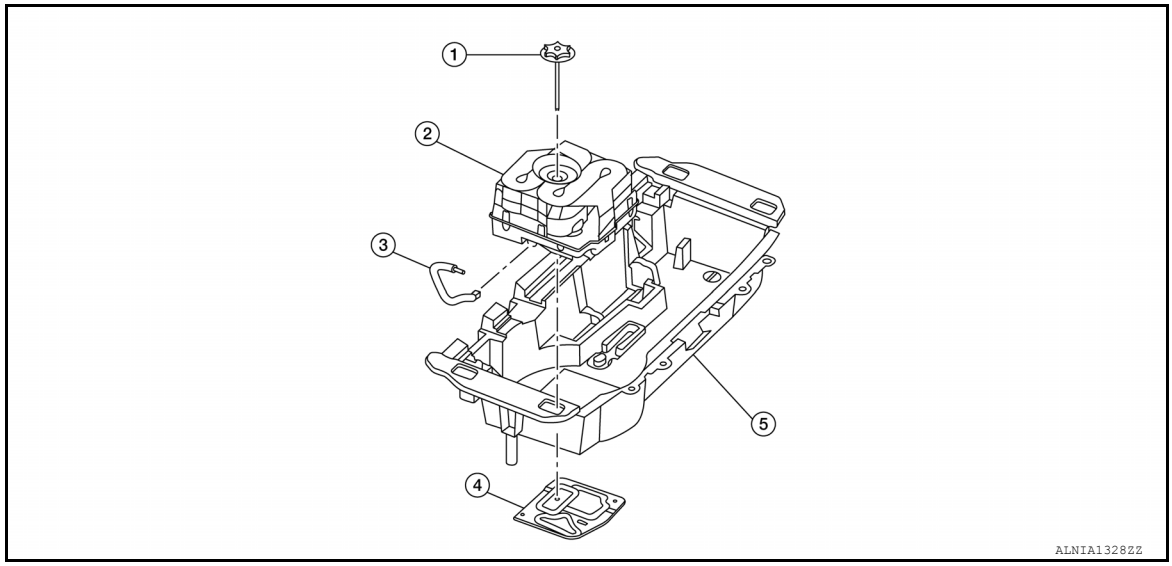
INSTALLATION

Installation is in the reverse order of removal.

WOOFER

Exploded View

INFOID:0000000008297237



1. Spare tire clamp
2. Woofer
3. Harness
4. Bracket
5. Rear storage box

Removal and Installation

INFOID:0000000008297238

REMOVAL

1. Open the storage box lid.
2. Remove the spare tire clamp.
3. Lift woofer to disconnect harness connector, then remove woofer.

INSTALLATION

Installation is in the reverse order of removal.

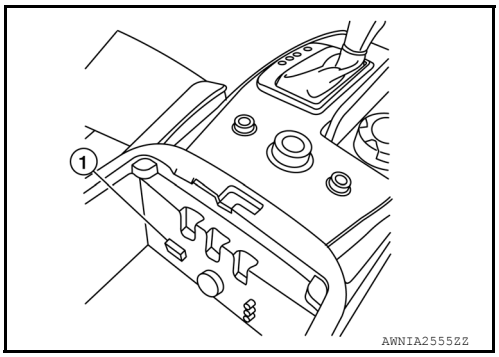
USB CONNECTOR

Removal and Installation

INFOID:0000000008297239

REMOVAL

1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
2. Disconnect harness connector from the USB connector.
3. Release the pawl from the back of USB connector (1), then remove USB connector (1).



INSTALLATION

Installation is in the reverse order of removal.

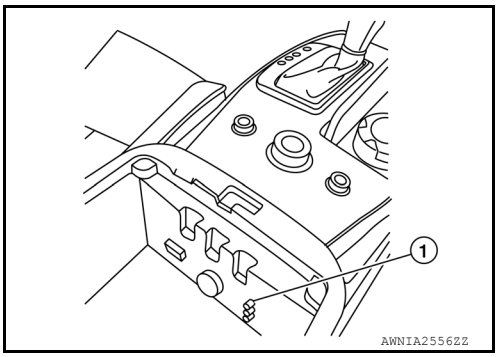
FRONT AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000008297241

REMOVAL

1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
2. Disconnect harness connector from the front auxiliary input jack.
3. Remove front auxiliary input jack screws, then remove front auxiliary input jack (1).



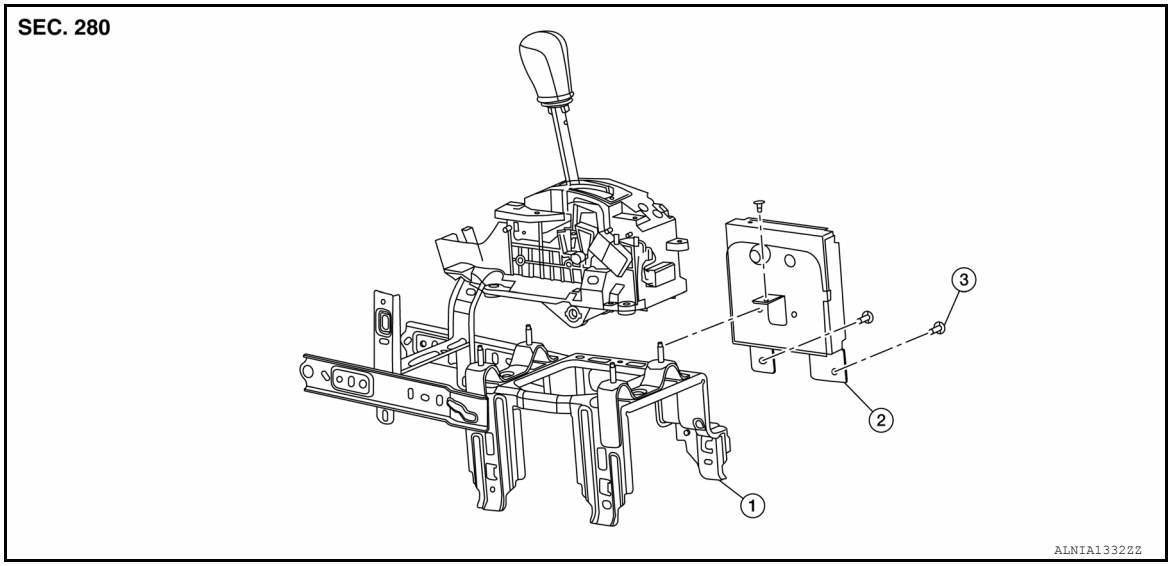
INSTALLATION

Installation is in the reverse order of removal.

AROUND VIEW MONITOR CONTROL UNIT

Exploded View

INFOID:0000000008297242



1. Bracket
2. Around view monitor control unit
3. Screw

Removal and Installation

INFOID:0000000008297243

REMOVAL

1. Remove center console. Refer to IP-18, "Removal and Installation".
2. Remove the around view monitor control unit screws.
3. Disconnect harness connector from around view monitor control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Perform camera image calibration. Refer to AV-268, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

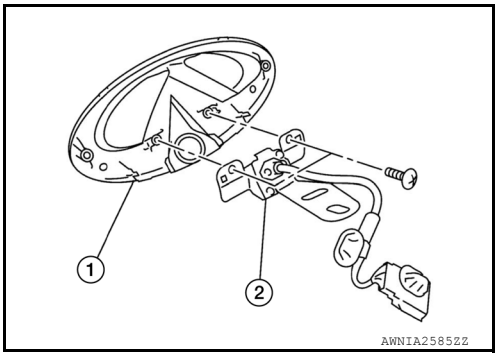
FRONT CAMERA

Removal and Installation

INFOID:0000000008297244

REMOVAL

1. Remove front grille. Refer to EXT-23, "Removal and Installation".
2. Remove front camera screws, then remove front camera (2) from front emblem (1).



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Perform camera image calibration. Refer to AV-268, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

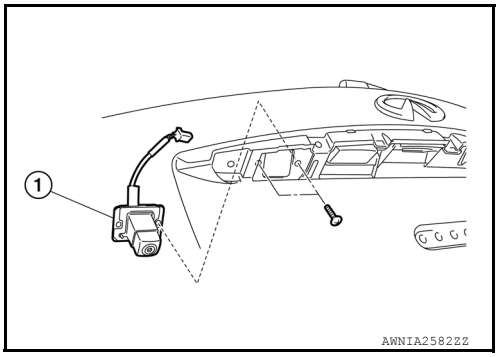
REAR CAMERA

Removal and Installation

INFOID:0000000008297245

REMOVAL

1. Remove back door outer upper finisher. Refer to EXT-41, "Removal and Installation".
2. Remove rear camera screws, then remove rear camera (1).



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Perform camera image calibration. Refer to AV-268, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

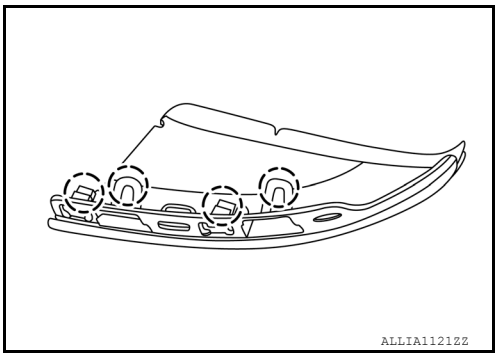
SIDE CAMERA

Removal and Installation

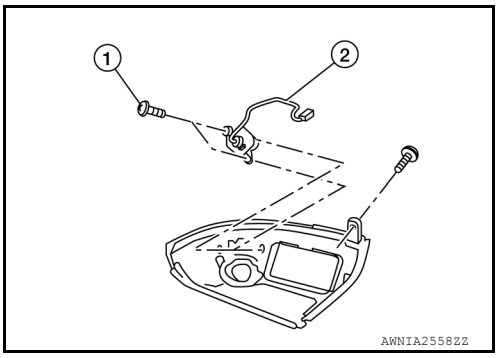
INFOID:0000000008297246

REMOVAL

1. Remove the door mirror assembly. Refer to MIR-29, "Removal and Installation".
2. Remove the door mirror rear finisher. Refer to MIR-31, "Removal and Installation".
3. Release the side camera finisher pawls using a suitable tool, disconnect the harness connector from the side camera, then remove the side camera finisher.
   : Pawl



4. Remove the screws (1) and the side camera (2).



INSTALLATION

Installation is in the reverse order of removal.

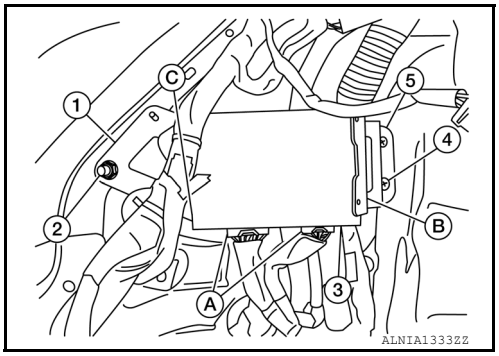
VIDEO DISTRIBUTOR

Removal and Installation

INFOID:0000000008297247

REMOVAL

1. Remove luggage side lower finisher. Refer to INT-29, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation".
2. Disconnect video distributor harness connectors (A).
3. Remove video distributor nuts (2) and bolts (4).
4. Remove video distributor (3) and brackets (1) (5) from the vehicle as a single unit.
5. Remove screws (B) (C), then remove video distributor (3).



INSTALLATION

Installation is in the reverse order of removal.

HEADREST DISPLAY UNIT

Removal and Installation

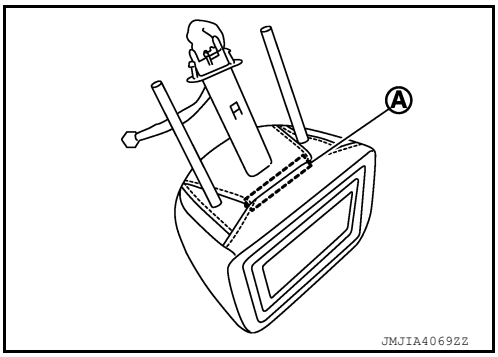
INFOID:0000000008360065

REMOVAL

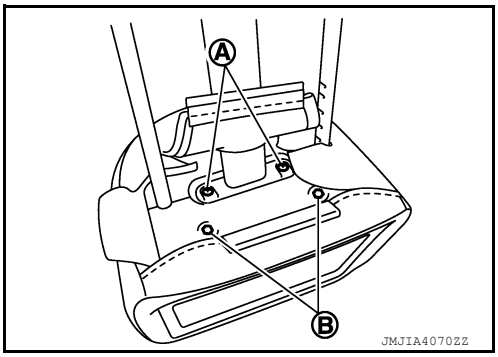
CAUTION:

- **Do not strongly press panel surface of display (glass area).**
- **Do not strongly press or pull out the movable part of display.**

1. Remove the headrest trim retainer (A).

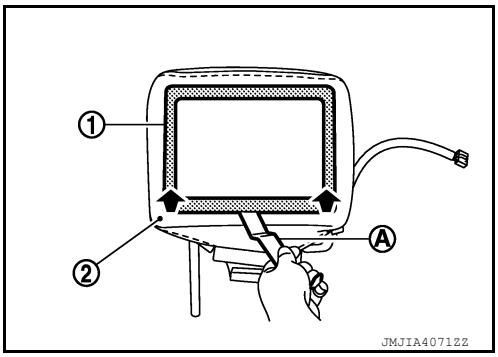


2. Remove the headrest display harness and upper tube screws (A), and then remove headrest display unit bolts (B).



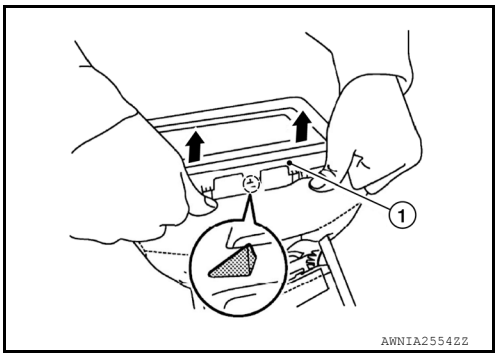
3. Remove the headrest display escutcheon and headrest display.

a. Insert a suitable tool (A) between lower side of headrest display escutcheon (1) and headrest trim (2) and pull out lower side of escutcheon.



b. Pull out headrest display escutcheon (1) to the position that pawl is visible and disengage pawl.

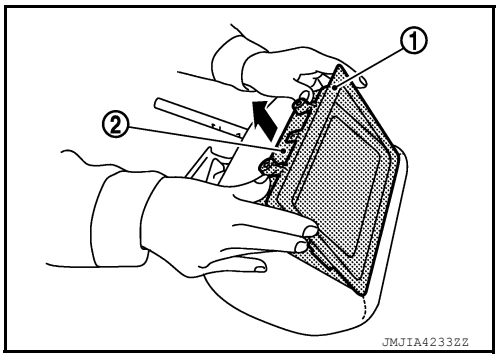
: Pawl



c. Pull out lower side of headrest display escutcheon from headrest.

CAUTION:
Be careful not damage pawls on upper side headrest display escutcheon.

d. Pull downward and remove headrest display escutcheon (1) and headrest display unit (2) by pulling them out and removing pins on upper side of display.



e. Disconnect inner harness connector.
f. Press headrest display escutcheon to the headrest display unit side. Disconnect pawls on upper side and remove headrest display escutcheon.
4. Remove the headrest display harness upper tube from headrest trim.

INSTALLATION

Installation is in the reverse order of removal.

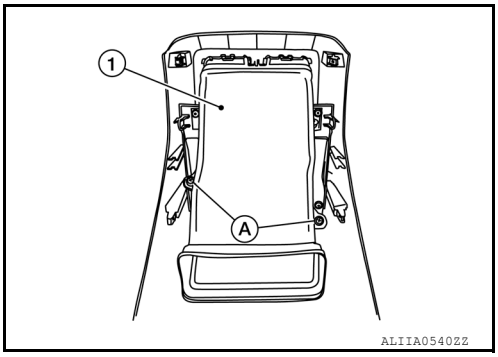
REAR AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000008297249

REMOVAL

1. Remove center console rear finisher. Refer to IP-18, "Exploded View".
2. Remove the screws (A) from the center ventilator duct (1).



3. Remove the center ventilator duct.
4. Remove rear auxiliary input jack screws, then remove rear auxiliary input jack.

INSTALLATION

Installation is in the reverse order of removal.

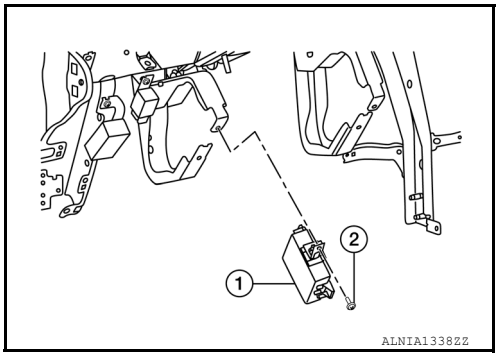
SONAR CONTROL UNIT

Removal and Installation

INFOID:0000000008297250

REMOVAL

1. Remove instrument lower panel LH. Refer to IP-23, "Removal and Installation".
2. Remove sonar control unit bolt (2).
3. Disconnect harness connector from the sonar control unit, then remove sonar control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

SONAR SENSOR

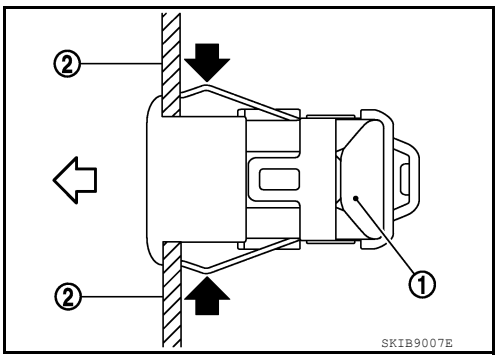
Removal and Installation

INFOID:0000000008297251

REAR SONAR SENSORS

Removal

1. Remove rear bumper fascia assembly. Refer to EXT-20, "Removal and Installation".
2. Press sonar sensor spring (⬅).
3. Remove the sonar sensor (1) from rear bumper (2) as shown (⇦).
4. Disconnect the harness connector from sonar sensor (1) and remove.



Installation

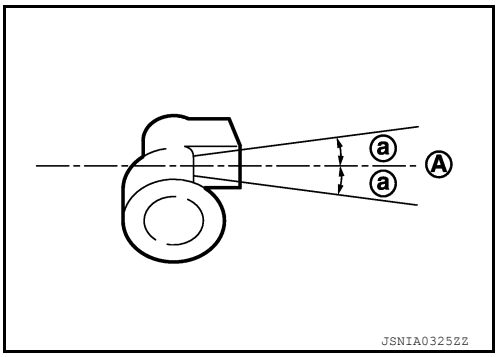
Installation is in the reverse order of removal.

CAUTION:

The connector direction is within ±10° from the horizontal position when assembling the bumper.

(A) : Horizontal position

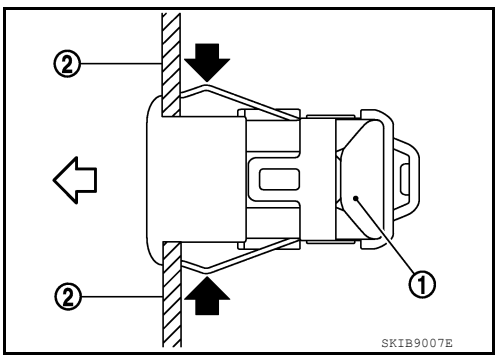
(a) : 10°



FRONT SONAR SENSORS

Removal

1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Press sonar sensor spring (⬅).
3. Remove the sonar sensor (1) from front bumper (2) as shown (⇦).
4. Disconnect harness connector from sonar sensor (1) and remove.



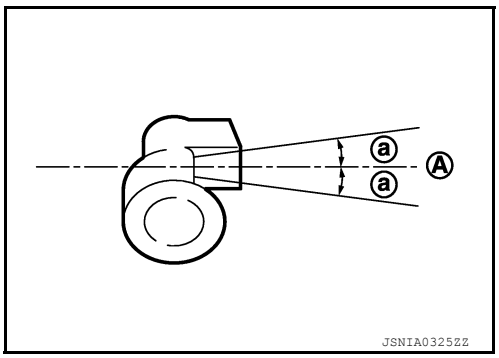
Installation

Installation is in the reverse order of removal.

CAUTION:

The connector direction is within ±10° from the horizontal position when assembling the bumper.

(A) : Horizontal position
(a) : 10°



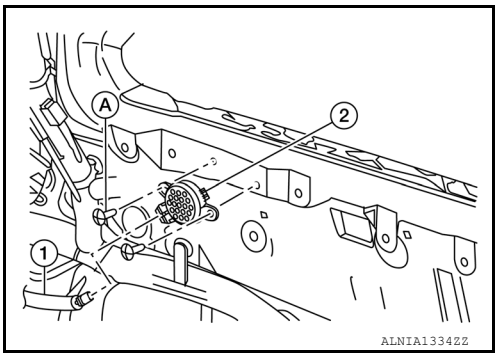
BUZZER

Removal and Installation

INFOID:0000000008297252

REMOVAL

1. Remove luggage side lower finisher (RH). Refer to INT-29, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation".
2. Disconnect harness connector (1) from the buzzer.
3. Remove buzzer screws (A), then remove buzzer (2).



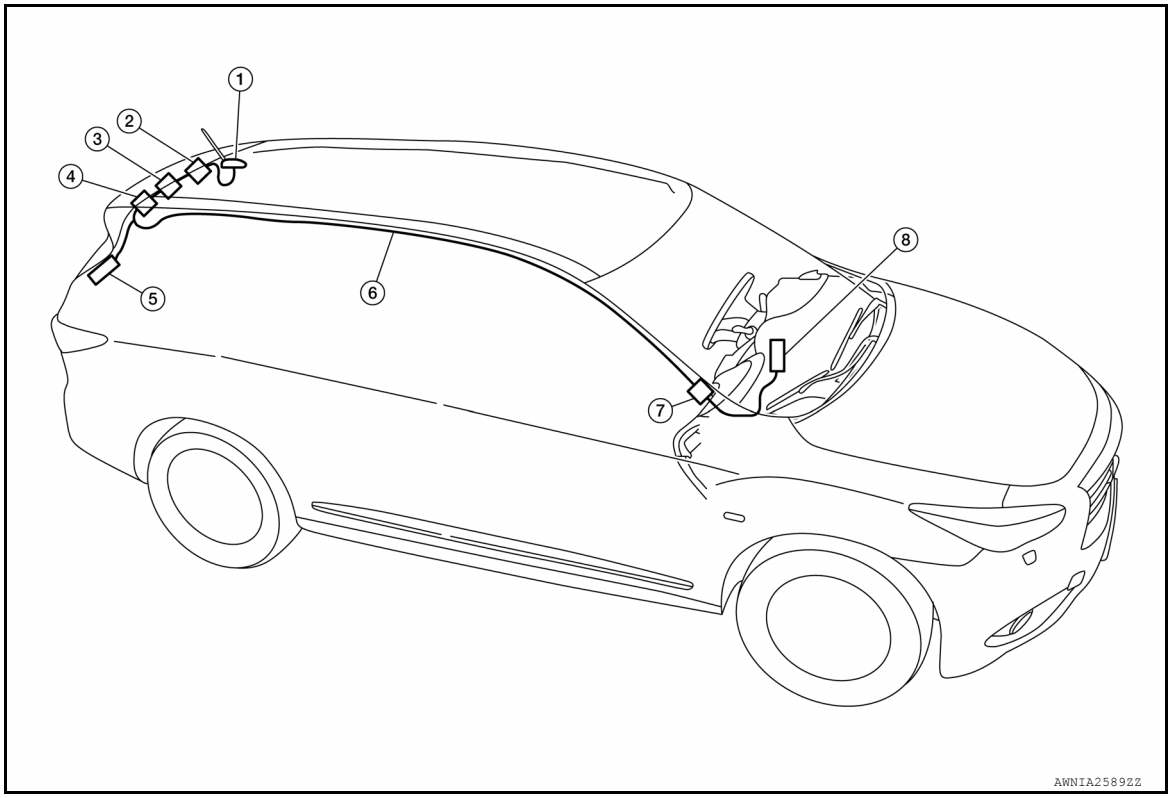
INSTLLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antennas

INFOID:0000000008486420



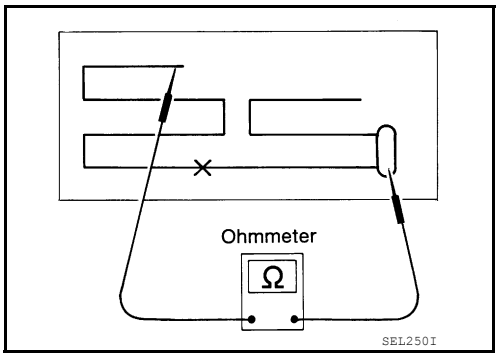
1. Antenna base (satellite antenna and antenna amp)
2. M502
3. M501
4. M503, M504
5. M505
6. Antenna Feeder
7. M95, M138, M500, M509
8. AV control unit M133, M143

Window Antenna Repair

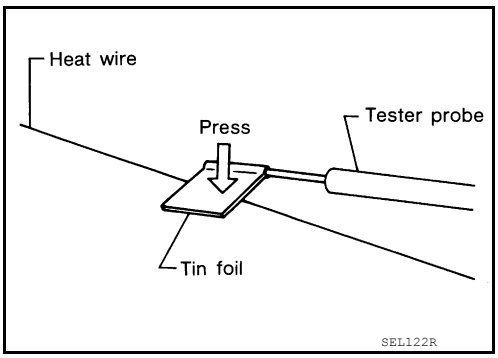
INFOID:0000000008486421

ELEMENT CHECK

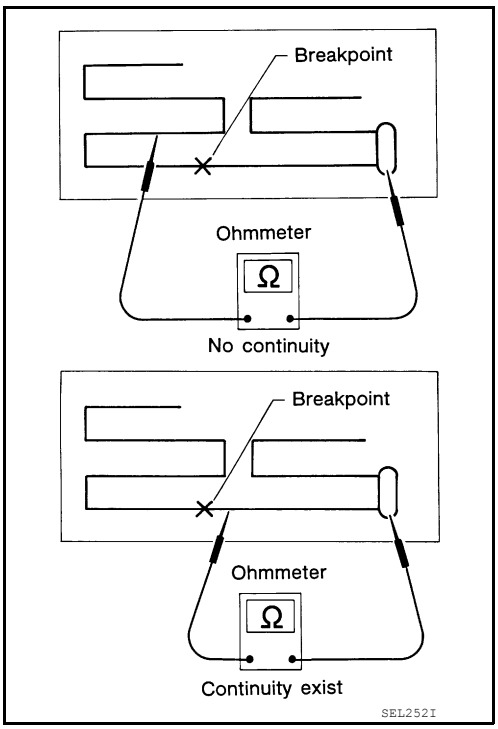
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



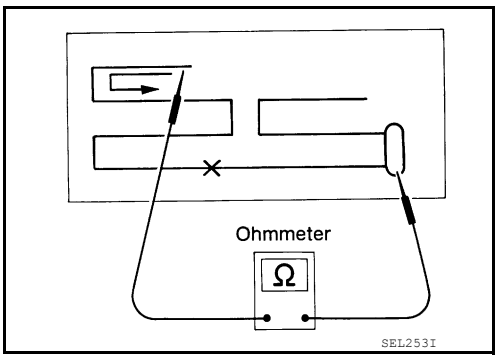
- **When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.**



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.



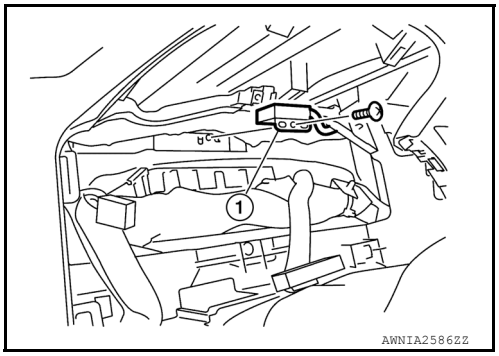
GPS ANTENNA

Removal and Installation

INFOID:0000000008297253

REMOVAL

1. Remove combination meter. Refer to IP-15, "Removal and Installation".
2. Disconnect harness connector from AV control unit.
3. Remove feeder clips.
4. Remove GPS antenna screws, then remove GPS antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

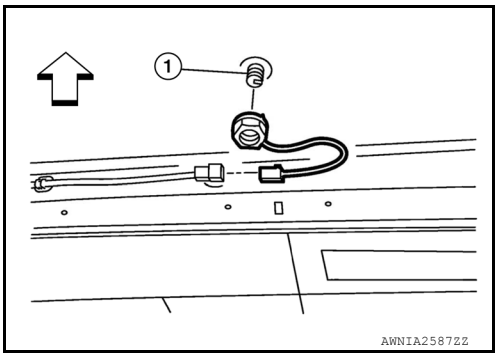
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:0000000008360066

REMOVAL

1. Pull headlining assembly (rear). Obtain a service area. Refer to INT-25, "Removal and Installation".
2. Disconnect harness connector from antenna feeder.
3. Remove nut (1) then remove satellite radio antenna and two connectors shown in art cover from the vehicle as a unit.
   ⇦: Front



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

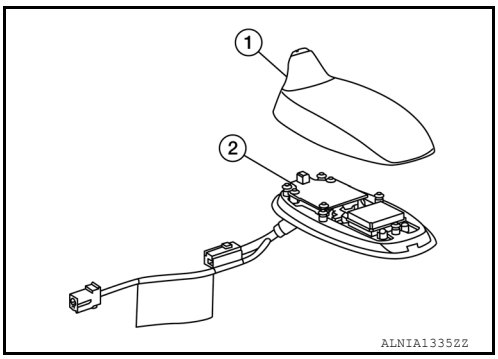
If the satellite radio antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. On the other hand, if the nut is tightened tighter than the specified torque, this will deform the roof panel.

Disassembly and Assembly

INFOID:0000000008360067

DISASSEMBLY

Insert a suitable tool into gaps between satellite radio antenna (1) and the cover (2), and remove the cover (2) from satellite radio antenna (1).



ASSEMBLY

Assembly is in the reverse order of disassembly.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000008487457

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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. 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.**

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

INFOID:0000000007913422

CAUTION:

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

NOTE:

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

Precaution for Trouble Diagnosis

INFOID:0000000007913423

AV COMMUNICATION SYSTEM

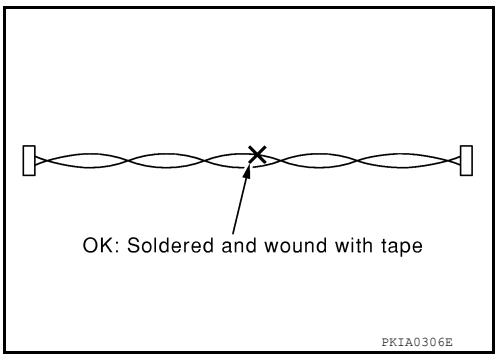
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

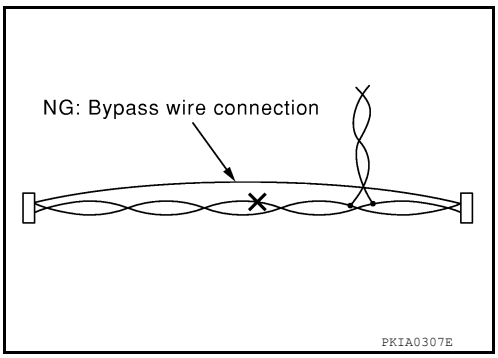
INFOID:0000000007913424

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:0000000008359995

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt: Dip a soft cloth into lukewarm water 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.

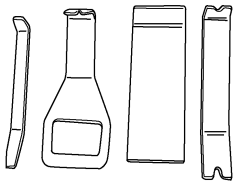
PREPARATION

PREPARATION

Special Service Tool

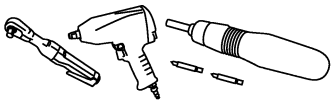
INFOID:0000000008360017

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:0000000008360018

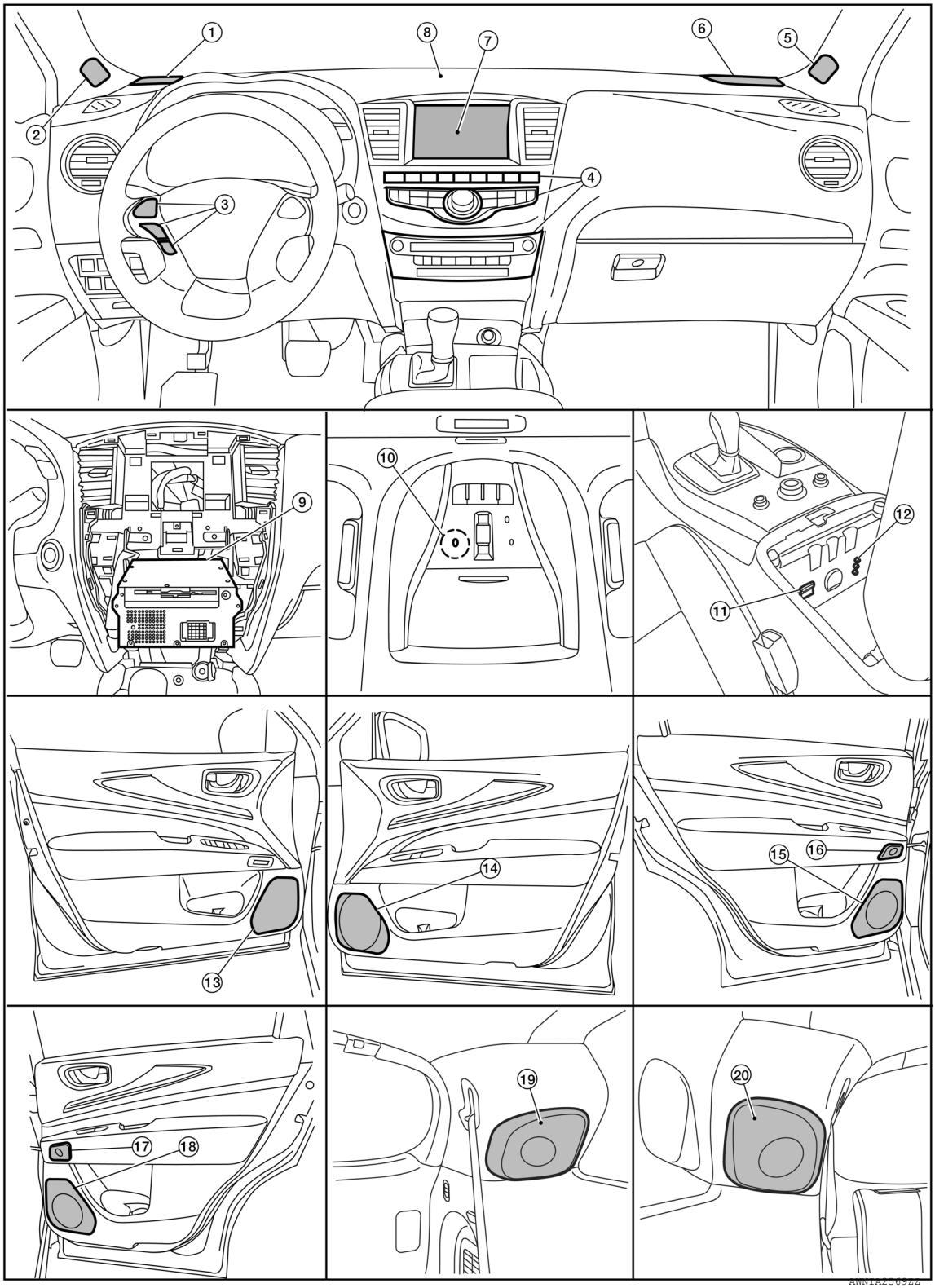
(Kent-Moore No.) Tool name	Description
(—) Power tools  PIIB1407E	Loosening nuts, screws and bolts

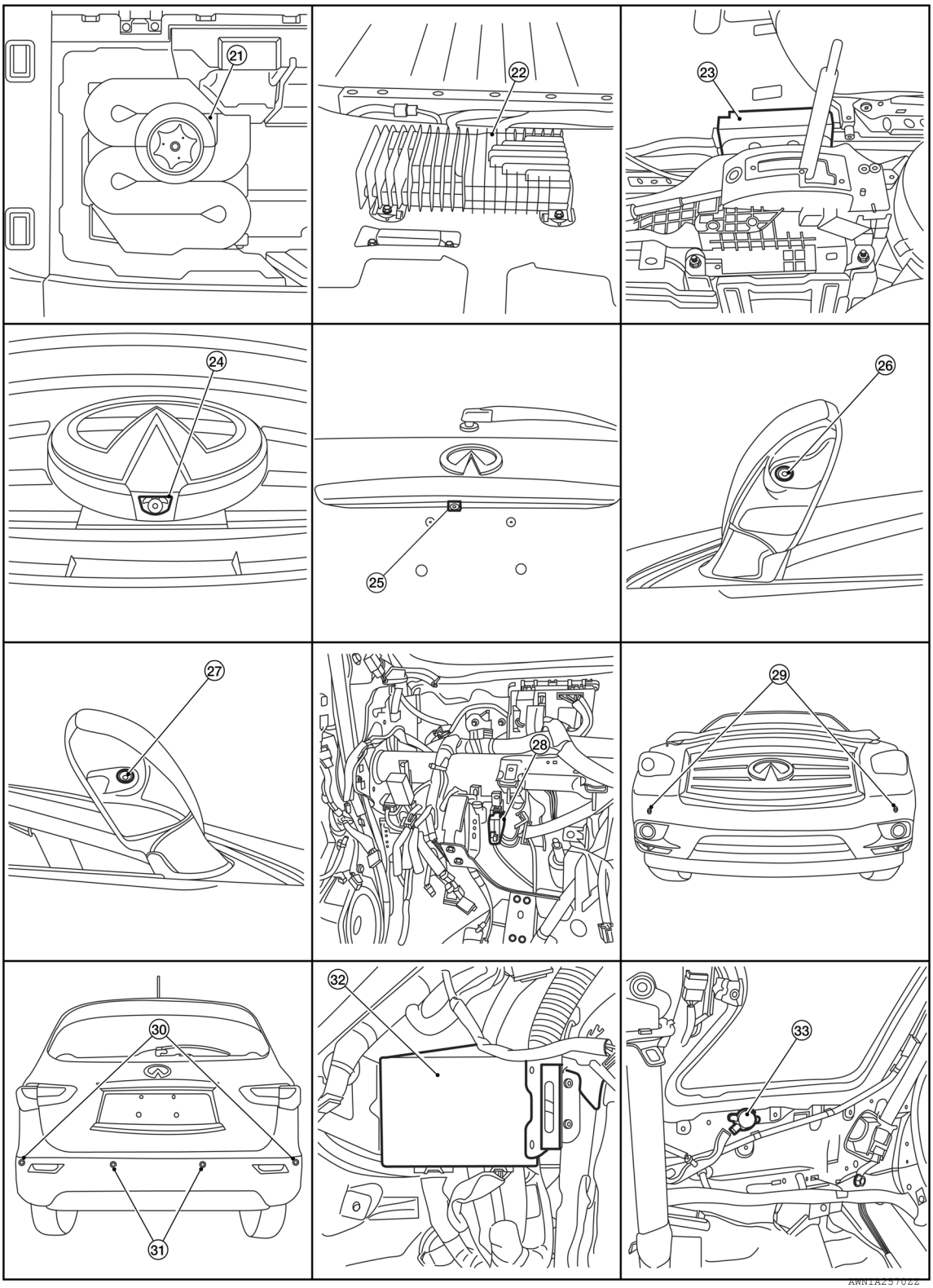
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000007913426

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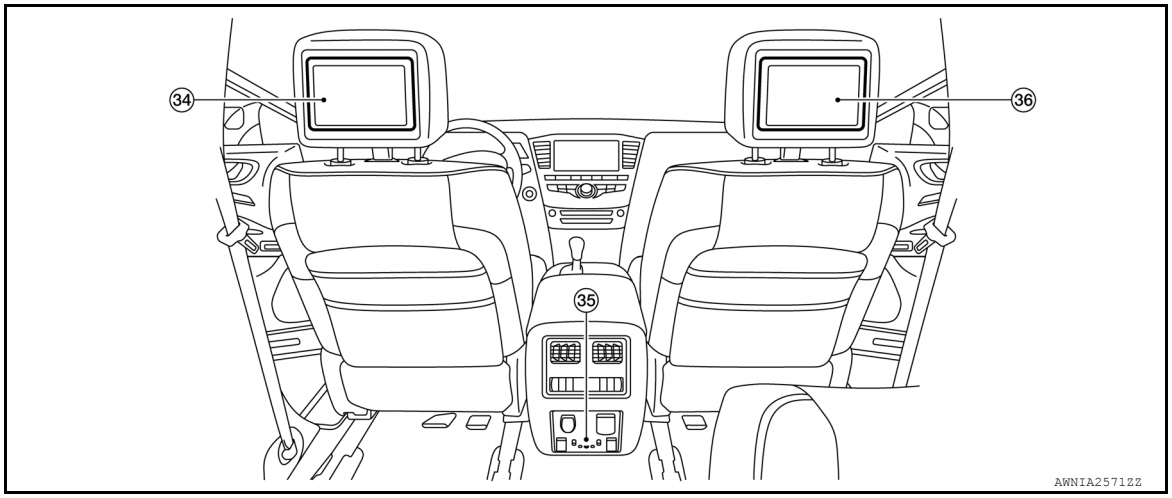
AWNIA2376ZZ



1. Instrument panel tweeter LH
2. Front tweeter LH
3. Steering switch
4. A/C and AV switch assembly
5. Front tweeter RH
6. Instrument panel tweeter RH
7. Display unit
8. Center speaker
9. AV control unit (view with center stack removed)
10. Microphone
11. USB interface
12. Front auxiliary input jacks
13. Front door speaker LH
14. Front door speaker RH
15. Rear door speaker LH
16. Rear door tweeter LH
17. Rear door tweeter RH
18. Rear door speaker RH
19. Rear side speaker LH
20. Rear side speaker RH
21. Subwoofer
22. Bose apeaker amp.
23. Around view monitor control unit
24. Front camera
25. Rear camera
26. Door mirror LH (side camera)
27. Door mirror RH (side camera)
28. Sonar control unit
29. Front sonar sensors outer
30. Rear sonar sensors outer
31. Rear sonar sensors inner
32. Video distributor
33. Sonar buzzer
34. Headrest display unit (driver seat)
35. Rear auxiliary input jacks
36. Headrest display unit (passenger seat)

Component Description

INFOID:0000000007913427

Part name	Description
AV control unit	• Master unit of MULTI AV system. • AV control unit includes audio, hands-free phone, navigation, USB connection, DVD play and vehicle status functions. • Integrates hard disk drive (HDD) allowing map data and music data to be stored. • Connected to MULTI AV system control units via AV communication. • Connected to other vehicle control units via CAN communication to obtain necessary information for vehicle function. • Receives steering angle signal via CAN communication from steering angle sensor and controls an expected course line during around view monitor operation. • Inputs signals for driving status recognition (vehicle speed, reverse and parking brake). • RGB digital image signal and composite image signal are output to front display unit. • Transmits image and sound output to video distributor and inputs image switch signal from headrest display units via AV communication. • Receives an intelligent key identification signal necessary for intelligent key interlocking function via hard wire from BCM. • Transmits Amp. ON signal and mode change signal to BOSE amp. • Update of map data is performed using DVD-ROM.
Display unit	• Display image is controlled by AV control unit via serial communication. • Receives power from AV control unit. • RGB and RGB digital image signals are input from AV control unit. • Composite image signals are input from AV control unit. • Synchronizing signals are output to AV control unit. • Camera image signals are input from around view monitor control unit via video output signal. • Touch panel functions can be operated by touching display directly.
BOSE speaker amp.	Receives sound signals from AV control unit and outputs sound signals to each speaker.
Instrument panel tweeter	Outputs high range sound signals from BOSE speaker amp.
Center speaker	Outputs mid and high range sound signals from BOSE speaker amp.
Front tweeter	Outputs high range sound signals from BOSE speaker amp.
Front door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Rear door tweeter	Outputs high range sound signals from BOSE speaker amp.
Rear door speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Rear side speaker	Outputs low, mid and high range sound signals from BOSE speaker amp.
Subwoofer	Outputs low range sound signals from BOSE speaker amp.
A/C and AV switch assembly	• Operation panels are equipped with switches for audio and air conditioner operations. • Operation signal is transmitted via AV communication to AV control unit and around view monitor. • Disk eject operation signal is performed via hardwire.
Steering switch	• Operations for audio, hands-free phone and voice recognition are possible. • Steering switch signal (operation signal) is output to AV control unit.
Steering angle sensor	Connected to AV control unit via CAN communication and transmits steering angle sensor signal.
Video distributor	• Receives image and sound signals from AV control unit and transmits them to headrest display units. • Receives image and sound signals from rear auxiliary input jacks and transmits them to headrest display units. • Transmits image and sound signals to headrest display unit and receives image switch signal from headrest display units.

Part name	Description
Headrest display units	• Composite image signals are input from video distributor. • Receives DVD/AUX/USB sound signals from video distributor and transmits them to headphones. • Transmits image switch signal to video distributor according to remote control operation. • Transmits image switch signal to AV control unit via AV communication according to remote control operation.
Front auxiliary input jacks	Transmits image and sound signals to AV control unit.
Rear auxiliary input jacks	Transmits image and sound signals to video distributor and headrest display units.
Around view monitor control unit	• Supplies power to front, rear and side cameras. • Superimposes images from each camera and outputs them to display unit. • Superimposes guiding line, predicted course line and sonar indicator to camera image that outputs to display unit. • Performs reception/transmission of communication signals with cameras. • Transmits sonar operation signal from sonar control unit via CAN communication. • Receives sonar information from sonar control unit via CAN communication. • Transmits data received/transmitted from sonar control unit to AV control unit via CAN communication.
Front camera	• Inputs power supply from around view monitor control unit. • Outputs image of vehicle front to around view monitor control unit. • Performs reception/transmission of communication signal with around view monitor control unit.
Rear camera	• Inputs power supply from around view monitor control unit. • Outputs image of vehicle rear to around view monitor control unit. • Performs reception/transmission of communication signal with around view monitor control unit.
Side camera LH	• Inputs power supply from around view monitor control unit. • Outputs image of vehicle LH side to around view monitor control unit. • Performs reception/transmission of communication signal with around view monitor control unit.
Side camera RH	• Inputs power supply from around view monitor control unit. • Outputs image of vehicle RH side to around view monitor control unit. • Performs reception/transmission of communication signal with around view monitor control unit.
Sonar control unit	• Connected to around view monitor control unit via CAN communication. • Receives sonar operation signal from around view monitor control unit via CAN communication. • Transmits sonar detection status to around view monitor control unit via CAN communication. • Judges warning level according to signals from front and rear sensors.
Front sensors	Detects front obstacle distance and transmits signal to sonar control unit.
Rear sensors	Detects rear obstacle distance and transmits signal to sonar control unit.
Microphone	• Used for hands-free phone, voice recognition and INFINITI CONNECTIONS operations. • Microphone signal is transmitted to telematics control unit (TCU). • Power (Microphone VCC) is supplied from TCU.
Telematics control unit (TCU)	• Connected to the AV control unit via a USB harness for sound signal input/output and USB communication. • Data is sent to and received from the INFNITI CONNECTIONS data center via the TEL antenna. • Inputs TEL voice signal from TEL antenna and outputs it to AV control unit.
TEL antenna	• Receives TEL voice signals and outputs them to TCU. • Transmits TEL voice signals from TCU.
GPS antenna	GPS signal is received and transmitted to AV control unit.
Antenna amp.	• Radio signal received by window antenna is amplified and transmitted to AV control unit. • Power (antenna amp. ON signal) is supplied from AV control unit.

Part name	Description
Satellite radio antenna	Satellite radio signal is received and transmitted to AV control unit.
USB connector	USB sound and data input signals are transmitted to AV control unit.

SYSTEM

MULTI AV SYSTEM

MULTI AV SYSTEM : System Diagram

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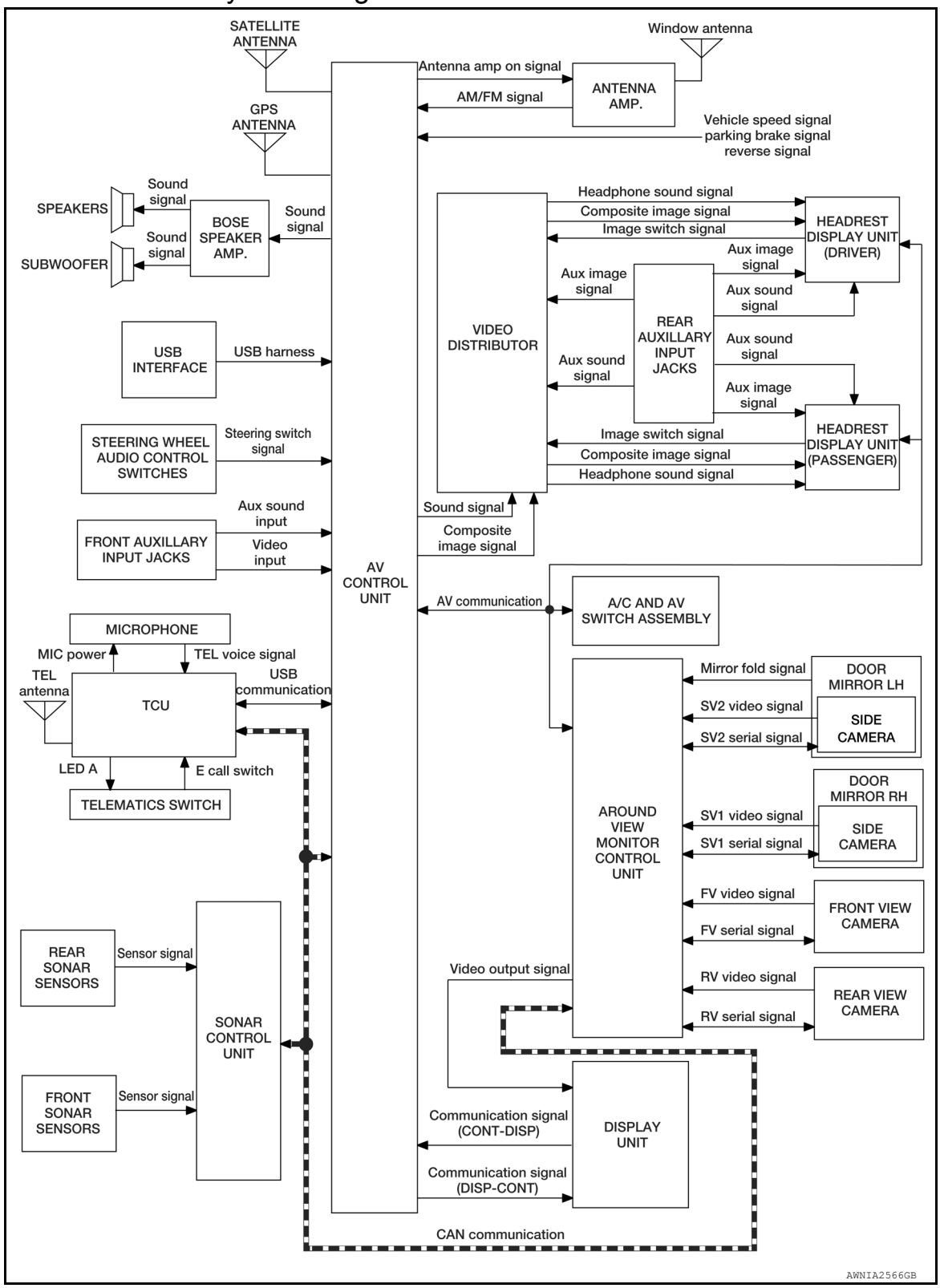

MULTI AV SYSTEM : System Description

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AUDIO SYSTEM

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

When the audio system is on, radio signals are received by the window antenna. The AV control unit then sends audio signals to the BOSE speaker amp. The BOSE speaker amp. amplifies the audio signals before sending them to the speakers, tweeters and subwoofer.
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.

HANDS-FREE PHONE SYSTEM

System Operation

NOTE:

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

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

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

AV Control Unit

When the ignition switch is turned to ACC or ON, the AV control unit will power up. During power up, the AV control unit is initialized and performs various self-checks. Initialization may take up to 20 seconds. If a phone is present in the vehicle and paired with the AV control unit, Infiniti Voice Recognition will then become active. Bluetooth® telephone functions can be turned off using the Infiniti 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 Telematics Control Unit (TCU), which transmits the signal to the AV control unit via the USB communication circuits. The microphone can be actively tested during self-diagnosis.

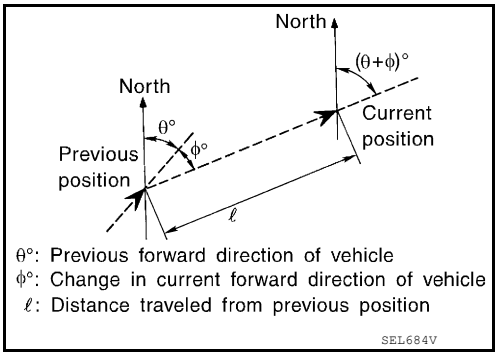
NAVIGATION SYSTEM

System Operation

NOTE:
Refer to NAVI System Owner's Manual for system operation.

The navigation system periodically calculates the vehicle's current position according to the following three signals: Travel distance of the vehicle as determined by the vehicle speed sensor, turning angle of the vehicle as determined by the gyroscope (angular velocity sensor), and the direction of vehicle travel as determined by the GPS antenna (GPS information).
The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map data, which is stored in the hard disk drive (HDD) (map-matching), and indicated on the screen with a current-location mark.

By comparing the vehicle position detection results found by the GPS and by map-matching, more accurate vehicle position data can be used.
The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.



Travel Distance

Travel distance calculations are based on the vehicle speed input signal. Therefore, the calculation may become incorrect as the tires wear down. To prevent this, an automatic distance fine adjustment function has been adopted.

Travel Direction

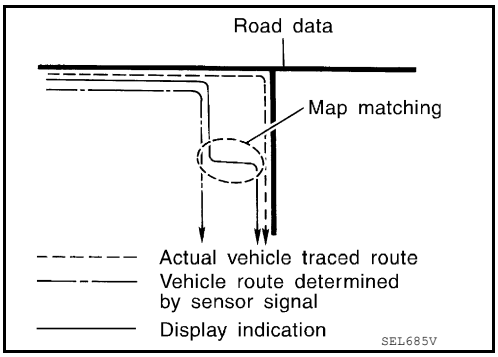
Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). As the gyroscope and GPS antenna have both merit and demerit, input signals from them are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

Type	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	• Can detect the vehicle's turning angle quite accurately.	• Direction errors may accumulate when the vehicle is driven for long distances without stopping.
GPS antenna (GPS information)	• Can detect the vehicle's travel direction (North/South/East/West).	• Correct direction cannot be detected when the vehicle speed is low.

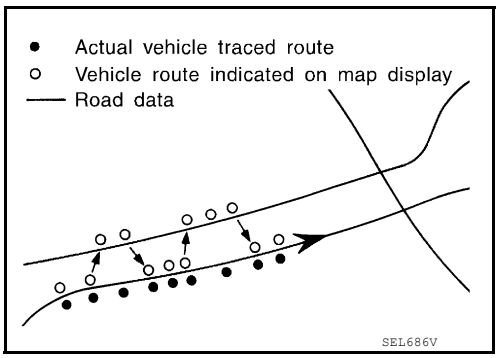
Map–Matching

Map–matching is a function that repositions the vehicle on the road map when a new location is judged to be the most accurate. This is done by comparing the current vehicle position, calculated by the method described in the position detection principle, with the road map data around the vehicle, read from the map data stored on the HDD.
Therefore, the vehicle position may not be corrected after the vehicle is driven over a certain distance or time in which GPS information is hard to receive. In this case, the current-location mark on the display must be corrected manually.

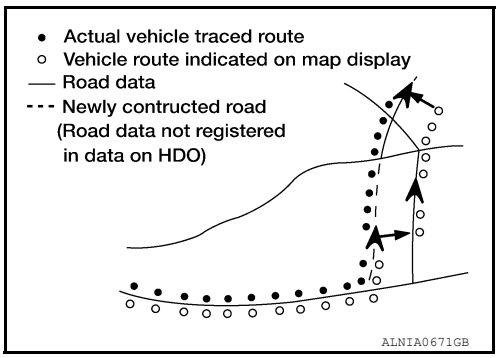
CAUTION:
The road map data is based on data stored on the HDD.



- In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the current-location mark has been repositioned.
  If there is an error in distance and/or direction, the alternative routes will be shown in different order of priority, and the wrong road can be avoided.
  If two roads are running in parallel, they are of the same priority. Therefore, the current-location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.

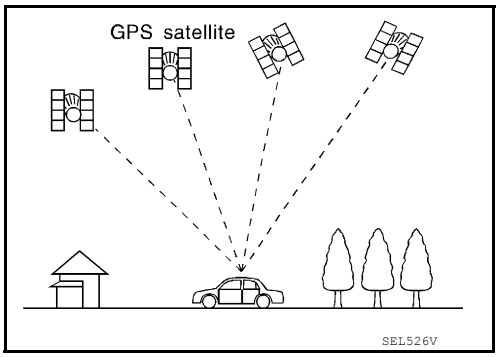


- Map-matching does not function correctly when the road on which the vehicle is driving is new and not recorded on the HDD, or when the road pattern stored in the map data and the actual road pattern are different due to repair.
  When driving on a road not present in the map, the map-matching function may find another road and position the current-location mark on it. Then, when the correct road is detected, the current-location mark may leap to it.
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data read from the HDD is limited. Therefore, when there is an excessive gap between the current vehicle position and the position on the map, correction by map-matching is not possible.



GPS (Global Positioning System)

GPS (Global Positioning System) has been developed and controlled by the US Department of Defense. The system utilizes GPS satellite (NAVSTAR), sending out radio waves while flying on an orbit around the earth at the height of approx. 21,000 km (13,000 mi).
The GPS receiver calculates the vehicle's position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves received from four or more GPS satellites (three-dimensional positioning). If radio waves were received only from three GPS satellites, the GPS receiver calculates the vehicle's position in two dimensions (latitude/longitude), utilizing the altitude data calculated previously by using radio waves from four or more GPS satellites (two-dimensional positioning).



Accuracy of the GPS will deteriorate under the following conditions.

- In two-dimensional positioning, the GPS accuracy will deteriorate when the altitude of the vehicle position changes.
- There may be an error of approximately 10 m (30 ft.) in position detected by three-dimensional positioning, which is more accurate than two-dimensional positioning. The accuracy can be even lower depending on the arrangement of the GPS satellites utilized for the positioning.
- Position detection is not possible when the vehicle is in an area where radio waves from the GPS satellite do not reach, such as in a tunnel, parking lot in a building, and under an elevated highway. Radio waves from the GPS satellites may not be received when some object is located over the GPS antenna.
- Position correction by GPS is not available while the vehicle is stopped.

SPEED SENSITIVE VOLUME SYSTEM

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

FRONT AUXILIARY INPUT JACKS

- Image and sound can be output from an external device connected to the front auxiliary input jacks.
- AUX image signals are transmitted to each unit as follows:
- To the display unit via AV control unit.
- To the headrest display units via AV control unit and video distributor.
- AUX sound signals are transmitted to each unit as follows:
- To each speaker via AV control unit and BOSE speaker amp.

- To video distributor via AV control unit.
• Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

REAR ENTERTAINMENT SYSTEM

• Image and sound (DVD, USB memory-stored video data and front auxiliary input) played by AV control unit can be enjoyed in rear seat using headrest display units and headphones.
• Image and sound of an external device connected to rear auxiliary input jacks for rear seat can be enjoyed in rear seat using headrest display units and headphones. Also, image and sound from rear auxiliary input jacks can be selected and played individually on each side as well as on both sides.
• Headrest display units have a self-diagnosis function. Refer to AV-455, "On Board Diagnosis Function".

NOTE:
Image signal and sound signal from rear auxiliary input jacks are not transmitted to front display unit and each speaker.

Operation Signal

• The rear entertainment system can be controlled by the rear seat remote control.
• The rear seat remote control transmits the operation signal to the remote control receiver built into headrest display units, which then transmits it to the AV control unit and video distributor.

Headphone Sound

• Sound signals output from AV control unit or rear auxiliary input jacks are transmitted to headrest display units via video distributor.
• Headphone sound signals are transmitted via infrared communication between headrest display units and headphones.

Headrest Display Units

• Composite image signals from AV control unit are transmitted to headrest display unit via video distributor.
• Image switch signals from headrest display units are transmitted to AV control unit and video distributor, according to rear seat remote control operation.
• When image switch signal is transmitted from headrest display unit to AV control unit via AV communication, image played by AV control unit (DVD, USB memory-stored video data, and front auxiliary input) switches.
• When image switch signal is transmitted from headrest display unit to video distributor, image output from AV control unit and image output from rear auxiliary input jacks switch.

AROUND VIEW MONITOR SYSTEM

• This system is equipped with wide-angle high-resolution cameras on the front and rear of the vehicle and on both right and left door mirrors. The images from front view, rear view, front-side view (RH side), and birds-eye view that shows the view from the top of the vehicle are displayed to monitor the vehicle surroundings.
• Around view monitor control unit cuts out and expands the image received from each camera to create each view.
• The sonar indicator is viewed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warn of the approach of an obstacle.
• In front view and rear view, the vehicle width, distance lines and predictive course lines are superimposed and displayed. In front-side view, the vehicle distance guiding line and vehicle width guiding line are displayed.
• The Birds-Eye view converts the images from 4 cameras into the overhead view and displays the status of the vehicle. The vehicle icon and sonar indicator on the Birds-Eye view display are rendered by around view monitor control unit.

Around View Monitor Screen

• Around view monitor combines and displays the travel direction view and Birds-Eye view, Front-Side view and then displays the sonar indicator on the Birds-Eye view, Front-Side view, Rear wide view.
• AV control unit renders the Change View switch, view icon, warning message on display.

Operation Description

NOTE:
The first, second, and third camera image displayed when switched to the camera image display depends on the settings of Camera View Priority.

• Around view monitor operates by pressing the CAMERA switch on the A/C and AV switch assembly and shifting the selector lever to the R position.
• When the selector lever is in any position other than R, the screen is switched to the around view monitor by pressing the CAMERA switch.
• The screen is switched to the around view monitor by shifting the selector lever to the R position.

- The around view monitor's, Birds-Eye view, Front-side view or rear wide view (rear only) can be switched by pressing the CAMERA switch.
- The around view monitor is cancelled 3 minutes after pressing the CAMERA switch, and the display returns to the previous screen.
- ON/OFF setting of sonar indicator display on the Front-Side view screen can be performed.
- In Birds-Eye view, the invisible area is displayed on the image to specify the boundary of the 4 cameras. The invisible area is displayed in yellow in the Birds-Eye view after turning the ignition switch ON.
- The sonar operates only when the camera screen is displayed.

SONAR SYSTEM

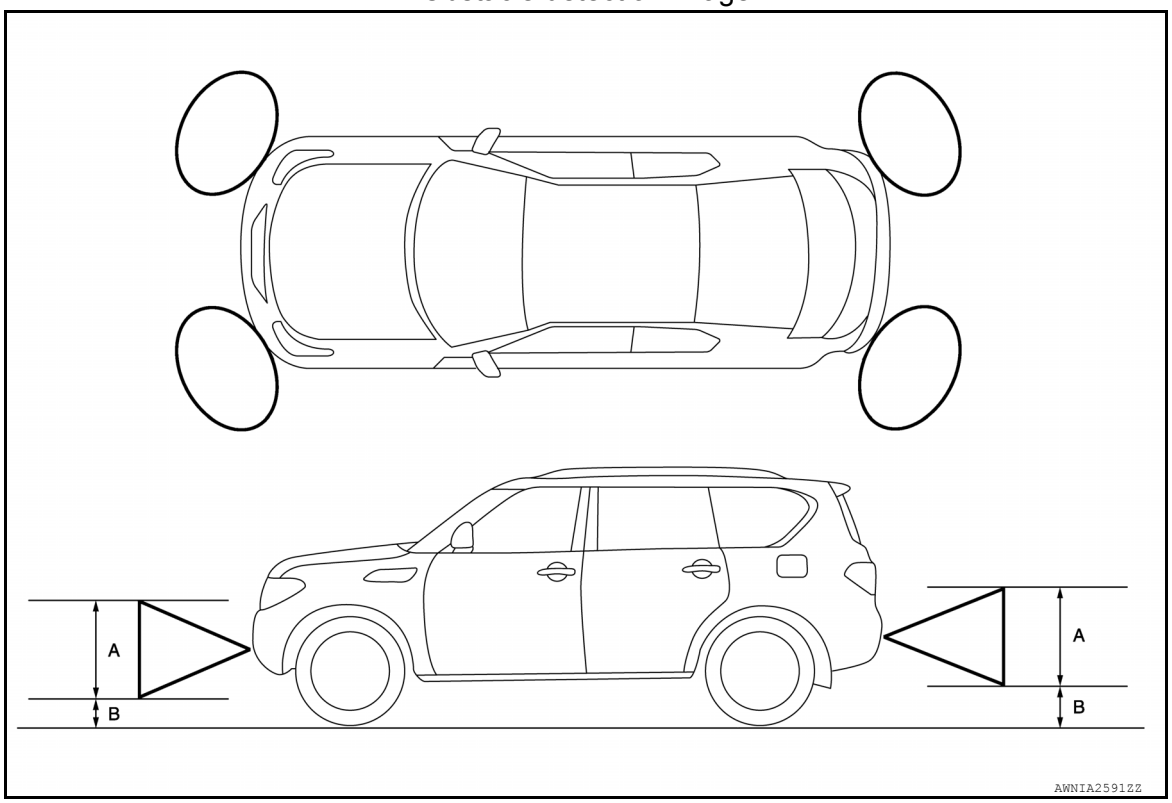
System Operation Description

- Around view monitor control unit transmits the sonar operation signal via CAN communication to sonar control unit to control the operation of sonar indicator and sonar buzzer.
- Sonar control unit transmits the detection signal and detection distance signal via CAN communication to around view monitor control unit. Around view monitor control unit operates the applicable sonar indicator.
- When receiving a sonar operation signal from the around view monitor control unit, the sonar control unit converts the signal into a detection distance signal and transmits it to the AV control unit via CAN communication. When receiving the detection signal, the AV control unit activates the speakers via the BOSE speaker amp.
- The sonar control unit is capable of self diagnosis. It can detect sensor malfunction or sensor harness open circuits. It transmits the diagnosis results to around view monitor control unit and always displays the sonar indicator in red to inform the vehicle operator.

Obstacle Detection Distance

- Sonar control unit changes the outputs of the sonar indicator and warning buzzer in 3 stages according to the obstacle detection distance from the corner sensor.
- The sonar control unit can change the setting of obstacle detection distance in 4 stages.

Obstacle detection image



A. Approx. 50 cm (19.6 in) B. Approx. 15 cm (5.9 in)

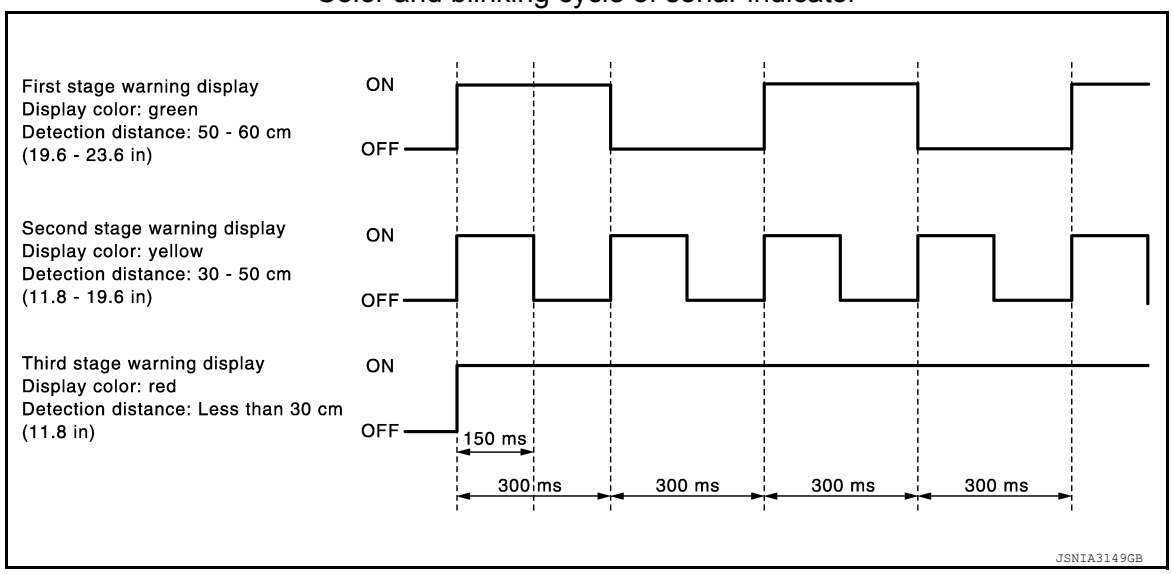
Detection distance

Warning item	Sensitivity level 1 (Fastest warning)	Sensitivity level 2 (Faster warning)	Sensitivity level 3 (Default value)	Sensitivity level 4 (Slower warning)
First stage warning	70 – 80 cm (27.5 – 31.4 in)	60 – 70 cm (23.6 – 27.5 in)	50 – 60 cm (19.6 – 23.6 in)	40 – 50 cm (15.7 – 19.6 in)
Second stage warning	50 – 70 cm (19.6 – 27.5 in)	40 – 60 cm (15.7 – 23.6 in)	30 – 50 cm (11.8 – 19.6 in)	30 – 40 cm (11.8 – 15.7 in)
Third stage warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

Sonar Indicator Display

- Around view monitor control unit that receives the detection signal and detection distance signal from sonar control unit displays the sonar indicator on display.
- Around view monitor control unit changes the color or blinking cycle of the indicator according to the detection distance.

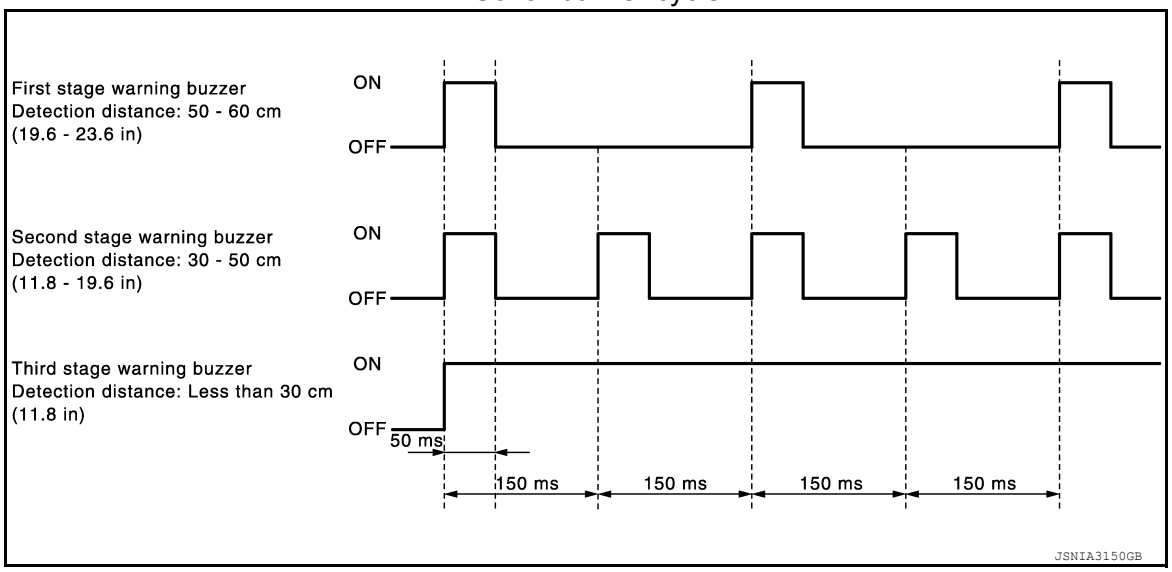
Color and blinking cycle of sonar indicator



Sonar Buzzer Operation

- Each sonar sensor transmits a sensor signal to the sonar control unit when detecting an obstacle.
- The sonar control unit converts a signal received from each sonar sensor into distance and transmits detection distance signal to the AV control unit via AV communication.
- The AV control unit transmits a buzzer signal to the BOSE amp. corresponding to each sonar sensor based on the received signal.
- When receiving a buzzer signal, the BOSE amp. transmits the buzzer signal to the each speaker. When each speaker receives a buzzer signal, a buzzer sounds.
- When the front corner sensor detects an obstacle, a buzzer is heard from the speakers on the front side.
- When the rear corner sensor detects an obstacle, a buzzer is heard from the speakers on the rear side.
- It changes the buzzer cycle in 3 stages according to the detection distance.

Sonar buzzer cycle



VEHICLE INFORMATION FUNCTION

- Status of audio, climate control system, fuel economy, maintenance and navigation are displayed.
- AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM and combination meter.
- AV control unit is connected to BCM via CAN communication transmitting/receiving for the vehicle settings function.

INTELLIGENT KEY INTERLOCKING FUNCTION

The AV control unit recognizes a door-unlocked state of Intelligent Key according to an Intelligent Key recognition signal transmitted from BCM and saves two different types of audio settings and navigation settings.

Settings saved in the AV control unit

- Map display
- Route guidance
- Locator
- Route search
- Sound quality
- Radio preset
- Language

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:0000000008376871

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

- A/C and AV switch assembly self diagnosis that checks the ON/OFF operation (continuity) of each switch in the A/C and AV switch assembly.
  NOTE:
  The hazard switch and disk eject switch are not included in this operation check.
- AV control unit on board diagnosis performs the following functions listed in the table below:

Mode			Description
Self Diagnosis			• AV control unit diagnosis. • Diagnoses the connections across system components, between AV control unit and GPS antenna.
Confirmation/ Adjustment	Display Diagnosis		The following check functions are available: color tone check by color bar display and white display, light and shade check by gray scale display and touch panel calibration response check.
	Vehicle Signals		Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition, reverse, side view switch and room lamp.
	Speaker Test		The connection of a speaker can be confirmed by test tone.
	Navigation	Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.
		Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.
	Error History		The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.
	Synchronizer FES Clock		–
	Vehicle CAN Diagnosis		The transmitting/receiving of CAN communication can be monitored.
	AV COMM Diagnosis		The communication condition of each unit of Multi AV system can be monitored.
	Handsfree Phone/Infiniti Connection		• The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed. • Diagnosis of the Infiniti Connection system can be performed.
	XM	XM NaviTrffic	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.
		XM NavWeather	
		XM CGS	
		Diag	
	Delete Unit Connection Log		Erase the connection history of unit and error history.
	Initialize Settings		Initializes the AV control unit memory.
	Version Information		Version information of the AV control unit is displayed.

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

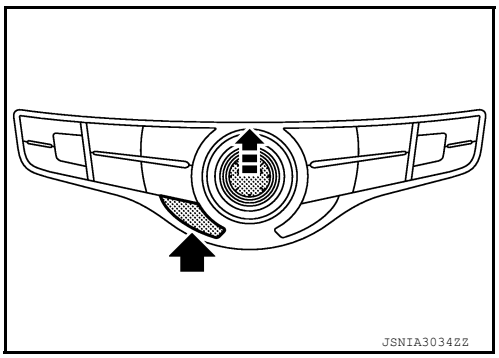
On Board Diagnosis Function

INFOID:0000000008376872

METHOD OF STARTING

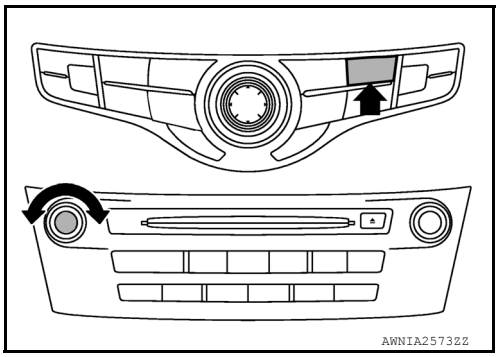
A/C and AV Switch Assembly Self Diagnosis

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

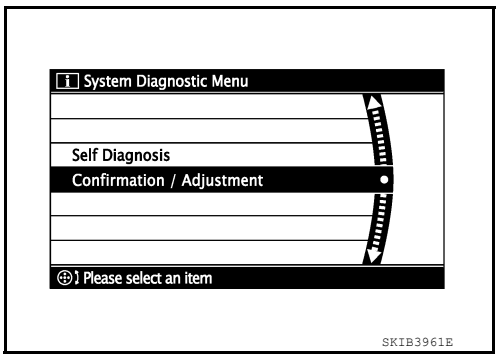


AV Control Unit Self Diagnosis

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



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

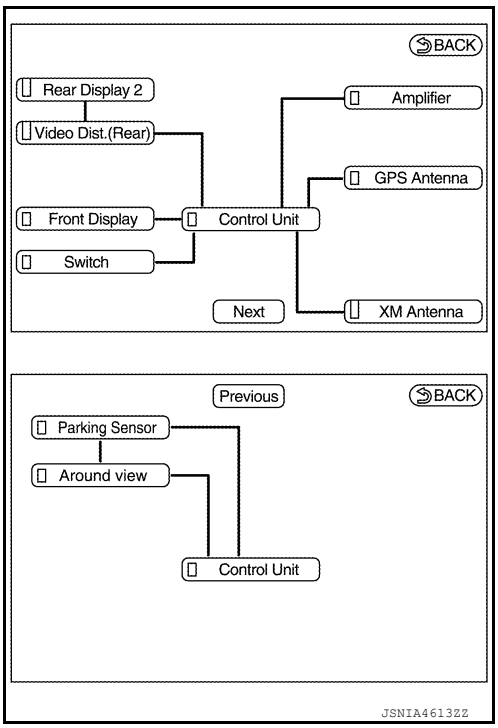


SELF DIAGNOSIS MODE

AV Control Unit Self Diagnosis

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

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

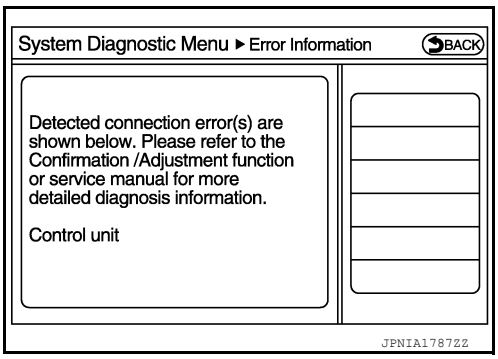


Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction [1]	Red	Green

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

- Replace AV control unit if Self Diagnosis did not run because control unit malfunction is indicated. The symptom is AV control unit internal error. Refer to AV-668, "Removal and Installation - AV Control Unit".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

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



AV Control Unit Self Diagnosis Results

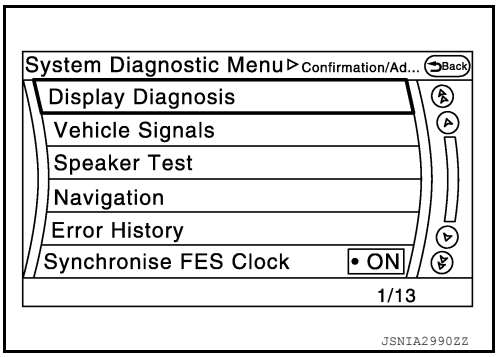
Only Unit Part Is Displayed In Red		
Screen switch	Description	Possible cause
Control Unit	Malfunction is detected in AV control unit power supply and ground circuits.	• AV control unit power supply or ground circuits. Refer to AV-613, "AV CONTROL UNIT : Diagnosis Procedure". • If no malfunction is detected in AV control unit power supply and ground circuits, replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".
Amplifier	When either one of the following items are detected: • sound signal circuits between BOSE amp. and each speaker are malfunctioning. • BOSE amp. malfunction is detected.	• Malfunctioning speaker circuits • Replace BOSE amp. Refer to AV-674, "Removal and Installation".

A Connecting Cable Between Units Is Displayed In Yellow		
Area with yellow connection lines	Description	Possible cause
Control unit ⇔ Front Display	Serial communication circuits between AV control unit and front display unit are malfunctioning.	Serial communication circuits between AV control unit and front display unit.
Control unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	Check the connection of the GPS antenna connector.
Control unit ⇔ XM Antenna	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection
Control unit ⇔ Amplifier	When either one of the following items are detected: • BOSE amp. power supply and ground circuits are malfunctioning. • AV communication circuits between headrest display unit LH and BOSE amp. are malfunctioning.	• BOSE amp. power supply and ground circuits. Refer to AV-614, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between headrest display unit LH and BOSE amp.
Control unit ⇔ Around view Around view ⇔ Parking Sensor	When either one of the following items are detected: • around view monitor control unit power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and around view monitor control unit are malfunctioning.	• Around view monitor control unit power supply and ground circuits. • AV communication circuits between AV control unit and around view monitor control unit.
Control unit ⇔ Parking Sensor Around view ⇔ Parking Sensor	When either one of the following items are detected: • sonar control unit power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and sonar control unit are malfunctioning.	• Sonar control unit power supply and ground circuits. • AV communication circuits between AV control unit and sonar control unit.

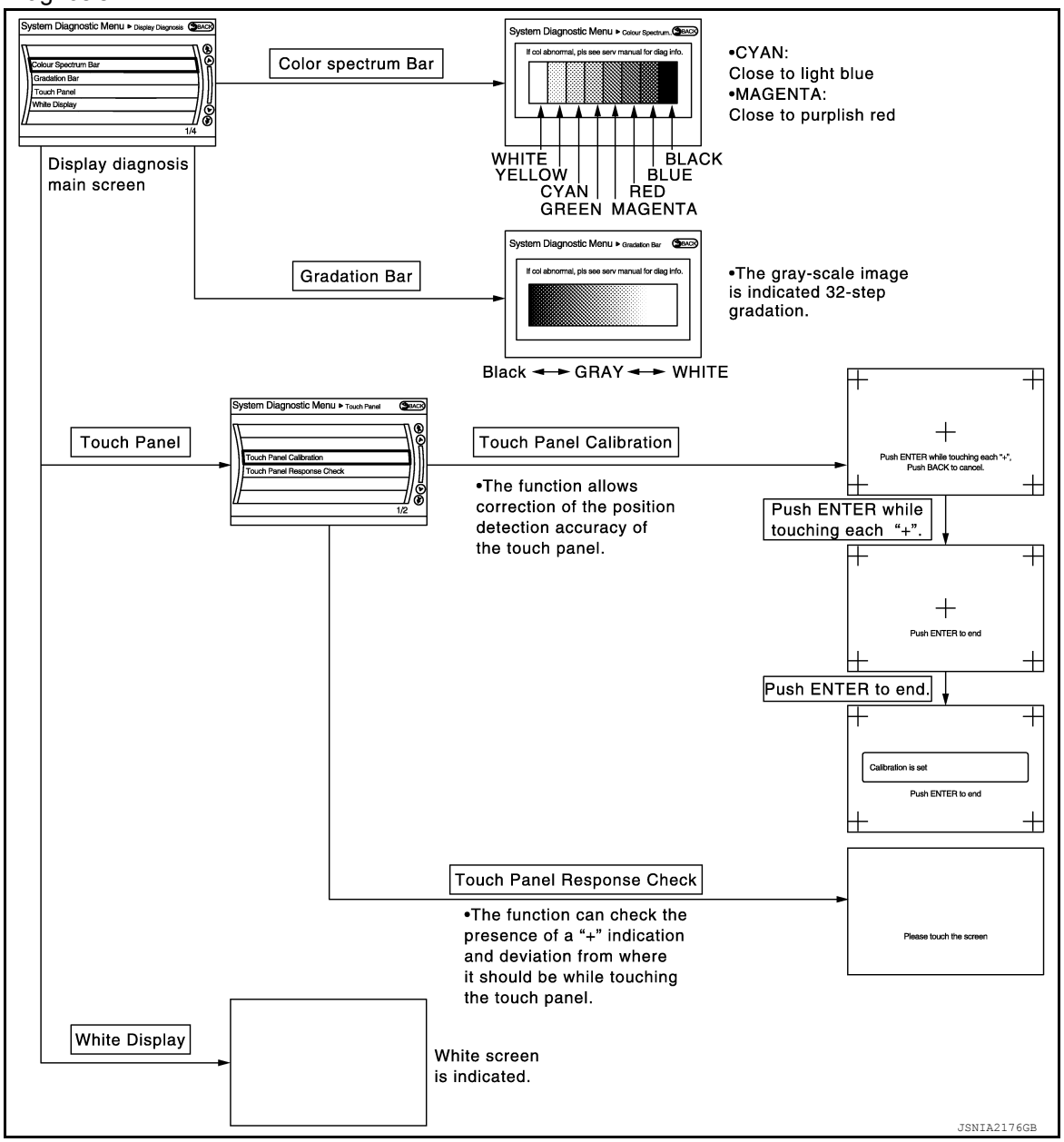
A Connecting Cable Between Units Is Displayed In Yellow		
Area with yellow connection lines	Description	Possible cause
Control unit ⇔ Video Dist.(Rear) Video Dist.(Rear) ⇔ Rear display 2	When either one of the following items are detected: • video distributor power supply and ground circuits are malfunctioning. • headrest display unit LH power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and headrest display unit LH are malfunctioning. • location recognition signal circuit between headrest display unit LH and ground is malfunctioning.	• Video distributor power supply and ground circuits. • Headrest display unit LH power supply and ground circuits. • AV communication circuits between AV control unit and headrest display unit LH. • Location recognition signal circuit between headrest display unit LH and ground.
Video Dist.(Rear) ⇔ Rear display 2	When either one of the following items are detected: • headrest display unit RH power supply and ground circuits are malfunctioning. • AV communication circuits between headrest display unit LH and headrest display unit RH are malfunctioning. • location recognition signal circuit between headrest display unit RH and ground is malfunctioning.	• Headrest display unit RH power supply and ground circuits. • AV communication circuits between headrest display unit LH and headrest display unit RH. • Location recognition signal circuit between headrest display unit RH and ground.

AV Control Unit Confirmation/Adjustment

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

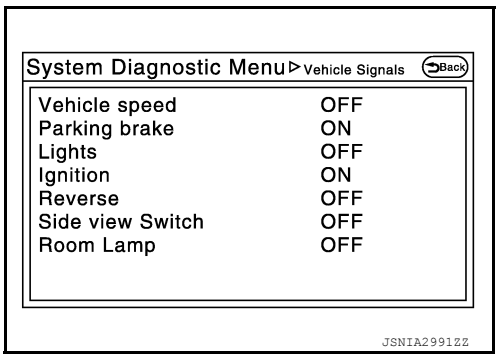


Display Diagnosis



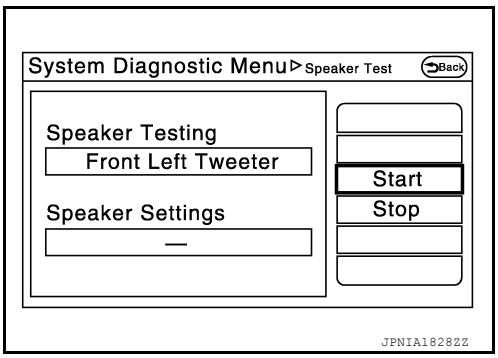
Vehicle Signals

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



Speaker Test

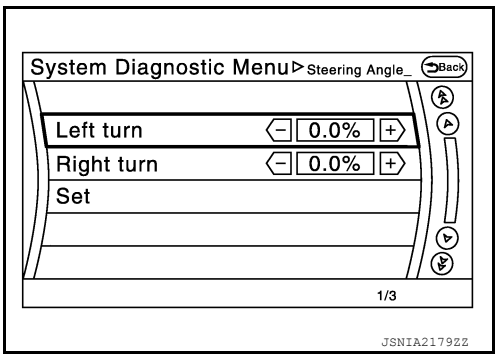
Select Speaker Test to display the Speaker Diagnosis screen. Press Start to generate a test tone in a speaker. Press Start again to generate a test tone in the next speaker. Press End to stop the test tones.



Navigation

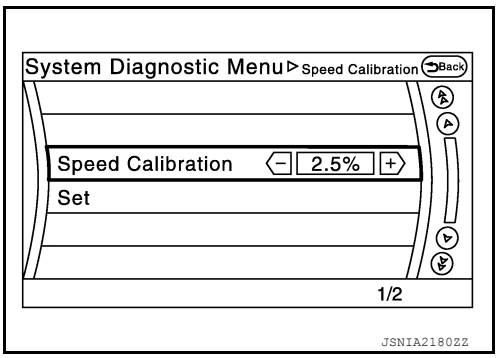
STEERING ANGLE ADJUSTMENT

The steering angle output value detected with the gyroscope is adjusted.



SPEED CALIBRATION

During normal driving, distance error caused by tire wear and tire pressure change is automatically adjusted for by the automatic distance correction function. This function, on the other hand, is for immediate adjustment, in cases such as driving with tire chain fitted on tires.



Error History

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

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

The error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.

- If there is a malfunction with the GPS antenna circuit board in the AV control unit, the correct date and time of occurrence may not be able to be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.
- The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

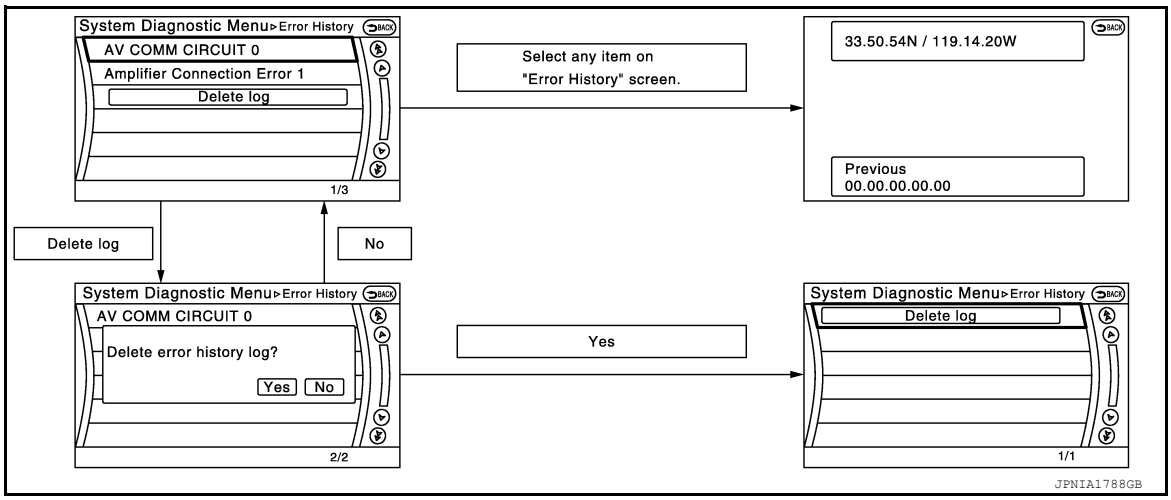
Count up method A

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

Count up method B

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

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



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-448, "CONSULT Function".
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
Connection Of Gyro		
Connection of G Sensor		
CAN Controller Memory Error		
Bluetooth® Module Connection Error		
Sub CPU Connection Error		
Audio connection error		
DSP Connection Error	AV control unit malfunction is detected.	• If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".
DSP Communication Error		

Error item	Description	Possible malfunction factor/Action to take
HDD Connection Error HDD Read Error HDD Write Error HDD Communication Error HDD Access Error	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".
GPS Communication Error GPS ROM Error GPS RAM Error GPS RTC Error	GPS malfunction is detected.	• An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT.
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DVD Mechanism Communication Error	AV control unit malfunction is detected.	• If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor. Refer to AV-448, "CONSULT Function".
Amplifier Temperature Error	BOSE amp. malfunction is detected.	Replace the BOSE amp. Refer to AV-674, "Removal and Installation".
Front Display Connection Error	When either one of the following items are detected: • front display unit power supply and ground circuits are malfunctioning. • Serial communication circuits between AV control unit and front display unit are malfunctioning.	• Front display unit power supply and ground circuits. • Serial communication circuits between AV control unit and front display unit.
• AV COMM CIRCUIT • 2nd Display Connection Error	When either one of the following items are detected: • video distributor power supply and ground circuits are malfunctioning. • headrest display unit LH power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and headrest display unit LH are malfunctioning. • location recognition signal circuit between headrest display unit LH and ground is malfunctioning.	• Video distributor power supply and ground circuits. • Headrest display unit LH power supply and ground circuits. • AV communication circuits between AV control unit and headrest display unit LH. • Location recognition signal circuit between headrest display unit LH and ground.
3rd Display Connection Error	When either one of the following items are detected: • headrest display unit RH power supply and ground circuits are malfunctioning. • AV communication circuits between headrest display unit LH and headrest display unit RH are malfunctioning. • location recognition signal circuit between headrest display unit RH and ground is malfunctioning.	• Headrest display unit RH power supply and ground circuits. • AV communication circuits between headrest display unit LH and headrest display unit RH. • Location recognition signal circuit between headrest display unit RH and ground.

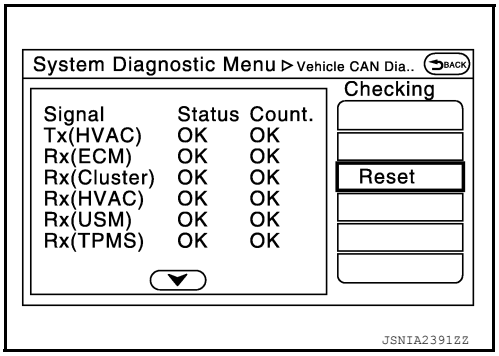
Error item	Description	Possible malfunction factor/Action to take
AM/FM antenna amplifier short to ground	Radio antenna amp. ON signal circuit malfunction is detected.	Radio antenna amp. ON signal circuit between AV control unit and antenna amp.
AM/FM antenna amplifier open		
Ext_Amp_ON output terminal short to ground	BOSE amp. ON signal circuit malfunction is detected.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.
Ext_Amp_ON output terminal :open		
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
XM Antenna Connection Error	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.
USB electric current Error	Detection of overcurrent in USB connector.	Check USB harness between the AV control unit and USB connector.
FL-DOOR SPEAKER OUT: open	When either one of the following items are detected: • sound signal circuits between BOSE amp. and front door speaker LH are malfunctioning. • sound signal circuits between BOSE amp. and front door tweeter LH are malfunctioning.	• Sound signal circuits between BOSE amp. and front door speaker LH. • Sound signal circuits between BOSE amp. and front door tweeter LH.
FL-DOOR SPEAKER OUT: short		
FL-DOOR SPEAKER: short to ground		
FL-DOOR SPEAKER: short to battery		
FL-DOOR TWEETER OUT: open		
FL-DOOR TWEETER OUT: short		
FL-DOOR TWEETER OUT: short to ground		
FL-DOOR TWEETER OUT: short to battery		
FR-DOOR SPEAKER OUT: open	When either one of the following items are detected: • sound signal circuits between BOSE amp. and front door speaker RH are malfunctioning. • sound signal circuits between BOSE amp. and front door tweeter RH are malfunctioning.	• Sound signal circuits between BOSE amp. and front door speaker RH. • Sound signal circuits between BOSE amp. and front door tweeter RH.
FR-DOOR SPEAKER OUT: short		
FR-DOOR SPEAKER OUT: short to ground		
FR-DOOR SPEAKER OUT: short to battery		
FR-DOOR TWEETER OUT: open		
FR-DOOR TWEETER OUT: short		
FR-DOOR TWEETER OUT: short to ground		
FR-DOOR TWEETER OUT: short to battery		
FL-INST TWEETER OUT: open	Sound signal circuits between BOSE amp. and tweeter LH are malfunctioning.	Sound signal circuits between BOSE amp. and tweeter LH.
FL-INST TWEETER OUT: short		
FL-INST TWEETER OUT: short to ground		
FL-INST TWEETER OUT: short to battery		
FC-INST SPEAKER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and center speaker.	Sound signal circuits between BOSE amp. and center speaker.
FC-INST SPEAKER OUT: short		
FC-INST SPEAKER OUT: short to ground		
FC-INST SPEAKER OUT: short to battery		
FR-INST TWEETER OUT: open	Sound signal circuits between BOSE amp. and tweeter RH are malfunctioning.	Sound signal circuits between BOSE amp. and tweeter RH.
FR-INST TWEETER OUT: short		
FR-INST TWEETER OUT: short to ground		
FR-INST TWEETER OUT: short to battery		
2L-DOOR SPEAKER OUT: open	Sound signal circuits between BOSE amp. and rear door speaker LH are malfunctioning.	Sound signal circuits between BOSE amp. and rear door speaker LH.
2L-DOOR SPEAKER OUT: short		
2L-DOOR SPEAKER OUT: short to ground		
2L-DOOR SPEAKER OUT: short to battery		

Error item	Description	Possible malfunction factor/Action to take
2R-DOOR SPEAKER OUT: open 2R-DOOR SPEAKER OUT: short 2R-DOOR SPEAKER OUT: short to ground 2R-DOOR SPEAKER OUT: short to battery	Sound signal circuits between BOSE amp. and rear door speaker RH are malfunctioning.	Sound signal circuits between BOSE amp. and rear door speaker RH.
RL-SPEAKER OUT: open RL-SPEAKER OUT: short RL-SPEAKER OUT: short to ground RL-SPEAKER OUT: short to battery	Sound signal circuits between BOSE amp. and rear speaker LH are malfunctioning.	Sound signal circuits between BOSE amp. and rear speaker LH.
RR-SPEAKER OUT: open RR-SPEAKER OUT: short RR-SPEAKER OUT: short to ground RR-SPEAKER OUT: short to battery	Sound signal circuits between BOSE amp. and rear speaker RH are malfunctioning.	Sound signal circuits between BOSE amp. and rear speaker RH.
SUBWOOFER OUT: open SUBWOOFER OUT: short SUBWOOFER OUT: short to ground SUBWOOFER OUT: short to battery	Sound signal circuits between BOSE amp. and subwoofer are malfunctioning.	Sound signal circuits between BOSE amp. and subwoofer.
• AV COMM CIRCUIT • Switches Connection Error	When either one of the following items are detected: • multifunction switch power supply and ground circuits were malfunctioning. • AV communication circuits between AV control unit and multifunction switch are malfunctioning.	• Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.
• AV COMM CIRCUIT • Amplifier Connection Error	When either one of the following items are detected: • BOSE amp. power supply and ground circuits are malfunctioning. • AV communication circuits between headrest display unit LH and BOSE amp. are malfunctioning.	• BOSE amp. power supply and ground circuits. Refer to AV-614, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between headrest display unit LH and BOSE amp.
• AV COMM CIRCUIT • AVM Connection Error	When either one of the following items are detected: • around view monitor control unit power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and around view monitor control unit are malfunctioning.	• Around view monitor control unit power supply and ground circuits. • AV communication circuits between AV control unit and around view monitor control unit.
• AV COMM CIRCUIT • Sonar Connection Error	When either one of the following items are detected: • sonar control unit power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and sonar control unit are malfunctioning.	• Sonar control unit power supply and ground circuits. • AV communication circuits between AV control unit and sonar control unit.

Error item	Description	Possible malfunction factor/Action to take
• AV COMM CIRCUIT • Switches Connection Error • Sonar Connection Error • AVM Connection Error • 2nd Display Connection Error	AV communication circuits between AV control unit and multifunction switch are malfunctioning.	AV communication circuits between AV control unit and multifunction switch.
• AV COMM CIRCUIT • Switches Connection Error • Amplifier Connection Error • Sonar Connection Error • AVM Connection Error • 2nd Display Connection Error		

Vehicle CAN Diagnosis

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

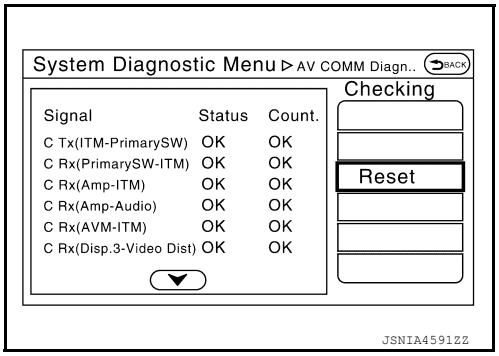


Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(TPMS)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39
Rx(ACC)	OK / ???	OK / 0 – 39
RX(VDC)	OK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

NOTE:
“???” indicates UNKWN.

AV COMM Diagnosis

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

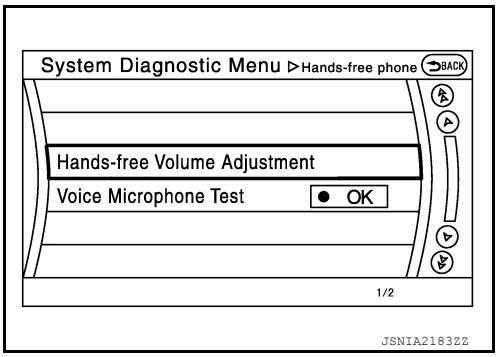


Items	Status (Current)	Counter (Past)
C Tx(ITM–PrimarySW)	OK / ???	OK / 0 – 39
C Rx(PrimarySW–ITM)	OK / ???	OK / 0 – 39
C Rx(Amp–ITM)	OK / ???	OK / 0 – 39
C Rx(Amp–Audio)	OK / ???	OK / 0 – 39
C Rx(AVM–ITM)	OK / ???	OK / 0 – 39
C Rx(Disp.3–Video Dist)	OK / ??? / –	OK / 0 – 39
C Rx(Video Dist–ITM)	OK / ???	OK / 0 – 39
C Rx(Sonar–ITM)	OK / ???	OK / 0 – 39

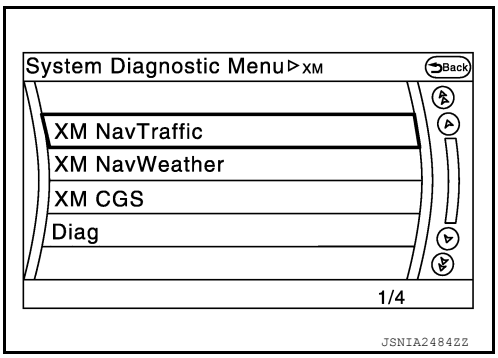
Items	Status (Current)	Counter (Past)
C Rx(Sonar–AVM)	OK / ???	OK / 0 – 39
C Rx(R.RemoteCont–ITM)	OK / ???	OK / 0 – 39

NOTE:
"???" indicates UNKWN

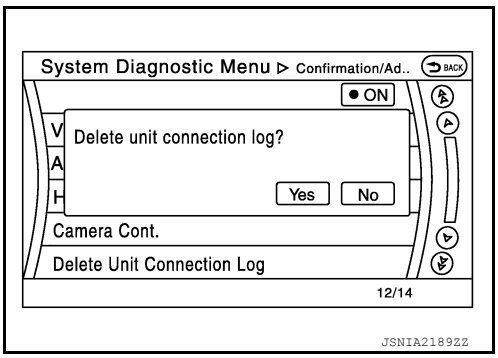
Hands-Free Phone
The hands-free phone reception volume adjustment and microphone and speaker test functions are also available.



XM
- 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.)

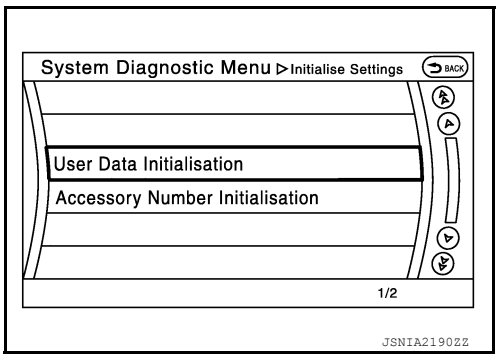


Initialize Settings

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

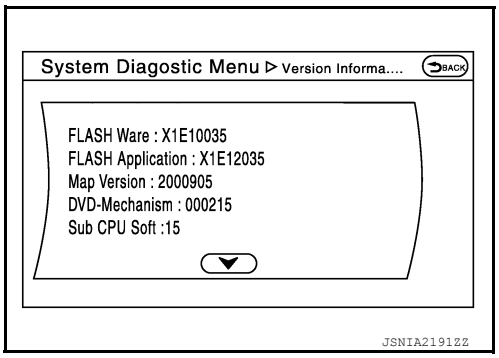
CAUTION:

- **Never perform Accessory Number Initialization except when configuration is unsuccessful.**
- **Accessory Number Initialization requires configuration. For details, refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Description".**



Version Information

Version information of the AV control unit is displayed.



CONSULT Function

INFOID:0000000008376873

CONSULT FUNCTIONS

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

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Work support	The settings for AV control unit functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing AV control unit.
CAN Diag Support Mntr	• The result of transmit/receive diagnosis of AV communication is displayed. • The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSTIC RESULT

Refer to AV-464, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPD SIG [On/Off]	• On: vehicle speed > 0 km/h (0 MPH). • Off: vehicle speed = 0 km/h (0 MPH).
PKB SIG [On/Off]	• On: parking brake applied. • Off: parking brake released.
ILLUM SIG [On/Off]	• On: optical sensor signal is received. • Off: optical sensor signal is not received.

Monitor Item [Unit]	Description
IGN SIG [On/Off]	• On: ignition switch ON. • Off: ignition switch ACC.
REV SIG [On/Off]	• On: selector lever in R position. • Off: selector lever in any position other than R.

WORK SUPPORT

Conditions	Description
ST ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed. Refer to BRC-59, "Description".

CONFIGURATION

Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Description".

CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

CONSULT Function

INFOID:0000000008376960

CONSULT FUNCTIONS

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

Direct Diagnostic Mode	Description
Ecu Identification	The around view monitor control unit part number is displayed.
Self Diagnostic Result	The around view monitor control unit self diagnostic results are displayed.
Data Monitor	The around view monitor control unit input/output data is displayed in real time.
Work support	The settings for around view monitor control unit functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing around view monitor control unit.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

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

SELF DIAGNOSTIC RESULT

Refer to AV-482, "DTC Index".

DATA MONITOR

Monitor Item	Description
ST ANGLE SENSOR SIGNAL [On/Off]	Indicates condition of steering angle sensor signal.
REVERSE SIGNAL [On/Off]	Indicates selector lever position.
VEHICLE SPEED SIGNAL [mph/km/h]	Indicates condition of vehicle speed signal.
CAMERA SWITCH SIGNAL [On/Off]	Indicates condition of camera switch signal.
CAMERA OFF SIGNAL [On/Off]	Indicates condition of camera OFF signal.
ST ANGLE SENSOR TYPE [Absolute]	Indicates steering angle sensor type.
ST GEAR RATIO TYPE [Type O]	Indicates steering gear ratio type.
STEERING POSITION [LHD/RHD]	Indicates drive type.
REAR CAMERA IMAGE SIGNAL [OK]	Indicates condition of camera image signal.
R-CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
R-CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
F-CAMERA IMAGE SIGNAL [OK]	Indicates condition of camera image signal.
F-CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
F-CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
DR-SIDE CAMERA IMAGE SIG [OK]	Indicates condition of camera image signal.
DR CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
DR-SIDE CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
PA-SIDE CAMERA IMAGE SIG [OK]	Indicates condition of camera image signal.
PA CAMERA COMM STATUS [OK]	Indicates condition of camera communication.
PA-SIDE CAMERA COMM LINE [OK]	Indicates condition of camera communication signal.
ACC [OK]	indicates condition of accessory signal.
FOLDING MOTOR VOLT 1 [On/Off]	indicates condition of mirror folding motor.
FOLDING MOTOR VOLT 2 [On/Off]	indicates condition of mirror folding motor.

WORK SUPPORT

Support Item	Description
NON-VIEWABLE AREA REMINDER	ON/OFF setting of non-viewable area can be performed.
INITIALIZE CAMERA IMAGE CALIBRATION	Factory image calibration restoration can be performed.
STEERING ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position adjustment can be performed.
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	Performs calibration of front camera.
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	Performs calibration of passenger side camera.
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	Performs calibration of driver side camera.
CALIBRATING CAMERA IMAGE (REAR CAMERA)	Performs calibration of rear camera.
FINE TUNING OF BIRDS-EYE VIEW	Confirmation and adjustment of difference between each camera can be performed.
REAR WIDE-VIEW FIXED GUIDE LINE CORRECTION	Performs calibration of rear wide-view guide line correction.
TURNING RADIUS CORRECTION	Performs calibration of turning radius correction.
PARTS WITH DOOR MIRROR AUTO FOLD FUNC	ON/OFF setting of auto fold mirror function can be performed.
SONAR Off POP-UP DISPLAY SETTING CHANGE	ON/OFF setting of sonar pop-up display can be performed.
FRONT WIDE-VIEW FIXED GUIDE LINE CORRECTION	Performs calibration of front wide-view guide line correction.
ZOOM FUNCTION	Adjustment of magnification setting of camera can be performed.

CONFIGURATION

Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Description".

CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

DIAGNOSIS SYSTEM [SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)]

CONSULT Function

INFOID:0000000008376961

APPLICATION ITEMS

CONSULT can display each diagnostic item using the diagnostic test modes shown as follows:

Test mode	Function
Ecu Identification	Sonar control unit part number can be read.
Self Diagnostic Result	Sonar control unit checks the conditions and displays memorized error.
Data Monitor	Sonar control unit input/output data in real time.
Active Test	Gives a drive signal to a load to check the operation.
Work support	Changes setting of each function.

ECU IDENTIFICATION

Displays the part number of sonar control unit.

SELF-DIAGNOSTIC RESULTS

For details, refer to AV-488, "DTC Index".

DATA MONITOR

Monitor Item	Display	Description
VEHICLE SPEED	(mph)	Vehicle speed
SONAR C/U POWER SUPPLY	(v)	Supply voltage for the Sonar C/U
SENSOR VOLTAGE	(v)	Sensor voltage
DETECTION MODE	(Mode)	Displays detection mode display
SW OPRT AFTR IGN ON	Yes	Switch operation after ignition ON
	No	
SONAR TEMPORARY OFF	Yes	Sonar system temporary Off
	No	Sonar system On
SONAR PERMANENT OFF	Yes	Sonar system malfunction
	No	Sonar system without malfunction
P N RANGE	Yes	Selector lever is in “P” or “N” position
	No	Selector lever is another position other than “P” or “N”
LED	Yes	Led On
	No	Led Off
TRAILER CONNECT	CON	Trailer connector is in use
	N CON	Trailer connector is not in use
REVERSE RANGE	On	Selector lever is in the “R” position
	Off	Selector lever is in another position other than “R”

Monitor Item	Display	Description
COR[RL]	(cm)	Measures the distance in cm to the obstacle.
COR[RL]-> CEN[RL]/ CEN[R]		
CEN[RL]/CEN[R]-> COR[RL]		
CEN[RL]/CEN[R]		
CEN[RL]-> CEN[RR]		
CEN[RR]-> CEN[RL]		
CEN[RR]		
CEN[RR]-> CEN[RR]/ COR[RR]		
COR[RR]-> CEN[RR]/ CEN[R]		
COR[RR]		
COR[FL]		
COR[FL]-> CEN[FL]/ CEN[F]		
CEN[FL]/CEN[F] ->COR[FL]		
CEN[FL]/CEN[F]		
CEN[FL]-> CEN[FR]		
CEN[FR]-> CEN[FL]		
CEN[FR]		
CEN[FR]/CEN[F]-> COR[FR]		
COR[FR]-> CEN[FR]/ CEN[F]		
COR[FR]		
CEN[FR]/CEN[F]-> COR[FR]		
COR[FR]-> CEN[FR]/ CEN[F]		
COR[FR]		
RVRB TIME COR[RL]	(ms)	Measures the distance in ms to the obstacle.
RVRB TIME COR[RR]		
RVRB TIME CEN[RL]		
RVRB TIME CEN[RR]		
RVRB TIME COR[FL]		
RVRB TIME COR[FR]		
RVRB TIME CEN[FL]		
RVRB TIME CEN[FR]		

*: Even when a buzzer (backward) is output condition, this item is indicated as OFF.

ACTIVE TEST

Active test item	Function
REAR BUZZER	This test is able to check rear buzzer operation.

WORK SUPPORT

Work support item	Function
VOLUME SETTING	Allows you to adjusts the volume of the warning tone.
TRAILER HITCH DETECTION RANGE ADJUSTMENT	Allows you to adjust the rear sonar sensors when towing a trailer.

CORNER SEN DISTANCE SET

Corner sensor warning buzzer distance can be set to 4 phases as follows.

Warning item	FARTHER	FAR	NORMAL (Default)	NEAR
Second warning	70 – 80 cm (27.5 – 31.4 in)	60 – 70 cm (23.6 – 27.5 in)	50 – 60 cm (19.6 – 23.6 in)	40 – 50 cm (15.7 – 19.6 in)
Third warning	50 – 70 cm (19.6 – 27.5 in)	40 – 60 cm (15.7 – 23.6 in)	30 – 50 cm (11.8 – 19.6 in)	30 – 40 cm (11.8 – 15.7 in)
Fourth warning	Less than 50 cm (19.6 in)	Less than 40 cm (15.7 in)	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

The default of this model is “NORMAL”.

DIAGNOSIS SYSTEM (HEADREST DISPLAY UNIT)

Description

INFOID:0000000008376962

Self-diagnosis of headrest display unit can be performed by operating rear seat remote controller.

On Board Diagnosis Function

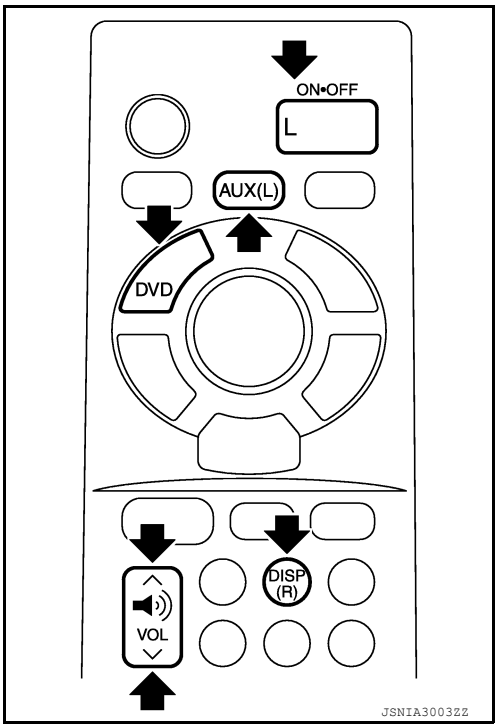
INFOID:0000000008376963

Self-diagnosis mode can check the following items.

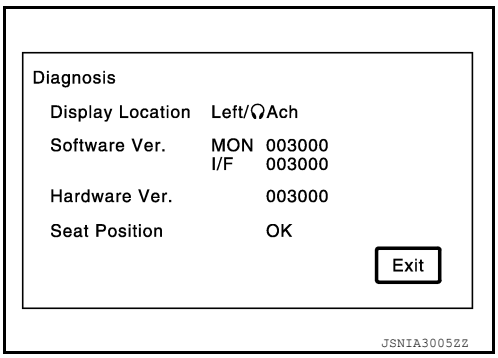
Diagnosis item	Display	Description
Display Location	Left/Right/Unknown	Installation location of headrest display unit is displayed. **NOTE:** If displayed location is different from the actual location or shown as “unknown”, check location recognition signal circuit.
Software Ver.	*****	Software version of headrest display unit is displayed.
Hardware Ver.	*****	Hardware version of headrest display unit is displayed.
Seat Position	OK	Not used for this vehicle.

METHOD OF STARTING

1. Turn ignition switch to the ON position.
2. Turn the headrest display unit OFF.
3. Press each switch of rear seat remote controller in the order shown below.
   “AUX(L)”→“VOL DOWN”→“DISP(R)”→“VOL UP”→“DVD”→“L”
   NOTE:
   - Operation must be done within 20 seconds.
   - Perform the operation of rear seat remote controller for headrest display unit of each side.

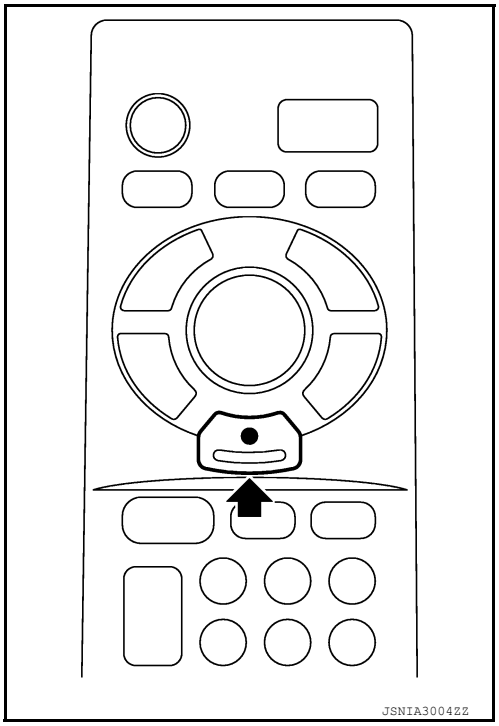


4. When the rear seat remote operation is performed as shown on procedure 3, self-diagnosis screen is displayed.



Finishing Self-diagnosis Mode

Self-diagnosis mode is canceled when pressing the enter switch of rear seat remote controller.



ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

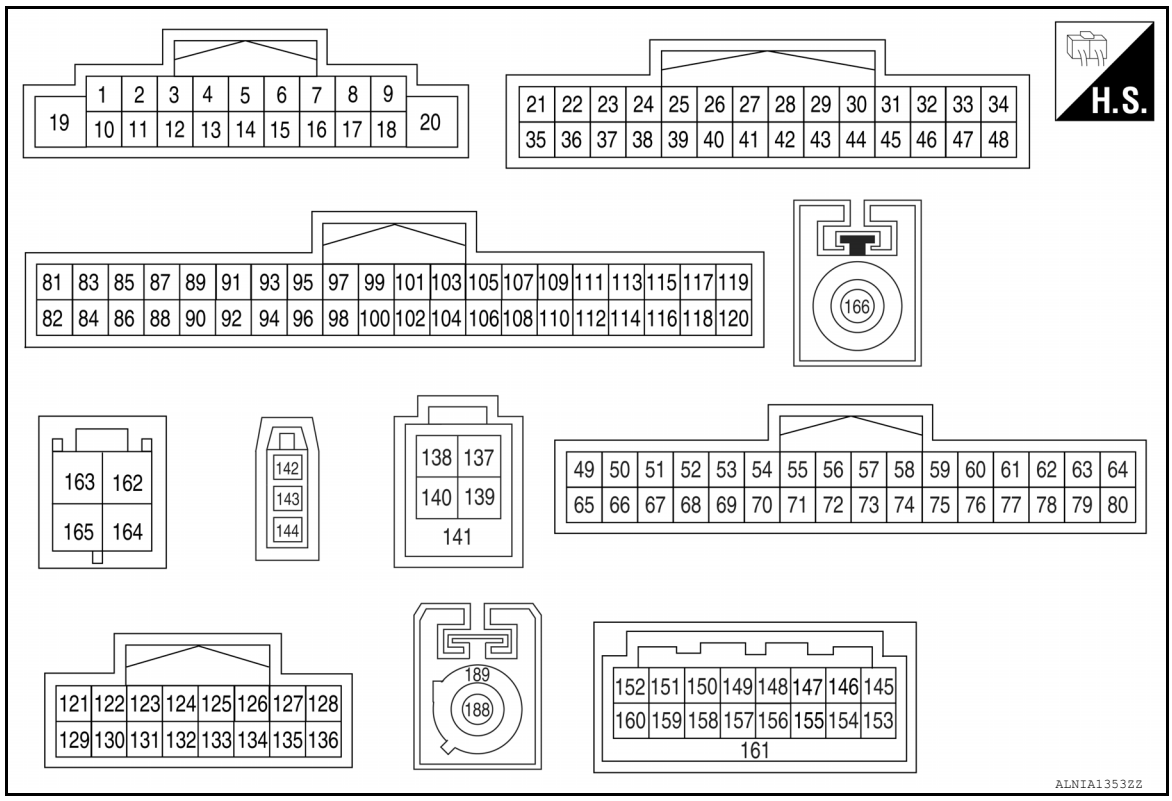
Reference Value

INFOID:0000000008376980

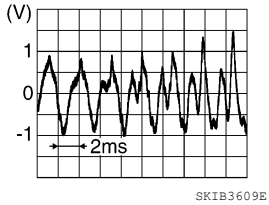
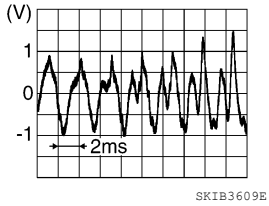
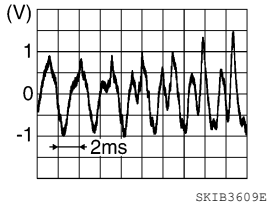
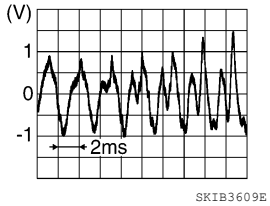
VALUES ON THE DIAGNOSIS TOOL

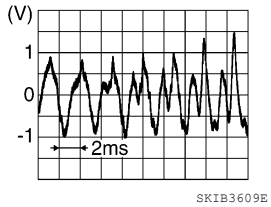
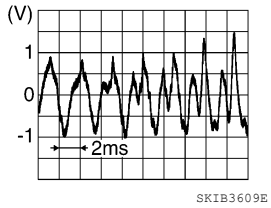
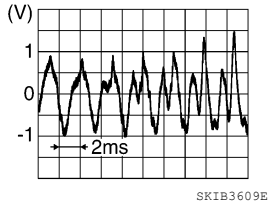
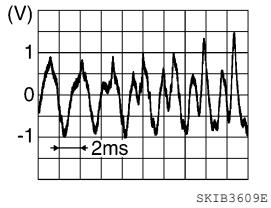
Monitor Item	Condition	Value/Status
VHCL SPD SIG	Vehicle speed = 0 km/h (0 MPH).	Off
	Vehicle speed > 0 km/h (0 MPH).	On
PKB SIG	Parking brake released.	Off
	Parking brake applied.	On
ILLUM SIG	Optical sensor signal is not received.	Off
	Optical sensor signal is received.	On
IGN SIG	Ingnition switch OFF or ACC.	Off
	Ignition switch ON.	On
REV SIG	Selector lever in any position other than R.	Off
	Selector lever in R position.	On

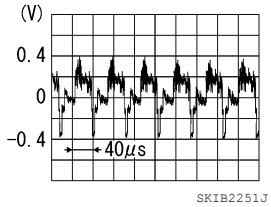
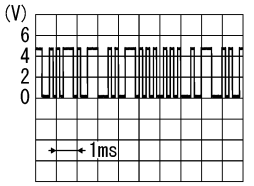
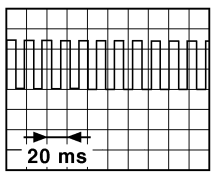
TERMINAL LAYOUT

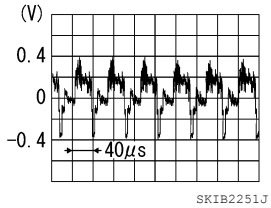
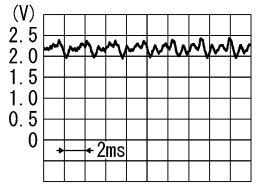
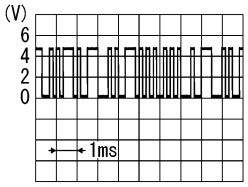
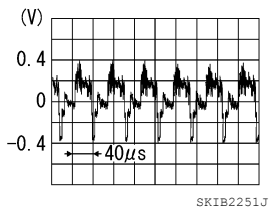


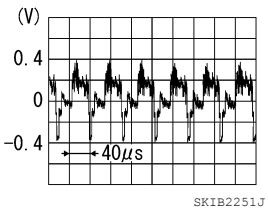
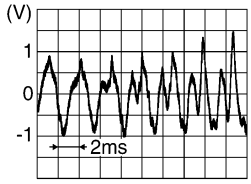
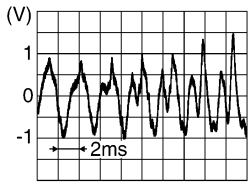
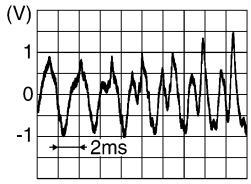
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
2 (B)	3 (W)	Sound signal front LH	Output	Ignition switch ON	Sound output	
4 (B)	5 (W)	Sound signal rear LH	Output	Ignition switch ON	Sound output	
6 (G)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch.	0 V
					Keep pressing MENU UP switch.	1.0 V
					Keep pressing MENU DOWN switch.	2.0 V
					Keep pressing switch	3.0 V
					Keep pressing ENTER switch.	4.0 V
					Except for above.	5.0 V
7 (G)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
10 (BR)	—	Shield	—	—	—	—
11 (W)	12 (B)	Sound signal front RH	Output	Ignition switch ON	Sound output	
13 (B)	14 (W)	Sound signal rear RH	Output	Ignition switch ON	Sound output	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
16 (W)	15 (B)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch.	0 V
					Keep pressing VOL UP switch.	1.0 V
					Keep pressing switch.	2.0 V
					Keep pressing switch.	3.0 V
					Except for above.	5.0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (GR)	Ground	Ground	—	Ignition switch ON	—	0 V
24 (R)	39 (B)	AUX sound signal LH	Input	Ignition switch ON	When front AUX mode is selected.	 SKIB3609E
26 (W)	40 (R)	Sound signal LH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	 SKIB3609E
27 (B)	41 (G)	Sound signal RH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	 SKIB3609E
37	—	Shield	—	—	—	—
38 (W)	39 (B)	AUX sound signal RH	Input	Ignition switch ON	When front AUX mode is selected.	 SKIB3609E
42	—	Shield	—	—	—	—
53 (G)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is applied.	0 V
					Parking brake is released.	4.5 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
55 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
56 (B)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
57 (BG)	—	I-Key memory	—	—	—	—
58 (G)	—	AV-ACC (DCM)	—	—	—	—
60 (W)	Ground	Microphone VCC	Output	Ignition switch ON	—	5.0 V
61 (W)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
62 (P)	—	CAN–L	Input/ Output	—	—	—
63 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
64 (LG)	—	M CAN–L TRM	—	—	—	—
67 (P)	—	MR output	—	—	—	—
68 (LG)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
69 (R)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever is in R position.	Battery voltage
					Selector lever is in other than R position.	0 V
70 (BG)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
71	—	Shield	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
72 (R)	Ground	Composite image synchronizing signal	Output	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
75 (B)	59	Microphone signal	Input	Ignition switch ON	Give a voice.	 PKIB5037J
76	—	Shield	—	—	—	—
77 (B)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
78 (L)	—	CAN–H	Input/ Output	—	—	—
79 (SB)	Ground	Dimmer signal	Input	Ignition switch ON	Either of the following conditions • Lighting switch is OFF • Lighting switch is 1st or 2nd, and the area around the vehicle is bright (shine a light on the optical sensor)	0 V
					Lighting switch is 1st or 2nd, and the area around the vehicle is dark (block the light from the optical sensor)	Battery voltage
80 (SB)	—	M CAN–H TRM	—	—	—	—
91 (W)	Ground	AUX image signal	Input	Ignition switch ON	At front AUX image is displayed.	 SKIB2251J
92 (B)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
94	—	Shield	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
97 (Y)	Ground	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.	0 V
					Except for above.	5.0 V
98 (V)	Ground	Switch ground	—	Ignition switch ON	—	0 V
105 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
106	—	Shield	—	—	—	—
107 (B)	Ground	Composite image signal	Output	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	 SKIB2251J
122 (B)	123 (W)	Sound signal guide	Output	Ignition switch ON	Sound output	 SKIB3609E
124 (B)	132 (W)	Sound signal sub woofer	Output	Ignition switch ON	Sound output	 SKIB3609E
125 (W)	133 (B)	Sound signal center	Output	Ignition switch ON	Sound output	 SKIB3609E
126 (Y)	—	Shield	—	—	—	—
131	—	Shield	—	—	—	—
137 (G)	—	V BUS signal	—	—	—	—
138 (W)	—	USB D+ signal	—	—	—	—
139 (R)	—	USB ground	—	—	—	—
140 (L)	—	USB D− signal	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
141	—	Shield	—	—	—	—
142 (B)	—	FM sub	Input	—	—	—
143 (B)	Ground	Antenna amp. ON signal	Input	Ignition switch ON	—	Battery voltage
144 (B)	—	AM-FM main	Input	—	—	—
145 (W)	—	USB D-signal	Input	—	—	—
146 (L)	—	USB VBUS signal	Input	—	—	—
151 (B)	—	U-VOICE ground	Input	—	—	—
152 (B)	—	U-VOICE signal	Input	—	—	—
153 (B)	Ground	GPS antenna signal	Input	Ignition switch ON	Not connected GPS antenna connector.	5.0 V
154	—	Shield	—	—	—	—
156	—	Shield	—	—	—	—
159	—	Shield	—	—	—	—
160 (B)	—	D-VOICE signal	—	—	—	—
161	—	Shield	—	—	—	—
162	—	Shield	—	—	—	—
163	—	Shield	—	—	—	—
164 (B)	Ground	RGB digital image signal (–)	Output	Ignition switch ON	Not connected connector.	1.3 V
165 (B)	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	1.3 V
166	Ground	Satellite radio antenna signal	Input	Ignition switch ON	Not connected satellite antenna connector.	5.0 V

Fail-Safe

INFOID:0000000008492783

When the ambient temperature becomes extremely low or extremely high, AV control unit displays a message and limits the function of the AV control unit.

FAIL-SAFE CONDITIONS

When the ambient temperature is –20°C (–4°F) or lower, or when it is 70°C (158°F) or higher.

Display

The following messages are displayed during fail-safe:

Fail-safe mode	Display
When HDD temperature is low	HDD system is experiencing problems due to extreme low temperature. Normal operation will resume when temperature rises.
When HDD temperature is high	HDD system is experiencing problems due to extreme high temperature. Normal operation will resume when temperature drops.

DESCRIPTION OF CONTROLS

Function		Fail-safe mode activated
Air conditioner	Operation	A/C and AV switch assembly can be operated.
	Display	• LEDs of A/C and AV switch assembly illuminate. • Temperature, mode and blower speed are displayed in a simplified mode.
Audio	Operation	Only ON/OFF and volume control operations of A/C and AV switch assembly are available.
	Display	“Fail-safe mode” is displayed.
Camera	Operation	Image tone cannot be controlled.
	Display	Cannot be superimposed. (warning display, tone control display)
Hands-free phone	Operation	Inoperative.
Navigation	Operation	Inoperative.
Self diagnosis		Displays in a simplified mode.
CONSULT diagnosis		Inoperative.

Ability Operation Mode
If HDD data can be read, “Fail-safe mode” is displayed and functions listed above can be operated.

DTC Index

INFOID:0000000008492784

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-553, "AV CONTROL UNIT : DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-554, "AV CONTROL UNIT : DTC Logic"
U1200: CONT UNIT	AV-555, "DTC Logic"
U1201: GYRO NO CONN	AV-556, "DTC Logic"
U1202: G-SENSOR NO CONN	AV-557, "DTC Logic"
U1204: GPS COMM	AV-558, "DTC Logic"
U1205: GPS ROM	AV-559, "DTC Logic"
U1206: GPS RAM	AV-560, "DTC Logic"
U1207: GPS RTC	AV-561, "DTC Logic"
U1216: CAN CONT	AV-562, "DTC Logic"
U1217: BLUETOOTH MODULE	AV-563, "DTC Logic"
U1218: HDD CONN	AV-564, "DTC Logic"
U1219: HDD READ	AV-565, "DTC Logic"
U121A: HDD WRITE	AV-566, "DTC Logic"
U121B: HDD COMM	AV-567, "DTC Logic"
U121C: HDD ACCESS	AV-568, "DTC Logic"
U121D: DSP CONN	AV-569, "DTC Logic"
U121E: DSP COMM	AV-570, "DTC Logic"
U1225: USB CONTROLLER	AV-571, "DTC Logic"
U1227: DVD COMM	AV-572, "DTC Logic"

CONSULT Display	Reference Page
U1228: SUB CPU CONN	AV-573, "DTC Logic"
U1229: iPod CERTIFICATION	AV-574, "DTC Logic"
U122A: CONFIG UNFINISH	AV-575, "DTC Logic"
U122E: Built-in AUDIO CONN	AV-576, "DTC Logic"
U1231: AMP TEMP	AV-577, "DTC Logic"
U1232: ST ANGLE SEN CALIB	AV-578, "DTC Logic"
U1243: FRONT DISP CONN	AV-579, "DTC Logic"
U1244: GPS ANTENNA CONN	AV-581, "DTC Logic"
U1258: XM ANTENNA CONN	AV-582, "DTC Logic"
U125A: 3RD DISP CONN	AV-583, "DTC Logic"
U1263: USB OVERCURRENT	AV-584, "DTC Logic"
U1264: ANTENNA AMP TERMINAL (OPEN or SHORT)	AV-585, "DTC Logic"
U1265: AMP ON TERMINAL (GND-SHORT or VB-SHORT)	AV-586, "DTC Logic"
• U1300: AV COMM CIRCUIT • U1240: SWITCH CONN	AV-587, "Description"
• U1300: AV COMM CIRCUIT • U124E: AMP CONN	
• U1300: AV COMM CIRCUIT • U1246: VIDEO DIST CONN	
• U1300: AV COMM CIRCUIT • U125B: AROUND CAMERA CONN	
• U1300: AV COMM CIRCUIT • U125C: SONAR CONN	
• U1300: AV COMM CIRCUIT • U1240: SWITCH CONN • U125C: SONAR CONN • U125B: AROUND CAMERA CONN • U1246: VIDEO DIST CONN	
• U1300: AV COMM CIRCUIT • U1240: SWITCH CONN • U124E: AMP CONN • U125C: SONAR CONN • U125B: AROUND CAMERA CONN • U1246: VIDEO DIST CONN	
U1310: CONTROL UNIT (AV)	AV-597, "DTC Logic"
U1601: FL-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-598, "DTC Logic"
U1603: FL-DOOR WOOFER/TWEETER (VB-SHOR)	
U1609: FR-DOOR WOOFER/TWEETER (OPEN, SHORT, GND-SHORT)	
U160B: FR-DOOR WOOFER/TWEETER (VB-SHOR)	
U1627: F-INST L-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-599, "DTC Logic"
U162F: F-INST R-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR)	
U162A: F-INST C-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-600, "DTC Logic"

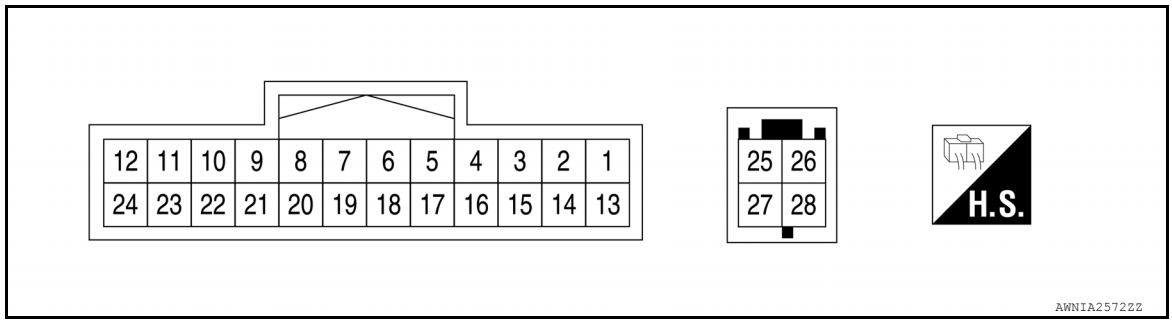
CONSULT Display	Reference Page
U1684: 2L-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)	AV-601, "DTC Logic"
U1687: 2L-DOOR SPEAKER/TWEETER (VB-SHOR)	
U162C: 2R-DOOR SPEAKER/TWEETER (OPEN, SHORT, GND-SHORT)	
U162F: 2R-DOOR SPEAKER/TWEETER (VB-SHOR)	
U175D: R-LUGGAGE L-WOOFER (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-602, "DTC Logic"
U176A: R-ROOF L-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	AV-603, "DTC Logic"
U1772: R-ROOF R-WK (OPEN, SHORT, GND-SHORT or VB-SHOR)	

DISPLAY UNIT

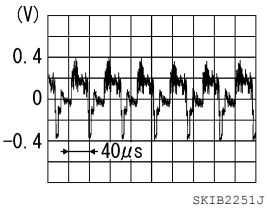
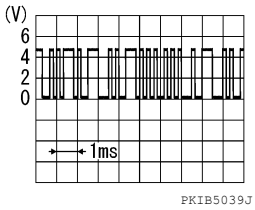
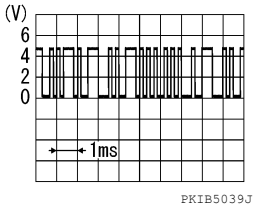
Reference Value

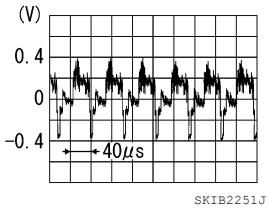
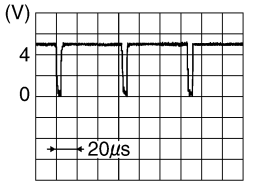
INFOID:0000000008487538

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
6	—	Shield	—	—	—	—
7	—	Shield	—	—	—	—
8 (B)	Ground	Camera image signal	Input	Ignition switch ON	At camera image is displayed.	 SKIB2251J
9 (B)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
10 (W)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V

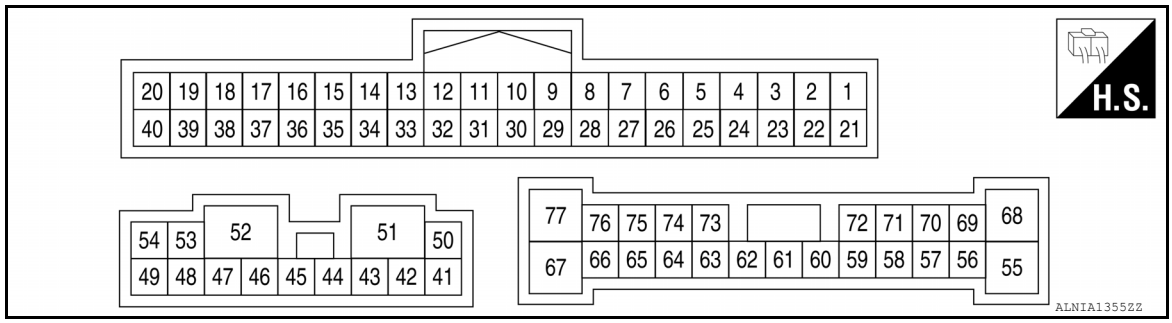
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (B)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
19 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
20 (R)	Ground	Composite image synchro-nizing signal	Input	Ignition switch ON	—	 SKIB0825E
22	—	Shield	—	—	—	—
23 (P)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
25	—	Shield	—	—	—	—
26	—	Shield	—	—	—	—
27 (B)	—	RGB digital image signal (–)	Input	—	—	—
28 (B)	—	RGB digital image signal (+)	Input	—	—	—

BOSE AMP.

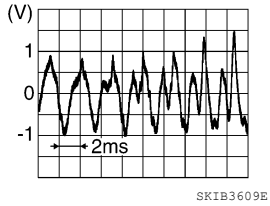
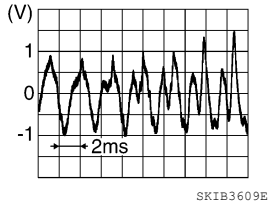
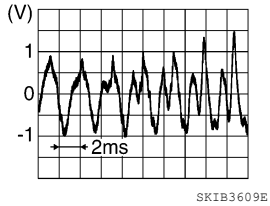
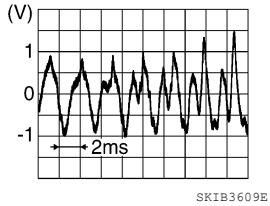
Reference Value

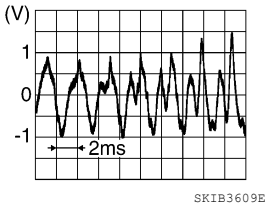
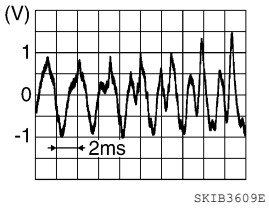
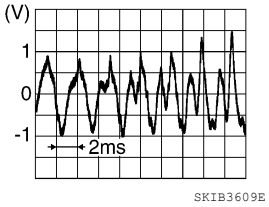
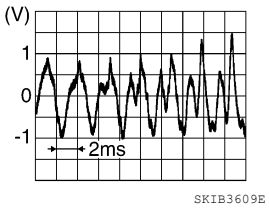
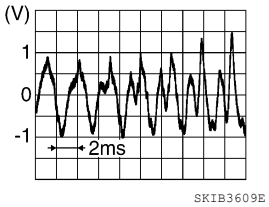
INFOID:0000000007913444

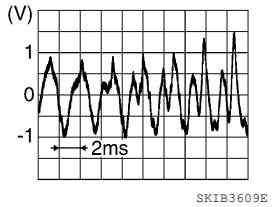
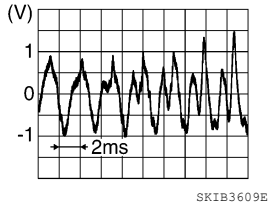
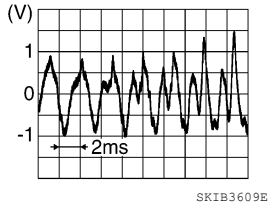
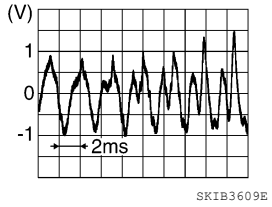
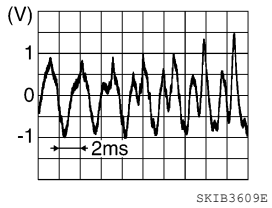
TERMINAL LAYOUT

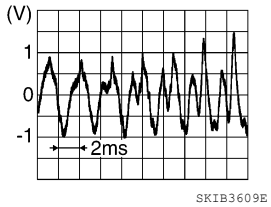
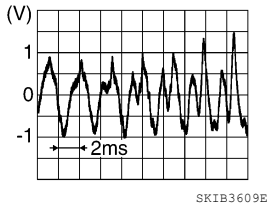
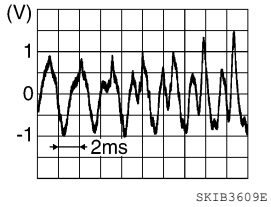
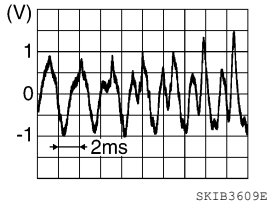
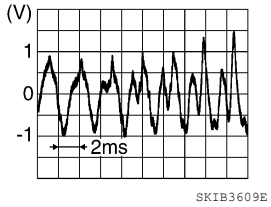


PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
4 (W)	24 (B)	Sound signal	Input	Ignition switch ON	Sound output	
5 (W)	25 (B)	Sound signal front LH	Input	Ignition switch ON	Sound output	
6 (W)	26 (B)	Sound signal front RH	Input	Ignition switch ON	Sound output	
7 (W)	27 (B)	Sound signal rear LH	Input	Ignition switch ON	Sound output	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
8 (W)	28 (B)	Sound signal rear RH	Input	Ignition switch ON	Sound output	
9 (W)	29 (B)	Sound signal	Input	Ignition switch ON	Sound output	
10 (B)	30 (W)	Sound signal	Input	Ignition switch ON	Sound output	
14 (LG)	—	M CAN-H TRM	—	—	—	—
15 (LG)	—	AV communication isignal (H)	—	—	—	—
16 (W)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
34 (SB)	—	M CAN-L TRM	—	—	—	—
35 (B/Y)	—	AV communication isignal (L)	—	—	—	—
39 (B)	—	Shield	—	—	—	—
41 (G)	42 (W)	Sound signal rear door speaker RH	Output	Ignition switch ON	Sound output	
43 (W)	44 (P)	Sound signal front door speaker RH	Output	Ignition switch ON	Sound output	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
45 (P)	46 (R)	Sound signal rear door speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
47 (B)	—	Ground	—	Ignition switch ON	—	0 V
48 (R)	53 (G)	Sound signal front door speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
49 (W)	54 (B)	Sound signal woofer	Output	Ignition switch ON	Sound output	 SKIB3609E
50 (LG)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
51 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
52 (B)	—	Ground	—	Ignition switch ON	—	0 V
55 (W)	Ground	Subwoofer amp. ON signal	Output	Ignition switch ACC	—	Battery voltage
56 (R)	69 (G)	Sound signal tweeter LH	Output	Ignition switch ON	Sound output	 SKIB3609E
57 (P)	58 (R)	Sound signal center speaker	Output	Ignition switch ON	Sound output	 SKIB3609E

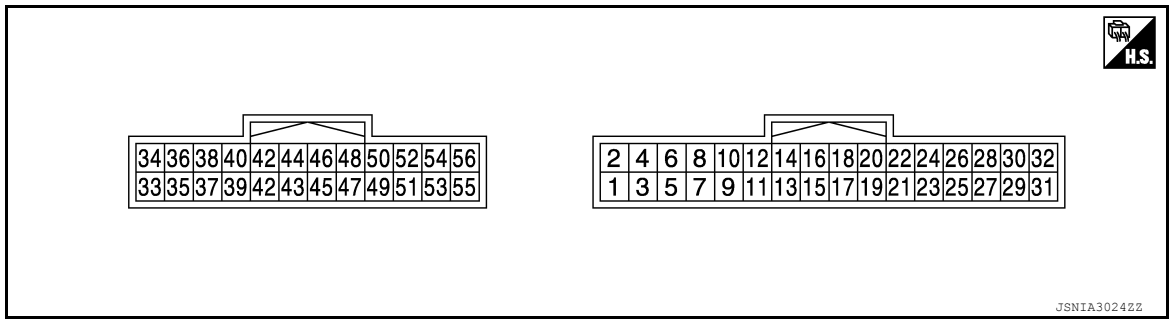
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
59 (G)	72 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Sound output	 SKIB3609E
62 (W)	73 (G)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
63 (W)	74 (G)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
64 (G)	75 (W)	Sound signal tweeter LH	Output	Ignition switch ON	Sound output	 SKIB3609E
65	—	Shield	—	—	—	—
70 (W)	71 (R)	Sound signal tweeter RH	Output	Ignition switch ON	Sound output	 SKIB3609E

VIDEO DISTRIBUTOR

Reference Value

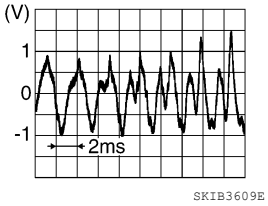
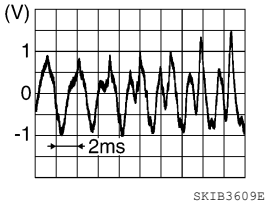
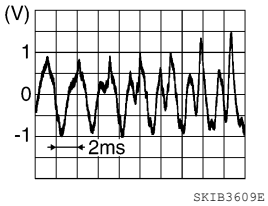
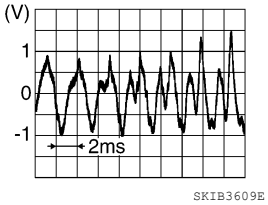
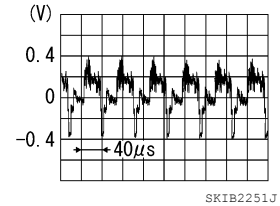
INFOID:0000000008487539

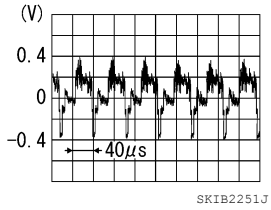
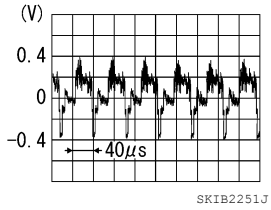
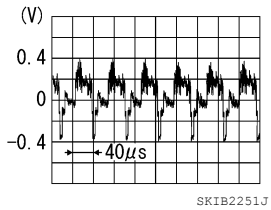
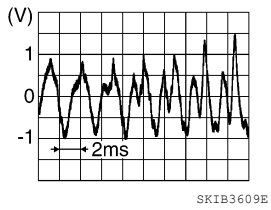
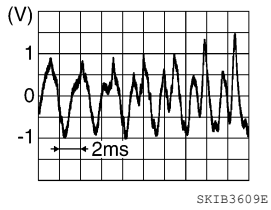
TERMINAL LAYOUT

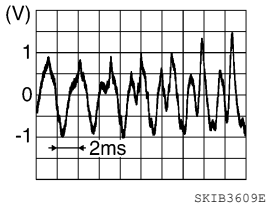
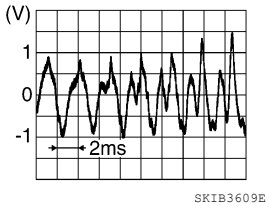


PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	—	Ground	—	Ignition switch ON	—	0 V
2 (V)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
3 (B)	—	Ground	—	Ignition switch ON	—	0 V
4 (W)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
5 (BR)	Ground	Cont. ground for headrest display unit RH	—	Ignition switch ON	—	0 V
6 (L)	Ground	ACC signal for headrest display unit RH	Output	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
7 (SB)	Ground	Cont. ground for headrest display unit LH	—	Ignition switch ON	—	0 V
8 (BR)	Ground	ACC signal for headrest display unit LH	Output	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
9 (SB)	Ground	Image switch signal for headrest display unit RH	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit RH.	0.5 V
					When rear AUX image is displayed on headrest display unit RH.	4.5 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
10 (L)	Ground	Image switch signal for headrest display unit LH	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH.	0.5 V
					When rear AUX image is displayed on headrest display unit LH.	4.5 V
14 (R)	15 (G)	Headphone sound signal RH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	 SKIB3609E
16 (B)	17 (W)	Headphone sound signal LH for headrest display unit RH	Output	Ignition switch ON	Output headphone sound from headrest display unit RH to headphone.	 SKIB3609E
18 (V)	Ground	AV ground for headrest display unit RH	—	Ignition switch ON	—	0 V
19 (V)	Ground	AV ground for headrest display unit LH	—	Ignition switch ON	—	0 V
20 (B)	21 (G)	Headphone sound signal RH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	 SKIB3609E
22 (W)	23 (R)	Headphone sound signal LH for headrest display unit LH	Output	Ignition switch ON	Output headphone sound from headrest display unit LH to headphone.	 SKIB3609E
27 (W)	Ground	Composite image signal ground for headrest display unit RH	—	Ignition switch ON	—	0 V
28 (B)	Ground	Composite image signal for headrest display unit RH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest display unit RH.	 SKIB2251J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
29	—	Shield	—	—	—	—
30	—	Shield	—	—	—	—
31 (P)	Ground	Composite image signal ground for headrest display unit LH	—	Ignition switch ON	—	0 V
32 (L)	Ground	Composite image signal for headrest display unit LH	Output	Ignition switch ON	When DVD, USB, front AUX or rear AUX image is displayed on headrest display unit LH.	 SKIB2251J
33 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
34 (B)	Ground	Composite image signal	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	 SKIB2251J
35	—	Shield	—	—	—	—
40 (B)	39 (W)	AUX image signal	Input	Ignition switch ON	When rear AUX image is displayed on headrest display unit LH or RH.	 SKIB2251J
41	—	Shield	—	—	—	—
45 (W)	46 (R)	Sound signal LH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E
47 (B)	48 (G)	Sound signal RH	Input	Ignition switch ON	When DVD, USB or front AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E
49	—	Shield	—	—	—	—
53	—	Shield	—	—	—	—

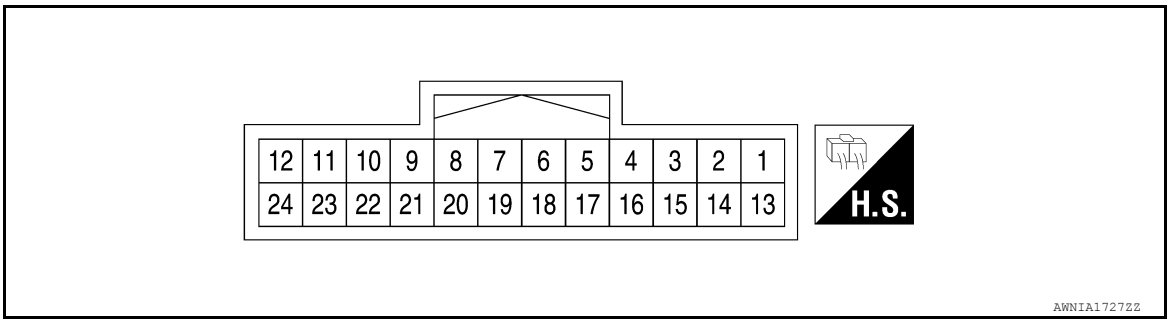
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
54 (B)	56 (W)	AUX sound signal LH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E
55 (R)	56 (W)	AUX sound signal RH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E

HEADREST DISPLAY UNIT

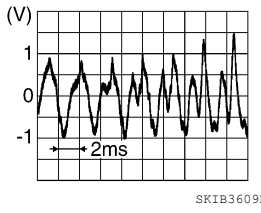
Reference Value

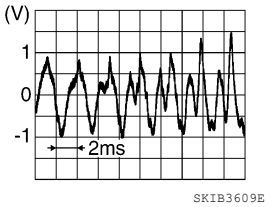
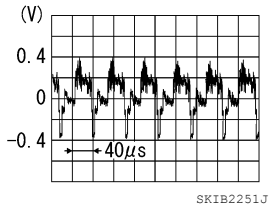
INFOID:0000000008487540

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
3	—	Shield	—	—	—	—
4 (P)*1	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
4 (Y)*2						
6 (SB)*1	Ground	Cont. ground	—	Ignition switch ON	—	0 V
6 (BR)*2						
7 (L)*1	Ground	Image switch signal	Output	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit.	0.5 V
7 (LG)*2					When rear AUX image is displayed on headrest display unit.	4.5 V
9 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
10 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
13 (B)	1 (W)	Headphone sound signal LH	Input	Ignition switch ON	Headphone sound output.	

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
14 (R)	2 (G)	Headphone sound signal RH	Input	Ignition switch ON	Headphone sound output.	
15	—	Shield	—	—	—	—
16 (L)*1	Ground	Composite image signal	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit.	
16 (O)*2						
17 (P)*1	Ground	AV ground	—	Ignition switch ON	—	0 V
17 (SB)*2						
19 (BR)	Ground	ACC signal	Input	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
20*2	—	Shield	—	—	—	—
21 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
22 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
24 (SB)*1	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
24 (Y)*2						

*1: Driver seat

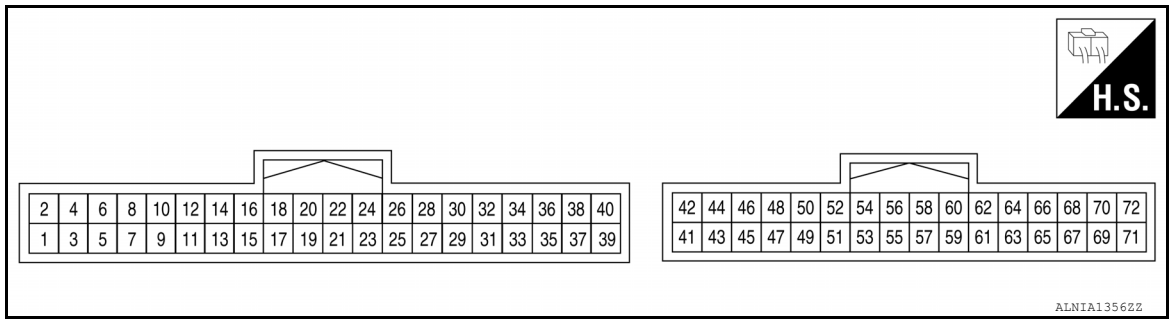
*2: Passenger seat

AROUND VIEW MONITOR CONTROL UNIT

Reference Value

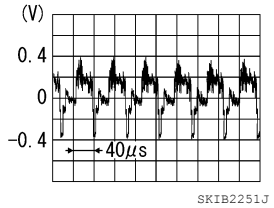
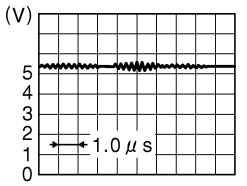
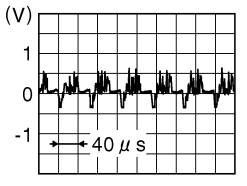
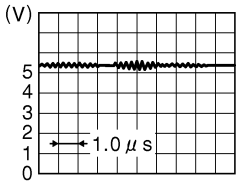
INFOID:0000000008487541

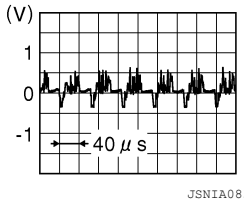
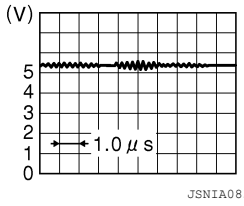
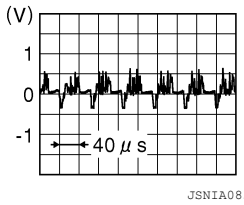
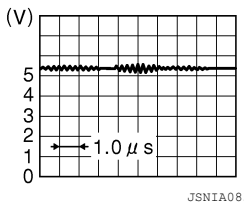
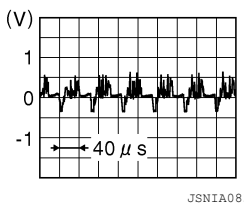
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
2 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
3 (LG)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (P)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
11 (G)	—	Signal ground	—	—	—	—
13 (P)	—	Camera direct OFF	—	—	—	—
14 (BG)	—	RX	—	—	—	—
19 (B)	—	AV communication signal (H)	Input/ Output	—	—	—
20 (W)	—	AV communication signal (L)	Input/ Output	—	—	—
23	—	Shield	—	—	—	—
25 (LG)	Ground	Reverse signal	Input	Ignition switch ON	R position	Battery voltage
					Other than R position	0 V
27 (B)	—	V-CAN (H)	—	—	—	—
28 (W)	—	V-CAN (L)	—	—	—	—
29	—	Shield	—	—	—	—
30 (W)	—	Mirror signal 2	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
32 (G)	—	Mirror signal 1	—	—	—	—
43 (B)	—	External video output	—	—	—	—
44	—	Shield	—	—	—	—
47 (B)	Ground	Camera image signal	Output	Ignition switch ON	At camera image display	 SKIB2251J
48	—	Shield	—	—	—	—
49 (W)	Ground	Rear camera communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
50 (B)	Ground	Rear camera power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
52 (R)	Ground	Rear camera ground	—	Ignition switch ON	—	0 V
53 (G)	54	Rear camera image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
55 (B)	Ground	Side camera driver side communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
56 (W)	Ground	Side camera driver side power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
58 (G)	Ground	Side camera driver side ground	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
59 (R)	60	Side camera driver side image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
61 (W)	Ground	Side camera passenger side communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
62 (B)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
64 (R)	Ground	Side camera passenger side ground	—	Ignition switch ON	—	0 V
65 (G)	66	Side camera passenger side image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
67 (B)	Ground	Front camera communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
68 (W)	Ground	Front camera power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
70 (G)	Ground	Front camera ground	—	Ignition switch ON	—	0 V
71 (R)	72	Front camera image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB

DTC Index

INFOID:0000000008376977

CONSULT Display	Reference Page
U1302: CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-589, "DTC Logic"
U1303: LED SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY	AV-593, "DTC Logic"
U1304: NON-COMPLETION OF THE CALIBRATION	AV-595, "DTC Logic"
U1305: NON-COMPLETION OF THE WRITE CONFIGURATION	AV-596, "DTC Logic"

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

Reference Value

INFOID:0000000008487542

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition		Value/Status
VEHICLE SPEED	While driving		Displays the vehicle speed
SONAR C/U POWER SUPPLY	Engine running		Power supply voltage of the Sonar C/U
SENSOR VOLTAGE	Engine running		Displays sensor voltage
DETECTION MODE	Ignition switch ON	Displays detection mode	Mode 1
			Mode 2
SW OPRT AFTR IGN ON	Ignition switch ON	Switch operation after ignition ON	Yes
			No
SONAR TEMPORARY OFF	Ignition switch ON	Sonar system not in use	Yes
		Sonar system in use	No
SONAR PERMANENT OFF	Ignition switch ON	Sonar system has malfunctioned	Yes
		Sonar system has no malfunction	No
P N RANGE	Ignition switch ON	When the selector lever is in “P”, “N” position	On
		When the selector lever is in any position other than “N”, “P”	Off
LED	Ignition switch ON	Led is illuminated	On
		Led is not illuminated	Off
TRAILER CONNECT	Ignition switch ON	If trailer connector is in use	CON
		If trailer connector is not in use	N CON
REVERSE RANGE	Ignition switch ON	When the selector lever is in “R”	On
		When the selector lever is in any position other than “R”	Off
COR[RL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[RL]/CEN[R]-> COR[RL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

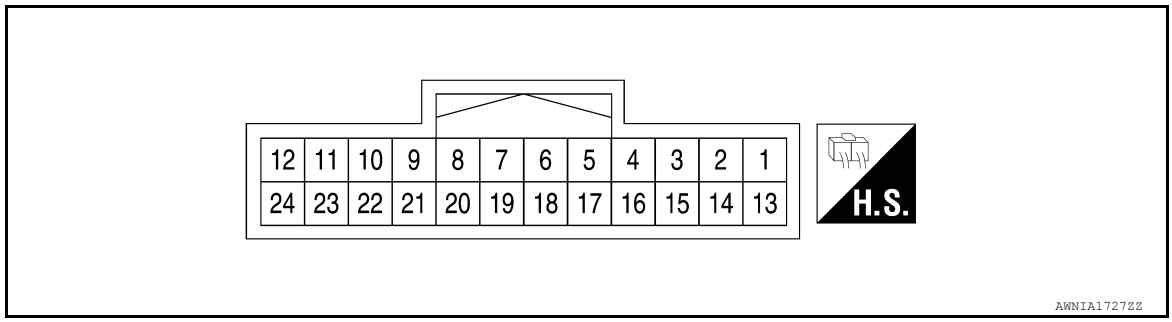
Monitor Item	Condition		Value/Status
CEN[RL]/CEN[R]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[RL]-> CEN[RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[RR]-> CEN[RL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN [RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[RR]/CEN[R]-> COR[RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR[RR]-> CEN[RR]/ CEN[R]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

Monitor Item	Condition		Value/Status
COR[RR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR[FL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR[FL]-> CEN[FL]/CEN[F]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[FL]/CEN[F]-> COR[FL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.7 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[FL]/CEN[F]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 1
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 3
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 4
CEN[FL]-> CEN[FR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3

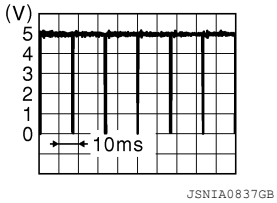
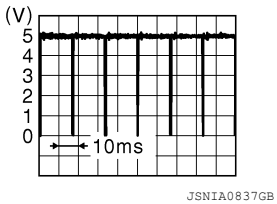
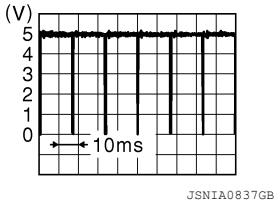
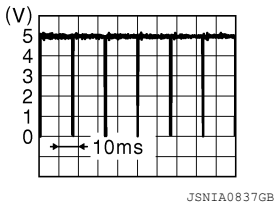
Monitor Item	Condition		Value/Status
CEN[FR]-> CEN[FL]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
CEN[FR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 1
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV.3
CEN[FR]/CEN[F] ->COR[FR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV.2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR[FR]-> CEN[FR]/ CEN[F]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV. 0
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
COR [FR]	Ignition switch ON	When a sensor is abnormal.	ERROR
		When a sensor is not detection.	LV.0
		The distance between the corner sensor and an obstacle is 70 cm (27.6 in) or more and less then 50 cm (19.6 in).	LV. 1
		The distance between corner sensor and an obstacle less than 50 cm (19.6 in).	LV. 2
		The distance between corner sensor and as obstacle is less than 27 cm. (10.6 in.)	LV. 3
RVRB TIME COR[RL]	Ignition switch ON	Corner rear left	Distance in time to obstacle (ms)
RVRB TIME COR[RR]		Corner rear right	
RVRB TIME CEN[RL]		Center rear left	
RVRB TIME CEN[RR]		Center rear right	
RVRB TIME COR[FL]		Corner front left	
RVRB TIME COR[FR]		Corner front right	
RVRB TIME CEN[FL]		Center front left	
RVRB TIME CEN[FR]		Center front right	

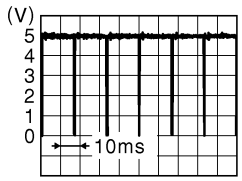
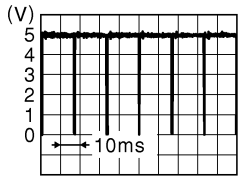
*: Even when a buzzer (backward) is output condition, this item is indicated as OFF.

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
3 (R)	13 (B)	Outer sensor signal front LH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
4 (R)	13 (B)	Outer sensor signal front RH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
5 (B)	—	V-CAN (H)	Input/ Output	—	—	—
6 (W)	—	V-CAN (L)	Input/ Output	—	—	—
9 (W)	14 (B)	Inner sensor signal rear RH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
10 (W)	14 (B)	Outer sensor signal rear RH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	
12 (LG)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
15 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
19 (BR)	20 (LG)	Buzzer	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	Battery voltage
21 (W)	14 (B)	Inner sensor signal rear LH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0837GB
22 (W)	14 (B)	Outer sensor signal rear LH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0837GB

DTC Index

INFOID:0000000008376979

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U1000: CAN COMM CIRCUIT	AV-553, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic"
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B2722: REAR RIGHT SIDE INTERNAL SENSOR	AV-606, "DTC Logic"
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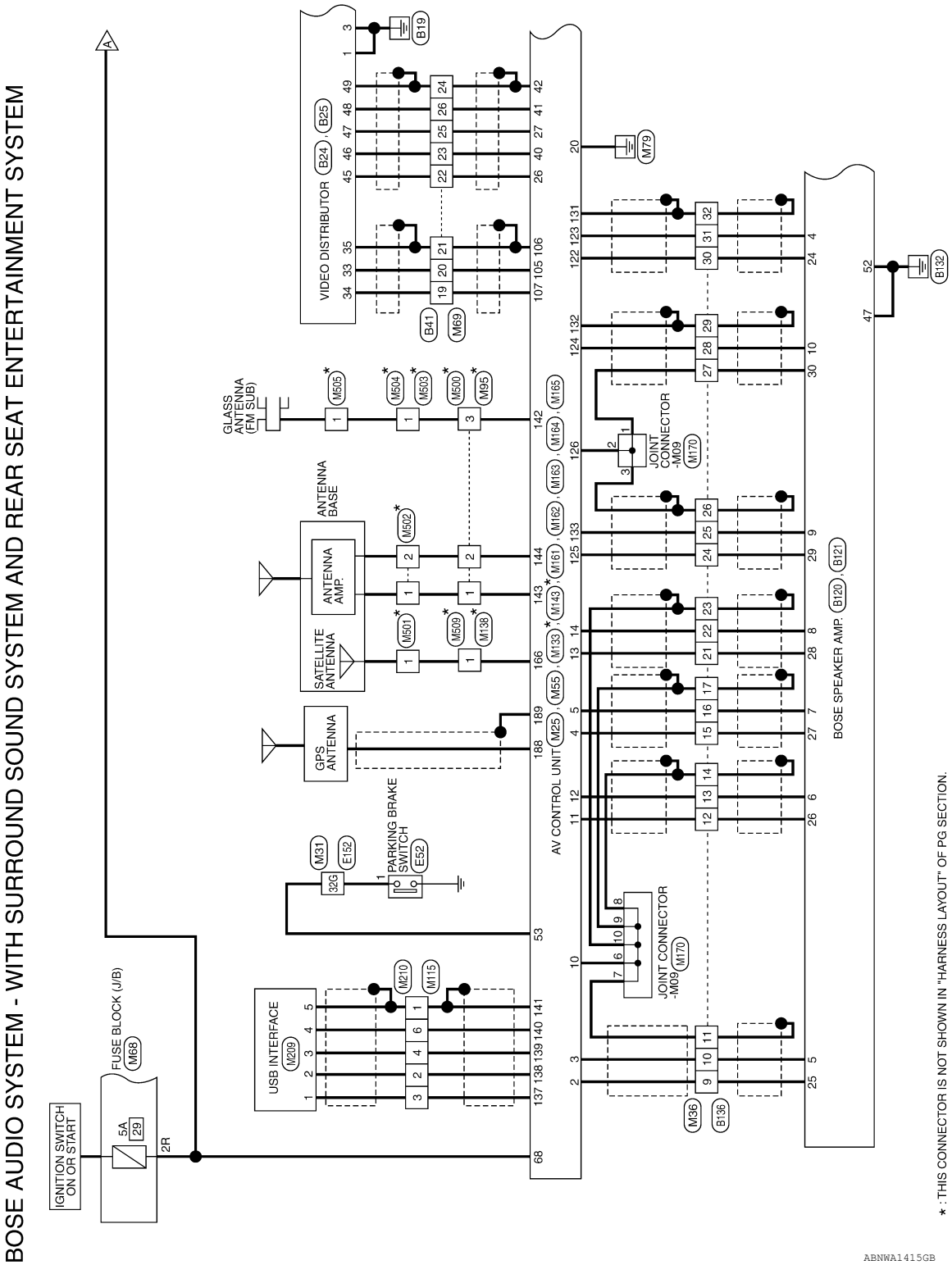
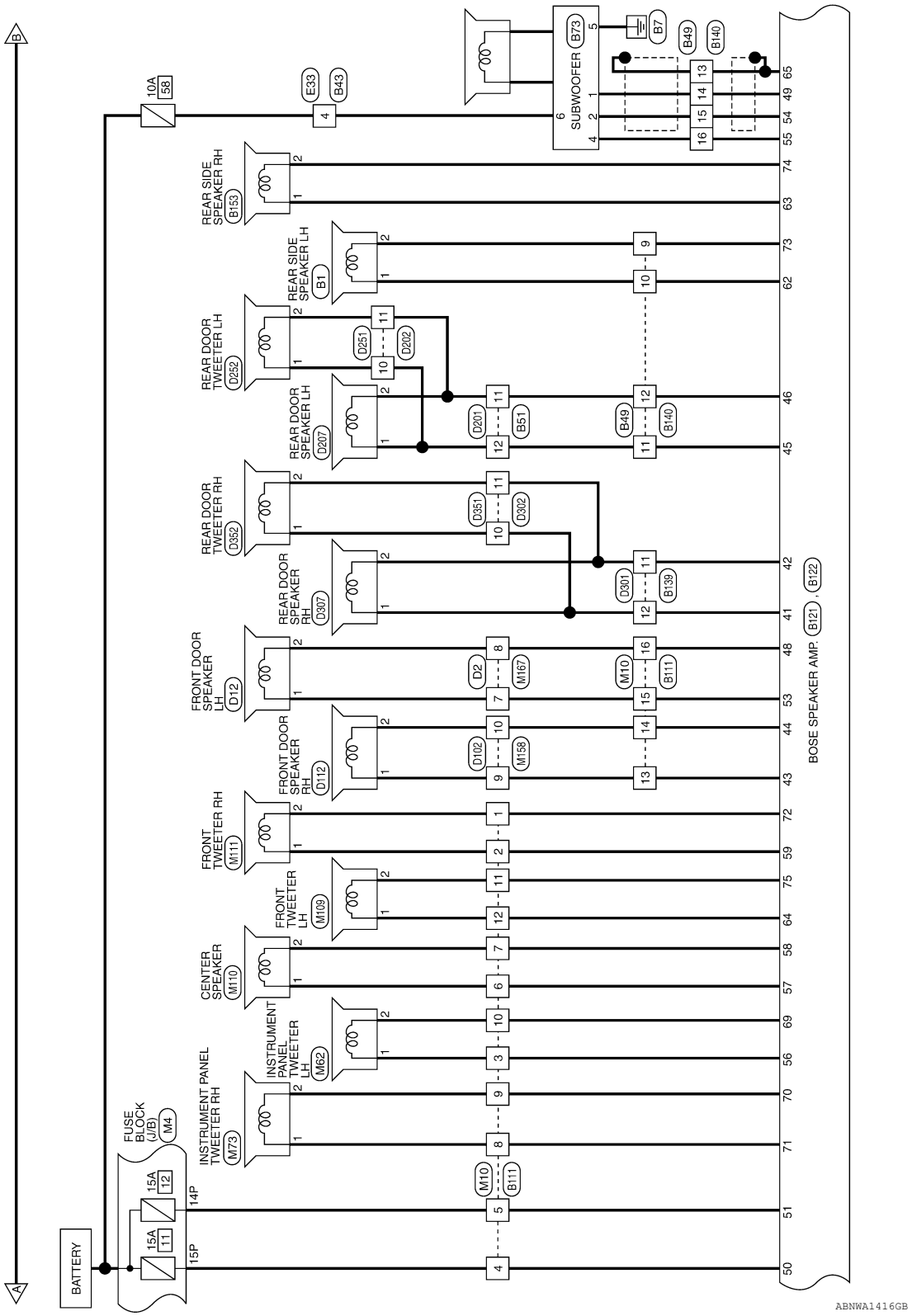
WIRING DIAGRAM

BOSE AUDIO WITH SURROUND SOUND

Wiring Diagram

INFOID:0000000008187316

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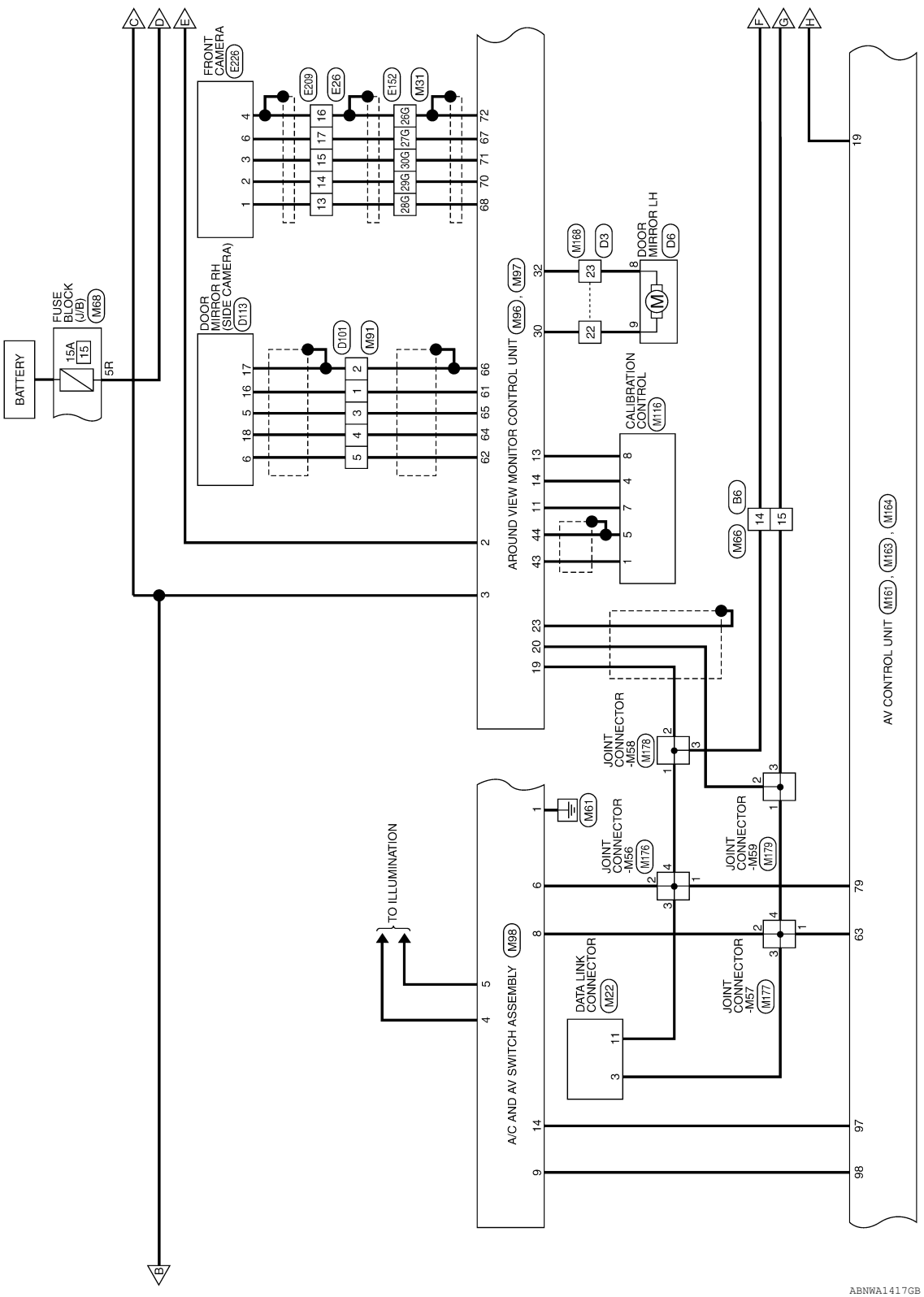
ABNWA1416GB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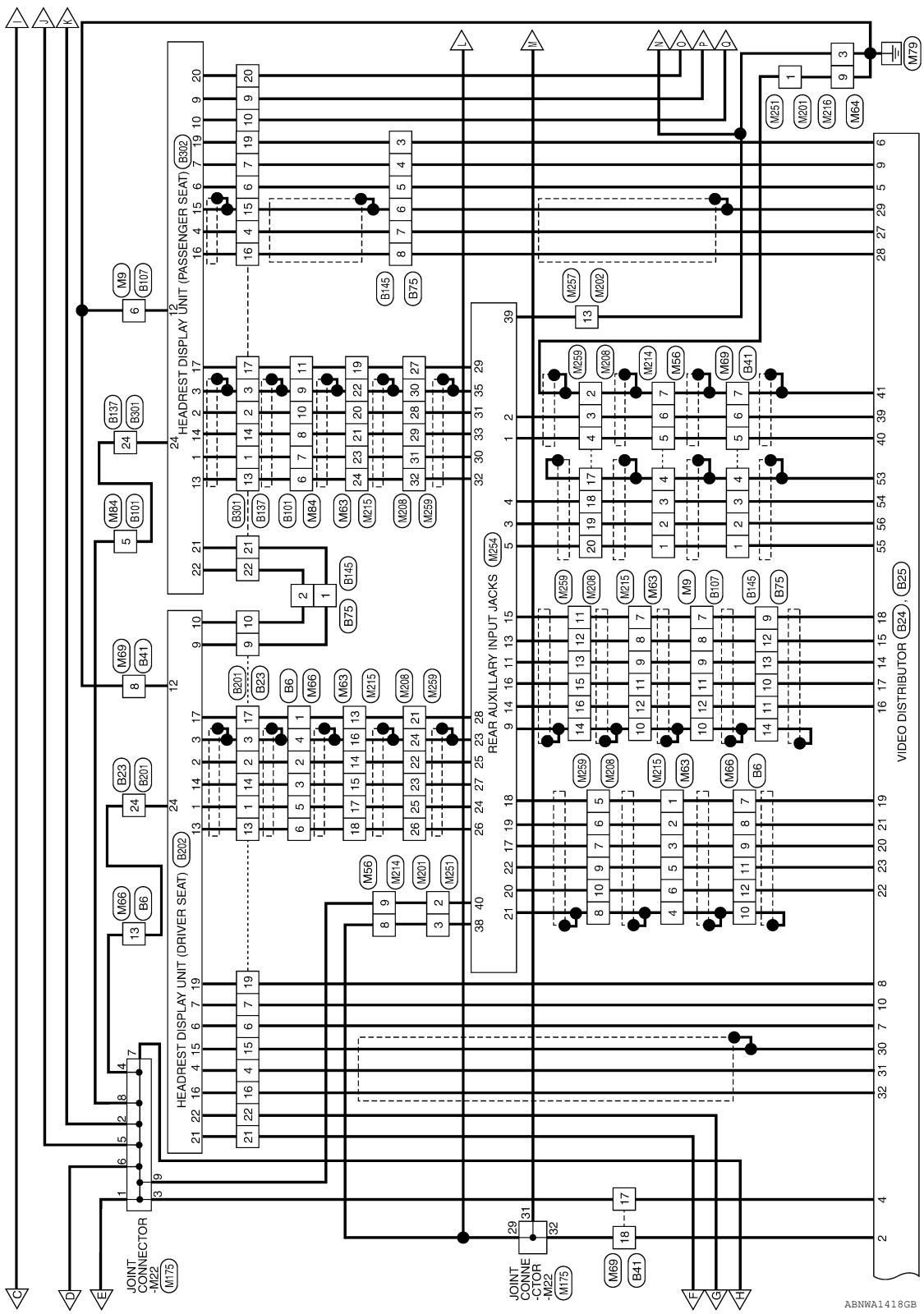
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REAR AUXILLARY INPUT JACKS
VIDEO DISTRIBUTOR
JOINT CONNECTOR -M22
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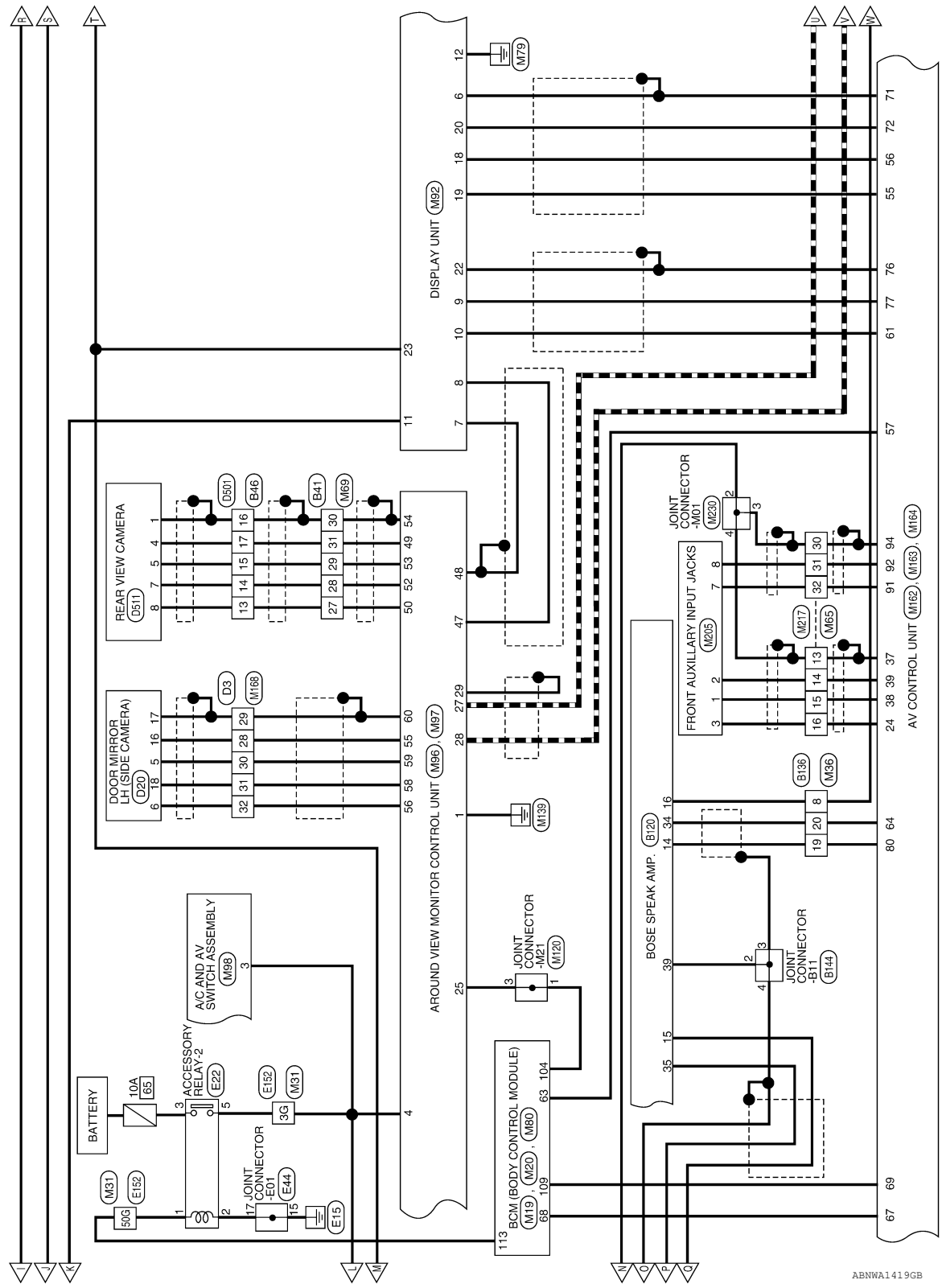
ABNWA1418GB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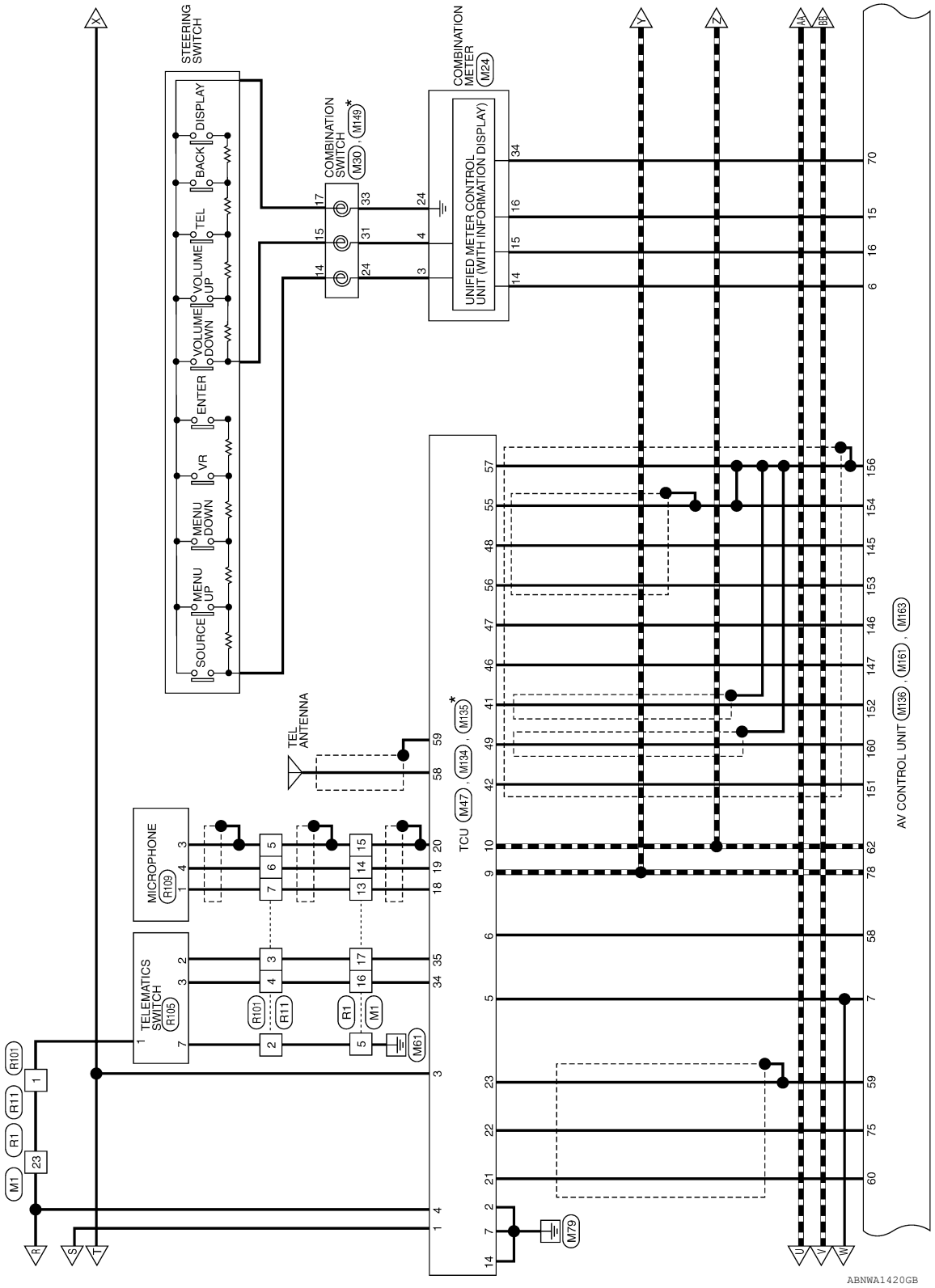
ABNWA1419GB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MENU UP
MENU DOWN
VR
ENTER
VOLUME DOWN
VOLUME UP
TEL
BACK
DISPLAY
COMBINATION SWITCH (M30) , (M149) *
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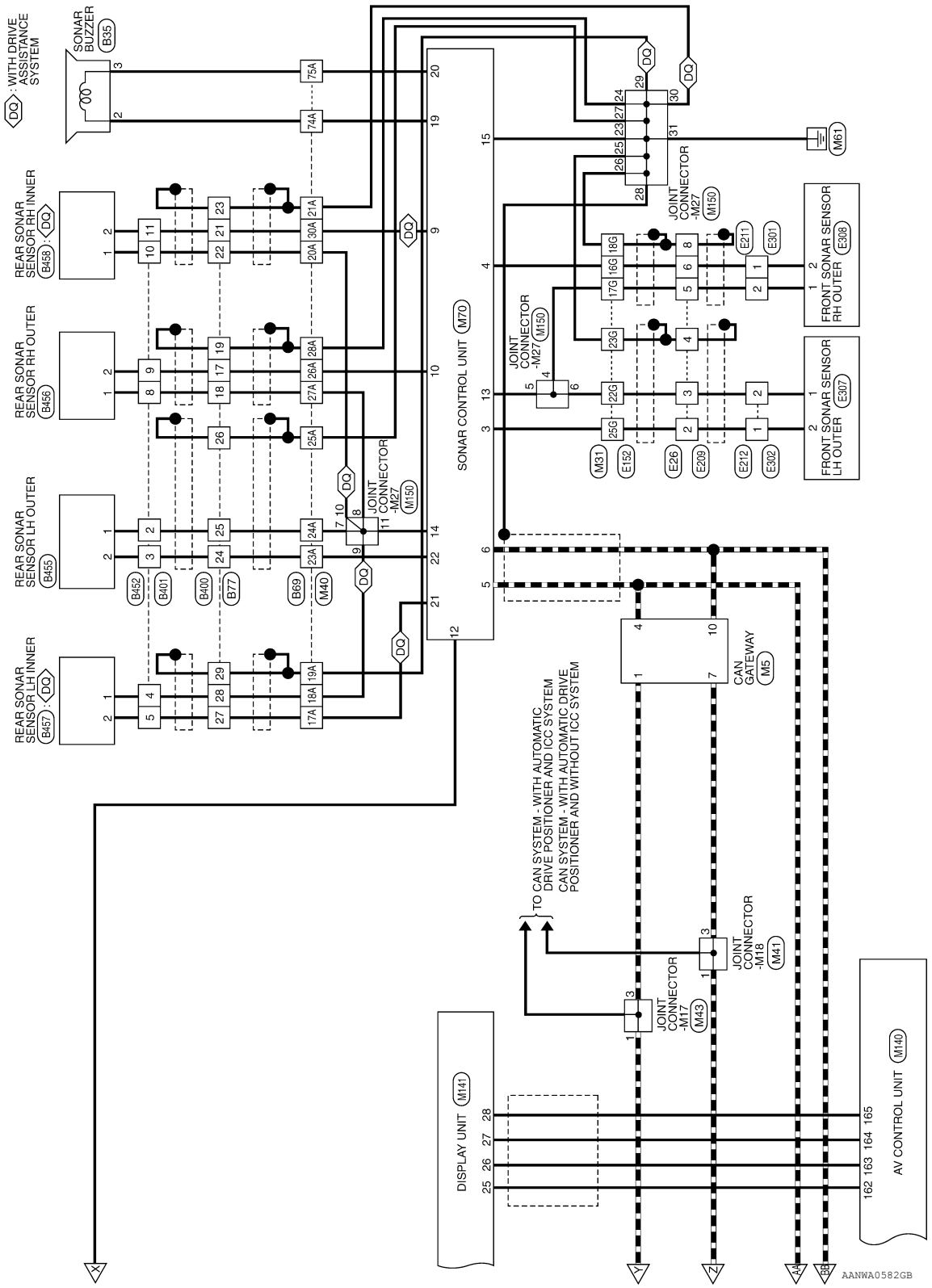
DQ : WITH DRIVE ASSISTANCE SYSTEM
SONAR BUZZER B35
REAR SONAR SENSOR RH INNER B458 : DQ
REAR SONAR SENSOR RH OUTER B456
REAR SONAR SENSOR LH OUTER B455
REAR SONAR SENSOR LH INNER B457 : DQ
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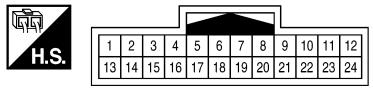
AANWA0582GB

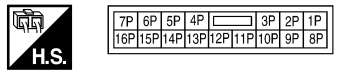
BOSE AUDIO SYSTEM CONNECTORS - WITH SURROUND SOUND SYSTEM AND REAR SEAT ENTERTAINMENT SYSTEM

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



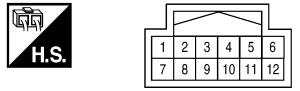
Terminal No.	Color of Wire	Signal Name
5	B	–
13	W	–
14	B	–
15	SHIELD	–
16	R	–
23	P	–

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



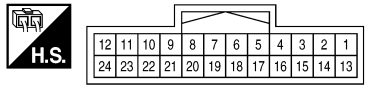
Terminal No.	Color of Wire	Signal Name
14P	Y	–
15P	L	–

Connector No.	M5
Connector Name	CAN GATEWAY
Connector Color	WHITE



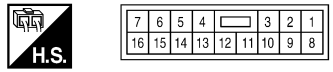
Terminal No.	Color of Wire	Signal Name
1	L	–
4	L	–
7	P	–
10	P	–

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



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

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
3	G	–
4	L	–
5	Y	–
6	G	–
7	W	–

Terminal No.	Color of Wire	Signal Name
8	G	–
9	W	–
10	W	–
11	R	–
12	G	–
13	G	–
14	W	–
15	G	–
16	W	–

ABNIA3554GB

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
63	BG	I-KEY LINK SIGNAL
68	P	MR OUTPUT

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

H.S.

92	91	90	89	88	87	86	85	84	83	82	81
104	103	102	101	100	99	98	97	96	95	94	93

Terminal No.	Color of Wire	Signal Name
104	LG	REVERSE LAMP OUT

Connector No.	M22
Connector Name	DATA LINK CONNE CTOR
Connector Color	WHITE

H.S.

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

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

Connector No.	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
3	P	STRG SW INPUT 1
4	BG	STRG SW INPUT 2
14	G	STRG SW OUTINPUT 1
15	W	STRG SW OUTINPUT 2
16	B	STRG SW OUTPUT GND
24	R	STRG SW GND
34	GR	SPEED 8P/R

Connector No.	M25
Connector Name	AV CONTROL UNIT
Connector Color	PINK

H.S.

Terminal No.	Color of Wire	Signal Name
188	B	–
189	SHIELD	–

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

25	24	31	32
			33

Terminal No.	Color of Wire	Signal Name
24	P	AUDIO STRG SW REMOTE A
31	BG	AUDIO STRG SW REMOTE B
33	R	AUDIO STRG SW GND

ABNIA3555GB

Connector No.	M31
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	81G
82G	83G	84G	85G	86G	87G	88G	89G	90G		

91G	92G	93G	94G	95G
96G	97G	98G	99G	100G

Terminal No.	Color of Wire	Signal Name
3G	P	–
16G	R	–
17G	B	–
18G	SHIELD	–
22G	B	–
23G	SHIELD	–
25G	R	–
26G	SHIELD	–
27G	B	–
28G	W	–
29G	B	–
30G	R	–
32G	G	–
50G	L	–

Connector No.	M36
Connector Name	WIRE TO WIRE
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
8	G	–
9	B	–
10	W	–
11	SHIELD	–
12	W	–
13	B	–
14	SHIELD	–
15	B	–
16	W	–
17	SHIELD	–
19	LG	–
20	SB	–
21	B	–
22	W	–
23	SHIELD	–
24	W	–
25	B	–
26	SHIELD	–
27	B	–
28	W	–
29	SHIELD	–
30	B	–
31	W	–
32	SHIELD	–

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

H.S.

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

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

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

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

71A	72A	73A	74A	75A	76A	77A	78A	79A	80A	81A
82A	83A	84A	85A	86A	87A	88A	89A	90A		

91A	92A	93A	94A	95A
96A	97A	98A	99A	100A

Terminal No.	Color of Wire	Signal Name
17A	W	–
18A	B	–
19A	SHIELD	–
20A	B	–
21A	SHIELD	–
23A	W	–
24A	B	–
25A	SHIELD	–
26A	W	–
27A	B	–
28A	SHIELD	–
30A	W	–
74A	BR	–
75A	LG	–

ABNIA3556GB

Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	–
3	P	–

Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
3	L	–

Connector No.	M47
Connector Name	TCU
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	Y	B+
2	B	GND
3	P	ACC
4	LG	IGN
5	G	ACC OUT
6	G	AV ACC
7	B	GND
8	–	–
9	L	V-CAN H
10	P	V-CAN L
11	–	–
12	–	–
13	–	–
14	B	AUDIO TYPE CONFIG 1
15	–	–
16	–	–
17	–	–
18	W	MIC VCC
19	B	MIC SIG
20	SHIELD	MIC GND
21	W	MIC VCC DETECTION
22	B	DCM MIC SIG
23	SHIELD	DCM MIC GND
24	–	–
25	–	–
26	–	–
27	–	–
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	R	ECALL SW
35	W	LED A
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–

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Terminal No.	Color of Wire	Signal Name
5	B	–
6	W	–
7	SHIELD	–
8	P	–
9	Y	–

Terminal No.	Color of Wire	Signal Name
10	SHIELD	–
11	W	–
12	B	–
13	L	–
14	G	–
15	R	–
16	SHIELD	–
17	W	–
18	B	–
19	L	–
20	G	–
21	R	–
22	SHIELD	–
23	W	–
24	B	–

Connector No.	M56
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
1	R	–
2	W	–
3	B	–
4	SHIELD	–

Connector No.	M63
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
1	SB	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–
7	V	–
8	G	–
9	R	–

Connector No.	M55
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

H.S.

138	137	139
140	141	

Terminal No.	Color of Wire	Signal Name
137	G	VBUS
138	W	USB GND
139	R	USB D+
140	L	USB D-
141	SHIELD	SHIELD

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

H.S.

2	1

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

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Connector No.	M64
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
3	B	–
9	B	–

Connector No.	M65
Connector Name	WIRE TO WIRE
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
13	SHIELD	–
14	B	–
15	R	–
16	W	–
30	SHIELD	–
31	B	–
32	W	–

Connector No.	M66
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
1	L	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–

Terminal No.	Color of Wire	Signal Name
7	SB	–
8	G	–
9	R	–
10	SHIELD	–
11	W	–
12	Y	–
13	Y	–
14	SB	–
15	LG	–

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

H.S.

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

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

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Connector No.	M70
Connector Name	SONAR CONTROL UNIT
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	–	–
2	–	–
3	R	FOL SENSOR SIGNAL
4	R	FOL SENSOR SIGNAL
5	B	V CAN-H
6	W	V CAN-L
7	–	–
8	–	–
9	W	RIR SENSOR SIGNAL
10	W	ROR SENSOR SIGNAL
11	–	–
12	LG	IGN
13	B	FR SENSOR GND
14	B	FR SENSOR GND
15	B	GND
16	–	–
17	–	–
18	–	–
19	BR	SPEAKER PWR
20	LG	SPEAKER RR SIGNAL
21	W	RIL SENSOR SIGNAL
22	W	ROL SENSOR SIGNAL
23	–	–
24	–	–

Connector No.	M69
Connector Name	WIRE TO WIRE
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	R	–
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	W	–
7	SHIELD	–
8	B	–
17	Y	–
18	P	–

Terminal No.	Color of Wire	Signal Name
19	B	–
20	W	–
21	SHIELD	–
22	W	–
23	R	–
24	SHIELD	–
25	B	–
26	G	–
27	B	–
28	R	–
29	G	–
30	SHIELD	–
31	W	–

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

H.S.

2	1

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

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

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

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

Connector No.	M84
Connector Name	WIRE TO WIRE
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
5	Y	–
6	B	–
7	W	–
8	R	–
9	SHIELD	–
10	G	–
11	L	–

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

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	W	–
2	SHIELD	–
3	G	–
4	R	–
5	B	–

Connector No.	M92
Connector Name	DISPLAY UNIT
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	–	–
2	–	–
3	–	–
4	–	–
5	–	–
6	SHIELD	FRONT COMP SHIELD
7	SHIELD	SHIELD
8	B	R CAMERA COMP

Terminal No.	Color of Wire	Signal Name
9	B	FRONT DISP IT
10	W	IT FRONT DISP
11	Y	BATT
12	B	GND
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	B	FRONT COMP +
19	W	FRONT COMP -
20	R	FRONT COMP SYNC
21	–	–
22	SHIELD	SHIELD
23	P	ACC
24		

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Terminal No.	Color of Wire	Signal Name
21	–	–
22	–	–
23	SHIELD	M-CAN GND
24	–	–
25	LG	REV
26	–	–
27	B	V-CAN1 H
28	W	V-CAN1 L
29	SHIELD	V-CAN1 GND
30	W	MIRROR SIGNAL 2
31	–	–
32	G	MIRROR SIGNAL 1
33	–	–
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–

Connector No.	M96
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	Y	+B
3	LG	IGN
4	P	ACC
5	–	–
6	–	–
7	–	–
8	–	–
9	–	–
10	–	–
11	G	SIGNAL GND
12	–	–
13	P	CAMERA DIRECT OFF
14	BG	RX
15	–	–
16	–	–
17	–	–
18	–	–
19	B	M-CAN-1H
20	W	M-CAN-1L

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

H.S.

1	2	3

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

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Connector No.	M97
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE

H.S.

42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72
41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71

Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	B	EXTERNAL VIDEO OUTPUT +
44	SHIELD	EXTERNAL VIDEO OUTPUT -
45	–	–
46	–	–
47	B	VIDEO OUTPUT +
48	SHIELD	VIDEO OUTPUT -
49	W	RV SERIAL SIGNAL
50	B	RV POWER
51	–	–
52	R	RV POWER GND

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	R	–

Terminal No.	Color of Wire	Signal Name
53	G	RV VIDEO +
54	SHIELD	RV VIDEO -
55	B	SV2 SERIAL SIGNAL
56	W	SV2 POWER
57	–	–
58	G	SV2 POWER GND
59	R	SV2 VIDEO +
60	SHIELD	SV2 POWER GND
61	W	SV1 SERIAL SIGNAL
62	B	SV1 POWER
63	–	–
64	R	SV1 POWER GND
65	G	SV1 VIDEO +
66	SHIELD	SV1 VIDEO -
67	B	FV SERIAL SIGNAL
68	W	FV POWER
69	–	–
70	G	FV POWER GND
71	R	FV VIDEO +
72	SHIELD	FV VIDEO -

Connector No.	M110
Connector Name	CENTER SPEAKER
Connector Color	BROWN

H.S.

2	1

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

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	GR	–
3	P	–
4	R	–
5	B	–
6	SB	–
8	LG	–
9	V	–
14	Y	–

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	B	–

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

H.S.

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

Connector No.	M116
Connector Name	CALIBRATION CONTROL
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
4	BG	–
5	SHIELD	–
7	G	–
8	P	–

Connector No.	M120
Connector Name	JOINT CONNECTOR-M21
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
3	LG	–

Terminal No.	Color of Wire	Signal Name
46	–	–
47	B	VBUS
48	B	D-
49	B	D-VOICE
50	–	–
51	–	–
52	–	–
53	–	–
54	–	–
55	SHIELD	GND(USB GND)
56	L/W	D+
57	SHIELD	CONN CHASSIS GND

Connector No.	M133
Connector Name	AV CONTROL UNIT
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
166	B	–

Connector No.	M134
Connector Name	TCU
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
41	W	U-VOICE
42	L	VOICE GND
43	–	–
44	–	–
45	–	–

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Connector No.	M135
Connector Name	TCU
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
58	B	–
59	SHIELD	–

Connector No.	M136
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
145	W	U-VOICE
146	L	VOICE GND
147	–	–
148	–	–
149	–	–

Terminal No.	Color of Wire	Signal Name
150	–	–
151	B	VBUS
152	B	D-
153	B	D-VOICE
154	–	–
155	–	–
156	–	–
157	–	–
158	–	–
159	SHIELD	GND(USB GND)
160	L/W	D+
161	SHIELD	CONN CHASSIS GND

Connector No.	M138
Connector Name	WIRE TO WIRE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M140
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
162	SHIELD	GND
163	SHIELD	GND
164	B	GVIF-
165	B	GVIF+

Connector No.	M141
Connector Name	DISPLAY UNIT
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
25	SHIELD	GND
26	SHIELD	GND
27	B	GVIF+
28	B	GVIF-

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Connector No.	M143
Connector Name	AV CONTROL UNIT
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
142	B	ANT MAIN
143	B	ANT +B
144	B	ANT SUB

Connector No.	M149
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Connector No.	M150
Connector Name	JOINT CONNECTOR-M27
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	B	–
5	B	–
6	B	–
7	B	–
8	B	–
9	B	–
10	B	–
11	B	–
23	B	–
24	SHIELD	–
25	SHIELD	–
26	SHIELD	–
27	SHIELD	–
28	SHIELD	–
29	SHIELD	–
30	SHIELD	–
31	GR	–

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

H.S.

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

Connector No.	M161
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–
2	B	FR LH PRE+
3	W	FR LH PRE-
4	B	RR LH PRE+
5	W	RR LH PRE-
6	G	STRG SW A
7	G	ACC
8	–	–
9	–	–
10	BR	SHIELD
11	W	FR RH PRE+
12	B	FR RH PRE-
13	B	RR RH PRE+
14	W	RR RH PRE-
15	B	STRG SW GND
16	W	STRG SW B
17	–	–
18	–	–
19	Y	+B
20	GR	GND

Connector No.	M162
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
21	–	–
22	–	–
23	–	–
24	R	AUX AUDIO LH
25	–	–
26	W	HP1 LH+
27	B	HP1 RH+
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	–	–
35	–	–
36	–	–
37	SHIELD	AUX SHIELD
38	W	AUX AUDIO RH
39	B	AUX AUDIO-
40	R	HP1 LH-
41	G	HP1 RH-
42	SHIELD	HP1 SHIELD
43	–	–
44	–	–
45	–	–
46	–	–
47	–	–
48	–	–

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Connector No.	M163
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

Terminal No.	Color of Wire	Signal Name
49	–	–
50	–	–
51	–	–
52	–	–
53	G	PKB_SIG
54	–	–
55	W	NAVI COMP1-
56	B	NAVI COMP1+
57	BG	RESERVE I1
58	G	RESERVE I2
59	SHIELD	MIC GND
60	W	MIC VCC
61	W	IT-DISP
62	P	V-CAN L
63	LG	M-CAN L
64	LG	M-CAN L TRM
65	–	–
66	–	–
67	P	MR OUTPUT
68	LG	IGN
69	R	REVERSE SIG
70	BG	SPEED
71	SHIELD	NAVI COMP1 SHIELD
72	R	GND
73	–	–
74	–	–
75	B	MIC SIG
76	SHIELD	DISP SHIELD
77	B	DISP-IT
78	L	V-CAN H
79	SB	M-CAN H
80	SB	M-CAN H TRM

Connector No.	M164
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

81	83	85	87	89	91	93	95	97	99	h01	h03	h05	h07	h09	h11	h13	h15	h17	h19
82	84	86	88	90	92	94	96	98	h00	h02	h04	h06	h08	h10	h12	h14	h16	h18	h20

Terminal No.	Color of Wire	Signal Name
81	–	–
82	–	–
83	–	–
84	–	–
85	–	–
86	–	–
87	–	–
88	–	–
89	–	–
90	–	–
91	W	AUX VIDEO+
92	B	AUX VIDEO-
93	–	–
94	SHIELD	VIDEO SHIELD
95	–	–
96	–	–
97	Y	DVD EJECT
98	V	EJECT GND
99	–	–
100	–	–
101	–	–
102	–	–
103	–	–
104	–	–
105	W	NAVI COMP2-
106	SHIELD	NAVI COMP2 SHIELD
107	B	NAVI COMP2+
108	–	–
109	–	–
110	–	–
111	–	–
112	–	–
113	–	–
114	–	–
115	–	–
116	–	–
117	–	–
118	–	–
119	–	–
120	–	–

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Connector No.	M165
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
121	–	–
122	B	GUIDE+
123	W	GUIDE-
124	B	SUB WOOFER PRE+
125	W	CENTER PRE+
126	Y	CENTER SHIELD
127	–	–
128	–	–
129	–	–
130	–	–
131	SHIELD	GUIDE SHIELD
132	W	SUB WOOFER PRE-
133	B	CENTER PRE-
134	–	–
135	–	–
136	–	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

Connector No.	M168
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
22	W	–
23	G	–
28	B	–
29	SHIELD	–
30	R	–
31	G	–
32	W	–

Connector No.	M170
Connector Name	JOINT CONNECTOR-M09
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SHIELD	–
2	Y	–
3	SHIELD	–
6	BR	–
7	SHIELD	–
8	SHIELD	–
9	SHIELD	–
10	SHIELD	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	Y	–
3	Y	–
4	Y	–
5	Y	–
6	Y	–
7	Y	–
8	Y	–
9	Y	–
29	P	–
31	P	–
32	P	–

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

Connector No.	M178
Connector Name	JOINT CONNECTOR-M58
Connector Color	WHITE

H.S.

4	3	2	1

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

Connector No.	M179
Connector Name	JOINT CONNECTOR-59
Connector Color	WHITE

H.S.

4	3	2	1

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

Connector No.	M201
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

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

Connector No.	M202
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
13	B	–

ABNIA3570GB

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

H.S.

1	2	3	4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	R	AUX AUDIO RH+
2	B	AUX AUDIO GND
3	W	AUX AUDIO LH+
7	W	AUX VIDEO+
8	B	AUX VIDEO-

Connector No.	M208
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
2	SHIELD	–
3	B	–
4	W	–
5	SB	–
6	G	–
7	R	–
8	SHIELD	–
9	W	–
10	B	–
11	V	–
12	G	–
13	R	–
14	SHIELD	–
15	W	–
16	B	–
17	SHIELD	–
18	B	–
19	R	–
20	W	–
21	L	–
22	G	–
23	R	–
24	SHIELD	–
25	W	–
26	B	–
27	L	–
28	G	–
29	R	–
30	SHIELD	–
31	W	–
32	B	–

Connector No.	M209
Connector Name	USB INTERFACE
Connector Color	WHITE

H.S.

2	1
4	3
5	

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

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

H.S.

1	
2	3
4	5
6	7

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

ABNIA3571GB

Connector No.	M214
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
1	W	–
2	R	–
3	B	–
4	SHIELD	–
5	W	–
6	B	–
7	SHIELD	–
8	V	–
9	Y	–

Connector No.	M215
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
1	SB	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–
7	V	–
8	G	–

Terminal No.	Color of Wire	Signal Name
9	R	–
10	SHIELD	–
11	W	–
12	B	–
13	L	–
14	G	–
15	R	–
16	SHIELD	–
17	W	–
18	B	–
19	L	–
20	G	–
21	R	–
22	SHIELD	–
23	W	–
24	B	–

Connector No.	M216
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
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Terminal No.	Color of Wire	Signal Name
3	B	–
9	B	–

Connector No.	M217
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	25	26	27	28	29	30	31	32

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

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

H.S.

6	5	4	3	2	1

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

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Terminal No.	Color of Wire	Signal Name
19	G	–
20	B	–
21	SHIELD	–
22	W	–
23	SHIELD	–
24	W	–
25	G	–
26	B	–
27	R	–
28	L	–
29	P	–
30	W	–
31	G	–
32	B	–
33	R	–
34	–	–
35	SHIELD	–
36	–	–
37	–	–
38	V	–
39	B	–
40	Y	–

Connector No.	M254
Connector Name	REAR AUXILIARY INPUT JACKS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	–
2	B	–
3	B	–
4	R	–
5	W	–
6	–	–
7	–	–
8	–	–
9	SHIELD	–
10	–	–
11	R	–
12	–	–
13	G	–
14	B	–
15	V	–
16	W	–
17	R	–
18	BG	–

Connector No.	M251
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	B	–
2	Y	–
3	V	–

ABNIA3573GB

Terminal No.	Color of Wire	Signal Name
16	B	–
17	SHIELD	–
18	R	–
19	B	–
20	W	–
21	L	–
22	G	–
23	R	–
24	SHIELD	–
25	W	–
26	B	–
27	P	–
28	G	–
29	R	–
30	SHIELD	–
31	W	–
32	B	–

Connector No.	M259
Connector Name	WIRE TO WIRE
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
2	SHIELD	–
3	B	–
4	W	–
5	BG	–
6	G	–
7	R	–
8	SHIELD	–
9	W	–
10	B	–
11	V	–
12	G	–
13	R	–
14	SHIELD	–
15	W	–

Connector No.	M257
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
13	B	–

ABNIA3574GB

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

H.S.

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

Connector No.	M501
Connector Name	ANTENNA BASE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M502
Connector Name	ANTENNA BASE
Connector Color	GRAY

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

ABNIA3575GB

Connector No.	M509
Connector Name	WIRE TO WIRE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	R	–
8	SHIELD	–
13	R	–
14	B	–
15	G	–
16	SHIELD	–
17	W	

Connector No.	E33
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	G	–

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–

ABNIA3576GB

Connector No.	E209
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
2	L	–
3	B	–
4	SHIELD	–
5	B	–
6	R	–
8	SHIELD	–
13	R	–
14	B	–
15	G	–
16	SHIELD	–
17	W	–

Connector No.	E226
Connector Name	FRONT CAMERA
Connector Color	BLACK

H.S.

1	2	3	4	5	6

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

Connector No.	E152
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		

81G	80G	79G	78G	77G	76G	75G	74G	73G	72G	71G
90G	89G	88G	87G	86G	85G	84G	83G	82G		

95G	94G	93G	92G	91G
100G	99G	98G	97G	96G

Terminal No.	Color of Wire	Signal Name
3G	P	–
16G	R	–
17G	B	–
18G	SHIELD	–
22G	B	–
23G	SHIELD	–
25G	W	–
26G	SHIELD	–
27G	W	–
28G	R	–
29G	B	–
30G	G	–
32G	LG	–
50G	G	–

Connector No.	E212
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

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

Connector No.	E211
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

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

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Connector No.	E301
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E308
Connector Name	FRONT SONAR SENSOR RH OUTER
Connector Color	BLACK

H.S.

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

Connector No.	E302
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	B1
Connector Name	REAR SIDE SPEAKER LH
Connector Color	BROWN

H.S.

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

Connector No.	E307
Connector Name	FRONT SONAR SENSOR LH OUTER
Connector Color	BLACK

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–
7	V	–
8	G	–
9	B	–
10	SHIELD	–
11	R	–
12	W	–
13	SB	–
14	SB	–
15	LG	–

ABNIA3578GB

Terminal No.	Color of Wire	Signal Name
18	V	–
19	V	–
20	B	–
21	G	–
22	W	–
23	R	–
24	–	–
25	–	–
26	–	–
27	W	–
28	B	–
29	SHIELD	–
30	SHIELD	–
31	P	–
32	L	–

Connector No.	B24
Connector Name	VIDEO DISTRIBUTOR
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	B	–
2	V	–
3	B	–
4	W	–
5	BR	–
6	L	–
7	SB	–
8	BR	–
9	SB	–
10	L	–
11	–	–
12	–	–
13	–	–
14	R	–
15	G	–
16	B	–
17	W	–

Connector No.	B23
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
1	W	–
2	G	–
3	SHIELD	–
4	P	–
6	SB	–
7	L	–
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	L	–
17	P	–
19	BR	–
20	–	–
21	LG	–
22	SB	–
24	SB	–

ABNIA3579GB

Connector No.	B25
Connector Name	VIDEO DISTRIBUTOR
Connector Color	WHITE

H.S.

34	36	38	40	42	44	46	48	50	52	54	56
33	35	37	39	41	43	45	47	49	51	53	55

Terminal No.	Color of Wire	Signal Name
33	W	–
34	G	–
35	SHIELD	–
36	–	–
37	–	–
38	–	–
39	W	–
40	B	–

Terminal No.	Color of Wire	Signal Name
41	SHIELD	–
42	–	–
43	–	–
44	–	–
45	W	–
46	R	–
47	B	–
48	G	–
49	SHIELD	–
50	–	–
51	–	–
52	–	–
53	SHIELD	–
54	B	–
55	R	–
56	W	–

Connector No.	B35
Connector Name	SONAR BUZZER
Connector Color	WHITE

H.S.

4	3	2	1

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

Terminal No.	Color of Wire	Signal Name
29	G	–
30	SHIELD	–
31	B	–

Connector No.	B41
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	25	26	27	28	29	30	31	32

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

Terminal No.	Color of Wire	Signal Name
6	W	–
7	SHIELD	–
8	B	–
17	V	–
18	W	–
19	B	–
20	W	–
21	SHIELD	–
22	W	–
23	R	–
24	SHIELD	–
25	B	–
26	G	–
27	W	–
28	R	–

ABNIA3580GB

Connector No.	B43
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	P	–

Connector No.	B46
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
13	W	–
14	R	–
15	G	–
16	SHIELD	–
17	B	–

Connector No.	B49
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
9	G	–
10	W	–
11	P	–
12	R	–
13	SHIELD	–
14	B	–
15	W	–
16	W	–

Connector No.	B51
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
11	R	–
12	P	–

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

H.S.

				5A	4A	3A	2A	1A			
				10A	9A	8A	7A	6A			
21A	20A	19A	18A	17A	16A	15A	14A	13A	12A	11A	
	30A	29A	28A	27A	26A	25A	24A	23A	22A		
41A	40A	39A	38A	37A	36A	35A	34A	33A	32A	31A	
	50A	49A	48A	47A	46A	45A	44A	43A	42A		
61A	60A	59A	58A	57A	56A	55A	54A	53A	52A	51A	
	70A	69A	68A	67A	66A	65A	64A	63A	62A		
81A	80A	79A	78A	77A	76A	75A	74A	73A	72A	71A	
	90A	89A	88A	87A	86A	85A	84A	83A	82A		
				95A	94A	93A	92A	91A			
				100A	99A	98A	97A	96A			

Terminal No.	Color of Wire	Signal Name
17A	W	–
18A	B	–
19A	SHIELD	–
20A	W	–
21A	SHIELD	–
23A	W	–
24A	B	–
25A	SHIELD	–
26A	W	–
27A	B	–
28A	SHIELD	–
30A	B	–
74A	P	–
75A	V	–

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Terminal No.	Color of Wire	Signal Name
8	B	–
9	V	–
10	W	–
11	B	–
12	G	–
13	R	–
14	SHIELD	–

Connector No.	B75
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	LG	–
2	SB	–
3	L	–
4	SB	–
5	BR	–
6	SHIELD	–
7	W	–

Connector No.	B73
Connector Name	SUBWOOFER
Connector Color	GRAY

H.S.

2	4	6
1	3	5

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

Connector No.	B101
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	25	26	27	28	29	30	31	32

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

Terminal No.	Color of Wire	Signal Name
25	B	–
26	SHIELD	–
27	B	–
28	B	–
29	B	–

Connector No.	B77
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
17	W	–
18	B	–
19	SHIELD	–
21	B	–
22	B	–
23	B	–
24	W	–

ABNIA3582GB

Connector No.	B107
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
6	B	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	B	–
12	W	–

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–
3	R	–
4	LG	–
5	Y	–
6	P	–
7	R	–
8	G	–
9	W	–
10	G	–
11	G	–
12	W	–
13	W	–
14	P	–
15	G	–
16	R	–

Connector No.	B120
Connector Name	BOSE SPEAKER AMP.
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
1	–	–
2	–	–
3	–	–
4	W	–
5	W	–
6	W	–
7	W	–
8	W	–
9	W	–
10	B	–
11	–	–
12	–	–
13	–	–
14	LG	–
15	LG	–
16	W	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–
21	–	–
22	–	–
23	–	–
24	B	–
25	B	–
26	B	–
27	B	–
28	B	–
29	B	–
30	W	–
31	–	–
32	–	–
33	–	–
34	SB	–
35	B/Y	–
36	–	–
37	–	–
38	–	–
39	B	–
40	–	–

ABNIA3583GB

Connector No.	B121
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN

H.S.

54	53	52	51	50
49	48	47	46	45	44	43	42	41

Terminal No.	Color of Wire	Signal Name
41	G	–
42	W	–
43	W	–
44	P	–
45	P	–
46	R	–
47	B	–
48	R	–
49	W	–
50	LG	–
51	Y	–
52	B	–
53	G	–
54	B	–

Connector No.	B122
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN

H.S.

77	76	75	74	73	72	71	70	69	68
67	66	65	64	63	62	61	60	59	58	57	56	55

Terminal No.	Color of Wire	Signal Name
55	W	–
56	R	–
57	P	–
58	R	–
59	G	–
60	–	–
61	–	–
62	W	–
63	W	–
64	G	–
65	SHIELD	–

Terminal No.	Color of Wire	Signal Name
66	–	–
67	–	–
68	–	–
69	G	–
70	W	–
71	R	–
72	W	–
73	G	–
74	G	–
75	W	–
76	–	–
77	–	–

Connector No.	B136
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	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
8	W	–
9	B	–

Terminal No.	Color of Wire	Signal Name
10	W	–
11	SHIELD	–
12	B	–
13	W	–
14	SHIELD	–
15	B	–
16	W	–
17	SHIELD	–
19	B	–
20	W	–
21	B	–

Terminal No.	Color of Wire	Signal Name
22	W	–
23	SHIELD	–
24	B	–
25	W	–
26	SHIELD	–
27	W	–
28	B	–
29	SHIELD	–
30	B	–
31	W	–
32	SHIELD	–

ABNIA3584GB

Connector No.	B137
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
1	W	–
2	G	–
3	SHIELD	–
4	Y	–
6	BR	–
7	LG	–

Terminal No.	Color of Wire	Signal Name
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	O	–

Terminal No.	Color of Wire	Signal Name
17	SB	–
19	SB	–
20	SHIELD	–
21	LG	–
22	SB	–
24	Y	–

Connector No.	B139
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
11	W	–
12	G	–

Connector No.	B140
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

Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–
11	P	–
12	R	–
13	SHIELD	–
14	W	–
15	B	–
16	W	–

Connector No.	B144
Connector Name	JOINT CONNECTOR-B11
Connector Color	WHITE

H.S.

4	3	2	1

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

ABNIA3585GB

Connector No.	B145
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

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	SB	–
3	SB	–
4	L	–
5	BR	–
6	SHIELD	–

Terminal No.	Color of Wire	Signal Name
7	Y	–
8	O	–
9	V	–
10	B	–
11	W	–
12	G	–
13	R	–
14	SHIELD	–

Connector No.	B153
Connector Name	REAR SIDE SPEAKER RH
Connector Color	BROWN

H.S.

2	1

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

Connector No.	B201
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
1	W	–
2	G	–
3	SHIELD	–
4	P	–
6	SB	–
7	L	–

Terminal No.	Color of Wire	Signal Name
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	L	–
17	P	–
19	BR	–
20	–	–
21	LG	–
22	SB	–
24	SB	–

ABNIA3596GB

Connector No.	B202
Connector Name	HEADREST DISPLAY UNIT (DRIVER SEAT)
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	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	P	REAR 1 COMP -
5	–	–
6	SB	CONT GND
7	L	AUX REQ. OUT
8	–	–
9	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	–	–
12	B	GND
13	B	REAR 1 HP LH+
14	R	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	L	REAR 1 COMP+
17	P	AV GND
18	–	–
19	BR	ACC DET. IN
20	–	–
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	–	–
24	SB	BAT

Connector No.	B301
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
1	W	–
2	G	–
3	SHIELD	–
4	Y	–
6	BR	–
7	LG	–
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	O	–
17	SB	–
19	SB	–
20	SHIELD	–
21	LG	–
22	SB	–
24	Y	–

Connector No.	B302
Connector Name	HEADREST DISPLAY UNIT (PASSENGER SEAT)
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	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	Y	REAR 1 COMP -
5	–	–
6	BR	CONT GND
7	LG	AUX REQ. OUT
8	–	–
9	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	–	–
12	B	GND
13	B	REAR 1 HP LH+
14	R	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	O	REAR 1 COMP+
17	SB	AV GND
18	–	–
19	SB	ACC DET. IN
20	SHIELD	SHIELD M-CAN
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	–	–
24	Y	BAT

ABNIA3597GB

Connector No.	B400
Connector Name	WIRE TO WIRE
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
17	W	–
18	B	–
19	SHIELD	–
20	R	–
21	B	–

Terminal No.	Color of Wire	Signal Name
22	W	–
23	SHIELD	–
24	W	–
25	B	–
26	SHIELD	–
27	W	–
28	B	–
29	SHIELD	–

Connector No.	B401
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	B	–
3	W	–
4	B	–
5	W	–
8	B	–
9	W	–
10	W	–
11	B	–

Connector No.	B452
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	P	–
3	G	–
4	L	–
5	Y	–
8	L	–
9	W	–
10	P	–
11	G	–

Connector No.	B455
Connector Name	REAR SONAR SENSOR LH OUTER
Connector Color	BLACK

H.S.

3	2	1

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

Connector No.	B456
Connector Name	REAR SONAR SENSOR RH OUTER
Connector Color	BLACK

H.S.

3	2	1

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

ABNIA3598GB

Connector No.	B457
Connector Name	REAR SONAR LH INNER
Connector Color	BLACK

H.S.

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

Connector No.	B458
Connector Name	REAR SONAR SENSOR RH INNER
Connector Color	BLACK

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
5	B	–
13	W	–
14	B	–
15	SHIELD	–
16	P	–
17	BG	–
24	W	–

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	V	–
2	R	–
3	G	–
4	P	–
5	GR	–
6	L	–
7	R	–

Connector No.	R105
Connector Name	TELEMATICS SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	V	–
2	G	–
3	P	–
7	R	–

ABNIA3599GB

Connector No.	R109
Connector Name	MICROPHONE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
3	GR	–
4	L	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
22	Y	–
23	LG	–
28	G	–
29	SHIELD	–
30	R	–
31	B	–
32	W	–

Connector No.	D6
Connector Name	DOOR MIRROR LH (WITH AUTOMATIC DRIVE POSITIONER)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
8	LG	–
9	Y	–

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

H.S.

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

Connector No.	D20
Connector Name	DOOR MIRROR LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	R	–
6	W	–
16	G	–
17	SHIELD	–
18	B	–

ABNIA3600GB

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	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

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

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

H.S.

1	2	3	4
5	6	7	8	9	10
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Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–

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

H.S.

2	1

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

Connector No.	D113
Connector Name	DOOR MIRROR RH
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
5	R	–
6	W	–
16	G	–
17	SHIELD	–
18	B	–

Connector No.	D201
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
11	Y	–
12	LG	–

Connector No.	D202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

5	4	3	2	1
12	11	10	9	8	7	6
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Terminal No.	Color of Wire	Signal Name
10	LG	–
11	Y	–

AANIA0744GB

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

H.S.

2	1

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

Connector No.	D251
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
10	LG	–
11	BR	–

Connector No.	D252
Connector Name	REAR DOOR TWEETER LH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	BR	–

Connector No.	D301
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
11	G	–
12	W	–

Connector No.	D302
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
10	W	–
11	G	–

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

H.S.

2	1

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

AANIA0745GB

Connector No.	D351
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
10	LG	–
11	BR	–

Connector No.	D352
Connector Name	REAR DOOR TWEETER RH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	BR	–

Connector No.	D501
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
13	W	–
14	B	–
15	R	–
16	SHIELD	–
17	G	–

Connector No.	D511
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

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

AANIA0746GB

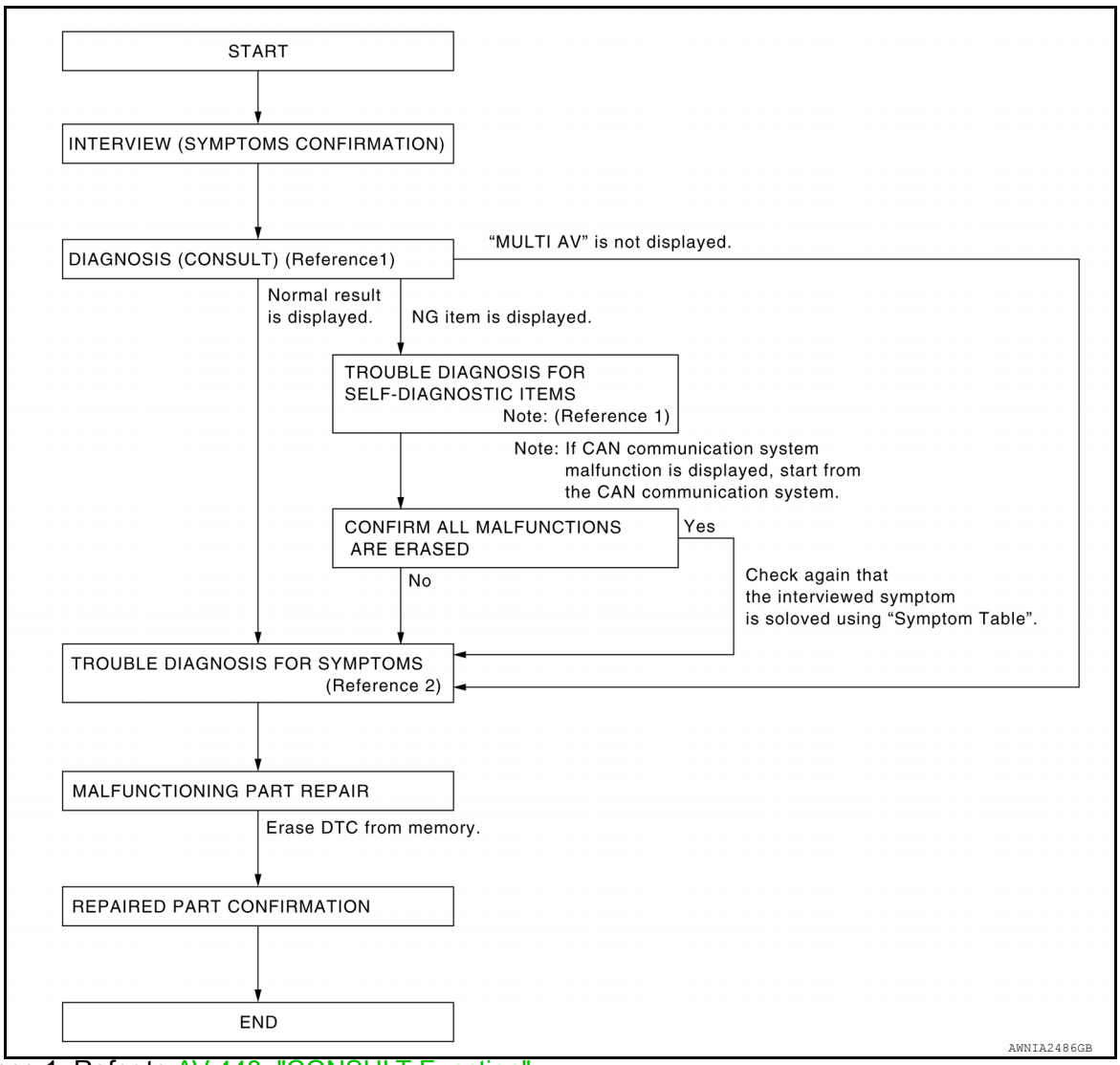
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow (Multi AV System)

INFOID:0000000008376943

OVERALL SEQUENCE



Reference 1: Refer to AV-448, "CONSULT Function".
Reference 2: Refer to AV-657, "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 No. displayed?

YES >> GO TO 3
NO >> GO TO 4

3. CHECK SELF-DIAGNOSIS RESULTS (CONSULT)

1. Check the DTC No. indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC No. list. Refer to AV-464, "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-657, "Symptom Table".

>> GO TO 5

5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the identified malfunctioning parts.

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

>> GO TO 6

6. CHECK AFTER REPAIR

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

Is any DTC No. displayed?

YES >> GO TO 3
NO >> GO TO 7

7. FINAL CHECK

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

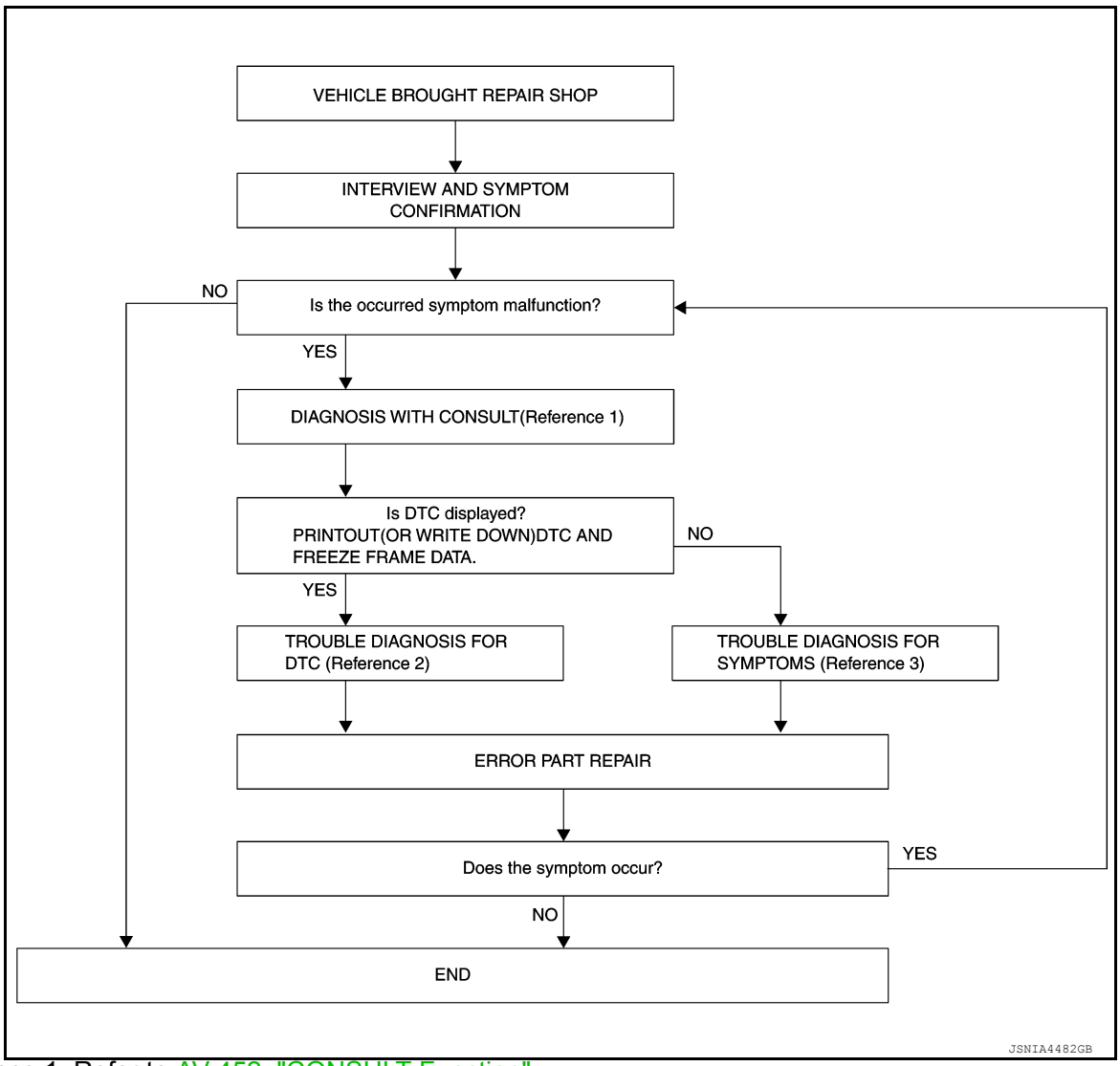
Are any symptoms present?

YES >> GO TO 4
NO >> Inspection End.

Work Flow (Camera Assistance Sonar)

INFOID:0000000008376944

OVERALL SEQUENCE



Reference 1: Refer to AV-452, "CONSULT Function".
Reference 2: Refer to AV-488, "DTC Index".
Reference 3: Refer to AV-657, "Symptom Table".

DETAILED FLOW

1.INTERVIEW AND SYMPTOM CONFIRMATION

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.

Is the occurred symptom malfunction?

YES >> GO TO 2.
NO >> INSPECTION END

2.DIAGNOSIS WITH CONSULT

1. Connect CONSULT and perform a self-diagnosis for “SONAR”. Refer to AV-452, "CONSULT Function".
   NOTE:
   Skip to step 4 of the diagnosis procedure if “SONAR” is not displayed.
2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Is DTC displayed?

YES >> GO TO 3.
NO >> GO TO 4.

3. TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC Index. Refer to AV-488, "DTC Index".

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-657, "Symptom Table".

>> GO TO 5.

5. ERROR PART REPAIR

1. Repair or replace the identified malfunctioning parts.
2. Perform a self-diagnosis for “SONAR” with CONSULT.
   NOTE:
   Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the self-diagnosis results.
3. Check that the symptom does not occur.

Does the symptom occur?

YES >> GO TO 1.
NO >> Inspection End.

INSPECTION AND ADJUSTMENT
ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT
ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:0000000008376945

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing AV control unit.

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform “After Replace ECU” with CONSULT.

- **Complete the procedure of “After Replace ECU” in order.**
- **If you set incorrect “After Replace ECU”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Work Procedure

INFOID:0000000008376946

1.SAVING VEHICLE SPECIFICATION

-CONSULT

Enter “Re/Programming, Configuration” and perform “Before Replace ECU” to save or print current vehicle specification.

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing AV control unit.

>> GO TO 2.

2.REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT

1. Enter "Re/Programming, Configuration".
2. If “Before Replace ECU” operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press “Confirm” to write vehicle specification. Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure".
3. If “Before Replace ECU” operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Work Procedure".

>> GO TO 4.

4.OPERATION CHECK

Check that the operation of the AV control unit is normal.

>> Work End.

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:0000000008376947

Vehicle specification needs to be written with CONSULT because it is not written after replacing AV control unit.
Configuration has three functions as follows:

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

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

CONFIGURATION (AV CONTROL UNIT) : Work Procedure

INFOID:0000000008376948

1.WRITING MODE SELECTION

CONSULT
Select “Reprogramming, Configuration” of AV control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2.PERFORM “SAVED DATA LIST”

CONSULT
Automatically “Operation Log Selection” window will display if “Before Replace ECU” was performed. Select applicable file from the “Save Data List” and press “Confirm”.

>> Work End.

3.PERFORM “AFTER REPLACE ECU” OR “MANUAL CONFIGURATION”

CONSULT
1. Select “After Replace ECU” or “Manual Configuration”.
2. Identify the correct model and configuration list. Refer to AV-542, "CONFIGURATION (AV CONTROL UNIT) : Configuration List".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select “Next”.
   CAUTION:
   Make sure to select “Next”, confirm each setting value and press “OK” even if the indicated configuration of brand new AV control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

4.OPERATION CHECK

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

>> Work End.

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:0000000008376949

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

MANUAL SETTING ITEM	
Items	Setting value
ENGINE TYPE	NORMAL ⇔ HYBRID
SOUND SYSTEM	BOSE SURROUND ⇔ BOSE ⇔ BASE

⇔: Items which confirm vehicle specifications

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Description

INFOID:0000000008376950

BEFORE REPLACEMENT

When replacing around view monitor control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:
If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing around view monitor control unit.

AFTER REPLACEMENT

CAUTION:
When replacing around view monitor control unit, you must perform “After Replace ECU” with CONSULT.
- **Complete the procedure of “After Replace ECU” in order.**
- **If you set incorrect “After Replace ECU”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Work Procedure

INFOID:0000000008376951

1.SAVING VEHICLE SPECIFICATION

-CONSULT
Enter “Re/Programming, Configuration” and perform “Before Replace ECU” to save or print current vehicle specification.

NOTE:
If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing around view monitor control unit.

>> GO TO 2.

2.REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT
1. Enter "Re/Programming, Configuration".
2. If “Before Replace ECU” operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press “Confirm” to write vehicle

specification. Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure".

3. If “Before Replace ECU” operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure".

>> GO TO 4.

4.OPERATION CHECK

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

>> Work End.

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Description

INFOID:0000000008376952

Vehicle specification needs to be written with CONSULT because it is not written after replacing around view monitor control unit.
Configuration has three functions as follows:

Function	Description
"Before Replace ECU"	• Reads the vehicle configuration of current around view monitor control unit. • Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:

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

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure

INFOID:0000000008376953

1.WRITING MODE SELECTION

CONSULT
Select “Reprogramming, Configuration” of around view monitor control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2.PERFORM “SAVED DATA LIST”

CONSULT
Automatically “Operation Log Selection” window will display if “Before Replace ECU” was performed. Select applicable file from the “Save Data List” and press “Confirm”.

>> Work End.

3.PERFORM “AFTER REPLACE ECU” OR “MANUAL CONFIGURATION”

CONSULT
1. Select “After Replace ECU” or “Manual Configuration”.

2. Identify the correct model and configuration list. Refer to AV-544, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Configuration List".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select “Next”.
   CAUTION:
   Make sure to select “Next”, confirm each setting value and press “OK” even if the indicated configuration of brand new around view monitor control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

4. OPERATION CHECK

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

>> Work End.

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Configuration List

INFOID:0000000008376954

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

MANUAL SETTING ITEM	
Items	Setting value
BCI FUNCTION	WITH ⇔ WITHOUT

⇔: Items which confirm vehicle specifications

ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT : Description

INFOID:0000000008489509

BEFORE REPLACEMENT

When replacing sonar control unit, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:
If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing sonar control unit.

AFTER REPLACEMENT

CAUTION:
When replacing sonar control unit, you must perform “After Replace ECU” with CONSULT.
- **Complete the procedure of “After Replace ECU” in order.**
- **If you set incorrect “After Replace ECU”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**

ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT : Work Procedure

INFOID:0000000008489510

1. SAVING VEHICLE SPECIFICATION

Ⓟ-CONSULT
Enter “Re/Programming, Configuration” and perform “Before Replace ECU” to save or print current vehicle specification.

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing sonar control unit.

>> GO TO 2.

2.REPLACE SONAR CONTROL UNIT

Replace sonar control unit. Refer to AV-691, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT
1. Enter "Re/Programming, Configuration".
2. If “Before Replace ECU” operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press “Confirm” to write vehicle specification. Refer to AV-545, "CONFIGURATION (SONAR CONTROL UNIT) : Work Procedure".
3. If “Before Replace ECU” operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to AV-545, "CONFIGURATION (SONAR CONTROL UNIT) : Work Procedure".

>> GO TO 4.

4.OPERATION CHECK

Check that the operation of the sonar control unit is normal.

>> Work End.

CONFIGURATION (SONAR CONTROL UNIT)

CONFIGURATION (SONAR CONTROL UNIT) : Description

INFOID:0000000008489511

Vehicle specification needs to be written with CONSULT because it is not written after replacing sonar control unit.
Configuration has three functions as follows:

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

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

CONFIGURATION (SONAR CONTROL UNIT) : Work Procedure

INFOID:0000000008489512

1.WRITING MODE SELECTION

CONSULT
Select “Reprogramming, Configuration” of sonar control unit.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2.PERFORM “SAVED DATA LIST”

CONSULT
Automatically “Operation Log Selection” window will display if “Before Replace ECU” was performed. Select applicable file from the “Save Data List” and press “Confirm”.

>> Work End.

3.PERFORM “AFTER REPLACE ECU” OR “MANUAL CONFIGURATION”

CONSULT
1. Select “After Replace ECU” or “Manual Configuration”.
2. Identify the correct model and configuration list. Refer to AV-546, "CONFIGURATION (SONAR CONTROL UNIT) : Configuration List".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
4. Select “Next”.
   CAUTION:
   Make sure to select “Next”, confirm each setting value and press “OK” even if the indicated configuration of brand new sonar control unit is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model can not be memorized.
5. When "Completed", select "End".

>> GO TO 4.

4.OPERATION CHECK

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

>> Work End.

CONFIGURATION (SONAR CONTROL UNIT) : Configuration List

INFOID:0000000008489513

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

MANUAL SETTING ITEM	
Items	Setting value
BCI FUNCTION	WITH ⇔ WITHOUT

⇔: Items which confirm vehicle specifications

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Description

INFOID:0000000008376955

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

PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure

INFOID:0000000008376956

1.DRIVING

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

>> END

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Description

INFOID:0000000008489500

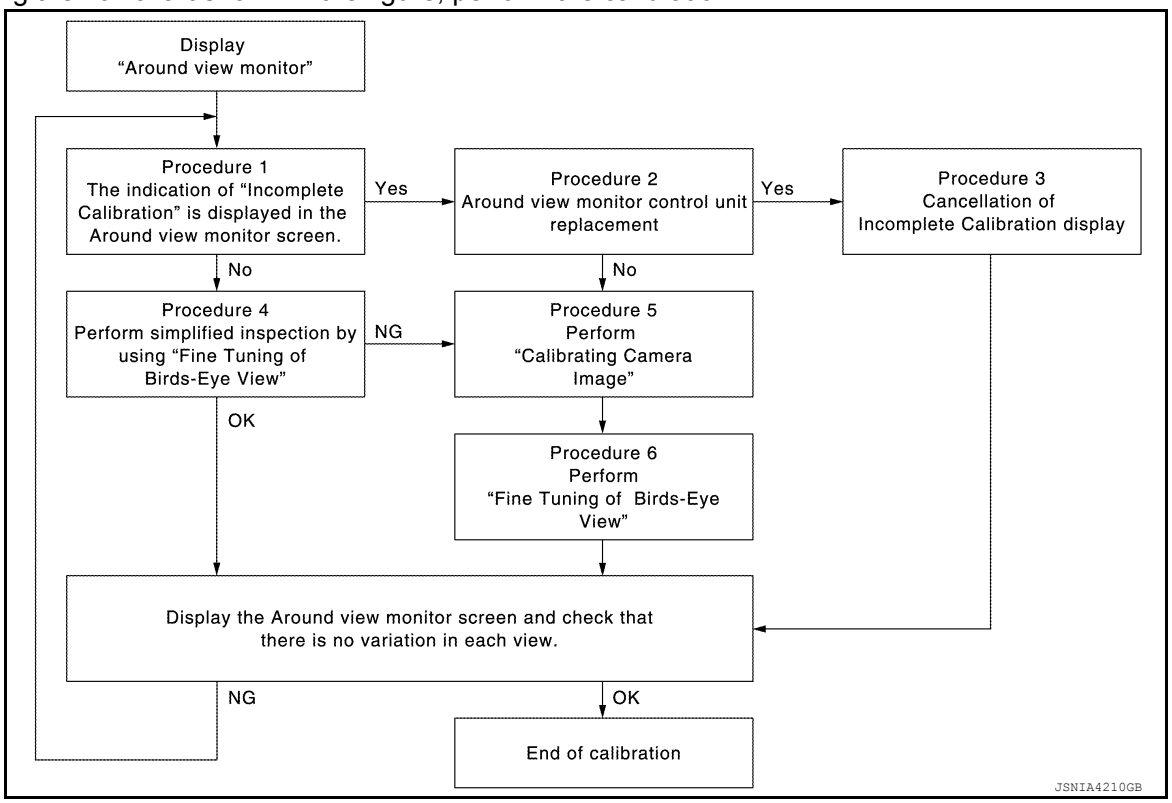
- Calibration must be performed after removing/replacing the cameras, removing parts (e.g. front grille, door mirror, and others) mounted on the cameras, or replacing the Around view monitor control unit.
- The use of CONSULT is required to perform calibration or writing of calibration results to the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

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure

INFOID:0000000008489501

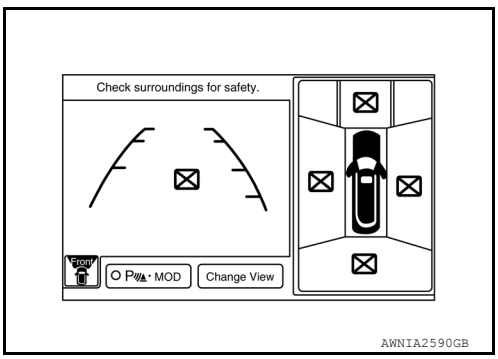
CALIBRATION FLOWCHART

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



NOTE:

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



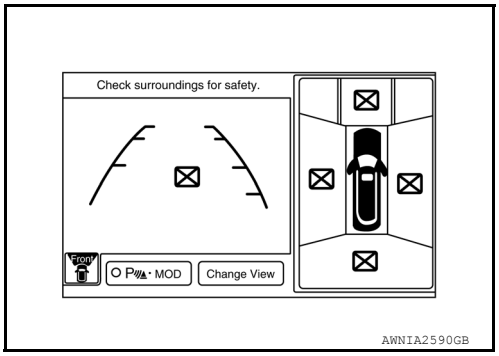
CALIBRATION PROCEDURE

1. AROUND VIEW MONITOR SCREEN CONFIRMATION

Check that there is no indication of “Incomplete calibration”.

Is the “Incomplete calibration” display visible?

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



2. CHECK THAT AROUND VIEW MONITOR CONTROL UNIT IS REPLACED

Check that the around view monitor control unit is replaced.

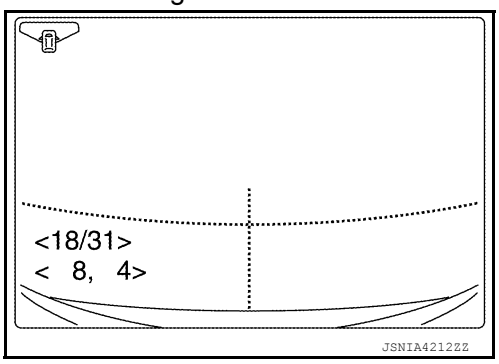
Is the around view monitor control unit replaced?

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

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

CONSULT work support

1. On the CONSULT screen, touch “CALIBRATING CAMERA IMAGE (FRONT CAMERA)”, “CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)”, “CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)”, or “CALIBRATING CAMERA IMAGE (REAR CAMERA)” to accept the selection.
   NOTE:
   To cancel the indication of Incomplete calibration, select items based on the target camera.
2. On the adjustment screen of each camera, touch “APPLY” button. After this, touch “OK” button.
   CAUTION:
   - **Never perform operations other than those mentioned above.**
   - **Never perform “Initialize Camera Image Calibration”.**
3. Display the around view monitor screen to check that there is no errors, such as deviations among the camera images.



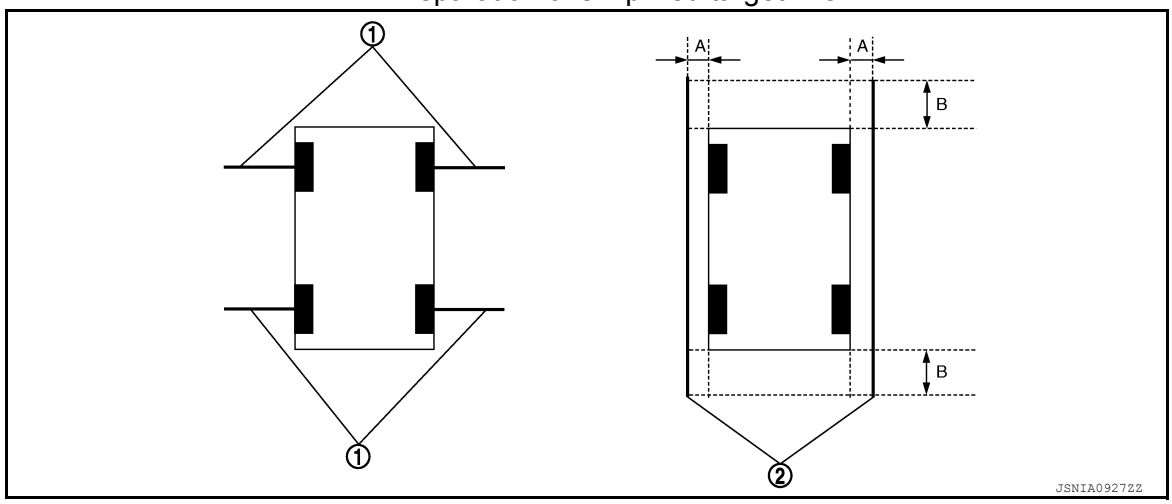
Is there a malfunction?

YES >> Calibration end
NO >> GO TO 1.

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

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

Preparation of simplified target line



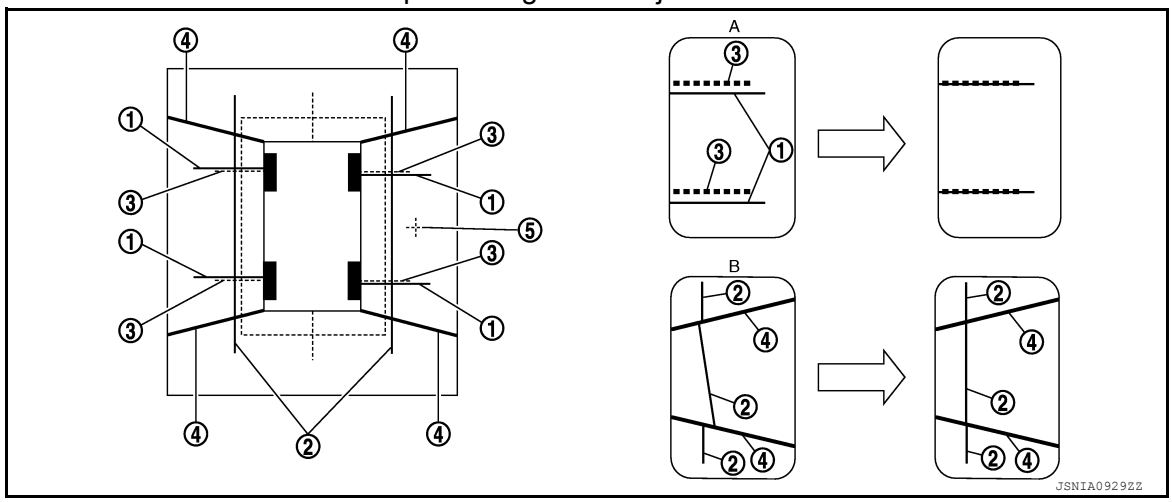
1. Target lines 1
2. Target lines 2
A. Approx. 30 cm (11.8 in)
B. Approx. 1.0 m (39.3 in)

3. CONSULT work support
Touch “FINE TUNING OF BIRDS-EYE VIEW” on the CONSULT screen.
4. On the CONSULT screen, touch “SELECT” button to select right or left camera and perform camera calibration as instructed below:

- If the marker on the screen deviates from Target line 1, touch “AXIS X” button and “AXIS Y” button to adjust so that the marker is placed on the Target line 1.
- If Target line 2 is misaligned among the cameras, adjust each camera image to bring Target line 2 into a straight line.

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

Simplified target line adjustment method



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

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

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

Is the difference corrected?

YES >> On the CONSULT screen, touch “OK” button to complete writing to the around view monitor control unit.

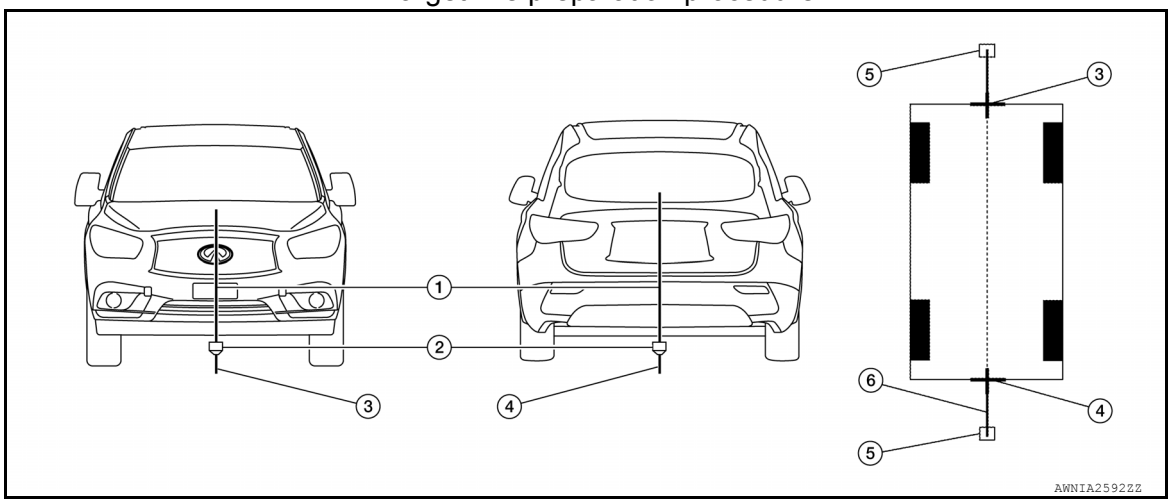
NO >> GO TO 5.

5. PERFORM “CALIBRATING CAMERA IMAGE”

Preparation of target line

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

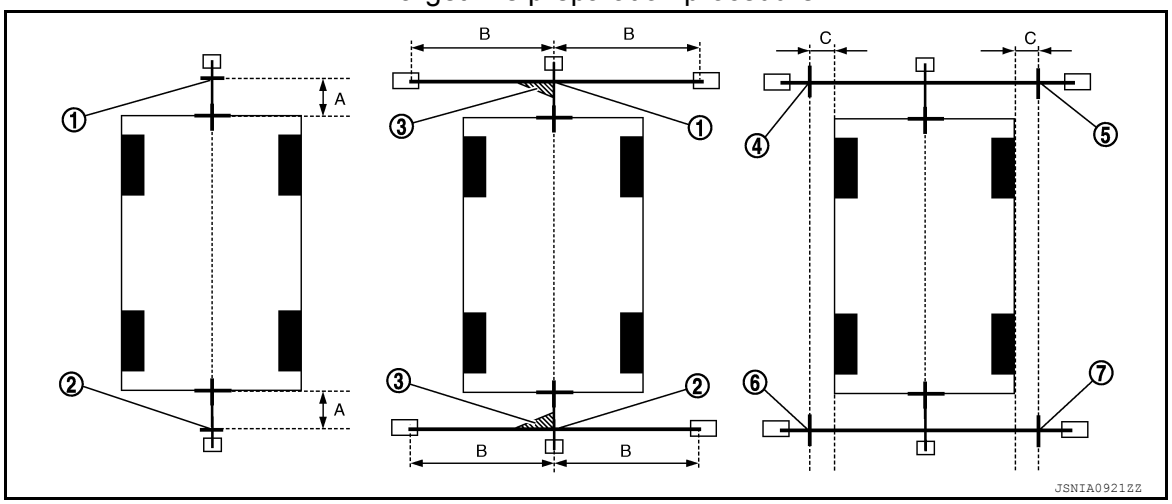
Target line preparation procedure 1



1. Thread
2. Weight
3. Point FM0 (mark)
4. Point RM0 (mark)
5. Packing tape (to fix the vinyl string)
6. Vinyl string

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

Target line preparation procedure 2



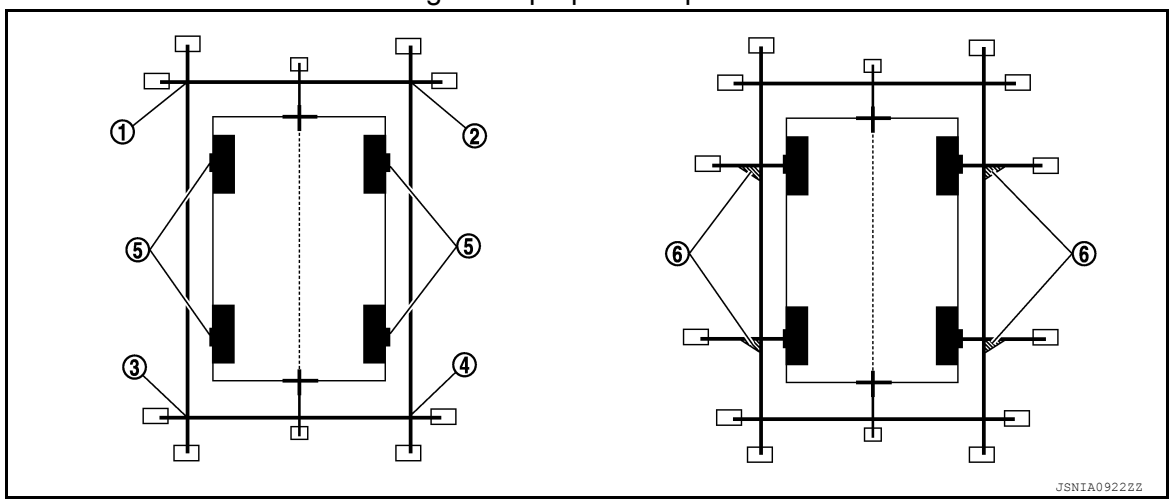
1. Point FM
2. Point RM
3. Triangle scale
4. Point FL (mark)
5. Point FR (mark)
6. Point RL (mark)

7. Point RR (mark)

A. 75 cm (29.5 in) B. Approx. 1.5 m (59 in) C. 30 cm (11.8 in) [Vehicle width/ 2 + 30 cm (11.8 in) from the points FM and RM]

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

Target line preparation procedure 3

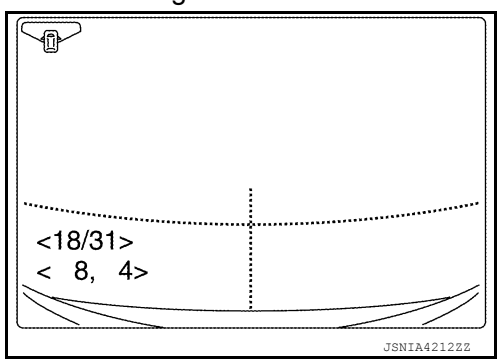


1. Point FL 2. Point FR 3. Point RL
4. Point RR 5. Center position of axle 6. Triangle scale

Perform “Calibrating Camera Image”

CONSULT work support

1. On the CONSULT screen, touch “CALIBRATING CAMERA IMAGE (FRONT CAMERA)”, “CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)”, “CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)”, or “CALIBRATING CAMERA IMAGE (REAR CAMERA)” to accept the selection.
   NOTE:
   To cancel the indication of Incomplete calibration, select items based on the target camera.
2. On the adjustment screen of each camera, adjust the parameter by touching the “AXIS X” button, “AXIS Y” button, and “ROTATE” button to place the calibration marker shown on the camera screen on the target line drawn on the ground.



Adjustment range	
Rotation direction (Center dial)	: 31 patterns (16 on the center)
Upper/lower direction (upper/lower switch)	: –22 – 22
Left/right direction (left/right switch)	: –22 – 22

3. Touch “APPLY” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are shown on the camera screen.
   CAUTION:
   Check that “PRCSNG” is displayed. Do never perform other operations while “PRCSNG” is displayed.
4. Touch “OK” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are written to the around view monitor control unit.
   CAUTION:
   Check that “PRCSNG” is displayed. Do never perform other operations while “PRCSNG” is displayed.

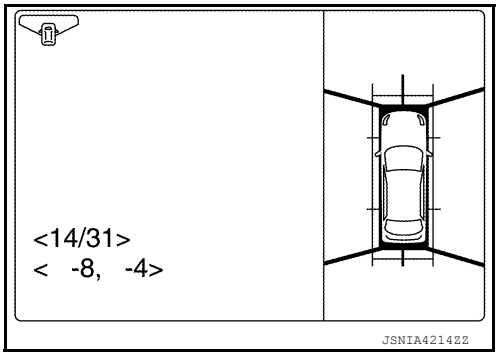
>> GO TO 6.

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

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

CONSULT work support

1. Select “FINE TUNING OF BIRDS-EYE VIEW” by touching CONSULT screen.
2. On the adjustment screen of each camera, adjust the parameter by touching the “AXIS X” button, “AXIS Y” button”, and “ROTATE” button to place the calibration marker shown on the camera screen on the target line drawn on the ground.
   NOTE:
   Touch “SELECT” button on the CONSULT screen to select the target camera.
3. Touch “APPLY” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are shown on the camera screen.
   CAUTION:
   Check that “PRCSNG” is displayed. Do never perform other operations while “PRCSNG” is displayed.



4. Touch “OK” button on the CONSULT screen. “PRCSNG” is displayed and adjustment results are written to the around view monitor control unit.
   CAUTION:
   - **Check that “PRCSNG” is displayed. Never perform other operations while “PRCSNG” is displayed.**
   - **After pressing the “OK” button, never press buttons other than the “BACK” button.**

   NOTE:
   - It can be initialized to the NISSAN factory default condition with “Initialize Camera Image Calibration”.
   - The adjustment value is cancelled in this mode by performing “Initialize Camera Image Calibration”.

>> Calibration end

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : DTC Logic

INFOID:0000000008376874

DTC DETECTION LOGIC

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

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000008376875

1.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform Self Diagnostic Result for MULTI AV.

Is CAN COMM CIRCUIT displayed?

YES >> Refer to LAN-22, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-53, "Intermittent Incident".

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic

INFOID:0000000008376876

DTC DETECTION LOGIC

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

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : Diagnosis Procedure

INFOID:0000000008376877

1.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform Self Diagnostic Result for SONAR.

Is CAN COMM CIRCUIT displayed?

YES >> Refer to LAN-22, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-53, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

AV CONTROL UNIT

AV CONTROL UNIT : DTC Logic

INFOID:0000000008376878

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : DTC Logic

INFOID:0000000008376879

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the sonar control unit if the malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1200 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487461

CONSULT Display	DTC Detection Condition	Possible Cause
CONT UNIT [U1200]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1201 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487462

CONSULT Display	DTC Detection Condition	Possible Cause
GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1202 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487463

CONSULT Display	DTC Detection Condition	Possible Cause
G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1204 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487464

CONSULT Display	DTC Detection Condition	Possible Cause
GPS CONN [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487465

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1204 detected?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".
NO >> Refer to GI-53, "Intermittent Incident".

U1205 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487466

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ROM [U1205]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487467

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1205 detected?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".
NO >> Refer to GI-53, "Intermittent Incident".

U1206 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487468

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RAM [U1206]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487469

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1206 detected?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".
NO >> Refer to GI-53, "Intermittent Incident".

U1207 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487470

CONSULT Display	DTC Detection Condition	Possible Cause
GPS RTC [U1207]	GPS malfunction is detected.	An intermittent error caused by strong radio interference, GPS reception error, etc. may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487471

1. PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1207 detected?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".
NO >> Refer to GI-53, "Intermittent Incident".

U1216 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487472

CONSULT Display	DTC Detection Condition	Possible Cause
CAN CONT [U1216]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1217 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487473

CONSULT Display	DTC Detection Condition	Possible Cause
BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1218 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487474

CONSULT Display	DTC Detection Condition	Possible Cause
HDD CONN [U1218]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487475

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1219 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487476

CONSULT Display	DTC Detection Condition	Possible Cause
HDD READ [U1219]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487477

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U121A AV CONTROL UNIT

DTC Logic

INFOID:0000000008487478

CONSULT Display	DTC Detection Condition	Possible Cause
HDD WRITE [U121A]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487479

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U121B AV CONTROL UNIT

DTC Logic

INFOID:0000000008487480

CONSULT Display	DTC Detection Condition	Possible Cause
HDD COMM [U121B]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487481

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U121C AV CONTROL UNIT

DTC Logic

INFOID:0000000008487482

CONSULT Display	DTC Detection Condition	Possible Cause
HDD ACCESS [U121C]	AV control unit malfunction is detected.	An intermittent error causing HDD malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487483

1.CHECK MUSIC BOX FUNCTION

Check the music box function of the AV control unit. Refer to Owner's Manual for audio system operating instructions.

Is the music box function of the AV control unit operating normally?

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U121D AV CONTROL UNIT

DTC Logic

INFOID:0000000008487484

CONSULT Display	DTC Detection Condition	Possible Cause
DSP CONN [U121D]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487485

1.CHECK CD PLAYBACK

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

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

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U121E AV CONTROL UNIT

DTC Logic

INFOID:0000000008487486

CONSULT Display	DTC Detection Condition	Possible Cause
DSP COMM [U121E]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487487

1.CHECK CD PLAYBACK

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

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

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1225 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487488

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

U1227 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487489

CONSULT Display	DTC Detection Condition	Possible Cause
DVD COMM [U1227]	AV control unit malfunction is detected.	An intermittent error causing disc player malfunction may be detected. Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

Diagnosis Procedure

INFOID:0000000008487490

1.CHECK DVD PLAYBACK

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

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

YES >> Refer to GI-53, "Intermittent Incident".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1228 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487491

CONSULT Display	DTC Detection Condition	Possible Cause
SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1229 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487492

CONSULT Display	DTC Detection Condition	Possible Cause
iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U122A AV CONTROL UNIT

DTC Logic

INFOID:0000000008487493

CONSULT Display	DTC Detection Condition	Possible Cause
CONFIG UNFINISH [U122A]	Configuration data is incomplete.	Write configuration data. Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure".

Diagnosis Procedure

INFOID:0000000008487494

1.PERFORM CONFIGURATION

When U122A is detected, configuration data must be written.

>> Write configuration data with CONSULT. Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure".

U122E AV CONTROL UNIT

DTC Logic

INFOID:0000000008487495

CONSULT Display	DTC Detection Condition	Possible Cause
Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1231 BOSE AMP.

DTC Logic

INFOID:0000000008487496

CONSULT Display	DTC Detection Condition	Possible Cause
AMP TEMP [U1231]	BOSE amp. malfunction is detected.	Replace BOSE amp. if malfunction occurs constantly. Refer to AV-674, "Removal and Installation".

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000008487497

CONSULT Display	DTC Detection Condition	Possible Cause
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of steering angle sensor is incomplete.	Adjust predictive course line center position of steering angle sensor.

Diagnosis Procedure

INFOID:0000000008487498

1.ADJUST PREDICTIVE COURSE LINE CENTER POSITION OF STEERING ANGLE SENSOR

When U1232 is detected, the predictive course line center position of the steering angle sensor needs to be adjusted.

>> Adjust the predictive course line center position of steering angle sensor. Refer to AV-546, "PREDICTED COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure".

U1243 DISPLAY UNIT

DTC Logic

INFOID:0000000008487499

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

Diagnosis Procedure

INFOID:0000000008487500

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuits. Refer to AV-613, "DISPLAY UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK COMMUNICATION CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect display unit connector M92 and AV control unit connector M124.
3. Check continuity between display unit connector M92 terminals 9, 10 and AV control unit connector M124 terminals 77, 61.

Display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M92	9	M124	77	Yes
	10		61	

4. Check continuity between display unit connector M92 terminals 9, 10 and ground.

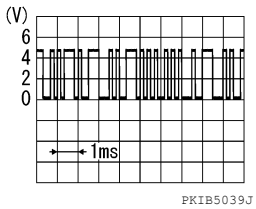
Display unit		Ground	Continuity
Connector	Terminals		
M92	9	—	No
	10		

Is the inspection result normal?

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

3.CHECK COMMUNICATION SIGNAL (DISP→CONT)

1. Connect display unit connector M92 and AV control unit connector M124.
2. Turn ignition switch ON.
3. Check signal between display unit connector M92 terminal 9 and ground.

Display unit		Ground	Condition	Reference value
(+)		(−)		
Connector	Terminal			
M92	9	—	When adjusting display brightness.	

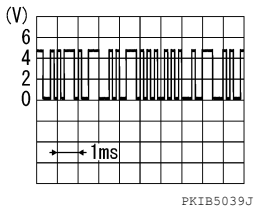
PKIB5039J

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

4. CHECK COMMUNICATION SIGNAL (CONT→DISP)

Check signal between display unit connector M92 terminal 10 and ground.

Display unit		Ground	Condition	Reference value
(+)		(−)		
Connector	Terminal			
M92	10	—	When adjusting display brightness.	

PKIB5039J

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace display unit. Refer to AV-671, "Removal and Installation".

U1244 GPS ANTENNA

DTC Logic

INFOID:0000000008487501

CONSULT Display	DTC Detection Condition	Possible Cause
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna disconnection.

Diagnosis Procedure

INFOID:0000000008487502

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.GPS ANTENNA INSPECTION

Visually inspect the GPS antenna and antenna feeder. Refer to AV-697, "Removal and Installation".

Is inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect GPS antenna connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit terminal and ground.

AV control unit terminal	Ground	Voltage
(+)	(–)	
188	—	5.0 V

Is inspection result normal?

YES >> Inspection End.
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1258 SATELLITE RADIO ANTENNA

DTC Logic

INFOID:0000000008487503

CONSULT Display	DTC Detection Condition	Possible Cause
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.

Diagnosis Procedure

INFOID:0000000008487504

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.SATELLITE RADIO ANTENNA INSPECTION

Visually inspect the satellite radio antenna and antenna feeder. Refer to AV-695, "Location of Antennas".

Is inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect AV control unit connector M133.
2. Turn ignition switch ON.
3. Check voltage between AV control unit terminal 166 and ground.

AV control unit terminal	Ground	Voltage
(+)	(–)	
166	—	5.0 V

Is inspection result normal?

YES >> Inspection End.
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U125A HEADREST DISPLAY UNIT

DTC Logic

INFOID:0000000008487505

CONSULT Display	DTC Detection Condition	Possible Cause
3RD DISP CONN [U125A]	When any of the following is detected. • headrest display unit power supply or ground circuit malfunction. • AV communication circuit malfunction between headrest display units.	• Headrest display unit power supply and ground circuits. • AV communication circuits between headrest display units.

Diagnosis Procedure

INFOID:0000000008487506

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK HEADREST DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check headrest display unit power supply and ground circuits. Refer to AV-618, "HEADREST DISPLAY UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK AV COMMUNICATION CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect headrest display unit connectors.
3. Check continuity between headrest display unit (driver seat) connector B202 and headrest display unit (passenger seat) connector B302.

Headrest display unit (driver seat)		Headrest display unit (passenger seat)		Continuity
Connector	Terminals	Connector	Terminals	
B202	9	B302	21	Yes
	10		22	

4. Check continuity between headrest display unit (driver seat) connector B202 and ground.

Headrest display unit (driver seat)		Ground	Continuity
Connector	Terminals		
B202	9	—	No
	10		

Is the inspection result normal?

YES >> Replace headrest display unit (passenger seat). Refer to AV-672, "Removal and Installation".
NO >> Repair or replace harness or connectors.

U1263 USB

DTC Logic

INFOID:0000000008487507

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

Diagnosis Procedure

INFOID:0000000008487508

1.CHECK USB INTERFACE HARNESS

Visually inspect USB interface harness.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace USB interface harness. Refer to AV-683, "Removal and Installation".

2.CHECK USB INTERFACE HARNESS CONTINUITY

Check USB interface harness continuity. Refer to AV-648, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".
NO >> Replace USB interface harness. Refer to AV-683, "Removal and Installation".

U1264 ANTENNA AMP.

DTC Logic

INFOID:0000000008487509

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

Diagnosis Procedure

INFOID:0000000008487510

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA BASE

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M143 and antenna base connector M502.
3. Check continuity between AV control unit connector M143 and antenna base connector M502.

AV control unit		Antenna base		Continuity
Connector	Terminal	Connector	Terminal	
M143	143	M502	1	Yes

4. Check continuity between AV control unit connector M143 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M143	143	—	No

Is the inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M143.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M143 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(–)	
Connector	Terminal		
M143	143	—	Battery voltage

Is the inspection result normal?

YES >> Replace antenna base. Refer to AV-698, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1265 BOSE AMP.

DTC Logic

INFOID:0000000008487511

CONSULT Display	DTC Detection Condition	Possible Cause
AMP ON TERMINAL [U1265]	BOSE amp. ON signal circuit open or short circuited.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.

Diagnosis Procedure

INFOID:0000000008487512

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND BOSE SPEAKER AMP.

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M122 and Bose speaker amp. connector B130.
3. Check continuity between AV control unit connector M122 and Bose speaker amp. connector M130.

AV control unit		Bose speaker amp.		Continuity
Connector	Terminal	Connector	Terminal	
M122	1	B130	60	Yes

4. Check continuity between AV control unit connector M122 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M122	1	—	No

Is the inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M122.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M122 and ground.

AV control unit		Ground	Voltage (Approx.)
(+)		(–)	
Connector	Terminal		
M122	1	—	Battery voltage

Is the inspection result normal?

YES >> Replace Bose speaker amp. Refer to AV-674, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1300 AV COMM CIRCUIT

Description

INFOID:0000000008487513

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

SELF DIAGNOSTIC RESULT DISPLAY ITEM

CONSULT Display	DTC Detection Condition	Possible Cause
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	When any of the following is detected: • A/C and AV switch assembly power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	• A/C and AV switch assembly power supply and ground circuits. Refer to AV-616, "A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure". • AV communication circuits between AV control unit and A/C and AV switch assembly.
• AV COMM CIRCUIT [U1300] • AMP CONN [U124E]	When any of the following is detected: • BOSE speaker amp. power supply or ground circuit malfunction. • AV communication circuits between AV control unit and BOSE speaker amp. are malfunctioning.	• BOSE speaker amp. power supply and ground circuits. Refer to AV-614, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between AV control unit and BOSE speaker amp.
• AV COMM CIRCUIT [U1300] • VIDEO DIST CONN [U1246]	When any of the following is detected: • video distributor power supply or ground circuit malfunction. • headrest display unit (driver seat) power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and headrest display unit (driver seat).	• Video distributor power supply and ground circuits. Refer to AV-617, "VIDEO DISTRIBUTOR : Diagnosis Procedure". • Headrest display unit (driver seat) power supply and ground circuits. Refer to AV-618, "HEADREST DISPLAY UNIT : Diagnosis Procedure". • AV communication circuits between AV control unit and headrest display unit (driver seat).
• AV COMM CIRCUIT [U1300] • AROUND CAMERA CONN [U125B]	When any of the following is detected: • around view monitor control unit power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and around view monitor control unit.	• Around view monitor control unit power supply and ground circuits. Refer to AV-618, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure". • AV communication circuits between AV control unit and around view monitor control unit.
• AV COMM CIRCUIT [U1300] • SONAR CONN [U125C]	When any of the following is detected: • sonar control unit power supply or ground circuit malfunction. • AV communication circuit malfunction between AV control unit and sonar control unit.	• Sonar control unit power supply and ground circuits. Refer to AV-619, "SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : Diagnosis Procedure". • AV communication circuits between AV control unit and sonar control unit.

CONSULT Display	DTC Detection Condition	Possible Cause
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B] • VIDEO DIST CONN [U1246]	AV communication circuit malfunction between AV control unit and A/C and AV switch assembly.	AV communication circuits between AV control unit and A/C and AV switch assembly.
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • AMP CONN [U124E] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B] • VIDEO DIST CONN [U1246]		

U1302 CAMERA POWER VOLT

DTC Logic

INFOID:0000000008376880

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAMERA SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY [U1302]	Short in camera power circuit.	• Harness or connectors. • Camera. • Around view monitor control unit.

Diagnosis Procedure

INFOID:0000000008376881

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK CAMERA DATA MONITOR

Check CAMERA IMAGE SIG, CAMERA COMM STATUS and CAMERA COMM LINE for each camera in “DATA MONITOR” of “AVM”.

Is “OK” displayed for all cameras?

YES >> Refer to GI-53, "Intermittent Incident".
NO-1 (Front camera)>>GO TO 2.
NO-2 (Rear camera)>>GO TO 4.
NO-3 (LH side camera)>>GO TO 6.
NO-4 (RH side camera)>>GO TO 8.

2.CHECK FRONT CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and camera connectors.
3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	68	E226	1	Yes
	70		2	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	68	—	No

Is the inspection result normal?

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

3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and front camera connector E226.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
68	70	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace front camera. Refer to AV-403, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

4. CHECK REAR CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
3. Check continuity between around view monitor control unit connector M97 and rear camera connector D511.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	50	D511	8	Yes
	52		7	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	50	—	No

Is the inspection result normal?

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

5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and rear camera connector D511.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
50	52	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace rear camera. Refer to AV-404, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

6. CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	

M97	56	D20	6	Yes
	58		18	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	56	—	No

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness or connectors.

7. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
56	58	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace LH side camera. Refer to AV-405, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

8. CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
3. Check continuity between around view monitor control unit connector M97 and RH side camera connector D113.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	62	D113	6	Yes
	64		18	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	62	—	No

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace harness or connectors.

9. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
62	64	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace RH side camera. Refer to AV-405, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

U1303 LED POWER SUPPLY VOLT

DTC Logic

INFOID:0000000008376882

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
LED SUPPLY POWER SUPPLY VOLTAGE ABNORMALITY [U1303]	Short in camera power circuit.	• Harness or connectors. • Camera. • Around view monitor control unit.

Diagnosis Procedure

INFOID:0000000008376883

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK CAMERA DATA MONITOR

Check CAMERA IMAGE SIG, CAMERA COMM STATUS and CAMERA COMM LINE for each camera in “DATA MONITOR” of “AVM”.

Is “OK” displayed for all cameras?

YES >> Refer to GI-53, "Intermittent Incident".
NO-1 (LH side camera)>>GO TO 2.
NO-2 (RH side camera)>>GO TO 4.

2.CHECK LH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	56	D20	6	Yes
	58		18	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	56	—	No

Is the inspection result normal?

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

3.CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
56	58	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace LH side camera. Refer to AV-405, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

4. CHECK RH SIDE CAMERA POWER SUPPLY AND POWER SUPPLY GROUND CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
3. Check continuity between around view monitor control unit connector M97 and RH side camera connector D113.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	62	D113	6	Yes
	64		18	

4. Check continuity between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	62	—	No

Is the inspection result normal?

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

5. CHECK AROUND VIEW MONITOR CONTROL UNIT VOLTAGE

1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit connector M97 terminals.

Around view monitor control unit M97		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
62	64	CAMERA switch is ON or shift position is R.	6.0 V

Is the inspection result normal?

YES >> Replace RH side camera. Refer to AV-405, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-402, "Removal and Installation".

U1304 CAMERA IMAGE CALIBRATION

DTC Logic

INFOID:0000000008376884

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE CALIBRATION [U1304]	Camera calibration malfunction.	Cameras are not calibrated. Refer to AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

U1305 CONFIG UNFINISH

DTC Logic

INFOID:0000000008376885

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
NON-COMPLETION OF THE WRITE CONFIGURATION [U1305]	Around view monitor control unit configuration malfunction.	Around view monitor control unit not configurated. Refer to AV-543, "CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure".

U1310 AV CONTROL UNIT

DTC Logic

INFOID:0000000008487514

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit if malfunction occurs constantly. Refer to AV-668, "Removal and Installation - AV Control Unit".

U1601, U1603, U1609, U160B FRONT DOOR SPEAKER/TWEETER

DTC Logic

INFOID:0000000008487515

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FL-DOOR WOOFER (OPEN, SHORT, GND-SHORT) [U1601] FL-DOOR WOOFER (VB-SHOR] [U1603]	When any of the following is detected: • Sound signal circuit malfunction between BOSE speaker amp. and front door speaker LH. • Sound signal circuit malfunction between BOSE speaker amp. and front tweeter LH.	• Sound signal circuits between BOSE speaker amp. and front door speaker LH. Refer to AV-627, "Diagnosis Procedure". • Sound signal circuits between BOSE speaker amp. and front tweeter LH. Refer to AV-625, "Diagnosis Procedure".
FR-DOOR WOOFER (OPEN, SHORT, GND-SHORT) [U1609] FR-DOOR WOOFER (VB-SHOR) [U160B]	When any of the following is detected: • Sound signal circuit malfunction between BOSE speaker amp. and front door speaker RH. • Sound signal circuit malfunction between BOSE speaker amp. and front tweeter RH.	• Sound signal circuits between BOSE speaker amp. and front door speaker RH. Refer to AV-627, "Diagnosis Procedure". • Sound signal circuits between BOSE speaker amp. and front tweeter RH. Refer to AV-625, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008487516

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1601, U1603, U1609 or U160B detected?

YES >> Refer to AV-627, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U1627, U162F TWEETER

DTC Logic

INFOID:0000000008487517

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST L-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR) [U1627]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter LH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter LH. Refer to AV-623, "Diagnosis Procedure".
F-INST R-TWEETER (OPEN, SHORT, GND-SHORT or VB-SHOR) [U162F]	Sound signal circuit malfunction between BOSE speaker amp. and instrument panel tweeter RH.	Sound signal circuits between BOSE speaker amp. and instrument panel tweeter RH. Refer to AV-623, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008487518

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1627 or U162F detected?

YES >> Refer to AV-623, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U162A CENTER SPEAKER

DTC Logic

INFOID:0000000008487519

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
F-INST C-SQUAWK (OPEN, SHORT, GND-SHORT, or VB-SHORT) [U162A]	Sound signal circuit malfunction between BOSE speaker amp. and center speaker.	Sound signal circuits between BOSE speaker amp. and center speaker. Refer to AV-621, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008487520

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U162A detected?

YES >> Refer to AV-621, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U1684, U1687, U168C, U168F REAR DOOR SPEAKER/TWEETER

DTC Logic

INFOID:0000000008487521

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
2L-DOOR SPEAKER (OPEN, SHORT, GND-SHORT) [U1684] 2L-DOOR SPEAKER (VB-SHOR) [U1687]	When any of the following is detected: • sound signal circuit malfunction between BOSE speaker amp. and rear door speaker LH. • sound signal circuit malfunction between BOSE speaker amp. and rear door tweeter LH.	• Sound signal circuits between BOSE speaker amp. and rear door speaker LH. Refer to AV-631, "Diagnosis Procedure". • Sound signal circuits between BOSE speaker amp. and rear door tweeter LH. Refer to AV-629, "Diagnosis Procedure".
2R-DOOR SPEAKER (OPEN, SHORT, GND-SHORT) [U168C] 2R-DOOR SPEAKER (VB-SHOR) [U168F]	When either one of the following items are detected: • sound signal circuit malfunction between BOSE speaker amp. and rear door speaker RH. • sound signal circuit malfunction between BOSE speaker amp. and rear door tweeter RH.	• Sound signal circuits between BOSE speaker amp. and rear door speaker RH. Refer to AV-631, "Diagnosis Procedure". • Sound signal circuits between BOSE speaker amp. and rear door tweeter RH. Refer to AV-629, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008487522

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U1684, U1687, U168C or U168F detected?

YES >> Refer to AV-631, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U175D WOOFER

DTC Logic

INFOID:0000000008487523

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-LUGGAGE L-WOOFER (OPEN, SHORT, GND-SHORT or VB-SHOR) [U175D]	Sound signal circuit malfunction between BOSE speaker amp. and subwoofer.	Sound signal circuits between BOSE speaker amp. and subwoofer. Refer to AV-635, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008487524

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U175D detected?

YES >> Refer to AV-635, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

U176A, U1772 ROOF SPEAKER

DTC Logic

INFOID:0000000008487525

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
R-ROOF L-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR) [U176A]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker LH.	Sound signal circuits between BOSE speaker amp. and rear side speaker LH. Refer to AV-633, "Diagnosis Procedure".
R-ROOF R-SQAWK (OPEN, SHORT, GND-SHORT or VB-SHOR) [U1772]	Sound signal circuit malfunction between BOSE speaker amp. and rear side speaker RH.	Sound signal circuits between BOSE speaker amp. and rear side speaker RH. Refer to AV-633, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008487526

1.PERFORM SELF DIAGNOSTIC RESULT

1. Perform Self Diagnostic Result for MULTI AV.
2. Erase Self Diagnostic Result. Turn ignition switch OFF.
3. Turn ignition switch ON. Perform Self Diagnostic Result again.

Is DTC U176A or U1772 detected?

YES >> Refer to AV-633, "Diagnosis Procedure".
NO >> Refer to GI-53, "Intermittent Incident".

B2720 CORNER SENSOR [RL]

DTC Logic

INFOID:0000000008376886

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR LEFT SIDE EXTERNAL SENSOR [B2720]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Rear sonar sensor LH outer.

Diagnosis Procedure

INFOID:0000000008376887

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK REAR SONAR SENSOR LH OUTER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and rear sonar sensor LH outer connector.
3. Check continuity between sonar control unit connector M70 and rear sonar sensor LH outer connector B455.

Sonar control unit		Rear sonar sensor LH outer		Continuity
Connector	Terminal	Connector	Terminal	
M70	22	B455	2	Yes
	14		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	22	—	No

Is the inspection result normal?

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

2.CHECK REAR SONAR SENSOR LH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	22	—	0V

Is the inspection result normal?

YES >> Replace rear sonar sensor LH outer. Refer to AV-692, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2721 CENTER SENSOR [RL]

DTC Logic

INFOID:0000000008376888

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR LEFT SIDE INTERNAL SENSOR [B2721]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Rear sonar sensor LH inner.

Diagnosis Procedure

INFOID:0000000008376889

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK REAR SONAR SENSOR LH INNER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and rear sonar sensor LH inner connector.
3. Check continuity between sonar control unit connector M70 and rear sonar sensor LH inner connector B457.

Sonar control unit		Rear sonar sensor LH inner		Continuity
Connector	Terminal	Connector	Terminal	
M70	21	B457	2	Yes
	14		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	21	—	No

Is the inspection result normal?

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

2.CHECK REAR SONAR SENSOR LH INNER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	21	—	0V

Is the inspection result normal?

YES >> Replace rear sonar sensor LH inner. Refer to AV-692, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2722 CENTER SENSOR [RR]

DTC Logic

INFOID:0000000008376890

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR RIGHT SIDE INTERNAL SENSOR [B2722]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Rear sonar sensor RH inner.

Diagnosis Procedure

INFOID:0000000008376891

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK REAR SONAR SENSOR RH INNER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and rear sonar sensor RH inner connector.
3. Check continuity between sonar control unit connector M70 and rear sonar sensor RH inner connector B458.

Sonar control unit		Rear sonar sensor RH inner		Continuity
Connector	Terminal	Connector	Terminal	
M70	9	B458	2	Yes
	14		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	9	—	No

Is the inspection result normal?

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

2.CHECK REAR SONAR SENSOR RH INNER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	9	—	0V

Is the inspection result normal?

YES >> Replace rear sonar sensor RH inner. Refer to AV-692, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2723 CORNER SENSOR [RR]

DTC Logic

INFOID:0000000008376892

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR RIGHT SIDE EXTERNAL SENSOR [B2723]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Rear sonar sensor RH outer.

Diagnosis Procedure

INFOID:0000000008376893

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK REAR SONAR SENSOR RH OUTER SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and rear sonar sensor RH outer connector.
3. Check continuity between sonar control unit connector M70 and rear sonar sensor RH outer connector B456.

Sonar control unit		Rear sonar sensor RH outer		Continuity
Connector	Terminal	Connector	Terminal	
M70	10	B456	2	Yes
	14		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	10	—	No

Is the inspection result normal?

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

2.CHECK REAR SONAR SENSOR RH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	10	—	0V

Is the inspection result normal?

YES >> Replace rear sonar sensor RH outer. Refer to AV-692, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2724 SONAR CONTROL UNIT

DTC Logic

INFOID:0000000008376894

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
ECU [B2724]	Sonar control module malfunction.	Replace sonar control module.

B2725 REAR BUZZER

DTC Logic

INFOID:0000000008376895

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
REAR BUZZER [B2725]	• Buzzer is open or short circuited. • Buzzer malfunction.	• Harness or connectors. • Buzzer.

Diagnosis Procedure

INFOID:0000000008376896

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK SONAR BUZZER SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and sonar buzzer connector.
3. Check continuity between sonar control unit connector M70 and sonar buzzer connector B35.

Sonar control unit		Sonar buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M70	20	B35	3	Yes

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	20	—	No

Is the inspection result normal?

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

2.CHECK SONAR BUZZER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	20	—	0V

Is the inspection result normal?

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

3.CHECK SONAR BUZZER SIGNAL CIRCUIT SHORT TO BUZZER POWER

1. Turn ignition switch OFF.
2. Check continuity between sonar control unit connector M70 terminals.

Sonar control unit connector M70		Continuity
Terminal	Terminal	
19	20	No

Is the inspection result normal?

YES >> Replace sonar buzzer. Refer to AV-694, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B2729 CORNER SENSOR [FL]

DTC Logic

INFOID:0000000008376897

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT LEFT SIDE EXTERNAL SENSOR [B2729]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Front sonar sensor LH outer.

Diagnosis Procedure

INFOID:0000000008376898

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FRONT SONAR SENSOR LH OUTER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and front sonar sensor LH outer connector.
3. Check continuity between sonar control unit connector M70 and front sonar sensor LH outer connector E307.

Sonar control unit		Front sonar sensor LH outer		Continuity
Connector	Terminal	Connector	Terminal	
M70	3	E307	2	Yes
	13		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	3	—	No

Is the inspection result normal?

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

2.CHECK FRONT SONAR SENSOR LH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	3	—	0V

Is the inspection result normal?

YES >> Replace front sonar sensor LH outer. Refer to AV-692, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B272C CORNER SENSOR [FR]

DTC Logic

INFOID:0000000008376899

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FRONT RIGHT SIDE EXTERNAL SENSOR [B272C]	• Sensor is not configured. • Sensor is open or short circuited. • Sensor element malfunction.	• Sensor configuration. • Harness or connectors. • Front sonar sensor RH outer.

Diagnosis Procedure

INFOID:0000000008376900

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FRONT SONAR SENSOR RH OUTER CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and front sonar sensor RH outer connector.
3. Check continuity between sonar control unit connector M70 and front sonar sensor RH outer connector E308.

Sonar control unit		Front sonar sensor RH outer		Continuity
Connector	Terminal	Connector	Terminal	
M70	4	E308	2	Yes
	13		1	

4. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	4	—	No

Is the inspection result normal?

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

2.CHECK FRONT SONAR SENSOR RH OUTER SIGNAL CIRCUIT SHORT TO BATTERY

1. Turn ignition switch ON.
2. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M70	4	—	0V

Is the inspection result normal?

YES >> Replace front sonar sensor RH outer. Refer to AV-692, "Removal and Installation".
NO >> Repair or replace harness or connectors.

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000008376901

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
68	Ignition signal	29 (5A)
19	Battery power supply	15 (15A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connectors M161 and M163.
3. Check voltage between AV control unit connectors and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M163	68	—	Ignition switch: ON	Battery voltage
M161	7		Ignition switch: ACC	
	19		Ignition switch: OFF	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between AV control unit connector M161 terminal 20 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M161	20	—	Yes

Is the inspection result normal?

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

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000008376902

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
11	Battery power supply	15 (15A)
23	ACC power supply	65 (10A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display unit connector.
3. Check voltage between display connector M92 and ground.

Display unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M92	23	—	Ignition switch: ACC	Battery voltage
	11		Ignition switch: OFF	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between display unit connector M92 terminal 12 and ground.

Display unit		Ground	Continuity
Connector	Terminal		
M92	12	—	Yes

Is the inspection result normal?

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

BOSE AMP.

BOSE AMP. : Diagnosis Procedure

INFOID:0000000008376903

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
50	Battery power supply	11 (15A)
51		12 (15A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect BOSE speaker amp. connector B121.
2. Check voltage between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Voltage (Approx.)
Connector	Terminal		
B121	50	—	Battery voltage
	51		

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B121	47	—	Yes
	52		

Is the inspection result normal?

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

SUBWOOFER

SUBWOOFER : Diagnosis Procedure

INFOID:0000000008376904

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
6	Battery power supply	58 (10A)

Are the fuses blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect subwoofer connector.
2. Check voltage between subwoofer connector B73 and ground.

Subwoofer		Ground	Voltage (Approx.)
Connector	Terminal		
B73	6	—	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between subwoofer connector B73 and ground.

Subwoofer		Ground	Continuity
Connector	Terminal		
B73	5	—	Yes

Is the inspection result normal?

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

A/C AND AV SWITCH ASSEMBLY

A/C AND AV SWITCH ASSEMBLY : Diagnosis Procedure

INFOID:0000000008376905

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuse is not blown.

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

Is the fuse blown?

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

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/C and AV switch assembly connector.
3. Check voltage between A/C and AV switch assembly connector M98 terminal 3 and ground.

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK CONTROL UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M125.
3. Check continuity between A/C and AV switch assembly connector M98 terminal 9 and AV control unit connector M125 terminal 98.

A/C and AV switch assembly		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M98	9	M125	98	Yes

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connectors.

4.CHECK SWITCH GROUND CIRCUIT

Check continuity between A/C and AV switch assembly connector M98 terminal 1 and ground.

A/C and AV switch assembly		Ground	Continuity
Connector	Terminal		
M98	1	—	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connectors.

VIDEO DISTRIBUTOR

VIDEO DISTRIBUTOR : Diagnosis Procedure

INFOID:0000000008376906

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
2	ACC power supply	65 (10A)
4	Battery power supply	15 (15A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector B24.
3. Check voltage between video distributor connector B24 and ground.

Video distributor		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
B24	2	—	Ignition switch: ACC	Battery voltage
	4		Ignition switch: OFF	

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal		
B24	1	—	Yes
	3		

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connectors.

HEADREST DISPLAY UNIT

HEADREST DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000008376907

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
24	Battery power supply	15 (15A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect headrest display unit connector.
2. Check voltage between headrest display unit connector and ground.

Headrest displayl unit		Ground	Voltage (Approx.)
Connector	Terminal		
B202 (driver seat)	24	—	Battery voltage
B302 (passenger seat)			

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between headrest display unit connector and ground.

Headrest displayl unit		Ground	Continuity
Connector	Terminal		
B202 (driver seat)	12	—	Yes
B302 (passenger seat)			

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connectors.

AROUND VIEW MONITOR CONTROL UNIT

AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:0000000008376908

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
3	Ignition signal	29 (5A)

Terminal No.	Signal name	Fuse No.
4	ACC power supply	65 (10A)
2	Battery power supply	15 (15A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M96.
3. Check voltage between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M96	3	—	Ignition switch: ON	Battery voltage
	4		Ignition switch: ACC	
	2		Ignition switch: OFF	

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between around view monitor control unit connector M96 and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M96	1	—	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connectors.

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : Diagnosis Procedure

INFOID:0000000008376909

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
12	ACC power supply	65 (10A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector M70.
3. Check voltage between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M70	12	—	Ignition switch: ACC	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between sonar control unit connector M70 and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M70	15	—	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connectors.

CENTER SPEAKER

Diagnosis Procedure

INFOID:0000000008376910

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK CENTER SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B122 and center speaker connector.
2. Check continuity between BOSE speaker amp. connector B122 and center speaker connector.

BOSE speaker amp.		Center speaker		Continuity
Connector	Terminal	Connector	Terminal	
B122	57	M110	1	Yes
	58		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

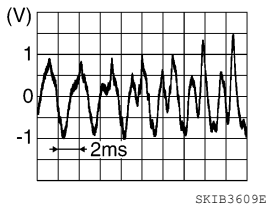
BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B122	57	—	No
	58		

Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness or connectors.

3.CHECK CENTER SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B122 and center speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp. connector B130		Condition	Reference value
(+)	(–)		
Terminal	Terminal		
57	58	Audio signal output	

Is the inspection result normal?

YES >> Replace center speaker. Refer to AV-678, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-674, "Removal and Installation".

INSTRUMENT PANEL SPEAKER/TWEETER

Diagnosis Procedure

INFOID:0000000008376911

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK INSTRUMENT PANEL TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B122 and suspect instrument panel tweeter connector.
2. Check continuity between BOSE speaker amp. connector B122 and suspect instrument panel tweeter connector.

BOSE speaker amp.		Instrument panel tweeter		Continuity
Connector	Terminal	Connector	Terminal	
B122	56	M62 (LH)	1	Yes
	69		2	
	71	M73 (RH)	1	
	70		2	

3. Check continuity between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B122	56	—	No
	69		
	71		
	70		

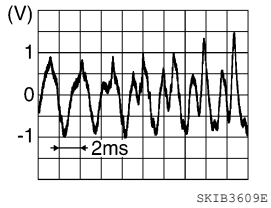
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness or connectors.

3.CHECK INSTRUMENT PANEL TWEETER SIGNAL

1. Connect BOSE speaker amp. connector B122 and suspect instrument panel tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp.		Condition	Reference value
(+)	(−)		
Terminal	Terminal		

56	69	Audio signal output	
71	70		

Is the inspection result normal?

YES >> Replace instrument panel tweeter. Refer to AV-677, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-674, "Removal and Installation".

FRONT TWEETER

Diagnosis Procedure

INFOID:0000000008376912

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK FRONT TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B122 and suspect front tweeter connector.
2. Check continuity between BOSE speaker amp. connector B122 and suspect front door speaker connector.

BOSE speaker amp.		Front tweeter		Continuity
Connector	Terminal	Connector	Terminal	
B122	64	M109 (LH)	1	Yes
	75		2	
	59	M111 (RH)	1	
	72		2	

3. Check continuity between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B122	64	—	No
	75		
	59		
	72		

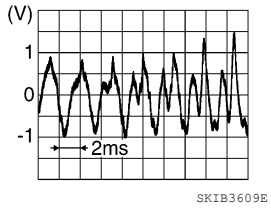
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness or connectors.

3.CHECK FRONT TWEETER SIGNAL

1. Connect BOSE speaker amp. connector B122 and suspect front tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp. connector B122		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

64	75	Audio signal output	
59	72		

Is the inspection result normal?

YES >> Replace front tweeter. Refer to AV-676, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-674, "Removal and Installation".

FRONT DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000008376913

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK FRONT DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B121 and suspect front door speaker connector.
2. Check continuity between BOSE speaker amp. connector B121 and suspect front door speaker connector.

BOSE speaker amp.		Front door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B121	53	D12 (LH)	1	Yes
	48		2	
	43	D112 (RH)	1	
	44		2	

3. Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B121	53	—	No
	48		
	43		
	44		

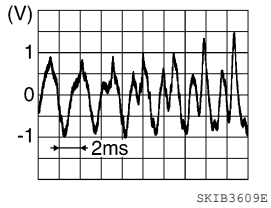
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness or connectors.

3.CHECK FRONT DOOR SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B121 and suspect front door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B130 and ground.

BOSE speaker amp. connector B121		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

53	48	Audio signal output	
43	44		

Is the inspection result normal?

YES >> Replace front door speaker. Refer to AV-675, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-674, "Removal and Installation".

REAR DOOR TWEETER

Diagnosis Procedure

INFOID:0000000008376959

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK REAR DOOR TWEETER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B121 and suspect rear door tweeter connector.
2. Check continuity between BOSE speaker amp. connector B121 and suspect rear door tweeter connector.

BOSE speaker amp.		Rear door tweeter		Continuity
Connector	Terminal	Connector	Terminal	
B121	45	D252 (LH)	1	Yes
	46		2	
	41	D352 (RH)	1	
	42		2	

3. Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B121	45	—	No
	46		
	41		
	42		

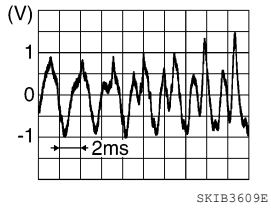
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness or connectors.

3.CHECK REAR DOOR TWEETER SIGNAL

1. Connect BOSE speaker amp. connector B121 and suspect rear door tweeter connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp. connector B121		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

45	46	Audio signal output	
41	42		

Is the inspection result normal?

YES >> Replace rear door tweeter. Refer to AV-680, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-674, "Removal and Installation".

REAR DOOR SPEAKER

Diagnosis Procedure

INFOID:0000000008376914

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK REAR DOOR SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B121 and suspect rear door speaker connector.
2. Check continuity between BOSE speaker amp. connector B121 and suspect rear door speaker connector.

BOSE speaker amp.		Rear door speaker		Continuity
Connector	Terminal	Connector	Terminal	
B121	45	D207 (LH)	1	Yes
	46		2	
	41	D307 (RH)	1	
	42		2	

3. Check continuity between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B121	45	—	No
	46		
	41		
	42		

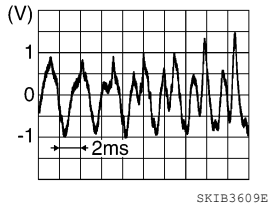
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness or connectors.

3.CHECK REAR DOOR SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B121 and suspect rear door speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp. connector B121		Condition	Reference value
(+)	(−)		
Terminal	Terminal		

45	46	Audio signal output	
41	42		

Is the inspection result normal?

YES >> Replace rear door speaker. Refer to AV-679, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-674, "Removal and Installation".

REAR SPEAKER

Diagnosis Procedure

INFOID:0000000008376915

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and speaker connectors for the following:
- Proper connection
- Damage
- Disconnected or loose terminals

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the terminals or connectors.

2.CHECK REAR SIDE SPEAKER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B122 and suspect rear side speaker connector.
2. Check continuity between BOSE speaker amp. connector B122 and suspect rear side speaker connector.

BOSE speaker amp.		Rear side speaker		Continuity
Connector	Terminal	Connector	Terminal	
B122	62	B1 (LH)	1	Yes
	73		2	
	63	B153 (RH)	1	
	74		2	

3. Check continuity between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B122	62	—	No
	73		
	63		
	74		

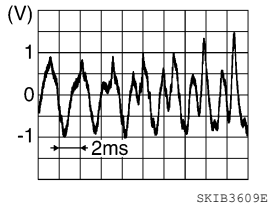
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness or connectors.

3.CHECK REAR SIDE SPEAKER SIGNAL

1. Connect BOSE speaker amp. connector B122 and suspect rear side speaker connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B122 and ground.

BOSE speaker amp. connector B122		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

62	73	Audio signal output	
63	74		

Is the inspection result normal?

YES >> Replace rear side speaker. Refer to AV-681, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-674, "Removal and Installation".

SUBWOOFER

Diagnosis Procedure

INFOID:0000000008376916

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CONNECTOR CHECK

Check the BOSE speaker amp. and subwoofer connectors for the following:
- Proper connection
- Damage
- Disconnected or looses terminals

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair the terminal and connector.

2.VERIFY SUBWOOFER POWER SUPPLY AND GROUND

Check subwoofer power supply and ground. Refer to AV-615, "SUBWOOFER : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK SUBWOOFER SIGNAL CIRCUIT CONTINUITY

1. Disconnect BOSE speaker amp. connector B121 and subwoofer connector.
2. Check continuity between BOSE speaker amp. connector B121 and subwoofer connector.

BOSE speaker amp.		Subwoofer		Continuity
Connector	Terminal	Connector	Terminal	
B121	49	B73	1	Yes
	54		2	

3. Check continuity between BOSE speaker amp. connector B121 and ground.

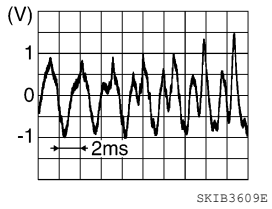
BOSE speaker amp.		Ground	Continuity
Connector	Terminal		
B121	54	—	No
	49		

Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness or connectors.

4.CHECK SUBWOOFER SIGNAL

1. Connect BOSE speaker amp. connector B121 and subwoofer connector.
2. Turn ignition switch to ACC.
3. Push AV control unit POWER switch.
4. Check signal between BOSE speaker amp. connector B121 and ground.

BOSE speaker amp. connector B121		Condition	Reference value
(+)	(–)		
Terminal	Terminal		
54	49	Audio signal output	

Is the inspection result normal?

YES >> Replace subwoofer. Refer to AV-682, "Removal and Installation".
NO >> Replace BOSE speaker amp. Refer to AV-674, "Removal and Installation".

FRONT AUXILIARY INPUT JACK AUDIO SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376917

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK AUX SOUND SIGNAL CIRCUIT CONTINUITY

1. Turn ignition OFF.
2. Disconnect AV control unit connector M162 and front auxiliary input jacks connector.
3. Check continuity between AV control unit connector M162 and front auxiliary input jacks connector.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M162	24	M205	3	Yes
	38		1	

4. Check continuity between AV control unit connector M162 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M162	24	—	No
	38		

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK AUX SOUND SIGNAL GROUND CIRCUIT CONTINUITY

Check continuity between AV control unit connector M162 and front auxiliary input jacks connector.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M162	39	M205	2	Yes

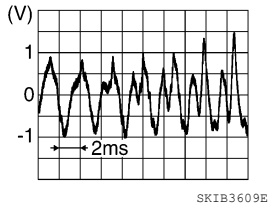
Is inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK AUX SOUND SIGNAL

1. Connect AV control unit connector M162 and front auxiliary input jacks connector.
2. Turn ignition switch to ACC.
3. Select AUX mode.
4. Check signals between AV control unit connector M162 and ground.

AV control unit connector M162		Condition	Reference value
(+)	(–)		
Terminal	Terminal		

24	39	AUX mode selected	
38	39		

Is the inspection result normal?

YES >> Replace front auxiliary input jacks. Refer to AV-684, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

RGB DIGITAL IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376918

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK RGB DIGITAL IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M140 and display unit connector M141.
3. Check continuity between AV control unit connector M140 and display unit connector M141.

AV control unit		Display unit		Continuity
Connector	Terminals	Connector	Terminals	
M140	165	M141	28	Yes
	164		27	

4. Check continuity between AV control unit connector M140 and ground.

AV control unit		Ground	Continuity
Connector	Terminals		
M140	165	—	No

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK RGB DIGITAL IMAGE SIGNAL

1. Connect AV control unit connector M140.
2. Turn ignition switch ON.
3. Check signal between display unit connector M141 and ground.

Display unit connector M141		Condition	Voltage (Approx.)
(+)	(–)		
Terminal	Terminal		
28	27	Audio system is ON.	1.3 V

Is the inspection result normal?

YES >> Replace display unit. Refer to AV-671, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000008376919

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M163 and display unit connector M92.
3. Check continuity between AV control unit connector M163 and display unit connector M92.

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M163	56	M92	18	Yes
	55		19	

4. Check continuity between AV control unit connector M163 and ground.

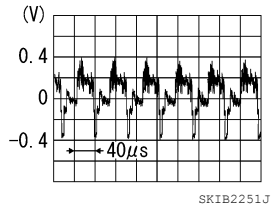
AV control unit		Ground	Continuity
Connector	Terminal		
M163	56	—	No

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector M163 and display unit connector M92.
2. Turn ignition switch ON.
3. Check signal between AV control unit connector M163 and ground.

AV control unit connector M163		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
56	55	DVD image is displayed.	

Is the inspection result normal?

YES >> Replace display unit. Refer to AV-671, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIBUTOR)

Diagnosis Procedure

INFOID:0000000008376920

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1. CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M164 and video distributor connector B25.
3. Check continuity between AV control unit connector M164 and video distributor connector B25.

AV control unit		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	
M164	107	B25	34	Yes
	105		33	

4. Check continuity between AV control unit connector M164 and ground.

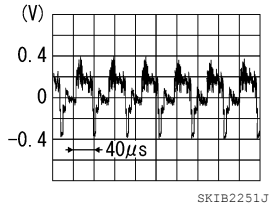
AV control unit		Ground	Continuity
Connector	Terminal		
M164	107	—	No

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2. CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector M164 and video distributor connector B25.
2. Turn ignition switch ON.
3. Check signal between video distributor connector B25 and ground.

Video distributor connector B25		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
34	33	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	

Is the inspection result normal?

YES >> Replace video distributor. Refer to AV-689, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEADREST DISPLAY UNIT)

Diagnosis Procedure

INFOID:0000000008376921

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK COMPOSITE IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect video distributor connector B24 and headrest display unit connectors.
3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video distributor		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	
B24	32	B202 (driver seat)	16	Yes
	31		4	
	28	B302 (passenger seat)	16	Yes
	27		4	

4. Check continuity between video distributor connector B24 and ground.

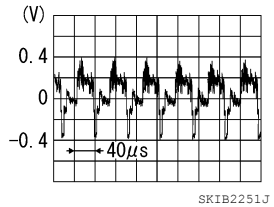
Video distributor		Ground	Continuity
Connector	Terminal		
B24	32	—	No
	28		

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK COMPOSITE IMAGE SIGNAL

1. Connect video distributor connector B24 and headrest display unit connectors.
2. Turn ignition switch ON.
3. Check signal between headrest display unit connectors and ground.

Headrest display unit			Condition	Reference value
Connector	(+)	(–)		
	Terminal	Terminal		
B202 (driver seat)	32	31	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	
B302 (passenger seat)	28	27		

Is the inspection result normal?

YES >> Replace headrest display unit. Refer to AV-407, "Removal and Installation".
NO >> Replace video distributor. Refer to AV-689, "Removal and Installation".

AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV CONTROL UNIT)

Diagnosis Procedure

INFOID:0000000008376922

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1. CHECK AUX IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M125 and front auxiliary input jacks connector M205.
3. Check continuity between AV control unit connector M125 and front auxiliary input jacks connector M205.

AV control unit		Front auxiliary input jacks		Continuity
Connector	Terminal	Connector	Terminal	
M125	91	M205	7	Yes
	92		8	

4. Check continuity between AV control unit connector M125 and ground.

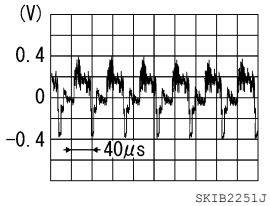
AV control unit		Ground	Continuity
Connector	Terminal		
M125	91	—	No

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2. CHECK AUX IMAGE SIGNAL

1. Connect AV control unit connector M125 and front auxiliary input jacks connector M205.
2. Turn ignition switch ON.
3. Check signal between front auxiliary input jacks connector M205 and ground.

Front auxiliary input jacks connector M205		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
7	8	Front auxiliary input jacks image is displayed.	

Is the inspection result normal?

YES >> Replace front auxiliary input jacks. Refer to AV-684, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

IMAGE SWITCH SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376923

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK CONTINUITY IMAGE SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect video distributor connector B24 and headrest display unit connectors.
3. Check continuity between video distributor connector B24 and headrest display unit connectors.

Video distributor		Headrest display unit		Continuity
Connector	Terminal	Connector	Terminal	
B24	10	B202 (driver seat)	7	Yes
	7		6	
	9	B302 (passenger seat)	7	
	5		6	

4. Check continuity between video distributor connector B24 and ground.

Video distributor		Ground	Continuity
Connector	Terminal		
B24	10	—	No
	9		

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK VIDEO DISTRIBUTOR VOLTAGE

1. Connect video distributor connector B24 and headrest display unit connectors.
2. Turn ignition switch ON.
3. Check voltage between video distributor connector B24 and ground.

Video distributor connector B24		Condition	Voltage (Approx.)
(+)	(−)		
Terminal	Terminal		
10	7	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0.5 V
		DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V
9	5	DVD, USB or front auxiliary input jacks image is displayed on headrest display.	0.5 V
		DVD, USB or rear auxiliary input jacks image is displayed on headrest display.	4.5 V

Is the inspection result normal?

YES >> Replace headrest display unit. Refer to AV-672, "Removal and Installation".
NO >> Replace video distributor. Refer to AV-689, "Removal and Installation".

DISK EJECT SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376924

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1. CHECK DISK EJECT SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M164 and A/C and AV switch assembly connector.
3. Check continuity between AV control unit connector M164 terminal 97 and A/C and AV switch assembly connector M98 terminal 14.

AV control unit		A/C and AV switch assembly		Continuity
Connector	Terminal	Connector	Terminal	
M164	97	M98	14	Yes

4. Check continuity between AV control unit connector M125 terminal 978 and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M164	97		No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2. CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector M164 and A/C and AV switch assembly connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M164 terminal 97 and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
(+)		(–)		
Connector	Terminal			
M125	97	—	Pressing eject switch	0 V
			Except above	5.0 V

Is the inspection result normal?

YES >> Replace A/C and AV switch assembly. Refer to AV-669, "Removal and Installation - AV and AC Switch Assembly".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

STEERING SWITCH

Diagnosis Procedure

INFOID:0000000008376926

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK STEERING WHEEL AUDIO CONTROL SWITCH RESISTANCE

1. Turn ignition switch OFF.
2. Disconnect combination switch connector M149.
3. Check resistance between combination switch connector terminals.

Combination switch connector M149		Condition	Resistance Ω (Approx.)
Terminal	Terminal		
14	17	Depress SOURCE switch.	1
		Depress △ switch.	121
		Depress ▽ switch.	321
		Depress switch.	723
		Depress ENTER switch.	2023
15		Depress − switch.	1
		Depress + switch.	121
		Depress switch.	321
		Depress switch.	723
		Depress DISP switch.	2023

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace steering wheel audio control switch. Refer to AV-670, "Removal and Installation".

2.CHECK HARNESS BETWEEN COMBINATION SWITCH AND COMBINATION METER

1. Disconnect combination meter connector M24 and combination switch connector M30.
2. Check continuity between combination meter connector M24 and combination switch connector M30.

Combination meter		Combination switch		Continuity
Connector	Terminal	Connector	Terminal	
M24	3	M30	24	Yes
	24		33	
	4		31	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	3	—	No
	24		
	4		

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3. CHECK COMBINATION SWITCH

Check continuity between combination switch connectors M30 and M149.

Combination switch				Continuity
Connector	Terminal	Connector	Terminal	
M30	24	M149	14	Yes
	31		15	
	33		17	

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace spiral cable. Refer to SR-13, "Removal and Installation".

4. CHECK HARNESS BETWEEN COMBINATION METER AND AV CONTROL UNIT

1. Disconnect AV control unit connector M122.
2. Check continuity between combination meter connector M24 and AV control unit connector M161.

Combination meter		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M24	14	M161	6	Yes
	15		16	
	16		15	

3. Check continuity between combination meter connector M24 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	14	—	No
	15		
	16		

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness or connectors.

5. CHECK AV CONTROL UNIT VOLTAGE

1. Connect combination meter connector M24 and AV control unit connector M161.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M122.

AV control unit M161		Voltage (Approx.)
(+)	(−)	
Terminal	Terminal	
6	15	5.0 V
16		

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-93, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-668, "Removal and Installation - AV Control Unit".

USB CONNECTOR

Diagnosis Procedure

INFOID:0000000008376927

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK USB INTERFACE HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector M55 and USB interface connector M209.
3. Check continuity between AV control unit connector M55 and USB interface connector M209.

AV control unit		USB interface		Continuity
Connector	Terminal	Connector	Terminal	
M55	137	M209	1	Yes
	138		2	
	139		3	
	140		4	
	141		5	

4. Check continuity between AV control unit connector M55 and ground.

AV control unit		—	Continuity
Connector	Terminal		
M55	137	Ground	No
	139		

Is the inspection result normal?

YES >> Replace the USB interface. Refer to AV-683, "Removal and Installation".
NO >> Repair or replace harness or connectors.

FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376928

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and front camera connector E226.
3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	67	E226	6	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

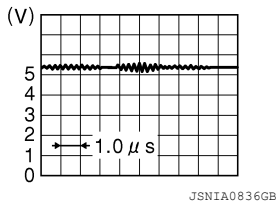
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	67	—	No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector M97 and front camera connector E226.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit (+)		Ground (–)	Condition	Reference value
Connector	Terminal			
M97	67	—	CAMERA switch is ON or shift position is R.	

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Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".
NO >> Replace front camera. Refer to AV-686, "Removal and Installation".

FRONT CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376929

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK FRONT CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and front camera connector E226.
3. Check continuity between around view monitor control unit connector M97 and front camera connector E226.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
M97	71	E226	3	Yes
	72		4	

4. Check continuity between around view monitor control unit connector M97 and ground.

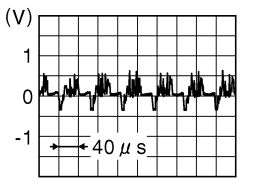
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M97	71	—	No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK FRONT CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M97 and front camera connector E226.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 terminals.

Around view monitor control unit		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
71	72	CAMERA switch is ON or shift position is R.	

JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".
NO >> Replace front camera. Refer to AV-686, "Removal and Installation".

REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376930

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
3. Check continuity between around view monitor control unit connector M97 and front camera connector D511.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	49	D511	4	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

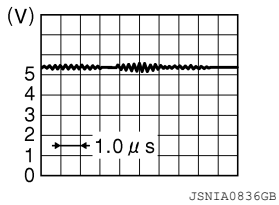
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	49	—	No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector M97 and rear camera connector D511.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Condition	Reference value
(+)		(–)		
Connector	Terminal			
M97	49	—	CAMERA switch is ON or shift position is R.	

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".
NO >> Replace rear camera. Refer to AV-687, "Removal and Installation".

REAR CAMERA IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376931

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK REAR CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and rear camera connector D511.
3. Check continuity between around view monitor control unit connector M97 and rear camera connector D511.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector	Terminals	
M97	53	D511	5	Yes
	54		1	

4. Check continuity between around view monitor control unit connector M97 and ground.

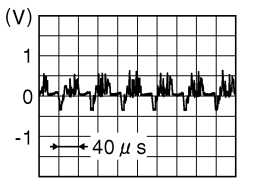
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M97	53	—	No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK REAR CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M97 and rear camera connector D511.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 terminals.

Around view monitor control unit		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
53	54	CAMERA switch is ON or shift position is R.	

JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".
NO >> Replace rear camera. Refer to AV-687, "Removal and Installation".

SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376932

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	55	D20	16	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

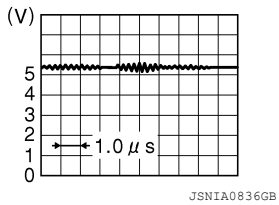
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	55	—	No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit		Ground	Condition	Reference value
(+)		(–)		
Connector	Terminal			
M97	55	—	CAMERA switch is ON or shift position is R.	

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".
NO >> Replace LH side camera. Refer to AV-688, "Removal and Installation".

SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376933

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK LH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and LH side camera connector D20.
3. Check continuity between around view monitor control unit connector M97 and LH side camera connector D20.

Around view monitor control unit		LH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M97	59	D20	5	Yes
	60		17	

4. Check continuity between around view monitor control unit connector M97 and ground.

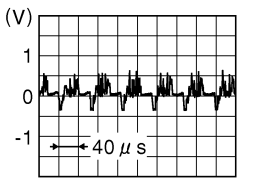
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M97	59	—	No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK LH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M97 and LH side camera connector D20.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 terminals.

Around view monitor control unit		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
59	60	CAMERA switch is ON or shift position is R.	

JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".
NO >> Replace LH side camera. Refer to AV-688, "Removal and Installation".

SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376934

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK COMMUNICATION SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
3. Check continuity between around view monitor control unit connector M97 and fRH side camera connector D113.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminal	Connector	Terminal	
M97	61	D113	16	Yes

4. Check continuity between around view monitor control unit connector M97 and ground.

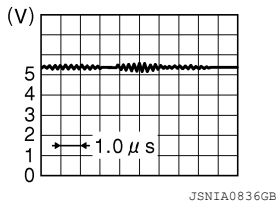
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M97	61	—	No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 and ground.

Around view monitor control unit (+)		Ground (–)	Condition	Reference value
Connector	Terminal			
M97	61	—	CAMERA switch is ON or shift position is R.	

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Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".
NO >> Replace RH side camera. Refer to AV-688, "Removal and Installation".

SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:0000000008376935

Regarding Wiring Diagram information, refer to AV-489, "Wiring Diagram".

1.CHECK RH SIDE CAMERA IMAGE SIGNAL CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector M97 and RH side camera connector D113.
3. Check continuity between around view monitor control unit connector M97 and fRH side camera connector D113.

Around view monitor control unit		RH side camera		Continuity
Connector	Terminals	Connector	Terminals	
M97	65	D113	5	Yes
	66		17	

4. Check continuity between around view monitor control unit connector M97 and ground.

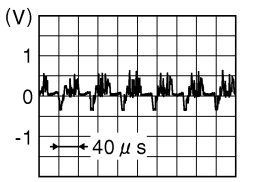
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M97	65	—	No

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK RH SIDE CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector M97 and RH side camera connector D113.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit connector M97 terminals.

Around view monitor control unit		Condition	Reference value
(+)	(−)		
Terminal	Terminal		
65	66	CAMERA switch is ON or shift position is R.	

JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-685, "Removal and Installation".
NO >> Replace RH side camera. Refer to AV-688, "Removal and Installation".

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM

Symptom Table

INFOID:0000000008376936

AUDIO SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power and ground circuit • AV control unit	• AV-613 • AV-435
Steering switch does not operate	• Steering switch • AV control unit	• AV-646 • AV-435
All speakers do not sound	• Speaker circuit shorted to ground • AV control unit power and ground circuit • BOSE speaker amp. ON signal • BOSE speaker amp. power and ground circuit • BOSE speaker amp. • AV control unit	• AV-489 • AV-613 • AV-614 • AV-614 • AV-674 • AV-435
One or several speakers do not sound	• Front door speaker • Front tweeter • Center speaker • Instrument panel speaker/tweeter • Rear door speaker • Rear speaker • Subwoofer	• AV-627 • AV-625 • AV-621 • AV-623 • AV-631 • AV-633 • AV-635
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 and ground circuit • AV control unit	• AV-613 • AV-435
Steering switch does not operate	• Steering switch • AV control unit	• AV-646 • AV-435
Voice activated control does not operate	• Microphone • Steering switch • AV control unit	• AV-816 • AV-646 • AV-435

HANDS-FREE PHONE SYSTEM

Symptom	Possible cause	Reference page
Inoperative	• AV control unit power and ground circuit • AV control unit	• AV-613 • AV-435
Steering switch does not operate	• Steering switch • AV control unit	• AV-646 • AV-435
Voice activated control does not operate	• Microphone • Steering switch • AV control unit	• AV-816 • AV-646 • AV-435

CD

Symptom	Possible cause	Reference page
CD cannot be inserted.	AV control unit	AV-435
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	• AV control unit power supply or ground circuit • AV control unit	• AV-613 • AV-435

DVD PLAYER

Symptom	Possible cause	Reference page
DVD player inoperative	• Power supply and ground circuits • DVD player	• AV-613 • AV-435
No sound when playing a DVD	• Audio signal circuits • DVD player	• AV-457 • AV-435
Video monitor is inoperative/does not display properly	• Power supply and ground circuits • Video out circuits • DVD player • Video monitor	• AV-618 • AV-457 • AV-435 • AV-672
DVD remote control is inoperative/does not operate properly	• DVD remote control • DVD player	• AV-435
Headphones inoperative	• Headphone batteries • DVD player	• AV-435

AROUND VIEW MONITOR

Symptom	Possible cause	Reference page
It does not switch to camera image even when the “CAMERA” switch is pressed or the selector lever is in the reverse position.	• Ignition signal circuit malfunction (around view monitor control unit). • Around view monitor control unit power supply and ground circuits malfunction. • AV communication circuits malfunction.	• AV-479 • AV-618 • AV-640
The screen switches when pressing the “CAMERA” switch or shifting the selector lever to the reverse position, however, all views are not displayed.	• Camera image signal circuit between around view monitor control unit and front display unit malfunction • Communication circuit between AV control unit and front display unit malfunction	• AV-640 • AV-640
Camera image is rolling.	Communication circuit between AV control unit and front display unit malfunction	AV-640
It cannot be switched to rear view monitor even when the selector lever is in the reverse position.	Reverse signal circuit malfunction. (AV control unit)	AV-479
The predicted course line display in front view and rear view is malfunctioning.	Steering angle sensor signal circuits.	AV-479
• The front view screen is not displayed. • The front of Birds-Eye view screen is not displayed.	• Front camera image signal circuit malfunction. • Front camera power supply and ground circuits malfunction. • Front camera communication signal circuit malfunction.	• AV-650 • AV-618 • AV-649
• The rear view screen is not displayed. • The rear of Birds-Eye view screen is not displayed.	• Rear camera image signal circuit malfunction. • Rear camera power supply and ground circuits malfunction. • Rear camera communication signal circuits malfunction.	• AV-652 • AV-618 • AV-651

Symptom	Possible cause	Reference page
• The front-side screen is not displayed. • The passenger side of Birds-Eye view screen is not displayed.	• Side camera RH image signal circuit malfunction. • Side camera RH power supply and ground circuits malfunction. • Side camera RH communication circuit malfunction.	• AV-656 • AV-618 • AV-655
The driver side of Birds-eye view screen is not displayed.	• Side camera LH image signal circuit malfunction. • Side camera LH power supply and ground circuits malfunction. • Side camera LH communication circuit malfunction.	• AV-654 • AV-618 • AV-653
When shift position is other than “R” the front-side and front screen or the Birds-Eye view and front screen remain displaying even if the vehicle speed increases.	Vehicle speed signal circuit malfunction (around view monitor control unit).	AV-479

CAMERA ASSISTANCE SONAR

Symptoms	Possible cause	Reference page
The malfunction is detected in only 1 indicator (Always displayed in red).	• Corner sensor malfunction in corresponding area. • Corner sensor harness circuit in corresponding area.	Perform CONSULT “self-diagnosis” of “SONAR”. Refer to AV-452.
The malfunction is detected in all 4 indicators (Always displayed in red).	Corner sensor ground circuit malfunction.	Perform CONSULT “self-diagnosis” of “SONAR”. Refer to AV-452.
	• Sonar control unit power supply and ground circuits malfunction. • AV communication circuits malfunction.	Perform CONSULT “self-diagnosis” of “MULTI AV”. Refer to AV-448.

NORMAL OPERATING CONDITION

Description

INFOID:0000000008376937

The majority of the audio concerns are the result of outside causes (bad CD, electromagnetic interference, etc.).

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.

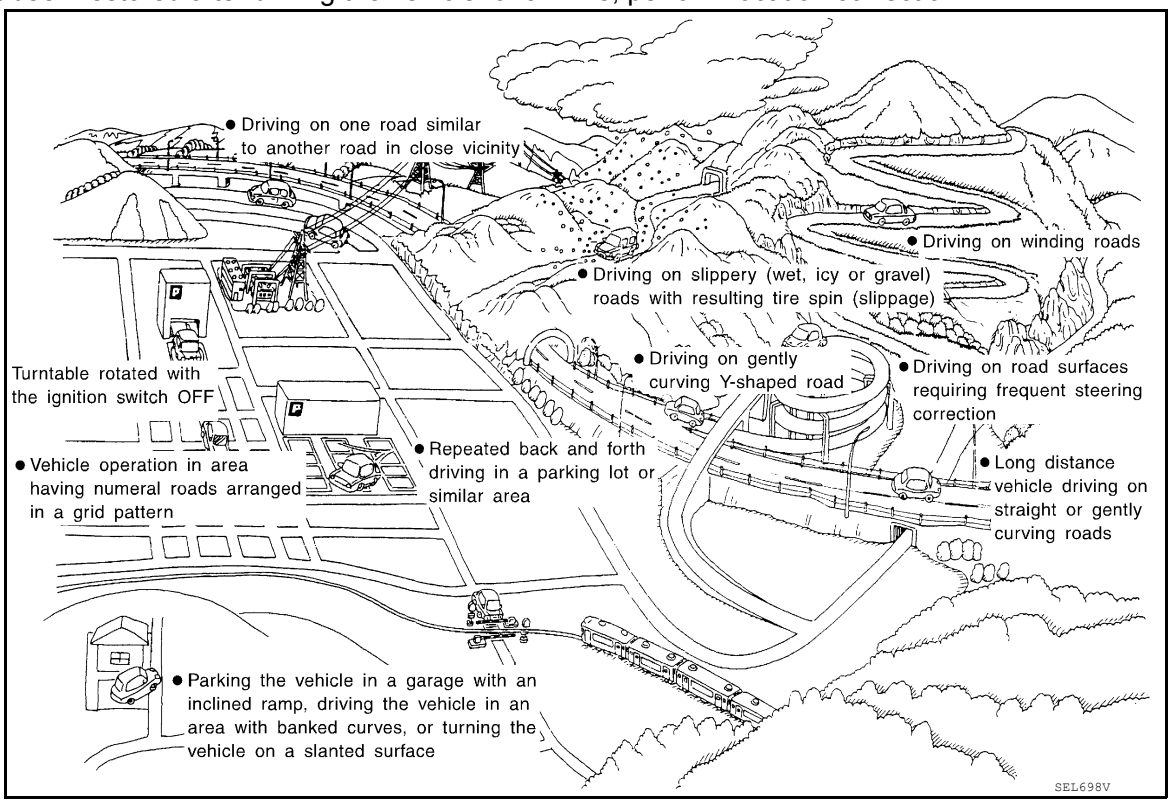
Symptom	Cause	Remedy
Detouring route is recommended.	In some areas, highways (gray routes) are not used for the search. (Note). Therefore, detour route may be recommended.	Set the route closer to the basic route (gray route).
	A detour route may be shown when some traffic regulation (one-way traffic, 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.

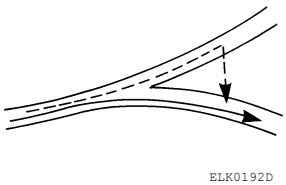
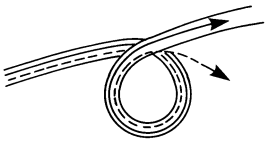
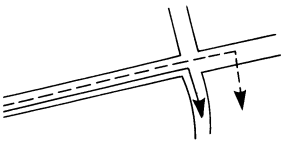
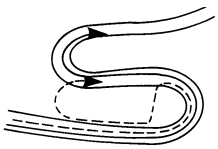
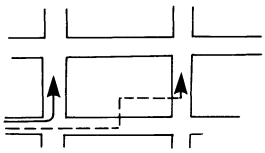
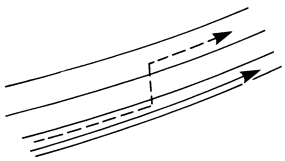
NOTE:

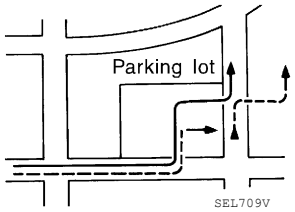
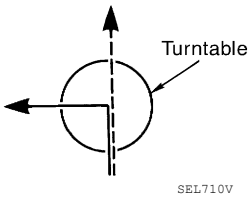
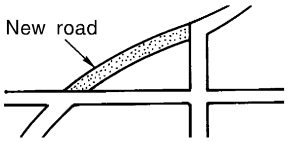
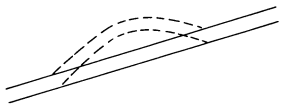
Except for the ordinance-designated cities. (Malfunctioning areas may be changed in the updated map disc.)

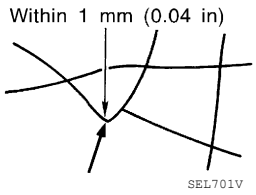
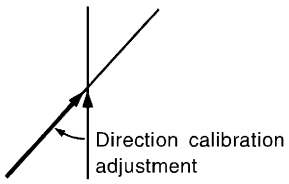
Examples of Current-Location Mark Displacement

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

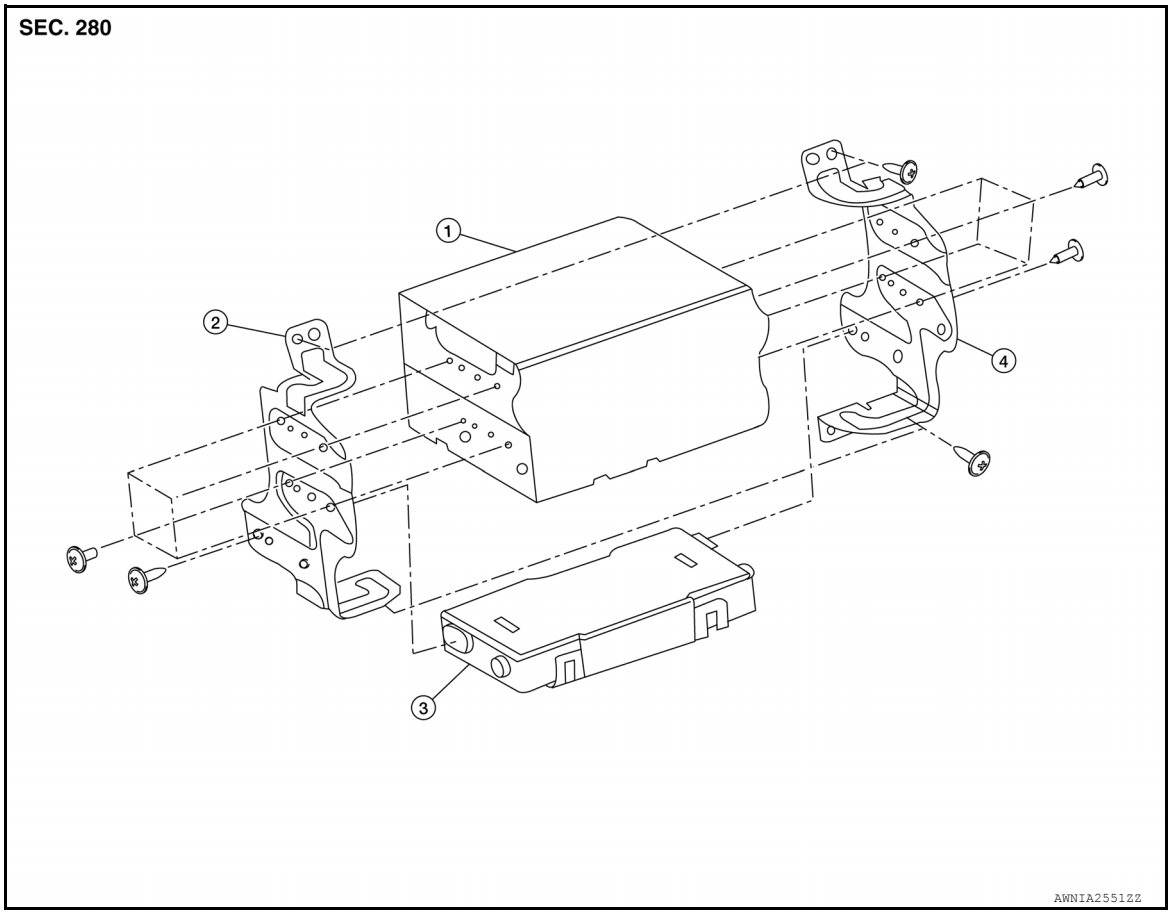
The conditions of the GPS antenna (GPS data) and gyroscope (angular speed sensor) change gradually. Depending on the road traveled and the operation of the steering wheel, the location detection results will be different. Therefore, even on a road on which the location has never been wrong, conditions may cause the vehicle mark to deviate.

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

INFOID:0000000008472309



1. AV control unit
2. AV control unit bracket LH
3. A/C auto amp.
4. AV control unit bracket RH

Removal and Installation - AV Control Unit

INFOID:0000000008297208

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Description".

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
2. Remove cluster lid C upper. Refer to IP-21, "Removal and Installation - Cluster Lid C Upper".
3. Remove the screws, then pull out the AV control unit.
4. Disconnect the harness connectors from the AV control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Description".**

Removal and Installation - AV and AC Switch Assembly

INFOID:0000000008297209

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Description".

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
2. Remove cluster lid C. Refer to IP-21, "Removal and Installation - Cluster Lid C Upper"
3. Remove the AV and AC switch assembly screws (A), then separate the cluster lid C from AV and AC switch assembly.
4. Release upper pawls and remove AV and AC switch assembly

INSTALLATION

Installation is in the reverse order of removal.

STEERING SWITCH

Removal and Installation

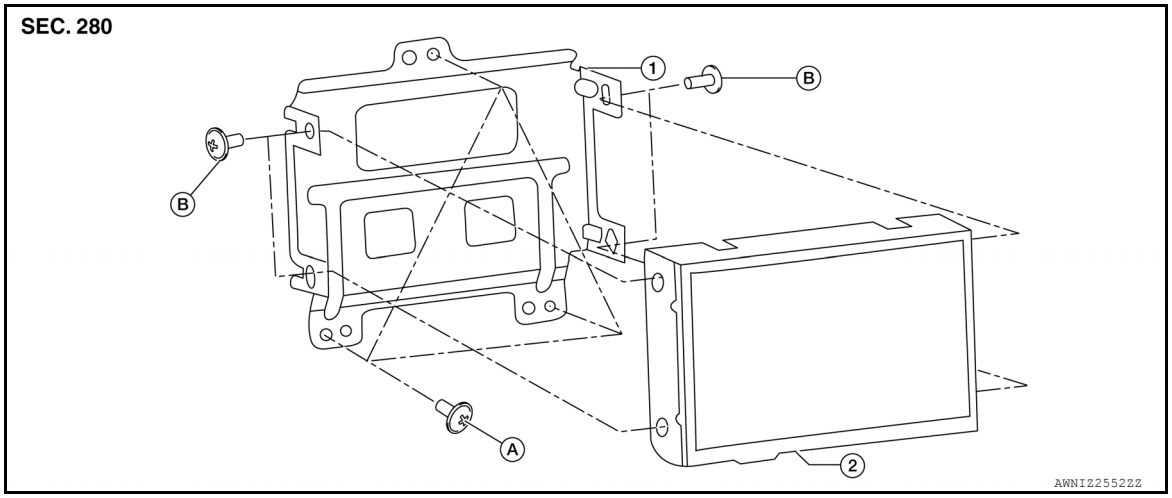
INFOID:0000000008282658

The steering switch and ICC steering switch are serviced as an assembly. Refer to CCS-190, "Removal and Installation".

DISPLAY UNIT

Exploded View

INFOID:0000000008360038



1. Display unit bracket
2. Display unit
A. Display unit bracket screws
B. Display unit screws

Removal and Installation

INFOID:0000000008266386

REMOVAL

1. Remove cluster lid D. Refer to IP-22, "Removal and Installation".
2. Remove the display unit screws, and then pull out the display unit and bracket.
3. Disconnect harness connector from the display unit, then remove the display unit and bracket.
4. Remove the display unit brackets screws, then remove the display unit from the display unit bracket.

INSTALLATION

Installation is in the reverse order of removal.

HEADREST DISPLAY UNIT

Removal and Installation

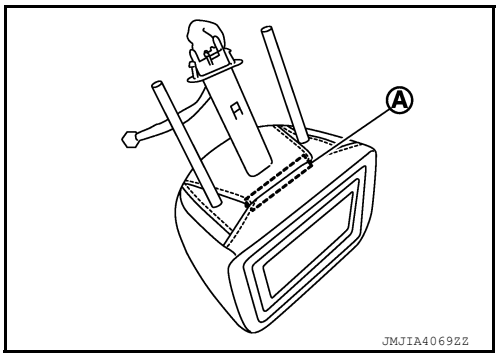
INFOID:0000000008267002

REMOVAL

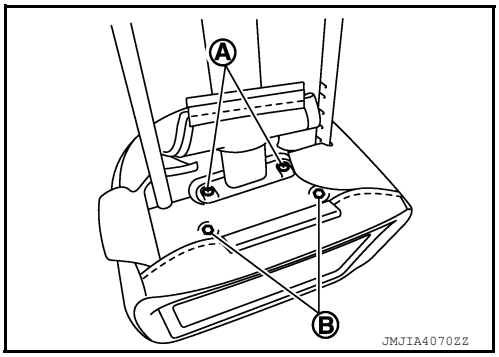
CAUTION:

- **Do not strongly press panel surface of display (glass area).**
- **Do not strongly press or pull out the movable part of display.**

1. Remove the headrest trim retainer (A).

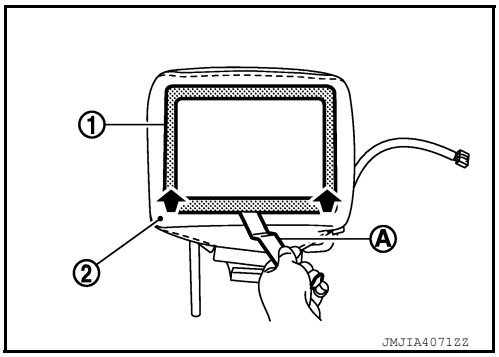


2. Remove the headrest display harness and upper tube screws (A), and then remove headrest display unit bolts (B).



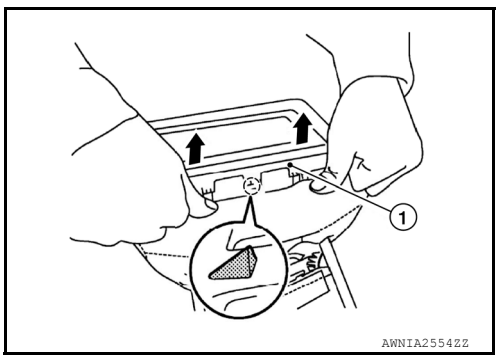
3. Remove the headrest display escutcheon and headrest display.

a. Insert a suitable tool (A) between lower side of headrest display escutcheon (1) and headrest trim (2) and pull out lower side of escutcheon.



b. Pull out headrest display escutcheon (1) to the position that pawl is visible and disengage pawl.

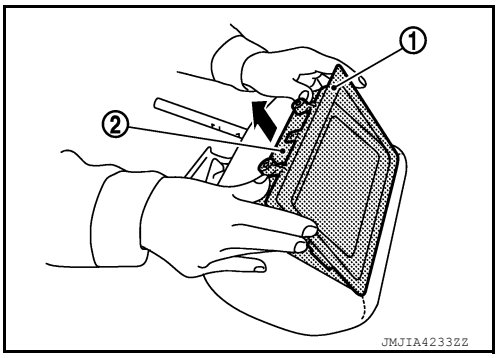
: Pawl



c. Pull out lower side of headrest display escutcheon from headrest.

CAUTION:
Be careful not damage pawls on upper side headrest display escutcheon.

d. Pull downward and remove headrest display escutcheon (1) and headrest display unit (2) by pulling them out and removing pins on upper side of display.



e. Disconnect inner harness connector.
f. Press headrest display escutcheon to the headrest display unit side. Disconnect pawls on upper side and remove headrest display escutcheon.
4. Remove the headrest display harness upper tube from headrest trim.

INSTALLATION

Installation is in the reverse order of removal.

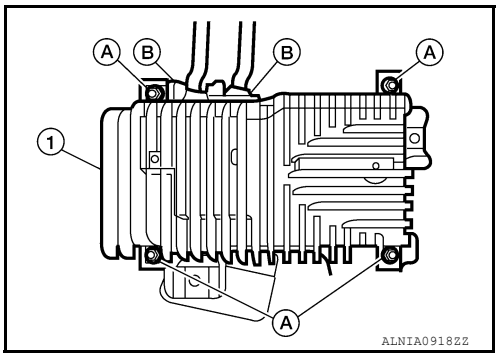
BOSE SPEAKER AMP

Removal and Installation

INFOID:0000000008266387

REMOVAL

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation"
2. Remove third row seat. Refer to SE-95, "Removal and Installation".
3. Remove Bose speaker amp screws (A).
4. Disconnect the harness connectors (B) from the Bose speaker amp. and remove.



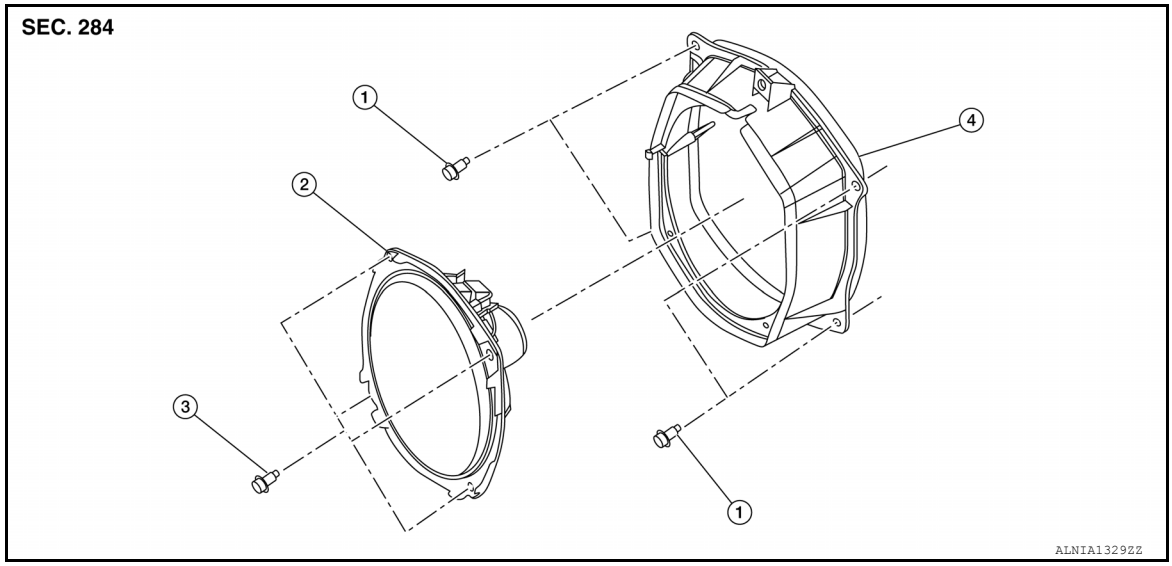
INSTALLATION

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000008267085



1. Speaker bracket bolt
2. Front door speaker
3. Speaker bolt
4. Speaker bracket

Removal and Installation

INFOID:0000000007913610

REMOVAL

1. Remove front door finisher. Refer to INT-15, "Removal and Installation".
2. Remove front door speaker bolts.
3. Disconnect harness connector from front door speaker, then remove front door speaker from speaker bracket.
4. Remove speaker bracket bolts.
5. Remove speaker bracket from front door.

INSTALLATION

Installation is in the reverse order of removal.

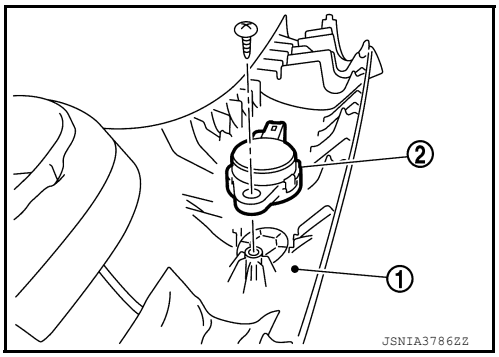
FRONT TWEETER

Removal and Installation

INFOID:0000000008266388

REMOVAL

1. Remove front pillar finisher (LH/RH). Refer to INT-17, "FRONT PILLAR FINISHER : Removal and Installation"
2. Remove front tweeter screws (2).
3. Remove front tweeter (2) from front pillar finisher (1).



INSTALLATION

Installation is in the reverse order of removal.

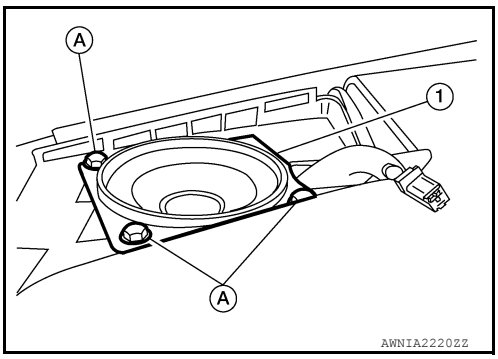
INSTRUMENT PANEL SPEAKER/TWEETER

Removal and Installation

INFOID:0000000008282659

REMOVAL

1. Remove instrument panel tweeter grille (LH/RH). Refer to IP-14, "Exploded View".
2. Remove the screws (A), then pull out the instrument panel tweeter (1).
3. Disconnect the harness connector and remove the instrument panel tweeter (1).



INSTALLATION

Installation is in the reverse order of removal.

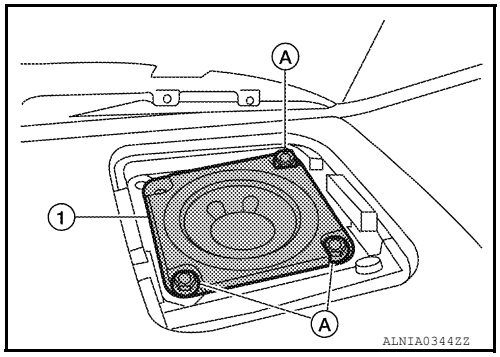
CENTER SPEAKER

Removal and Installation

INFOID:0000000007913616

REMOVAL

1. Remove center speaker grille. Refer to IP-14, "Exploded View".
2. Remove the center speaker screws (A).
3. Pull out the center speaker (1), disconnect harness connector, then remove center speaker.



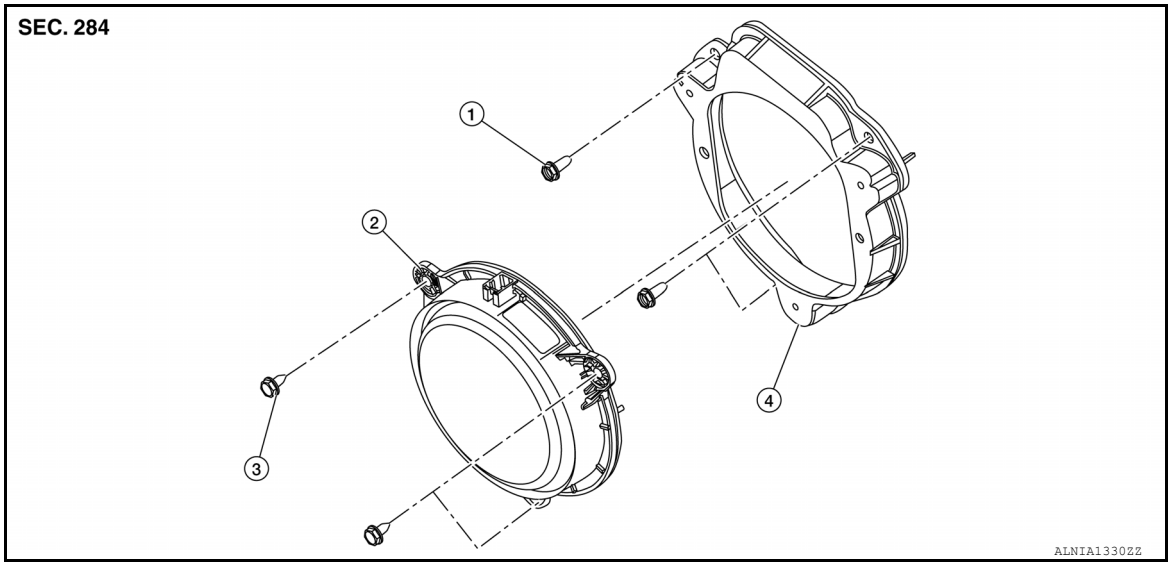
INSTALLATION

Installation is in the reverse order of removal.

REAR DOOR SPEAKER

Exploded View

INFOID:0000000008272177



1. Speaker bracket bolt
2. Rear door speaker
3. Speaker bolt
4. Speaker bracket

Removal and Installation

INFOID:0000000007913611

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "Removal and Installation".
2. Remove rear door speaker bolts.
3. Disconnect harness connector from the rear door speaker, then remove rear door speaker from speaker bracket.
4. Remove speaker bracket bolts.
5. Remove rear door speaker bracket.

INSTALLATION

Installation is in the reverse order of removal.

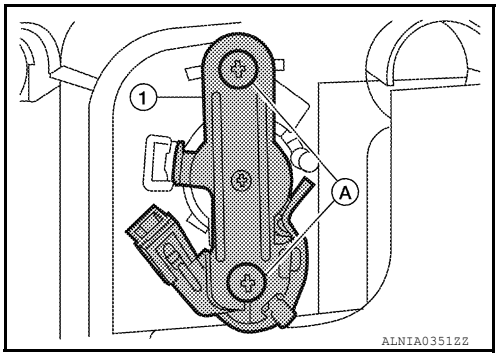
REAR DOOR TWEETER

Removal and Installation

INFOID:0000000007913614

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "Removal and Installation".
2. Disconnect connector harness from the rear door tweeter (1).
3. Remove the rear door tweeter screws (A), then remove rear door tweeter (1).



INSTALLATION

Installation is in the reverse order of removal.

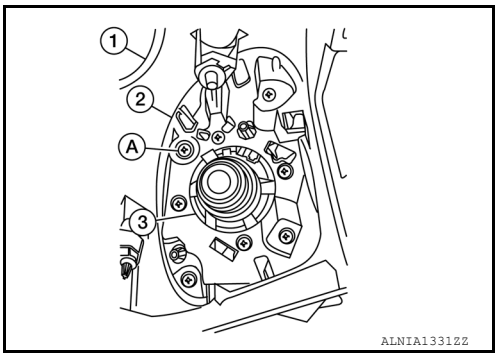
REAR SPEAKERS

Removal and Installation

INFOID:0000000008266390

REMOVAL

1. Remove back pillar finisher. Refer to INT-30, "BACK PILLAR FINISHER : Removal and Installation".
   CAUTION:
   Do not reuse back pillar finisher.
2. Remove rear speaker bolts (A).
3. Remove bracket (2), then remove rear speaker (3).



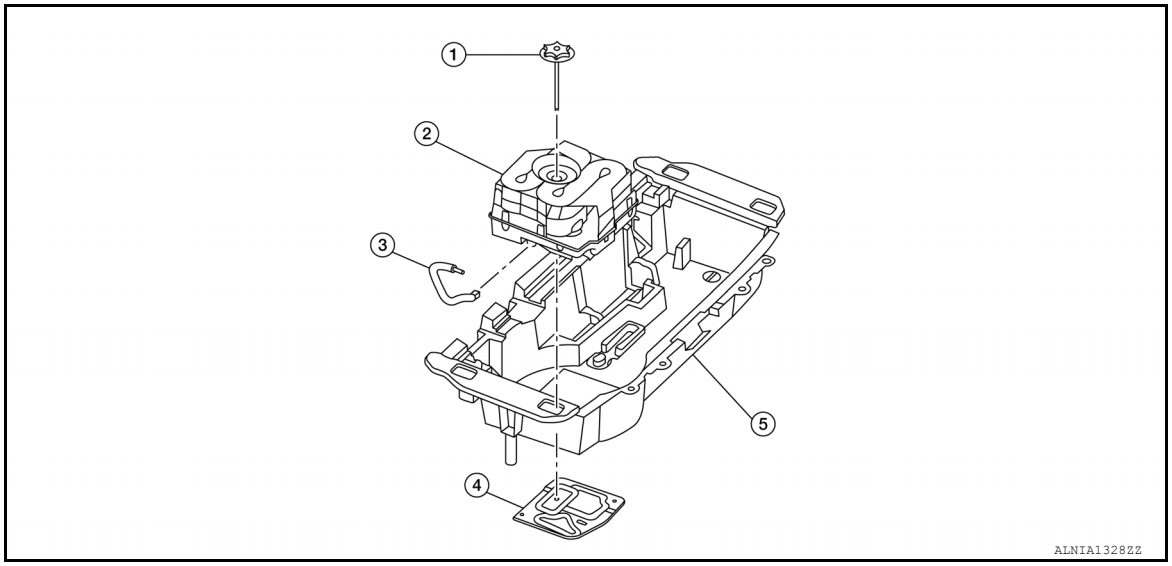
INSTALLATION

Installation is in the reverse order of removal.

WOOFER

Exploded View

INFOID:0000000008272178



1. Spare tire clamp
2. Woofer
3. Harness
4. Bracket
5. Rear storage box

Removal and Installation

INFOID:0000000007913617

REMOVAL

1. Open the storage box lid.
2. Remove the spare tire clamp.
3. Lift woofer to disconnect harness connector, then remove woofer.

INSTALLATION

Installation is in the reverse order of removal.

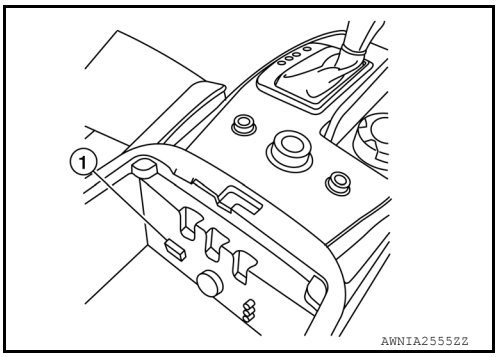
USB CONNECTOR

Removal and Installation

INFOID:0000000007913627

REMOVAL

1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
2. Disconnect harness connector from the USB connector.
3. Release the pawl from the back of USB connector (1), then remove USB connector (1).



INSTALLATION

Installation is in the reverse order of removal.

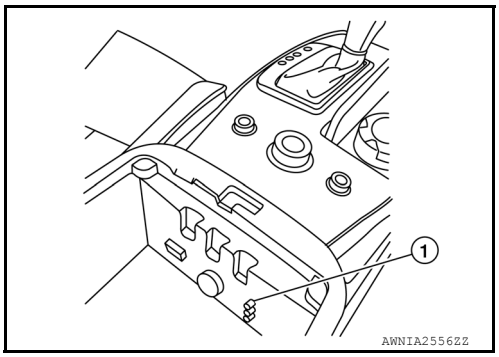
FRONT AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000007913625

REMOVAL

1. Remove CVT shift selector finisher. Refer to IP-18, "Exploded View".
2. Disconnect harness connector from the front auxiliary input jack.
3. Remove front auxiliary input jack screws, then remove front auxiliary input jack (1).



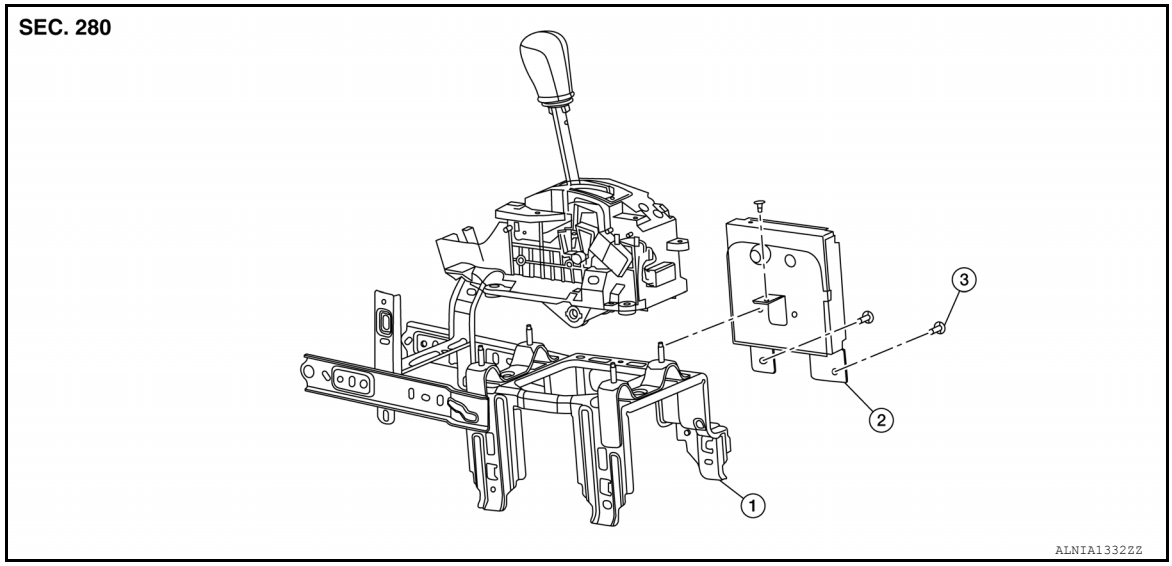
INSTALLATION

Installation is in the reverse order of removal.

AROUND VIEW MONITOR CONTROL UNIT

Exploded View

INFOID:0000000008272221



1. Bracket
2. Around view monitor control unit
3. Screw

Removal and Installation

INFOID:0000000007913630

REMOVAL

1. Remove center console. Refer to IP-18, "Removal and Installation".
2. Remove the around view monitor control unit screws.
3. Disconnect harness connector from around view monitor control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Perform camera image calibration. Refer to AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

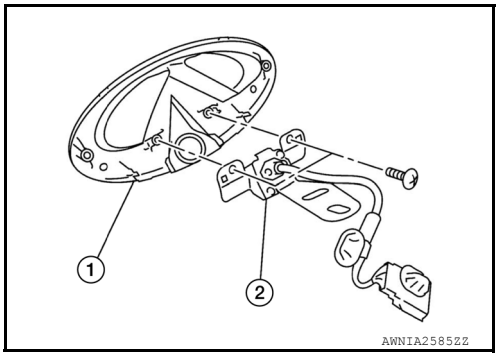
FRONT CAMERA

Removal and Installation

INFOID:0000000007913631

REMOVAL

1. Remove front grille. Refer to EXT-23, "Removal and Installation".
2. Remove front camera screws, then remove front camera (2) from front emblem (1).



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Perform camera image calibration. Refer to AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

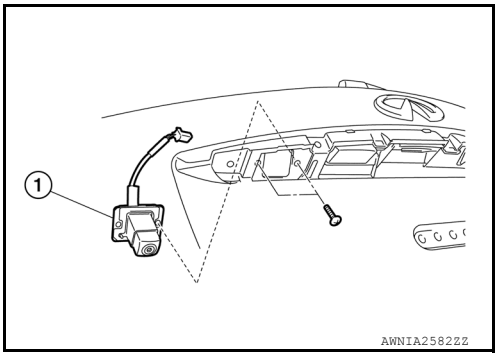
REAR CAMERA

Removal and Installation

INFOID:0000000007913632

REMOVAL

1. Remove back door outer upper finisher. Refer to EXT-41, "Removal and Installation".
2. Remove rear camera screws, then remove rear camera (1).



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

Perform camera image calibration. Refer to AV-547, "CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure".

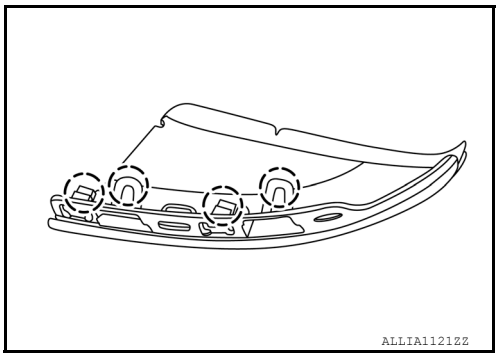
SIDE CAMERA

Removal and Installation

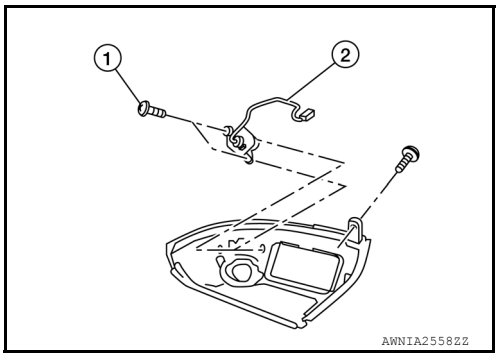
INFOID:0000000008486340

REMOVAL

1. Remove the door mirror assembly. Refer to MIR-29, "Removal and Installation".
2. Remove the door mirror rear finisher. Refer to MIR-31, "Removal and Installation".
3. Release the side camera finisher pawls using a suitable tool, disconnect the harness connector from the side camera, then remove the side camera finisher.
   ◌: Pawl



4. Remove the screws (1) and the side camera (2).



INSTALLATION

Installation is in the reverse order of removal.

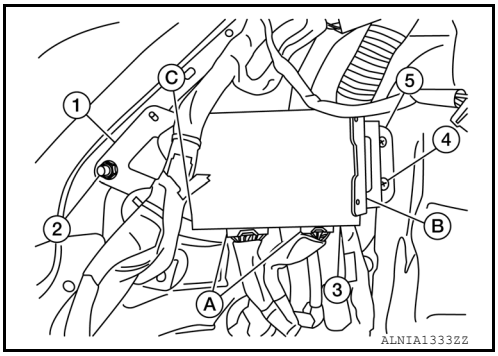
VIDEO DISTRIBUTOR

Removal and Installation

INFOID:0000000007913609

REMOVAL

1. Remove luggage side lower finisher. Refer to INT-29, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation".
2. Disconnect video distributor harness connectors (A).
3. Remove video distributor nuts (2) and bolts (4).
4. Remove video distributor (3) and brackets (1) (5) from the vehicle as a single unit.
5. Remove screws (B) (C), then remove video distributor (3).



INSTALLATION

Installation is in the reverse order of removal.

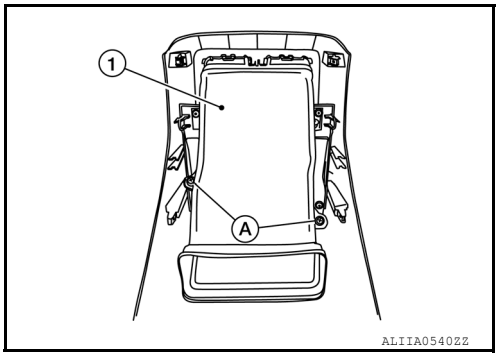
REAR AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000007913626

REMOVAL

1. Remove center console rear finisher. Refer to IP-18, "Exploded View".
2. Remove the screws (A) from the center ventilator duct (1).



3. Remove the center ventilator duct.
4. Remove rear auxiliary input jack screws, then remove rear auxiliary input jack.

INSTALLATION

Installation is in the reverse order of removal.

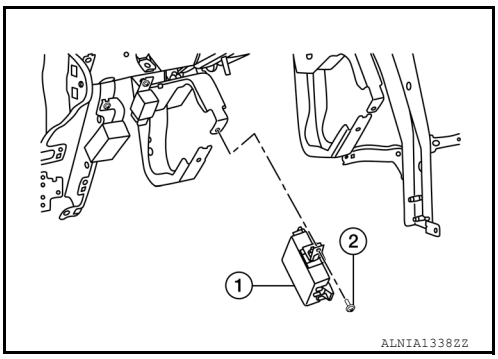
SONAR CONTROL UNIT

Removal and Installation

INFOID:0000000007913636

REMOVAL

1. Remove instrument lower panel LH. Refer to IP-23, "Removal and Installation".
2. Remove sonar control unit bolt (2).
3. Disconnect harness connector from the sonar control unit, then remove sonar control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

SONAR SENSOR

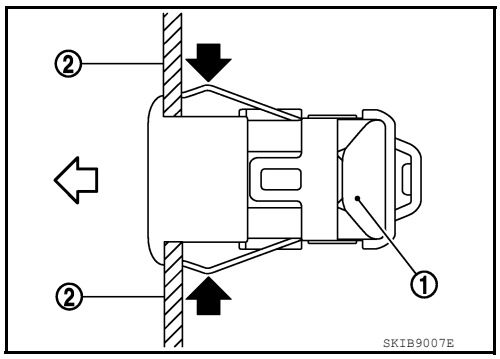
Removal and Installation

INFOID:0000000007913637

REAR SONAR SENSORS

Removal

1. Remove rear bumper fascia assembly. Refer to EXT-20, "Removal and Installation".
2. Press sonar sensor spring (⬅).
3. Remove the sonar sensor (1) from rear bumper (2) as shown (⇦).
4. Disconnect the harness connector from sonar sensor (1) and remove.



Installation

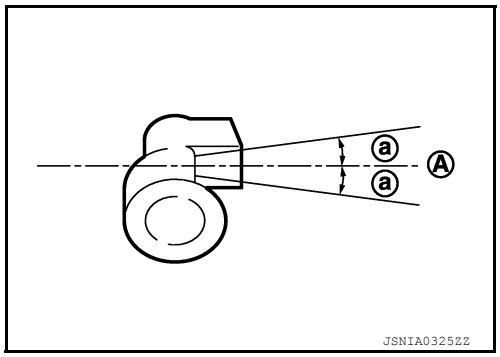
Installation is in the reverse order of removal.

CAUTION:

The connector direction is within ±10° from the horizontal position when assembling the bumper.

(A) : Horizontal position

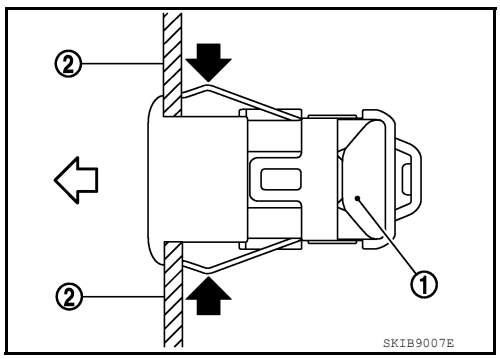
(a) : 10°



FRONT SONAR SENSORS

Removal

1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Press sonar sensor spring (⬅).
3. Remove the sonar sensor (1) from front bumper (2) as shown (⇦).
4. Disconnect harness connector from sonar sensor (1) and remove.

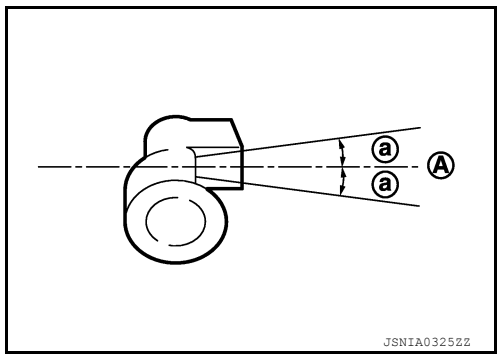


Installation

Installation is in the reverse order of removal.

CAUTION:

The connector direction is within ±10° from the horizontal position when assembling the bumper.



(A) : Horizontal position

(a) : 10°

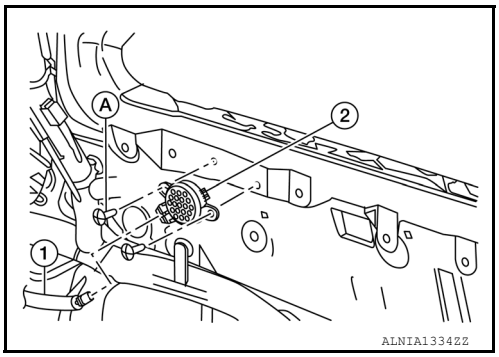
BUZZER

Removal and Installation

INFOID:0000000008266392

REMOVAL

1. Remove luggage side lower finisher (RH). Refer to INT-29, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation".
2. Disconnect harness connector (1) from the buzzer.
3. Remove buzzer screws (A), then remove buzzer (2).



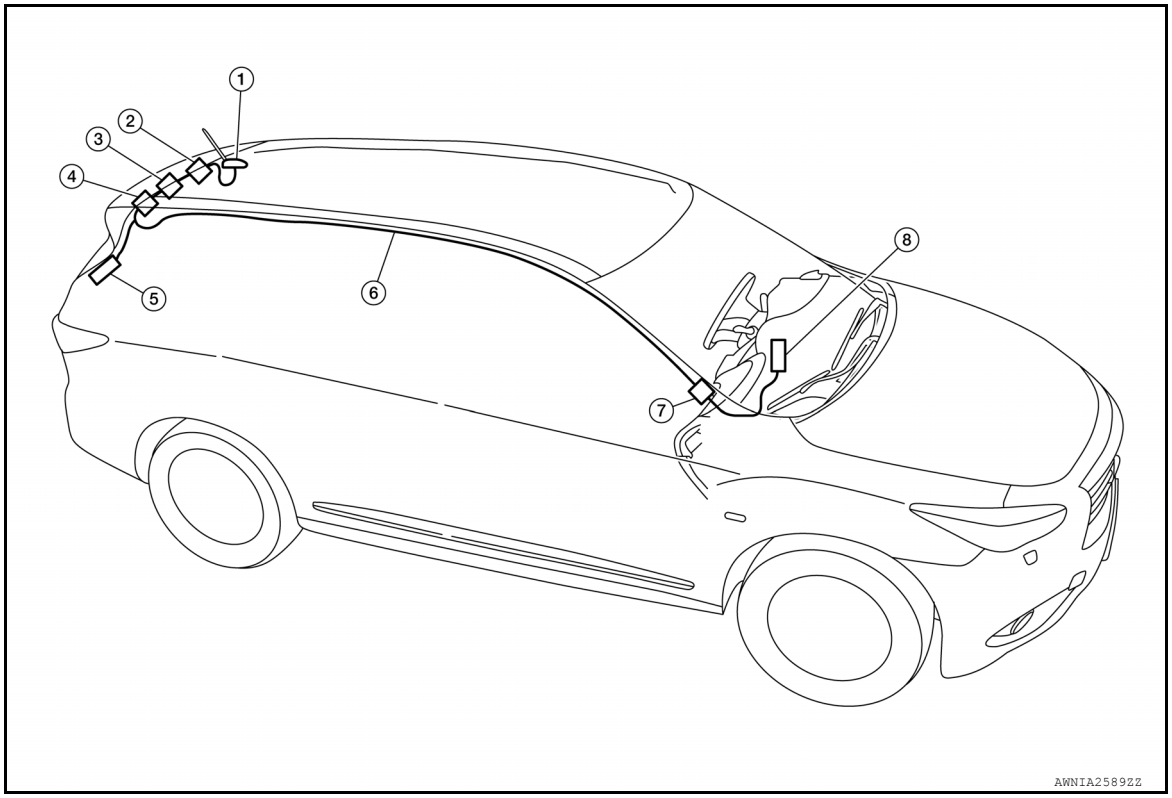
INSTLLATION

Installation is in the reverse order of removal.

AUDIO ANTENNA

Location of Antennas

INFOID:0000000008487401



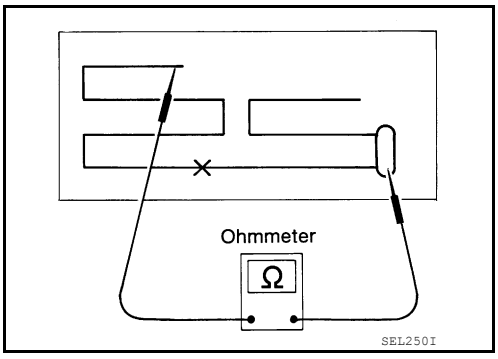
1. Antenna base (satellite antenna and antenna amp)
2. M502
3. M501
4. M503, M504
5. M505
6. Antenna Feeder
7. M95, M138, M500, M509
8. AV control unit M133, M143

Window Antenna Repair

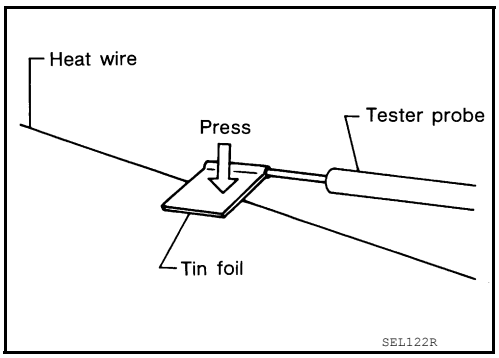
INFOID:0000000008487402

ELEMENT CHECK

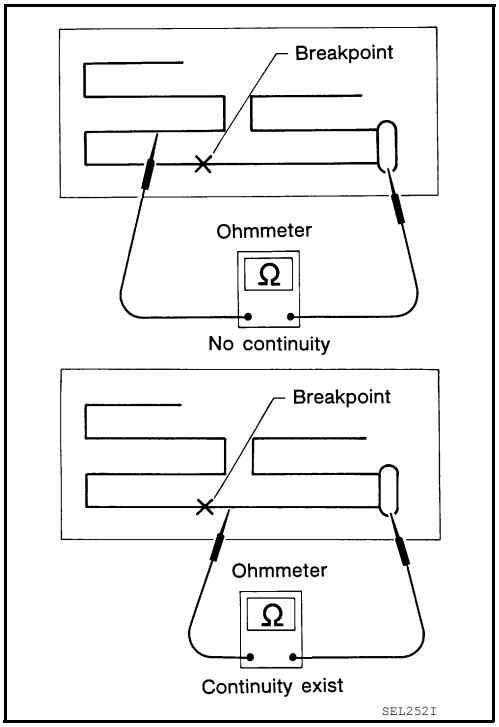
1. Attach probe circuit tester (ohm setting) to antenna terminal on each side.



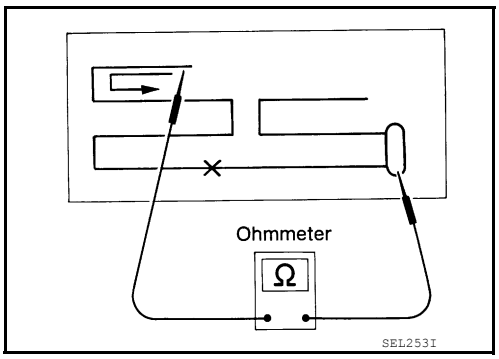
- **When measuring continuity, wrap tin foil around the top of probe. Then, press the foil against the wire with your finger.**



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.



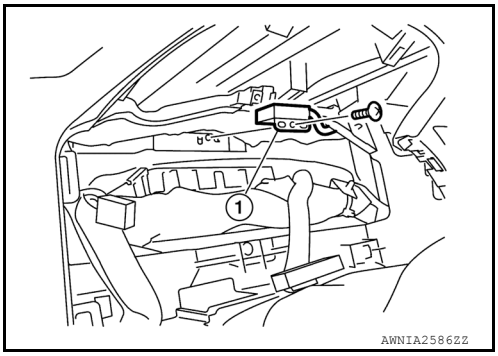
GPS ANTENNA

Removal and Installation

INFOID:0000000007913629

REMOVAL

1. Remove combination meter. Refer to IP-15, "Removal and Installation".
2. Disconnect harness connector from AV control unit.
3. Remove feeder clips.
4. Remove GPS antenna screws, then remove GPS antenna (1).



INSTALLATION

Installation is in the reverse order of removal.

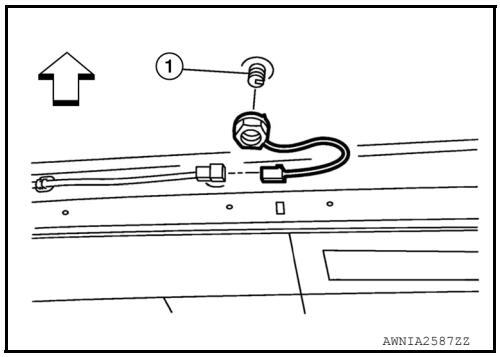
SATELLITE RADIO ANTENNA

Removal and Installation

INFOID:0000000007913621

REMOVAL

1. Pull headlining assembly (rear). Obtain a service area. Refer to INT-25, "Removal and Installation".
2. Disconnect harness connector from antenna feeder.
3. Remove nut (1) then remove satellite radio antenna and two connectors shown in art cover from the vehicle as a unit.
   ⇦: Front



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

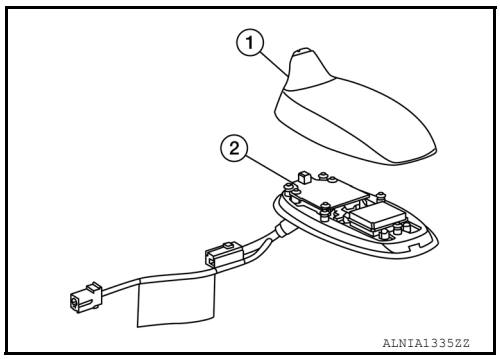
If the satellite radio antenna nut is not tightened to the specified torque, lower sensitivity of the antenna may be experienced. On the other hand, if the nut is tightened tighter than the specified torque, this will deform the roof panel.

Disassembly and Assembly

INFOID:0000000007913622

DISASSEMBLY

Insert a suitable tool into gaps between satellite radio antenna (1) and the cover (2), and remove the cover (2) from satellite radio antenna (1).



ASSEMBLY

Assembly is in the reverse order of disassembly.

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000008487458

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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. 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.**

Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

INFOID:0000000008360069

CAUTION:

Remove battery terminal and AV control unit 30 seconds or more after turning the ignition switch OFF.

NOTE:

After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:0000000008360070

AV COMMUNICATION SYSTEM

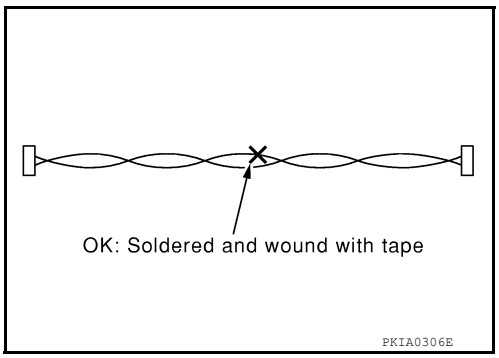
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

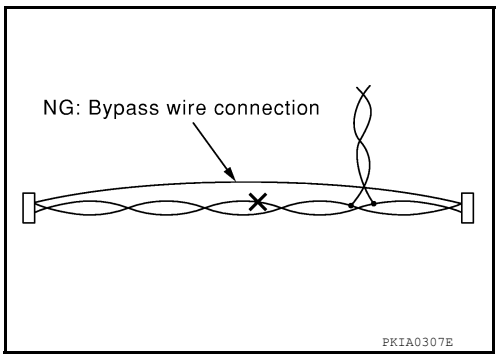
INFOID:0000000008360071

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:0000000008360072

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt: Dip a soft cloth into lukewarm water 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.

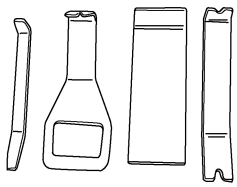
PREPARATION

PREPARATION

Special Service Tool

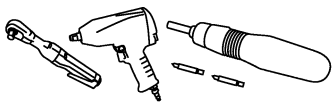
INFOID:0000000008360073

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:0000000008360074

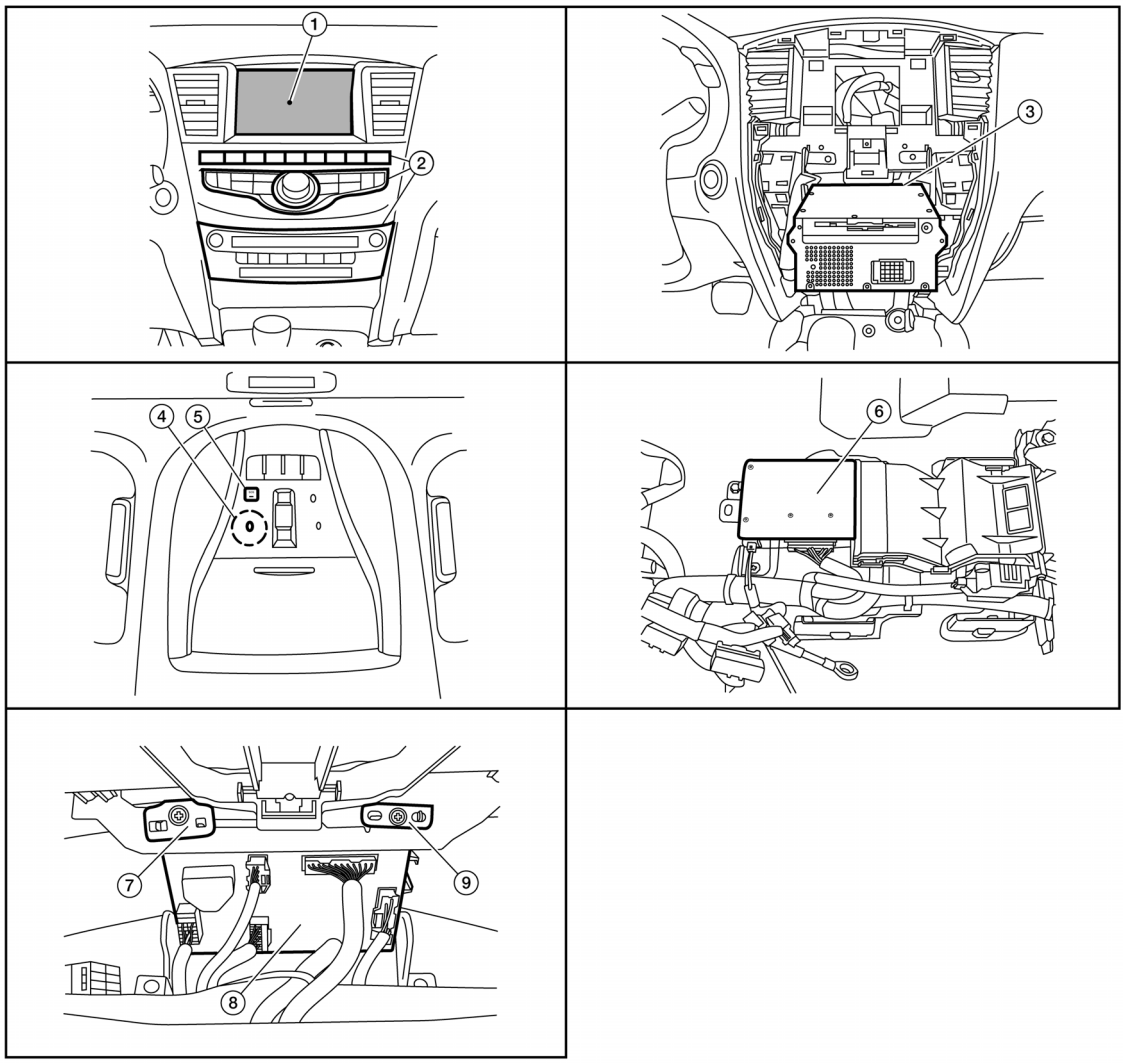
(Kent-Moore No.) Tool name	Description
(—) Power tools  PIIB1407E	Loosening nuts, screws and bolts

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000008233656



ALNIA1343ZZ

1. Display unit
2. A/C and AV switch assembly
3. AV control unit
4. Microphone
5. Telematics switch
6. Telematics control unit (TCU)
7. GPS antenna
8. BCM
9. TEL antenna

Component Description

INFOID:0000000008233660

TELEMATICS CONTROL UNIT (TCU)

The telematics control unit (TCU) is connected to the AV control unit using a USB harness for sound signal input/output and USB communication. A radio communication terminal and SIM card are built into the TCU. Data is sent to and received from the INFNITI CONNECTIONS data center via the TEL antenna.

AV CONTROL UNIT

The AV control unit is connected to the telematics control unit (TCU) using a USB harness for sound signal input/output and USB communication. The AV control unit receives input signals from the A/C and AV switch assembly through the AV communication circuits and transmits them to the TCU.

A/C AND AV SWITCH ASSEMBLY

The A/C and AV switch assembly transmits input signals to the AV control unit through the AV communication circuits.

GPS ANTENNA

The GPS antenna is used for vehicle location.

TEL ANTENNA

The TEL antenna is used for sending and receiving data.

TELEMATICS SWITCH

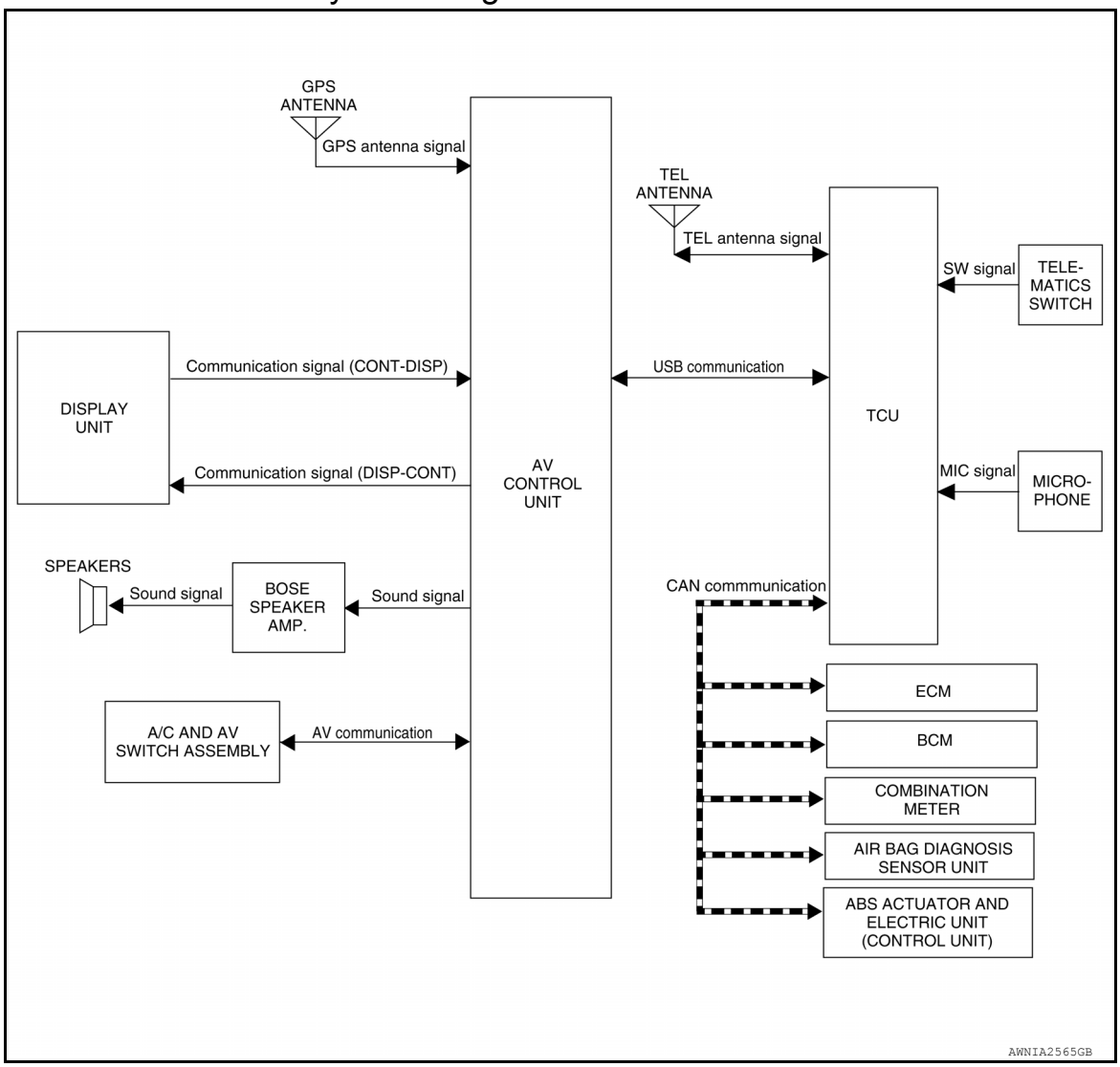
The telematics switch is used to turn ON the telematics system.

MICROPHONE

The microphone is used for interaction with the INFNITI CONNECTIONS data center.

SYSTEM
TELEMATICS SYSTEM
TELEMATICS SYSTEM : System Diagram

INFOID:0000000008233663



TELEMATICS SYSTEM : System Description

INFOID:0000000008233664

The telematics system interacts with the INFINITI CONNECTION data center using GPS and GSM/GPRS technologies. The telematics control unit (TCU) can send messages to and receive commands from the INFINITI CONNECTION data center. This allows the INFINITI CONNECTION data center to monitor the vehicle and obtain actual position coordinates and automatically detected events, as well as initiate certain services from outside the vehicle. In addition, the vehicle operator can initiate services from inside the vehicle.

NOTE:

For additional information on the Telematics system, refer to the NAVIGATION SYSTEM OWNER'S MANUAL.

DIAGNOSIS SYSTEM (TCU)

CONSULT Function

INFOID:0000000008233669

CONSULT FUNCTIONS

CONSULT performs the following functions via communication with the TCU.

Direct Diagnostic Mode	Description
Ecu Identification	The AV control unit part number is displayed.
Self Diagnostic Result	The AV control unit self diagnostic results are displayed.
Data Monitor	The AV control unit input/output data is displayed in real time.
Work support	The settings for AV control unit functions can be changed.
CAN Diag Support Mntr	• The result of transmit/receive diagnosis of AV communication is displayed. • The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The part number of TCU is displayed.

SELF DIAGNOSTIC RESULT

Refer to AV-708, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
HF TYPE [NO BT/]	HF type is displayed.
AUDIO UNIT TYPE [NAVI/]	AV control unit type is displayed.
CALL SWITCH TYPE [SOS/]	Call switch type is displayed.
ECHO CANCEL [TYPE 1/]	Echo cancel type is displayed.
NOISE CANCEL [TYPE 1/]	Noise cancel type is displayed.
TCU STANDBY TIME [2DAYS/14DAYS/30DAYS]	TCU standby time is displayed.
NAD OUTPUT STATUS [On/Off]	TCU activation is displayed.
ACN COMM SEQUENCE LOG [1–255]	ACN communication sequence log is displayed.
SOS COMM SEQUENCE LOG [1–10]	SOS communication sequence log is displayed.

WORK SUPPORT

Conditions	Description
SAVE VIN DATA	VIN data saved in TCU is stored in CONSULT.
CENTER CONNECTION SETTING	Connection to INFINITI CONNECTION data center can be set.
TCU ACTIVATE SETTING	Off: TCU activation Off.
	On: TCU activation On.
WRITE VIN DATA	VIN data from SAVE VIN DATA can be written to new TCU.
VIN REGISTRATION	VIN data can be manually written to new TCU.

CAN DIAG SUPPORT MNTR

Refer to LAN-19, "CAN Diagnostic Support Monitor".

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

List of ECU Reference

INFOID:0000000008233670

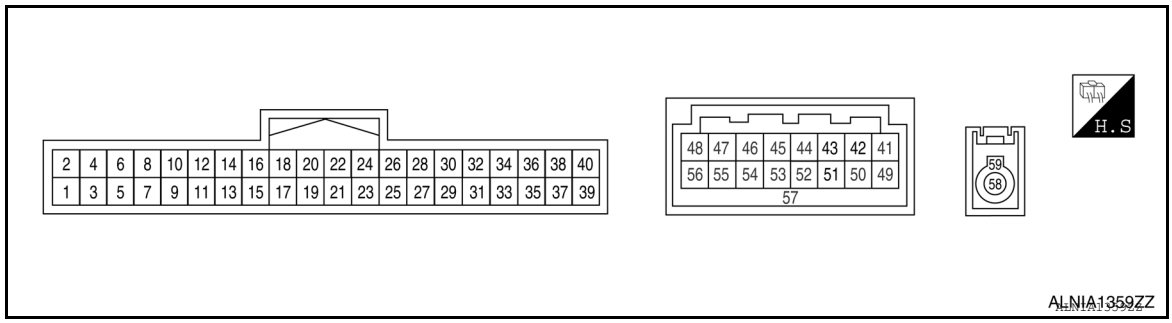
ECU	Reference
AV control unit (Bose Audio w/o Surround)	AV-181, "Reference Value"
	AV-187, "Fail-Safe"
	AV-187, "DTC Index"
AV control unit (Bose Audio with Surround)	AV-457, "Reference Value"
	AV-463, "Fail-Safe"
	AV-464, "DTC Index"

TCU

Reference Value

INFOID:0000000008233673

TERMINAL LAYOUT



INPUT/OUTPUT SIGNAL STANDARD

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery Voltage
2 (B)	—	Ground	—	—	—	—
3 (P)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery Voltage
4 (LG)	Ground	Ignition power supply	Input	Ignition switch ON	—	Battery Voltage
5 (G)	Ground	ACC OUT	Output	Ignition switch ACC	—	Battery Voltage
6 (G)	Ground	AV ACC	Output	Ignition switch ACC	—	Battery Voltage
7 (B)	—	Ground	—	—	—	—
9 (L)	—	V-CAN (H)	Input/ Output	—	—	—
10 (P)	—	V-CAN (L)	Input/ Output	—	—	—
14 (B)	—	Ground	—	—	—	—
18 (W)	20	MIC VCC	Input	Ignition switch ON	–	–
19 (B)	20	MIC SIG	Input	Ignition switch ON	–	–
21 (W)	23	DCM MIC VCC	Input	Ignition switch ON	–	–

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
22 (B)	20	DCM MIC SIG	Input	Ignition switch ON	–	–
34 (R)	Ground	ECALL SW	Input	Ignition switch ON	Telematics switch pressed	Battery Voltage
35 (W)	Ground	LED A	Output	Ignition switch ON	Telematics switch pressed	Battery Voltage
41 (W)	42 (L)	U-VOICE signal	Input	—	—	—
46 (V)	Ground	Manufacturer Specific signal	—	—	—	—
47 (B)	55	USB V BUS signal	Input	Ignition switch ON	—	5 V
48 (B)	55	USB D- signal	Input/ Output	—	—	—
49 (B)	42 (L)	D-VOICE signal	Output	—	—	—
56 (L/W)	55	USB D+ signal	Input/ Output	Ignition switch ON	—	—
57	—	Shield	—	—	—	—
58 (B)	—	TEL antenna signal	Input	Ignition switch ACC	TEL antenna disconnected.	2.8 V
59	—	Shield	—	—	—	—

DTC Index

INFOID:0000000008233674

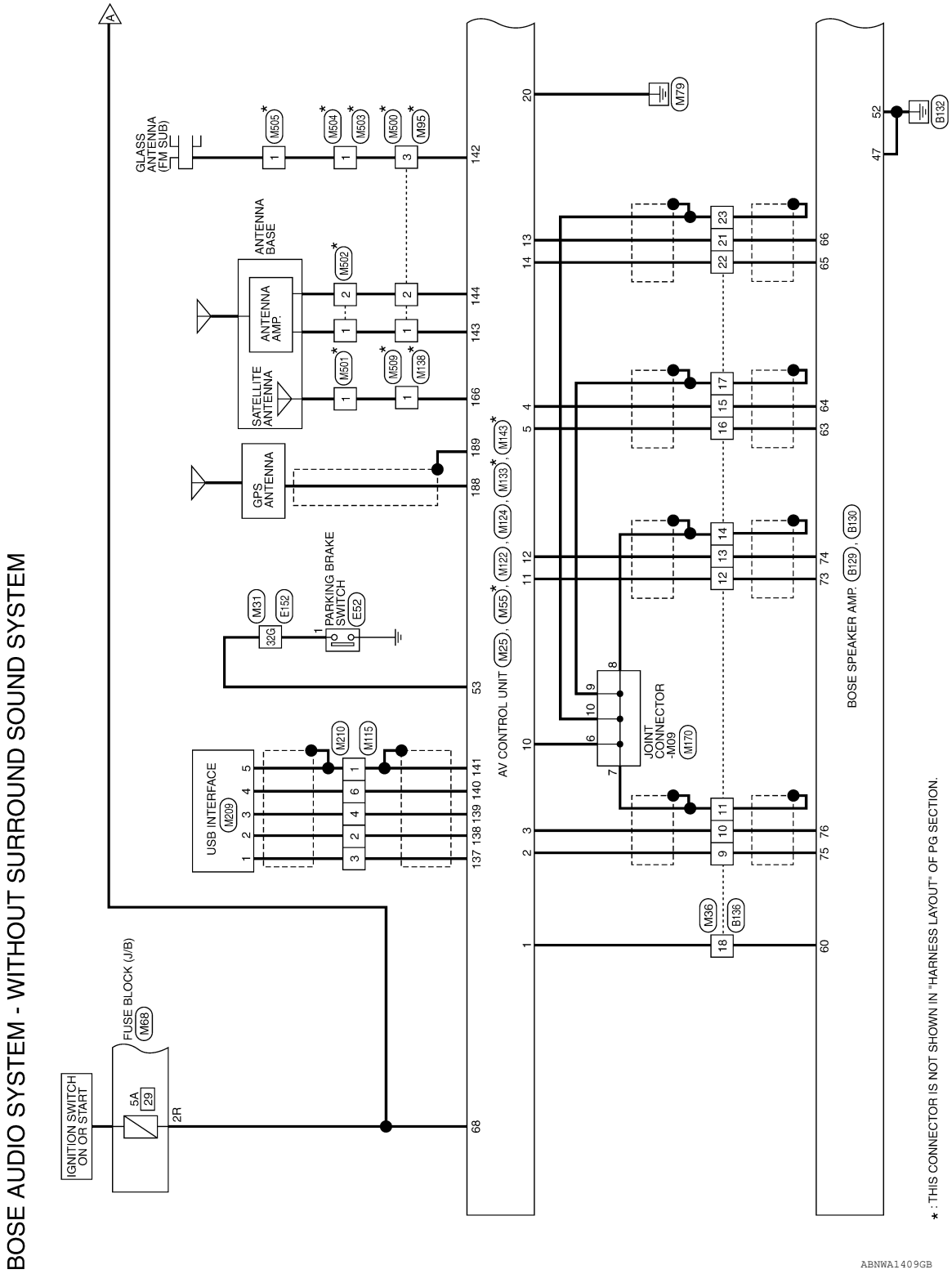
CONSULT Display	Reference Page
U1000: CAN COMM CIRCUIT	AV-806, "DTC Logic"
U1010: CONTROL UNIT (CAN)	AV-807, "DTC Logic"
U1A00: ACC NO CONN	AV-808, "DTC Logic"
U1A01: INTERNAL ERROR (TCU)	AV-809, "DTC Logic"
U1A02: TEL COMMUNICATION MODULE	AV-810, "DTC Logic"
U1A03: SIM CARD	AV-811, "DTC Logic"
U1A04: VIN UNFINISHED	AV-812, "DTC Logic"
U1A05: USB COMM	AV-813, "DTC Logic"
U1A07: TEL ANTENNA SHORT	AV-814, "DTC Logic"
U1A08: TEL ANTENNA NO CONN	AV-815, "DTC Logic"
U1A0B: MIC IN CONN	AV-816, "DTC Logic"
U1A0C: MIC OUT CONN	AV-818, "DTC Logic"
U1A0E: SOS SWITCH ON STUCK	AV-820, "DTC Logic"
U1A0F: SOS SWITCH NO CONN	AV-821, "DTC Logic"

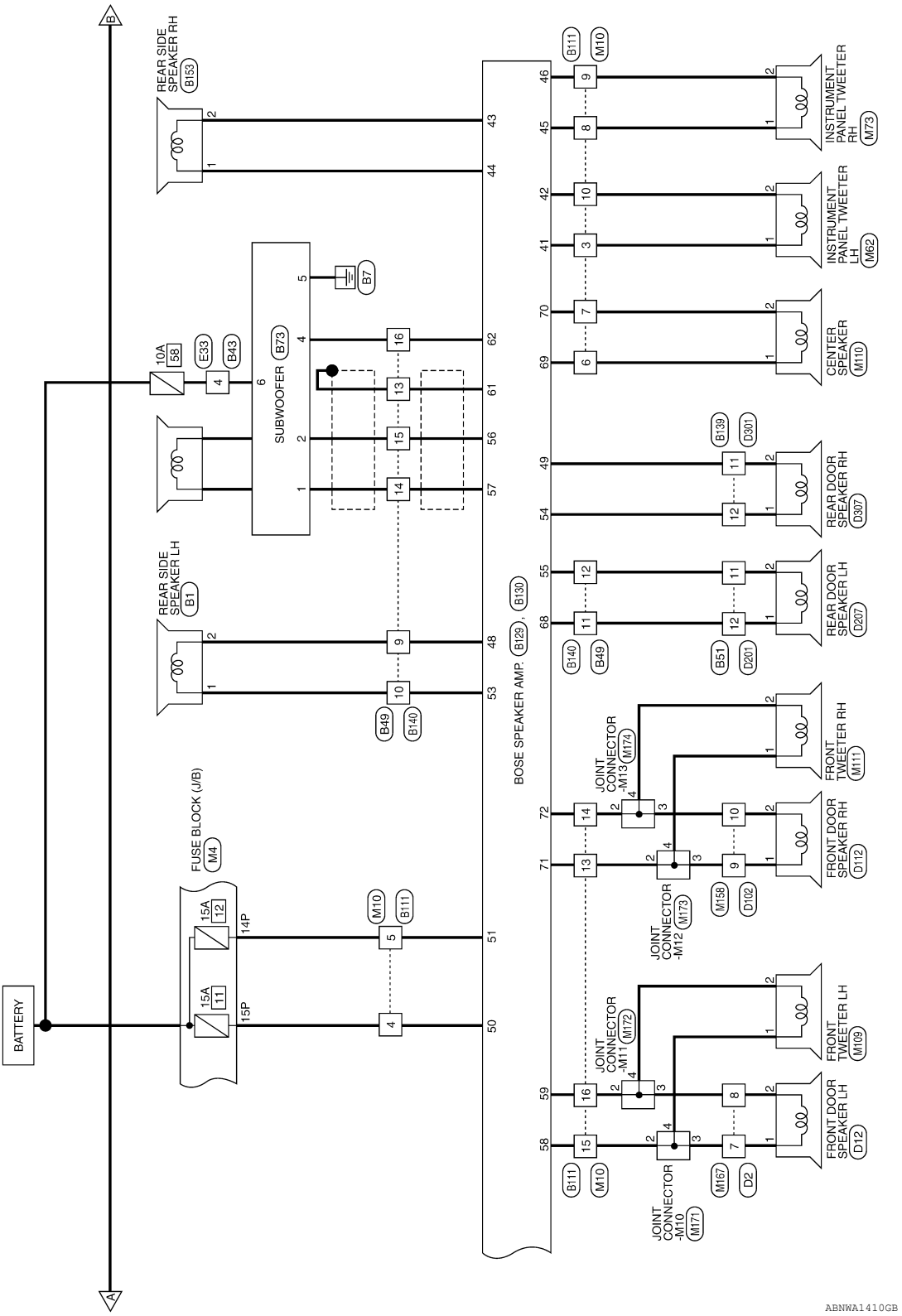
WIRING DIAGRAM

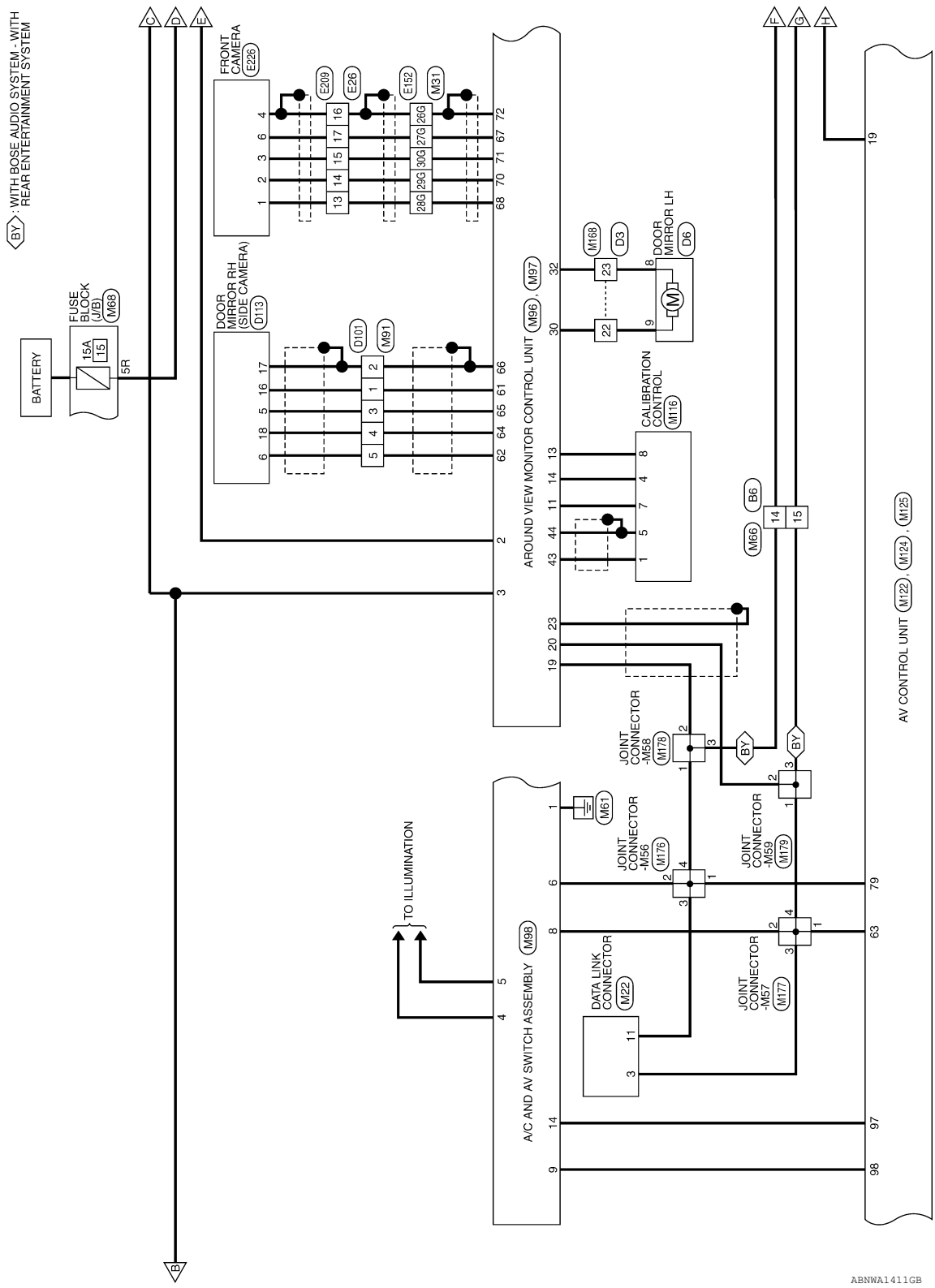
BOSE AUDIO W/O SURROUND SOUND

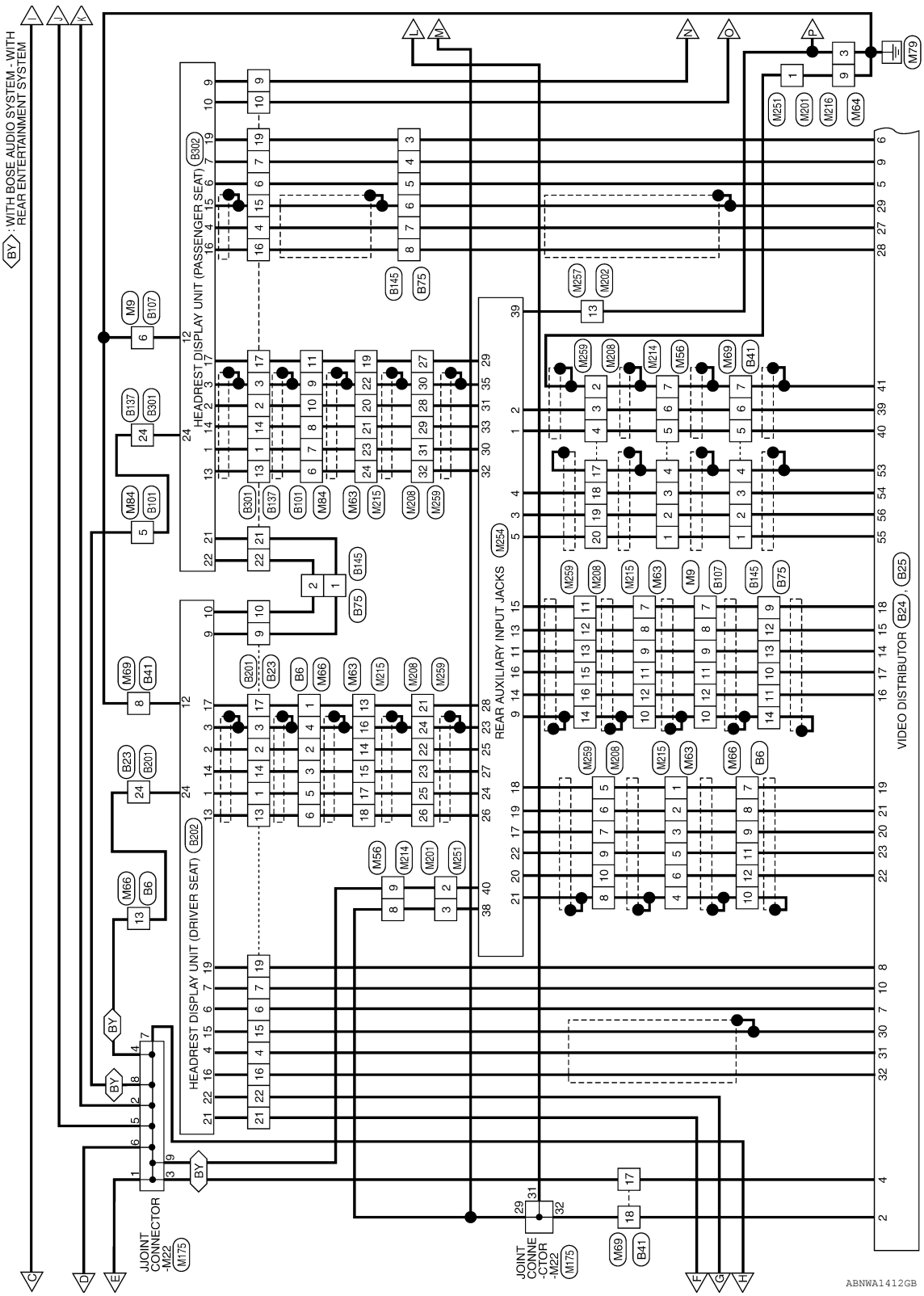
Wiring Diagram

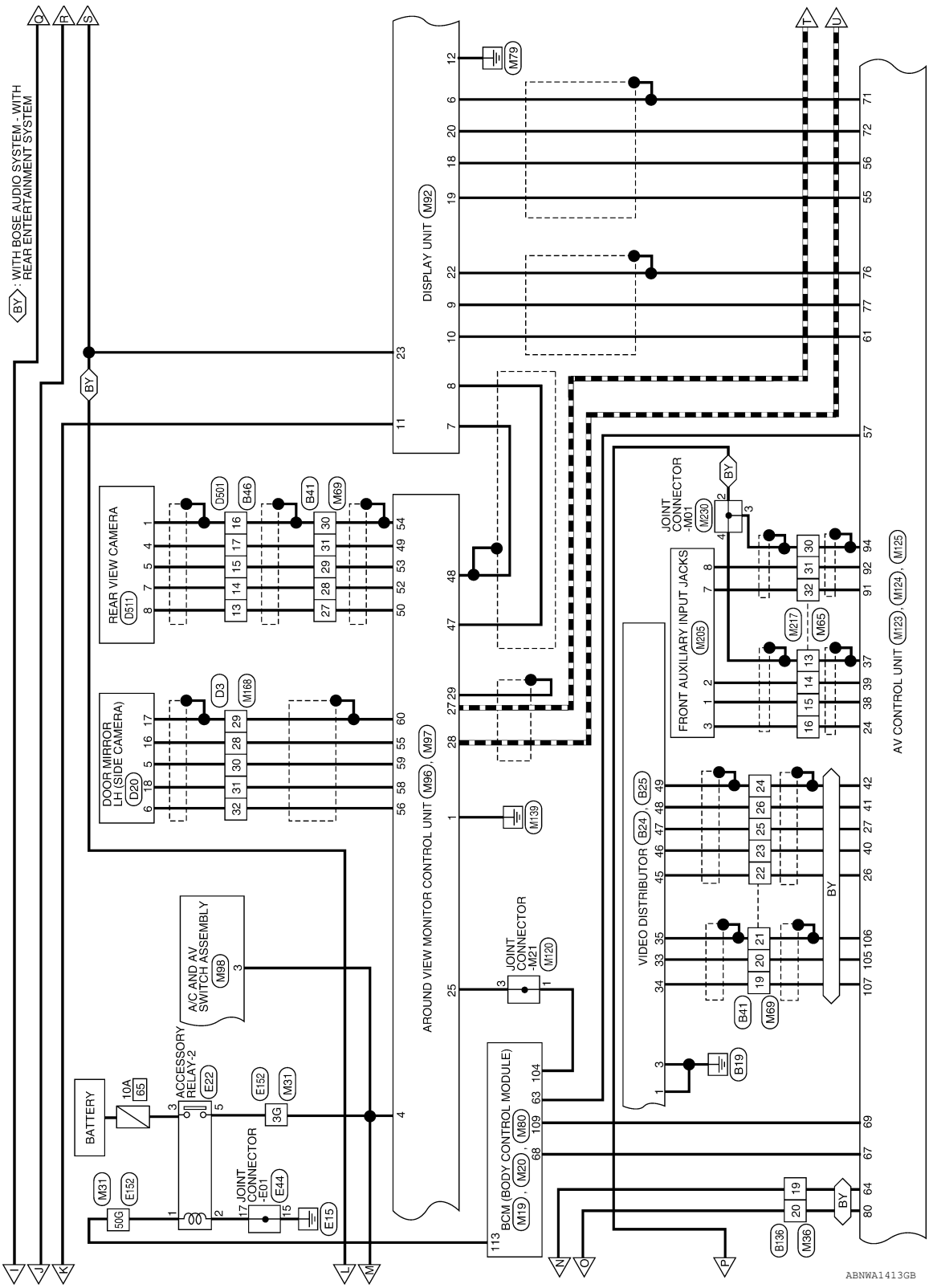
INFOID:0000000008236391

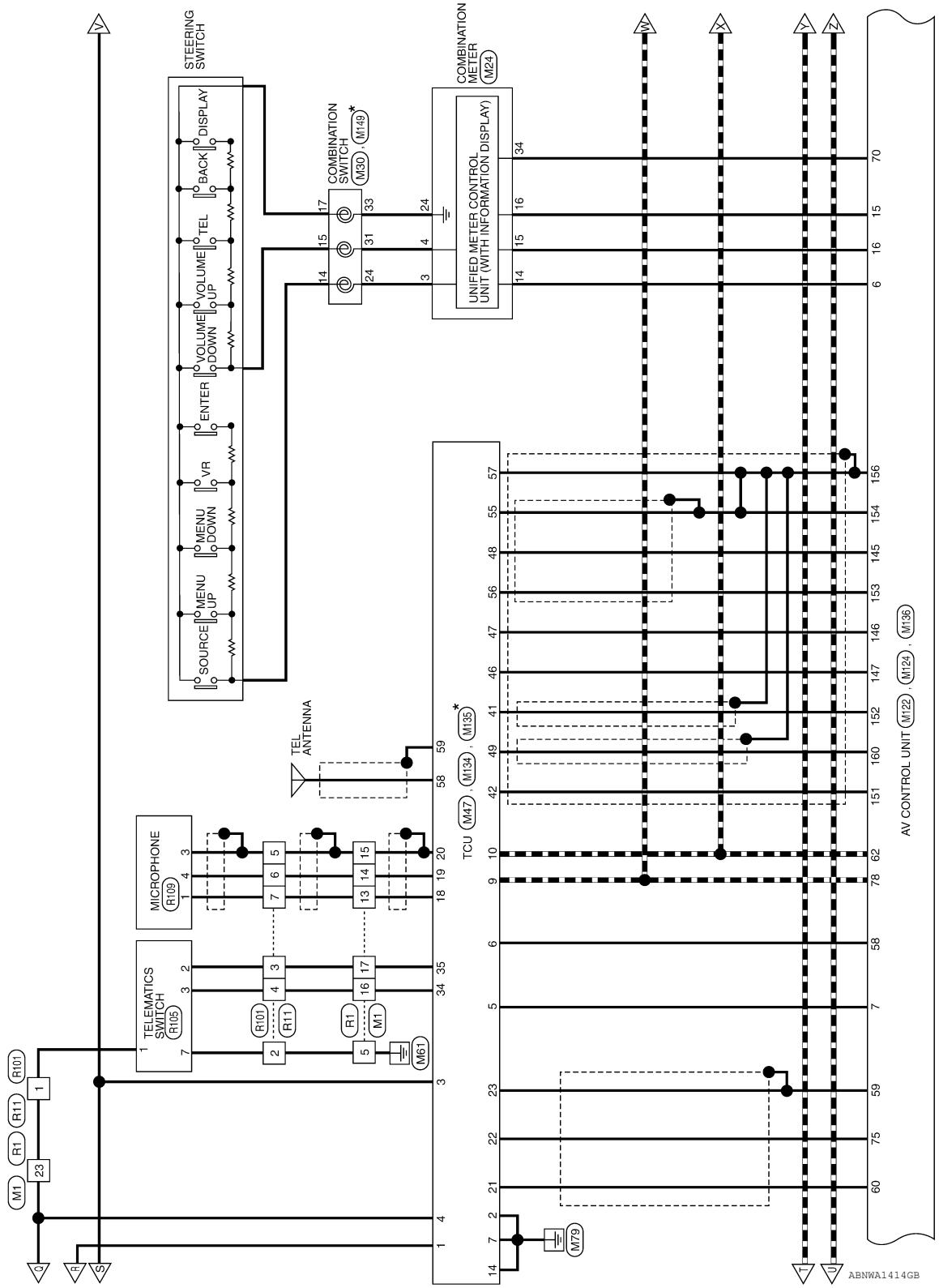


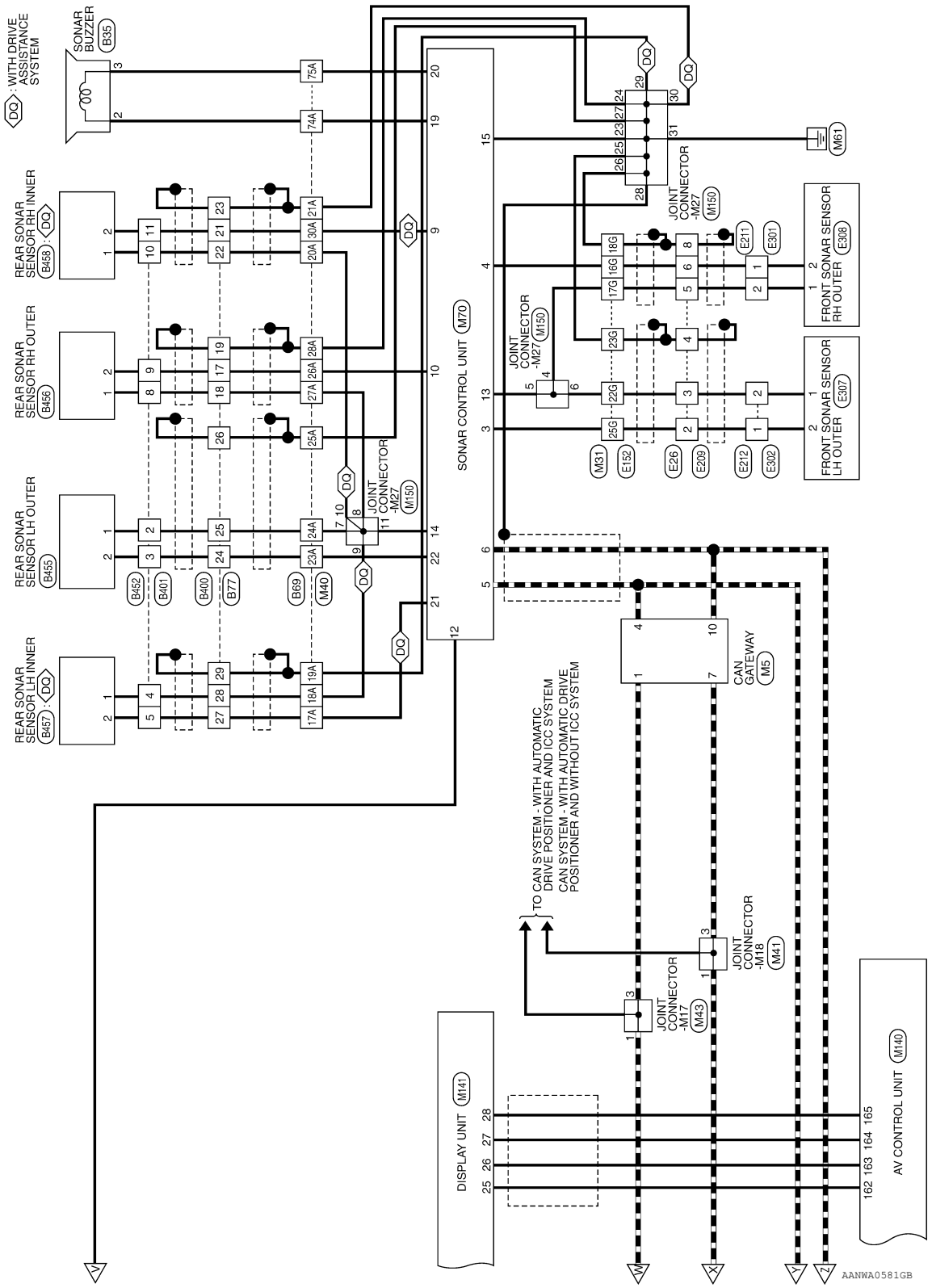

BATTERY
FUSE BLOCK (J/B)
M4
10A 58
15A 12
15A 11
14P
15P
E33
B43
B7
SUBWOOFER B73
REAR SIDE SPEAKER RH B153
REAR SIDE SPEAKER LH B1
BOSE SPEAKER AMP. B129, B130
JOINT CONNECTOR -M13 M174
JOINT CONNECTOR -M12 M173
JOINT CONNECTOR -M11 M172
JOINT CONNECTOR -M10 M171
INSTRUMENT PANEL TWEETER RH M73
INSTRUMENT PANEL TWEETER LH M62
CENTER SPEAKER M110
REAR DOOR SPEAKER RH D307
REAR DOOR SPEAKER LH D207
FRONT TWEETER RH M111
FRONT DOOR SPEAKER RH D112
FRONT TWEETER LH M109
FRONT DOOR SPEAKER LH D12
ABNWA1410GB


BY : WITH BOSE AUDIO SYSTEM - WITH REAR ENTERTAINMENT SYSTEM
BATTERY
FUSE BLOCK (J/B) M68
15A 15
5R
FRONT CAMERA E226
DOOR MIRROR RH (SIDE CAMERA) D113
DOOR MIRROR LH D6
AROUND VIEW MONITOR CONTROL UNIT M96, M97
CALIBRATION CONTROL M116
JOINT CONNECTOR -M58 M178
JOINT CONNECTOR -M56 M176
JOINT CONNECTOR -M59 M179
JOINT CONNECTOR -M57 M177
DATA LINK CONNECTOR M22
A/C AND AV SWITCH ASSEMBLY M98
TO ILLUMINATION
AV CONTROL UNIT M122, M124, M125
ABNWA1411GB


BY : WITH BOSE AUDIO SYSTEM - WITH REAR ENTERTAINMENT SYSTEM
HEADREST DISPLAY UNIT (PASSENGER SEAT) B302
HEADREST DISPLAY UNIT (DRIVER SEAT) B202
REAR AUXILIARY INPUT JACKS M254
VIDEO DISTRIBUTOR B24, B25
JOINT CONNECTOR -M22 M175
ABNWA1412GB

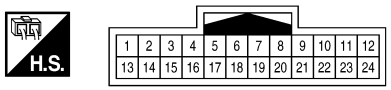

BY : WITH BOSE AUDIO SYSTEM - WITH REAR ENTERTAINMENT SYSTEM
DISPLAY UNIT M92
AROUND VIEW MONITOR CONTROL UNIT M96, M97
AV CONTROL UNIT M123, M124, M125
BCM (BODY CONTROL MODULE) M19, M20, M80
REAR VIEW CAMERA D511
DOOR MIRROR LH (SIDE CAMERA) D20
A/C AND AV SWITCH ASSEMBLY M98
JOINT CONNECTOR -M21 M120
JOINT CONNECTOR -M01 M230
FRONT AUXILIARY INPUT JACKS M205
VIDEO DISTRIBUTOR B24, B25
JOINT CONNECTOR -E01 E44
BATTERY
10A 65
ACCESSORY RELAY-2 E22
50G M31 E152
3G E152 M31
E15
B19
B41 M69
B136 M36
ABNWA1413GB


STEERING SWITCH
SOURCE
MENU UP
MENU DOWN
VR
ENTER
VOLUME DOWN
VOLUME UP
TEL
BACK
DISPLAY
COMBINATION SWITCH
M30
M149
COMBINATION METER
M24
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
TEL ANTENNA
MICROPHONE
R109
TELEMATICS SWITCH
R105
TCU
M47
M134
M135
AV CONTROL UNIT
M122
M124
M136
M79
M61
R101
R11
R1
M1
ABNWA1414GB


DQ : WITH DRIVE ASSISTANCE SYSTEM
SONAR BUZZER B35
REAR SONAR SENSOR RH INNER B458 : DQ
REAR SONAR SENSOR RH OUTER B456
REAR SONAR SENSOR LH OUTER B455
REAR SONAR SENSOR LH INNER B457 : DQ
SONAR CONTROL UNIT M70
JOINT CONNECTOR -M27 M150
JOINT CONNECTOR -M27 M150
JOINT CONNECTOR -M27 M150
FRONT SONAR SENSOR RH OUTER E308
FRONT SONAR SENSOR LH OUTER E307
M61
M31
E152
E26
E209
E212
E302
E211
E301
B452
B401
B400
B77
B69
M40
CAN GATEWAY M5
TO CAN SYSTEM - WITH AUTOMATIC DRIVE POSITIONER AND ICC SYSTEM
CAN SYSTEM - WITH AUTOMATIC DRIVE POSITIONER AND WITHOUT ICC SYSTEM
JOINT CONNECTOR -M18 M41
JOINT CONNECTOR -M17 M443
DISPLAY UNIT M141
AV CONTROL UNIT M140
AANWA0581GB

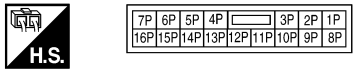
BOSE AUDIO SYSTEM - WITHOUT SURROUND SOUND SYSTEM

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



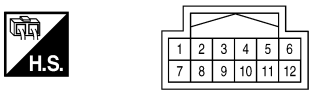
Terminal No.	Color of Wire	Signal Name
5	B	–
13	W	–
14	B	–
15	SHIELD	–
16	R	–
17	W	–
23	P	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



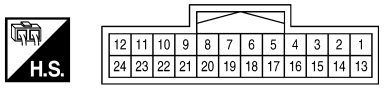
Terminal No.	Color of Wire	Signal Name
14P	Y	–
15P	L	–

Connector No.	M5
Connector Name	CAN GATEWAY
Connector Color	WHITE



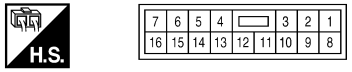
Terminal No.	Color of Wire	Signal Name
1	L	–
4	L	–
7	P	–
10	P	–

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	GR	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	W	–
12	B	–

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	G	–
4	L	–
5	Y	–
6	G	–
7	W	–
8	G	–
9	W	–
10	W	–

Terminal No.	Color of Wire	Signal Name
11	R	–
12	G	–
13	G	–
14	W	–
15	P	–
16	W	–

ABNIA3524GB

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
63	BG	I-KEY LINK SIGNAL
68	P	MR OUTPUT

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

92	91	90	89	88	87	86	85	84	83	82	81
104	103	102	101	100	99	98	97	96	95	94	93

Terminal No.	Color of Wire	Signal Name
104	LG	REVERSE LAMP OUT

Connector No.	M22
Connector Name	DATA LINK CONNECTOR
Connector Color	WHITE

H.S.

9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
3	LG	–
11	SB	–

Connector No.	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
3	P	STRG SW INPUT 1
4	BG	STRG SW INPUT 2
14	G	STRG SW OUTPUT 1
15	W	STRG SW OUTPUT 2
16	B	STRG SW OUTPUT GND
24	R	STRG SW GND
34	GR	SPEED 8 P /R

Connector No.	M25
Connector Name	GPS ANTENNA
Connector Color	PINK

H.S.

Terminal No.	Color of Wire	Signal Name
188	B	–
189	SHIELD	–

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

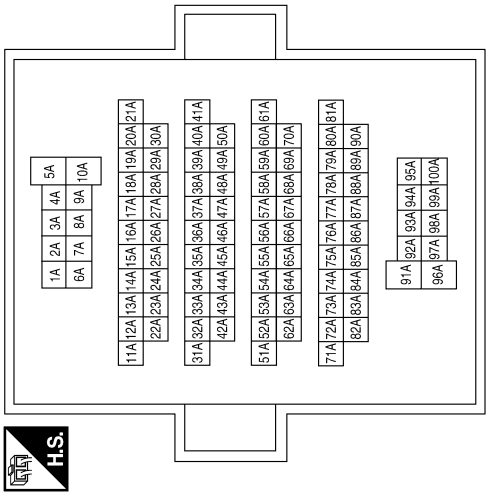
H.S.

25	24	31	32	33

Terminal No.	Color of Wire	Signal Name
24	P	–
31	BG	–
33	R	–

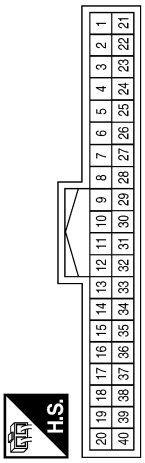
ABNIA3525GB

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



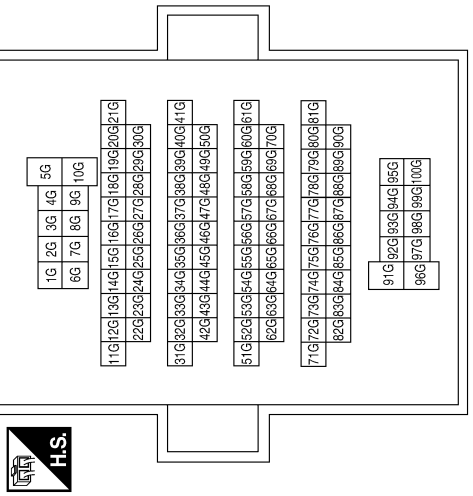
Terminal No.	Color of Wire	Signal Name
17A	W	–
18A	B	–
19A	SHIELD	–
20A	B	–
21A	SHIELD	–
23A	W	–
24A	B	–
25A	SHIELD	–
26A	W	–
27A	B	–
28A	SHIELD	–
30A	W	–
74A	BR	–
75A	LG	–

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	B	–
10	W	–
11	SHIELD	–
12	W	–
13	B	–
14	SHIELD	–
15	B	–
16	W	–
17	SHIELD	–
18	SB	–
19	LG	–
20	SB	–
21	B	–
22	W	–
23	SHIELD	–

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3G	P	–
16G	R	–
17G	B	–
18G	SHIELD	–
22G	B	–
23G	SHIELD	–
25G	R	–
26G	SHIELD	–
27G	B	–
28G	W	–
29G	B	–
30G	R	–
32G	G	–
50G	L	–

ABNIA3526GB

Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
3	P	–

Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
3	L	–

Connector No.	M47
Connector Name	TCU
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	B+
2	B	GND
3	P	ACC
4	LG	IGN
5	G	ACC OUT
6	G	AV ACC
7	B	GND
8	–	–
9	L	V-CAN H
10	P	V-CAN L
11	–	–
12	–	–
13	–	–
14	B	AUDIO TYPE CONFIG 1
15	–	–
16	–	–
17	–	–
18	W	MIC VCC
19	B	MIC SIG
20	SHIELD	MIC GND
21	W	MIC VCC DETECTION
22	B	DCM MIC SIG
23	SHIELD	DCM MIC GND
24	–	–
25	–	–
26	–	–
27	–	–
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	R	ECALL SW
35	W	LED A
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–

ABNIA3527GB

Connector No.	M55
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
137	G	VBUS
138	W	USB GND
139	R	USB D+
140	L	USB D-
141	SHIELD	SHIELD

Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	W	–
7	SHIELD	–
8	P	–
9	L	–

Connector No.	M62
Connector Name	INSTRUMENT PANEL TWEETER LH
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

Connector No.	M63
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–
7	V	–
8	G	–
9	R	–

Terminal No.	Color of Wire	Signal Name
10	SHIELD	–
11	W	–
12	B	–
13	L	–
14	G	–
15	R	–
16	SHIELD	–
17	W	–
18	B	–
19	L	–
20	G	–
21	R	–
22	SHIELD	–
23	W	–
24	B	–

Connector No.	M64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	B	–
9	B	–

ABNIA3528GB

Connector No.	M65
Connector Name	WIRE TO WIRE
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
13	SHIELD	–
14	B	–
15	R	–
16	W	–

Terminal No.	Color of Wire	Signal Name
30	SHIELD	–
31	B	–
32	W	–

Connector No.	M66
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
1	L	–
2	G	–
3	R	– (WITH REAR ENTERTAINMENT SYSTEM)
3	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
4	SHIELD	– (WITH REAR ENTERTAINMENT SYSTEM)
4	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	W	– (WITH REAR ENTERTAINMENT SYSTEM)
5	LG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	BG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	SB	– (WITH REAR ENTERTAINMENT SYSTEM)
7	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	G	– (WITH REAR ENTERTAINMENT SYSTEM)
8	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	R	– (WITH REAR ENTERTAINMENT SYSTEM)
9	SHIELD	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
10	SHIELD	–
11	W	– (WITH REAR ENTERTAINMENT SYSTEM)
11	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
12	B	– (WITH REAR ENTERTAINMENT SYSTEM)
12	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
13	Y	–
14	SB	–
15	LG	–

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

H.S.

7R	6R	5R	4R		3R	2R	1R
16R	15R	14R	13R	12R	11R	10R	9R	8R

Terminal No.	Color of Wire	Signal Name
2R	LG	–
5R	Y	–

ABNIA3529GB

Connector No.	M69
Connector Name	WIRE TO WIRE
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	R	–
2	W	–
3	B	–
4	SHIELD	–

Terminal No.	Color of Wire	Signal Name
5	B	–
6	W	–
7	SHIELD	–
8	B	–
17	Y	–
18	P	–
19	B	–
20	W	–
21	SHIELD	–
22	W	–
23	R	–
24	SHIELD	–
25	B	–

Terminal No.	Color of Wire	Signal Name
26	G	–
27	B	–
28	R	–
29	G	–
30	SHIELD	–
31	W	–

Connector No.	M70
Connector Name	SONAR CONTROL UNIT
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	–	–
2	–	–
3	R	FOL SENSOR SIGNAL
4	R	FOR SENSOR SIGNAL
5	B	V CAN-H
6	W	V CAN-L
7	–	–
8	–	–

Terminal No.	Color of Wire	Signal Name
9	–	–
10	W	ROR SENSOR SIGNAL
11	–	–
12	LG	IGN
13	B	FR SENSOR GND
14	B	RR SENSOR GND
15	B	GND
16	–	–
17	–	–
18	–	–
19	BR	SPEAKER PWR
20	LG	SPEAKER RR SIGNAL
21	–	–
22	W	ROL SENSOR SIGNAL
23	–	–
24	–	–

Connector No.	M73
Connector Name	INSTRUMENT PANEL TWEETER RH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

ABNIA3530GB

Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
109	R	REVERSE SIGNAL
113	L	ACC RELAY OUT

Connector No.	M84
Connector Name	WIRE TO WIRE
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
5	Y	– (WITH REAR ENTERTAINMENT SYSTEM)
5	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	W	– (WITH REAR ENTERTAINMENT SYSTEM)
7	R	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	R	– (WITH REAR ENTERTAINMENT SYSTEM)
8	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	–
10	G	–
11	L	–

Connector No.	M91
Connector Name	WIRE TO WIRE
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	W	–
2	SHIELD	–
3	G	–
4	R	–
5	B	–

ABNIA3531GB

Connector No.	M92
Connector Name	DISPLAY UNIT
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	–	–
2	–	–
3	–	–
4	–	–
5	–	–
6	SHIELD	FRONT COMP SHIELD
7	SHIELD	SHIELD
8	B	R CAMERA COMP

Terminal No.	Color of Wire	Signal Name
9	B	FRONT DISP IT
10	W	IT FRONT DISP
11	Y	BATT
12	B	GND
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	B	FRONT COMP +
19	W	FRONT COMP -
20	R	FRONT COMP SYNC
21	–	–
22	SHIELD	SHIELD
23	P	ACC
24	–	–

Connector No.	M95
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

1	2	3

Terminal No.	Color of Wire	Signal Name
1	B	–
2	B	–
3	B	–

Connector No.	M96
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE

H.S.

2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	Y	+B
3	LG	IGN
4	P	ACC
5	–	–
6	–	–
7	–	–

Terminal No.	Color of Wire	Signal Name
8	–	–
9	–	–
10	–	–
11	G	SIGNAL GND
12	–	–
13	P	CAMERA DIRECT OFF
14	BG	RX
15	–	–
16	–	–
17	–	–
18	–	–
19	B	MCAN-1H
20	W	MCAN-1L
21	–	–
22	–	–
23	SHIELD	MCAN GND

Terminal No.	Color of Wire	Signal Name
24	–	–
25	LG	REV
26	–	–
27	B	V-CAN1 H
28	W	V-CAN1 L
29	SHIELD	V-CAN1 GND
30	W	MIRROR SIGNAL 2
31	–	–
32	G	MIRROR SIGNAL 1
33	–	–
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–

ABNIA3532GB

Connector No.	M97
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE

H.S.

42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72
41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71

Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	B	EXTERNAL VIDEO OUTPUT +
44	SHIELD	EXTERNAL VIDEO OUTPUT -
45	–	–
46	–	–
47	B	VIDEO OUTPUT +
48	SHIELD	VIDEO OUTPUT -
49	W	RV SERIAL SIGNAL
50	B	RV POWER
51	–	–

Connector No.	M109
Connector Name	FRONT TWEETER LH
Connector Color	BROWN

H.S.

2 1

Terminal No.	Color of Wire	Signal Name
1	P	–
2	W	–

Terminal No.	Color of Wire	Signal Name
52	R	RV POWER GND
53	G	RV VIDEO +
54	SHIELD	RV VIDEO -
55	B	SV2 SERIAL SIGNAL
56	W	SV2 POWER
57	–	–
58	G	SV2 POWER GND
59	R	SV2 VIDEO +
60	SHIELD	SV2 POWER GND
61	W	SV1 SERIAL SIGNAL
62	B	SV1 POWER
63	–	–
64	R	SV1 POWER GND
65	G	SV1 VIDEO +
66	SHIELD	SV1 VIDEO -
67	B	FV SERIAL SIGNAL
68	W	FV POWER
69	–	–
70	G	FV POWER GND
71	R	FV VIDEO +
72	SHIELD	FV VIDEO -

Connector No.	M110
Connector Name	CENTER SPEAKER
Connector Color	BROWN

H.S.

2 1

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

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	GR	GND
3	P	ACC
4	R	ILL
5	B	ILL CONT
6	SB	M CAN-H
8	LG	M CAN-L
9	V	EJECT GND
14	Y	CD(DVD)EJECT

Connector No.	M111
Connector Name	FRONT TWEETER RH
Connector Color	BROWN

H.S.

2 1

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

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Connector No.	M115
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	SHIELD	–
2	W	–
3	G	–
4	R	–
6	L	–

Connector No.	M116
Connector Name	CALIBRATION CONTROL
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
4	BG	–
5	SHIELD	–
7	G	–
8	P	–

Connector No.	M120
Connector Name	JOINT CONNECTOR-M21
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
3	LG	–

Connector No.	M122
Connector Name	AV CONTROL UNIT
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
3	W	FR LH PRE -
4	B	RR LH PRE +
5	W	RR LH PRE -
6	G	STRG SW A
7	G	ACC
8	–	–
9	–	–
10	BR	SHIELD
11	W	FR RH PRE +

Terminal No.	Color of Wire	Signal Name
12	B	FR RH PRE -
13	B	RR RH PRE +
14	W	RR RH PRE -
15	B	STRG SW GND
16	W	STRG SW B
17	–	–
18	–	–
19	Y	(+)B
20	GR	GND

Terminal No.	Color of Wire	Signal Name
1	SB	AMP ON
2	B	FR LH PRE +

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Connector No.	M123
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

21	22	23	24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45	46	47	48

Terminal No.	Color of Wire	Signal Name
21	–	–
22	–	–
23	–	–
24	R	AUX AUDIO LH
25	–	–
26	W	HP 1 LH+
27	B	HP 1 RH-
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	–	–
35	–	–
36	–	–
37	SHIELD	AUX SHIELD
38	W	AUX AUDIO RH
39	B	AUX AUDIO
40	R	HP 1 LH-
41	G	HP 1 RH-
42	SHIELD	HP 1 SHIELD
43	–	–
44	–	–
45	–	–
46	–	–
47	–	–
48	–	–

Connector No.	M124
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

Terminal No.	Color of Wire	Signal Name
49	–	–
50	–	–
51	–	–
52	–	–
53	G	PKB SIG
54	–	–
55	W	NAVI COMP 1-
56	B	NAVI COMP 1+
57	BG	I-KEY MEMORY
58	G	AV-ACC (DCM)
59	SHIELD	PKB SIGMIC GND
60	W	MIC VCC
61	W	IT DISP
62	P	CAN-L
63	LG	M CAN-L
64	LG	M CAN-L TRM
65	–	–
66	–	–
67	P	MR OUTPUT
68	LG	IGN
69	R	REVERSE SIG
70	BG	SPEED
71	SHIELD	NAVI COMP 1 SHIELD
72	R	NAVI COMP 1 SYNC
73	–	–
74	–	–
75	B	MIC SIG
76	SHIELD	DISP SHIELD
77	B	DISP IT
78	L	CAN-H
79	SB	M CAN-H
80	SB	M CAN-H TRM

ABNIA3535GB

Connector No.	M125
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

81	83	85	87	89	91	93	95	97	99	101	103	105	107	109	111	113	115	117	119
82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120

Terminal No.	Color of Wire	Signal Name
81	–	–
82	–	–
83	–	–
84	–	–
85	–	–
86	–	–

Terminal No.	Color of Wire	Signal Name
87	–	–
88	–	–
89	–	–
90	–	–
91	W	AUX VIDEO+
92	B	AUX VIDEO-
93	–	–
94	SHIELD	VIDEO SHIELD
95	–	–
96	–	–
97	Y	DVD EJECT
98	V	EJECT GND
99	–	–
100	–	–
101	–	–
102	–	–
103	–	–

Terminal No.	Color of Wire	Signal Name
104	–	–
105	W	NAVI COMP 2-
106	SHIELD	NAVI COMP 2 SHIELD
107	B	NAVI COMP 2+
108	–	–
109	–	–
110	–	–
111	–	–
112	–	–
113	–	–
114	–	–
115	–	–
116	–	–
117	–	–
118	–	–
119	–	–
120	–	–

Connector No.	M133
Connector Name	AV CONTROL UNIT
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
166	B	–

Connector No.	M134
Connector Name	TCU
Connector Color	WHITE

H.S.

48	47	46	45	44	43	42	41
56	55	54	53	52	51	50	49

57

Terminal No.	Color of Wire	Signal Name
41	W	U-VOICE
42	L	VOICE GND
43	–	–
44	–	–
45	–	–

Terminal No.	Color of Wire	Signal Name
46	–	–
47	B	VBUS
48	B	D-
49	B	D-VOICE
50	–	–
51	–	–
52	–	–
53	–	–
54	–	–
55	SHIELD	GND(USB GND)
56	L/W	D+
57	SHIELD	CONN CHASSIS GND

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Connector No.	M135
Connector Name	TCU
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
58	B	–
59	SHIELD	–

Connector No.	M136
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
145	W	U-VOICE
146	L	VOICE GND
147	–	–
148	–	–
149	–	–

Terminal No.	Color of Wire	Signal Name
150	–	–
151	B	VBUS
152	B	D-
153	B	D-VOICE
154	–	–
155	–	–
156	–	–
157	–	–
158	–	–
159	SHIELD	GND(USB GND)
160	L/W	D+
161	SHIELD	CONN CHASSIS GND

Connector No.	M138
Connector Name	WIRE TO WIRE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M140
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
162	SHIELD	GND
163	SHIELD	GND
164	B	GVIF-
165	B	GVIF+

Connector No.	M141
Connector Name	DISPLAY UNIT
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
25	SHIELD	GND
26	SHIELD	GND
27	B	GVIF+
28	B	GVIF-

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Connector No.	M143
Connector Name	AV CONTROL UNIT
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
142	B	ANT MAIN
143	B	ANT +B
144	B	ANT SUB

Connector No.	M149
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
14	B	–
15	GR	–
17	BR	–

Connector No.	M150
Connector Name	JOINT CONNECTOR-M27
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	B	–
5	B	–
6	B	–

Terminal No.	Color of Wire	Signal Name
7	B	–
8	B	–
9	B	–
10	10	–
11	B	–
23	B	–
24	SHIELD	–
25	SHIELD	–
26	SHIELD	–
27	SHIELD	–
28	SHIELD	–
29	SHIELD	–
30	SHIELD	–
31	GR	–

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–

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Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

Connector No.	M168
Connector Name	WIRE TO WIRE
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
22	W	–
23	G	–
28	B	–
29	SHIELD	–
30	R	–
31	G	–
32	W	–

Connector No.	M170
Connector Name	JOINT CONNECTOR-M09
Connector Color	WHITE

H.S.

11	10	9	8	7	6	5	4	3	2	1
22	21	20	19	18	17	16	15	14	13	12
33	32	31	30	29	28	27	26	25	24	23

Terminal No.	Color of Wire	Signal Name
6	BR	–
7	SHIELD	–
8	SHIELD	–
9	SHIELD	–
10	SHIELD	–

Connector No.	M171
Connector Name	JOINT CONNECTOR-M10
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	P	–
3	P	–
4	P	–

Connector No.	M172
Connector Name	JOINT CONNECTOR-M11
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	W	–
3	W	–
4	W	–

Connector No.	M173
Connector Name	JOINT CONNECTOR-M12
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	G	–
3	G	–
4	G	–

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Connector No.	M174
Connector Name	JOINT CONNECTOR-M13
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	W	–
3	W	–
4	W	–

Connector No.	M175
Connector Name	JOINT CONNECTOR-M22
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	Y	–
3	Y	–

Terminal No.	Color of Wire	Signal Name
4	Y	–
5	Y	–
6	Y	–
7	Y	–
8	Y	–
9	Y	–
29	P	–
31	P	–
32	P	–

Connector No.	M176
Connector Name	JOINT CONNECTOR-M56
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	SB	–
3	SB	–
4	SB	–

Connector No.	M177
Connector Name	JOINT CONNECTOR-M57
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	LG	–
3	LG	–
4	LG	–

Connector No.	M178
Connector Name	JOINT CONNECTOR-M58
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	SB	–
3	SB	–

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Connector No.	M179
Connector Name	JOINT CONNECTOR-M59
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	LG	–
3	LG	–

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
2	Y	–
3	V	–

Connector No.	M202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
13	B	–

Connector No.	M205
Connector Name	FRONT AUXILIARY INPUT JACKS
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	AUX AUDIO RH+
2	B	AUX AUDIO GND
3	W	AUX AUDIO LH+
7	W	AUX VIDEO+
8	B	AUX VIDEO-

Connector No.	M208
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	SHIELD	–
3	B	–
4	W	–
5	SB	–
6	G	–
7	R	–
8	SHIELD	–
9	W	–
10	B	–
11	V	–
12	G	–
13	R	–
14	SHIELD	–
15	W	–
16	V	–
17	SHIELD	–
18	B	–
19	R	–
20	W	–
21	L	–
22	G	–
23	R	–
24	SHIELD	–
25	W	–
26	B	–
27	L	–
28	G	–
29	R	–
30	SHIELD	–
31	W	–
32	B	–

ABNIA3541GB

Connector No.	M209
Connector Name	USB INTERFACE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–
3	R	–
4	L	–
5	SHIELD	–

Connector No.	M210
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	SHIELD	–
2	W	–
3	G	–
4	R	–
6	L	–

Connector No.	M214
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–
2	R	–
3	B	–
4	SHIELD	–
5	W	–
6	B	–
7	SHIELD	–
8	V	–
9	Y	–

Terminal No.	Color of Wire	Signal Name
5	W	–
6	B	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	W	–
12	B	–
13	L	–
14	G	–
15	R	–
16	SHIELD	–
17	W	–

Terminal No.	Color of Wire	Signal Name
18	B	–
19	L	–
20	G	–
21	R	–
22	SHIELD	–
23	W	–
24	B	–

Connector No.	M215
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	G	–
3	R	–
4	SHIELD	–

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Connector No.	M216
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

Terminal No.	Color of Wire	Signal Name
3	B	–
9	B	–

Connector No.	M217
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
13	SHIELD	–
14	B	–
15	R	–
16	W	–
30	SHIELD	–
31	B	–
32	W	–

Connector No.	M230
Connector Name	JOINT CONNECTOR-M01
Connector Color	WHITE

H.S.

6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	B	–
3	SHIELD	–
4	SHIELD	–

Connector No.	M251
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

Terminal No.	Color of Wire	Signal Name
1	B	–
2	Y	–
3	V	–

ABNIA3543GB

Connector No.	M257
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
13	B	–

Terminal No.	Color of Wire	Signal Name
16	W	–
17	R	–
18	BG	–
19	G	–
20	B	–
21	SHIELD	–
22	W	–
23	SHIELD	–
24	W	–
25	G	–
26	B	–
27	R	–
28	L	–
29	P	–
30	W	–
31	G	–
32	B	–
33	R	–
34	–	–
35	SHIELD	–
36	–	–
37	–	–
38	V	–
39	B	–
40	Y	–

Connector No.	M254
Connector Name	REAR AUXILIARY INPUT JACKS
Connector Color	WHITE

H.S.

2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39

Terminal No.	Color of Wire	Signal Name
1	W	–
2	B	–
3	B	–
4	R	–
5	B	–
6	–	–
7	–	–
8	–	–
9	SHIELD	–
10	–	–
11	R	–
12	–	–
13	G	–
14	B	–
15	V	–

ABNIA3544GB

Connector No.	M259
Connector Name	WIRE TO WIRE
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
2	SHIELD	–
3	B	–
4	W	–
5	BG	–
6	G	–
7	R	–
8	SHIELD	–
9	W	–
10	B	–
11	V	–
12	G	–
13	R	–

Terminal No.	Color of Wire	Signal Name
14	SHIELD	–
15	W	–
16	B	–
17	SHIELD	–
18	R	–
19	B	–
20	W	–
21	L	–
22	G	–
23	R	–
24	SHIELD	–
25	W	–
26	B	–
27	P	–
28	G	–
29	R	–
30	SHIELD	–
31	W	–
32	B	–

Connector No.	M500
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
2	B	–
3	B	–

Connector No.	M503
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M501
Connector Name	ANTENNA BASE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M502
Connector Name	ANTENNA BASE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
2	B	–

ABNIA3545GB

Connector No.	M504
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M505
Connector Name	GLASS ANTENNA (FM SUB)
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M509
Connector Name	WIRE TO WIRE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	E22
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	B	–
3	R	–
5	P	–

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	R	–
8	SHIELD	–
13	R	–
14	B	–
15	G	–
16	SHIELD	–
17	W	–

Connector No.	E33
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	G	–

ABNIA3546GB

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
15	GR	–
17	B	–

Connector No.	E52
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3G	P	–
16G	R	–
17G	B	–
18G	SHIELD	–
22G	B	–
23G	SHIELD	–
25G	W	–
26G	SHIELD	–
27G	W	–
28G	R	–
29G	B	–
30G	G	–
32G	LG	–
50G	G	–

Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	L	–
3	B	–
4	SHIELD	–
5	B	–
6	R	–
8	SHIELD	–
13	R	–
14	B	–
15	G	–
16	SHIELD	–
17	W	–

ABNIA3547GB

Connector No.	E211
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–

Connector No.	E212
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

Connector No.	E226
Connector Name	FRONT CAMERA
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–
3	G	–
4	SHIELD	–
6	W	–

Connector No.	E301
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	P	–

Connector No.	E302
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	P	–

Connector No.	E307
Connector Name	FRONT SONAR SENSOR LH OUTER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

ABNIA3548GB

Connector No.	E308
Connector Name	FRONT SONAR SENSOR RH OUTER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

Connector No.	B1
Connector Name	REAR SIDE SPEAKER LH
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	R	– (WITH REAR ENTERTAINMENT SYSTEM)
3	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
4	SHIELD	– (WITH REAR ENTERTAINMENT SYSTEM)
4	R	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
5	W	– (WITH REAR ENTERTAINMENT SYSTEM)
5	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	V	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	V	– (WITH REAR ENTERTAINMENT SYSTEM)
7	W	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
8	G	– (WITH REAR ENTERTAINMENT SYSTEM)
8	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	B	– (WITH REAR ENTERTAINMENT SYSTEM)
9	SHIELD	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
10	SHIELD	–
11	R	– (WITH REAR ENTERTAINMENT SYSTEM)
11	B	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
12	W	–
13	SB	–
14	SB	–
15	LG	–

ABNIA3549GB

Terminal No.	Color of Wire	Signal Name
15	SHIELD	
16	L	–
17	P	–
19	BR	–
20	–	–
21	LG	–
22	SB	–
24	SB	–

Terminal No.	Color of Wire	Signal Name
6	SB	–
7	L	–
9	LG	–
10	SB	–
13	B	–
14	R	–

Terminal No.	Color of Wire	Signal Name
13	–	–
14	R	–
15	G	–
16	B	–
17	W	–
18	V	–
19	V	–
20	B	–
21	G	–
22	W	–
23	R	–
24	–	–
25	–	–
26	–	–
27	W	–
28	B	–
29	SHIELD	–
30	SHIELD	–
31	P	–
32	L	–

Connector No.	B23
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
1	W	–
2	G	–
3	SHIELD	–
4	P	–

Connector No.	B24
Connector Name	VIDEO DISTRIBUTOR
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	B	–
2	V	–
3	B	–
4	W	–
5	BR	–
6	L	–
7	SB	–
8	BR	–
9	SB	–
10	L	–
11	–	–
12	–	–

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Connector No.	B25
Connector Name	VIDEO DISTRIBUTOR
Connector Color	WHITE

H.S.

34	36	38	40	42	44	46	48	50	52	54	56
33	35	37	39	41	43	45	47	49	51	53	55

Terminal No.	Color of Wire	Signal Name
33	W	–
34	B	–
35	SHIELD	–
36	–	–
37	–	–
38	–	–
39	W	–
40	B	–

Connector No.	B41
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
1	R	–
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	W	–
7	SHIELD	–
8	B	–

Terminal No.	Color of Wire	Signal Name
41	SHIELD	–
42	–	–
43	–	–
44	–	–
45	W	–
46	R	–
47	B	–
48	G	–
49	SHIELD	–
50	–	–
51	–	–
52	–	–
53	SHIELD	–
54	B	–
55	R	–
56	W	–

Terminal No.	Color of Wire	Signal Name
17	V	–
18	W	–
19	B	–
20	W	–
21	SHIELD	–
22	W	–
23	R	–
24	SHIELD	–
25	B	–
26	G	–
27	W	–
28	R	–
29	G	–
30	SHIELD	–
31	B	–

Connector No.	B35
Connector Name	SONAR BUZZER
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	P	–
3	V	–

Connector No.	B43
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	P	–

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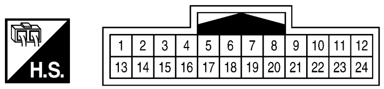
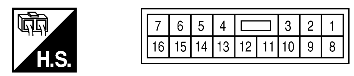
Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Color	WHITE



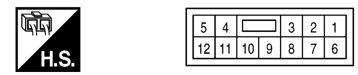
Terminal No.	Color of Wire	Signal Name
13	W	–
14	R	–
15	G	–
16	SHIELD	–
17	B	–

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



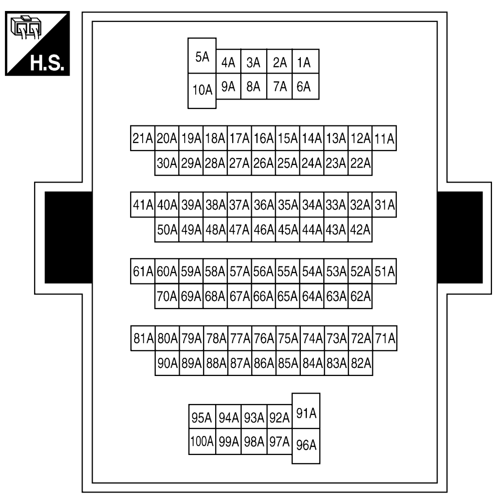
Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–
11	P	–
12	R	–
13	SHIELD	–
14	B	–
15	W	–
16	W	–

Connector No.	B51
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	R	–
12	P	–

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
17A	W	–
18A	B	–
19A	SHIELD	–
20A	W	–
21A	SHIELD	–
23A	W	–
24A	B	–
25A	SHIELD	–
26A	W	–
27A	B	–
28A	SHIELD	–
30A	B	–
74A	P	–
75A	V	–

Connector No.	B73
Connector Name	SUBWOOFER
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
4	W	–
5	B	–
6	G	–

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Connector No.	B75
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	LG	–
2	SB	–
3	L	–

Terminal No.	Color of Wire	Signal Name
4	SB	–
5	BR	–
6	SHIELD	–
7	W	–
8	B	–
9	V	–
10	W	–
11	B	–
12	G	–
13	R	–
14	SHIELD	–

Connector No.	B77
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
17	W	–
18	B	–
19	SHIELD	–
21	B	–
22	B	–
23	B	–
24	W	–
25	B	–
26	SHIELD	–
27	B	–
28	B	–
29	B	–

Connector No.	B101
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
5	Y	– (WITH REAR ENTERTAINMENT SYSTEM)
5	Y	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
6	B	– (WITH REAR ENTERTAINMENT SYSTEM)
6	P	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
7	W	– (WITH REAR ENTERTAINMENT SYSTEM)
7	LG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)

Terminal No.	Color of Wire	Signal Name
8	R	– (WITH REAR ENTERTAINMENT SYSTEM)
8	BG	– (WITHOUT REAR ENTERTAINMENT SYSTEM)
9	SHIELD	–
10	G	–
11	SB	–

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Connector No.	B107
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
6	B	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	B	–
12	W	–

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
3	R	–
4	LG	–
5	Y	–
6	P	–
7	R	–
8	G	–
9	W	–
10	G	–
13	W	–
14	P	–
15	G	–
16	R	–

Connector No.	B129
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN

H.S.

54	53		52		51		50
49	48	47	46	45	44	43	42	41

Terminal No.	Color of Wire	Signal Name
41	R	–
42	G	–
43	G	–
44	W	–
45	G	–
46	W	–
47	B	–
48	G	–
49	W	–
50	LG	–
51	Y	–
52	B	–
53	W	–
54	G	–

Connector No.	B130
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN

H.S.

77	76	75	74	73		72	71	70	69	68
67	66	65	64	63	62	61	60	59	58	57	56	55

Terminal No.	Color of Wire	Signal Name
55	R	–
56	B	–
57	W	–
58	G	–
59	R	–
60	W	–
61	SHIELD	–
62	W	–
63	W	–
64	B	–
65	W	–
66	B	–
67	–	–
68	P	–
69	P	–
70	R	–
71	W	–
72	P	–
73	B	–
74	W	–
75	B	–
76	W	–
77	–	–

ABNIA3553GB

Connector No.	B136
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	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
9	B	–
10	W	–
11	SHIELD	–
12	B	–
13	W	–
14	SHIELD	–
15	B	–
16	W	–
17	SHIELD	–
18	W	–
19	B	–
20	W	–
21	B	–
22	W	–
23	SHIELD	–

Connector No.	B137
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
1	W	–
2	G	–
3	SHIELD	–
4	Y	–
6	BR	–
7	LG	–
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	O	–
17	SB	–
19	SB	–
20	SHIELD	–
21	LG	–
22	SB	–
24	Y	–

Connector No.	B139
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
11	W	
12	G	

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Terminal No.	Color of Wire	Signal Name
7	Y	–
8	O	–
9	V	–
10	B	–
11	W	–
12	G	–
13	R	–
14	SHIELD	–

Connector No.	B145
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	SB	–
3	SB	–
4	L	–
5	BR	–
6	SHIELD	–

Terminal No.	Color of Wire	Signal Name
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	L	–
17	P	–
19	BR	–
20	–	–
21	LG	–
22	SB	–
24	SB	–

Connector No.	B140
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

Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–
11	P	–
12	R	–
13	SHIELD	–
14	W	–
15	B	–
16	W	–

Connector No.	B201
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
1	W	–
2	G	–
3	SHIELD	–
4	P	–
6	SB	–
7	L	–

Connector No.	B153
Connector Name	REAR SIDE SPEAKER RH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

ABNIA3590GB

Connector No.	B202
Connector Name	HEADREST DISPLAY UNIT (DRIVER SEAT)
Connector Color	

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	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	P	REAR 1 COMP -
5	–	–
6	SB	CONT GND
7	L	AUX REQ. OUT
8	–	–
9	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	–	–
12	B	GND
13	B	REAR 1 HP LH+
14	R	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	L	REAR 1 COMP+
17	P	AV GND
18	–	–
19	BR	ACC DET. IN
20	–	–
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	–	–
24	SB	BAT

Connector No.	B301
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
1	W	–
2	G	–
3	SHIELD	–
4	Y	–
6	BR	–
7	LG	–
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	O	–
17	SB	–
19	SB	–
20	SHIELD	–
21	LG	–
22	SB	–
24	Y	–

Connector No.	B302
Connector Name	HEADREST DISPLAY UNIT (PASSENGER SEAT)
Connector Color	

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	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	Y	REAR 1 COMP -
5	–	–
6	BR	CONT GND
7	LG	AUX REQ. OUT
8	–	–
9	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	–	–
12	B	GND
13	B	REAR 1 HP LH+
14	R	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	O	REAR 1 COMP+
17	SB	AV GND
18	–	–
19	SB	ACC DET. IN
20	SHIELD	SHIELD M-CAN
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	–	–
24	Y	BAT

ABNIA3591GB

Connector No.	B452
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
2	P	–
3	G	–
4	L	–
5	Y	–
8	L	–
9	W	–
10	P	–
11	G	–

Connector No.	B455
Connector Name	REAR SONAR SENSOR LH OUTER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

Connector No.	B456
Connector Name	REAR SONAR SENSOR RH OUTER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	W	–

Connector No.	B457
Connector Name	REAR SONAR LH INNER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	Y	–

Connector No.	B458
Connector Name	REAR SONAR SENSOR RH INNER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	B	–
13	W	–
14	B	–
15	SHIELD	–
16	P	–
17	BG	–
24	W	–

ABNIA3592GB

Connector No.	R11
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
1	G	–
2	R	–
3	W	–
4	B	–
5	SHIELD	–
6	B	–
6	W	–

Connector No.	R101
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
1	V	–
2	R	–
3	G	–
4	P	–
5	GR	–
6	L	–
7	R	–

Connector No.	R105
Connector Name	TELEMATICS SWITCH
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	V	–
2	G	–
3	P	–
7	R	–

Connector No.	R109
Connector Name	MICROPHONE
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	R	–
3	GR	–
4	L	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8	9	10
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Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

Connector No.	D3
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	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
22	V	–
23	LG	–
28	G	–
29	SHIELD	–
30	R	–
31	B	–
32	W	–

AANIA0740GB

Connector No.	D6
Connector Name	DOOR MIRROR LH (WITH AUTOMATIC DRIVE POSITIONER)
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
8	LG	–
9	Y	–

Connector No.	D12
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

Connector No.	D20
Connector Name	DOOR MIRROR LH
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
5	R	–
6	W	–
16	G	–
17	SHIELD	–
18	B	–

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	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
1	G	–
2	SHIELD	–
3	R	–
4	B	–
5	W	–

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8	9	10
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Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–

Connector No.	D112
Connector Name	FRONT DOOR SPEAKER RH
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

AANIA0741GB

Connector No.	D113
Connector Name	DOOR MIRROR RH
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
5	R	–
6	W	–
16	G	–
17	SHIELD	–
18	B	–

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5
6	7	8	9	10	11	12
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Terminal No.	Color of Wire	Signal Name
11	Y	–
12	LG	–

Connector No.	D207
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	Y	–

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5
6	7	8	9	10	11	12
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Terminal No.	Color of Wire	Signal Name
11	G	–
12	W	–

Connector No.	D307
Connector Name	REAR DOOR SPEAKER RH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

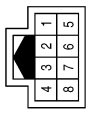
12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
13	W	–
14	B	–
15	R	–
16	SHIELD	–
17	G	–

AANIA0742GB

Connector No.	D511
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE

H.S.



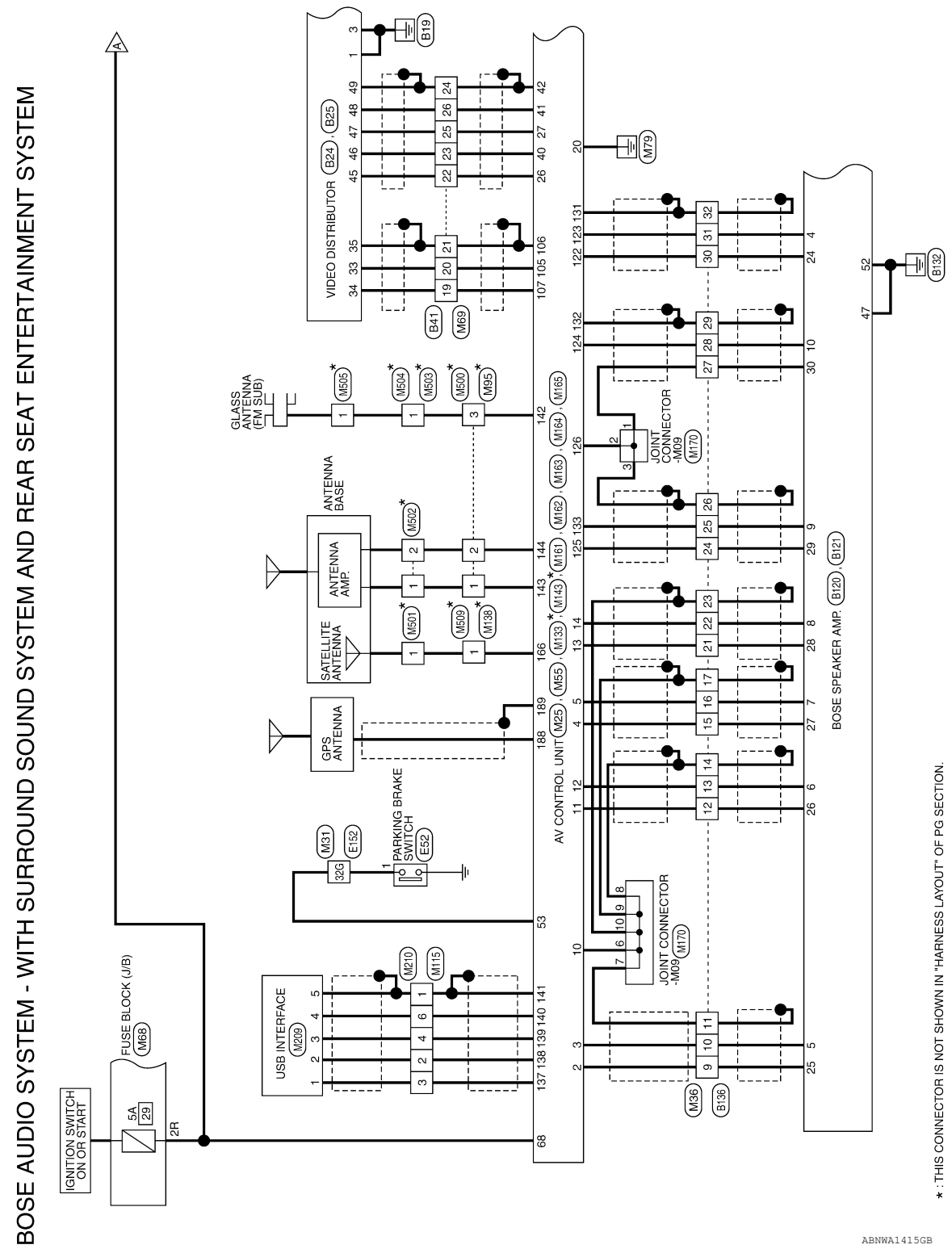
Terminal No.	Color of Wire	Signal Name
1	SHIELD	–
4	G	–
5	R	–
7	B	–
8	W	–

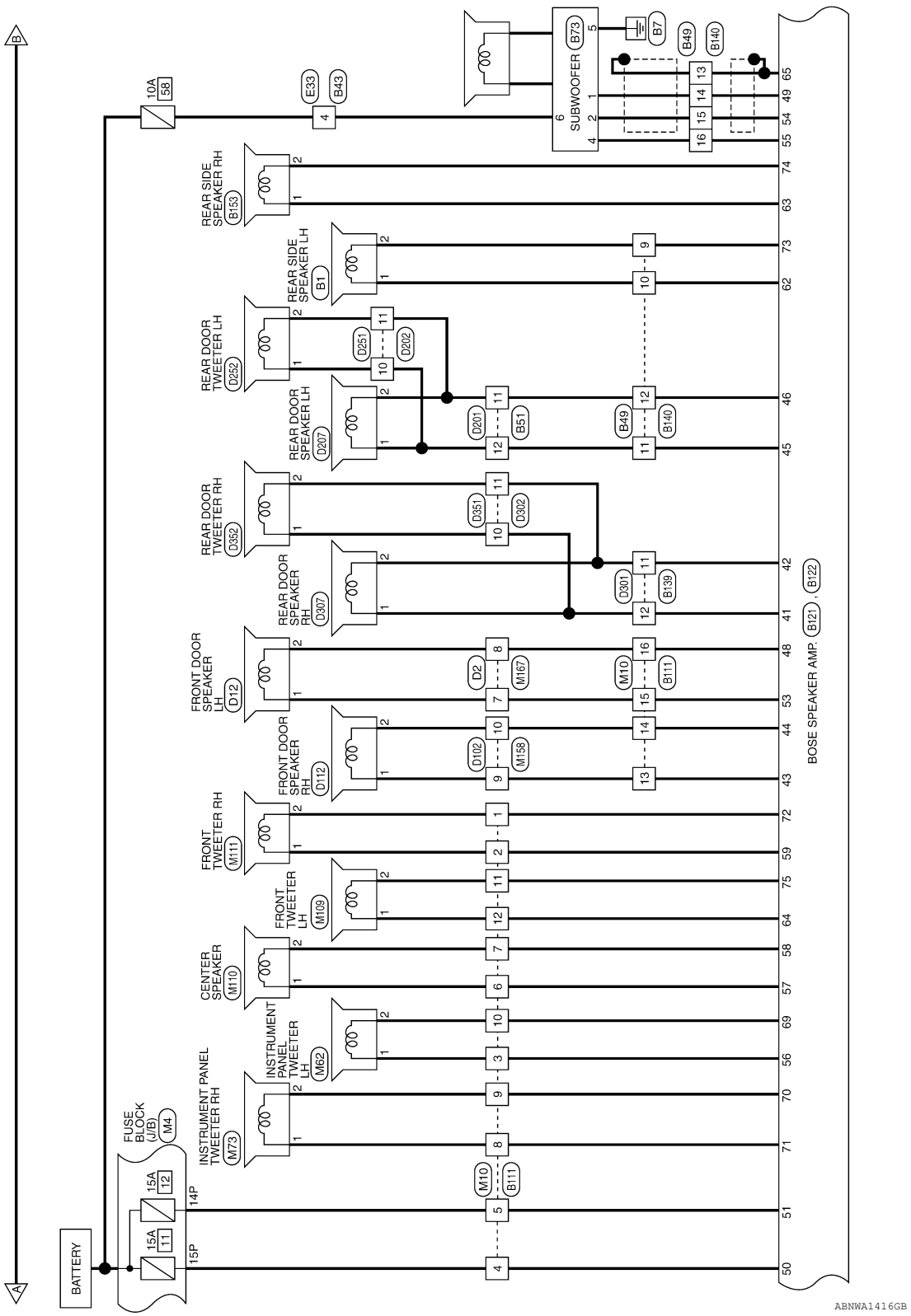
AANIA0743GB

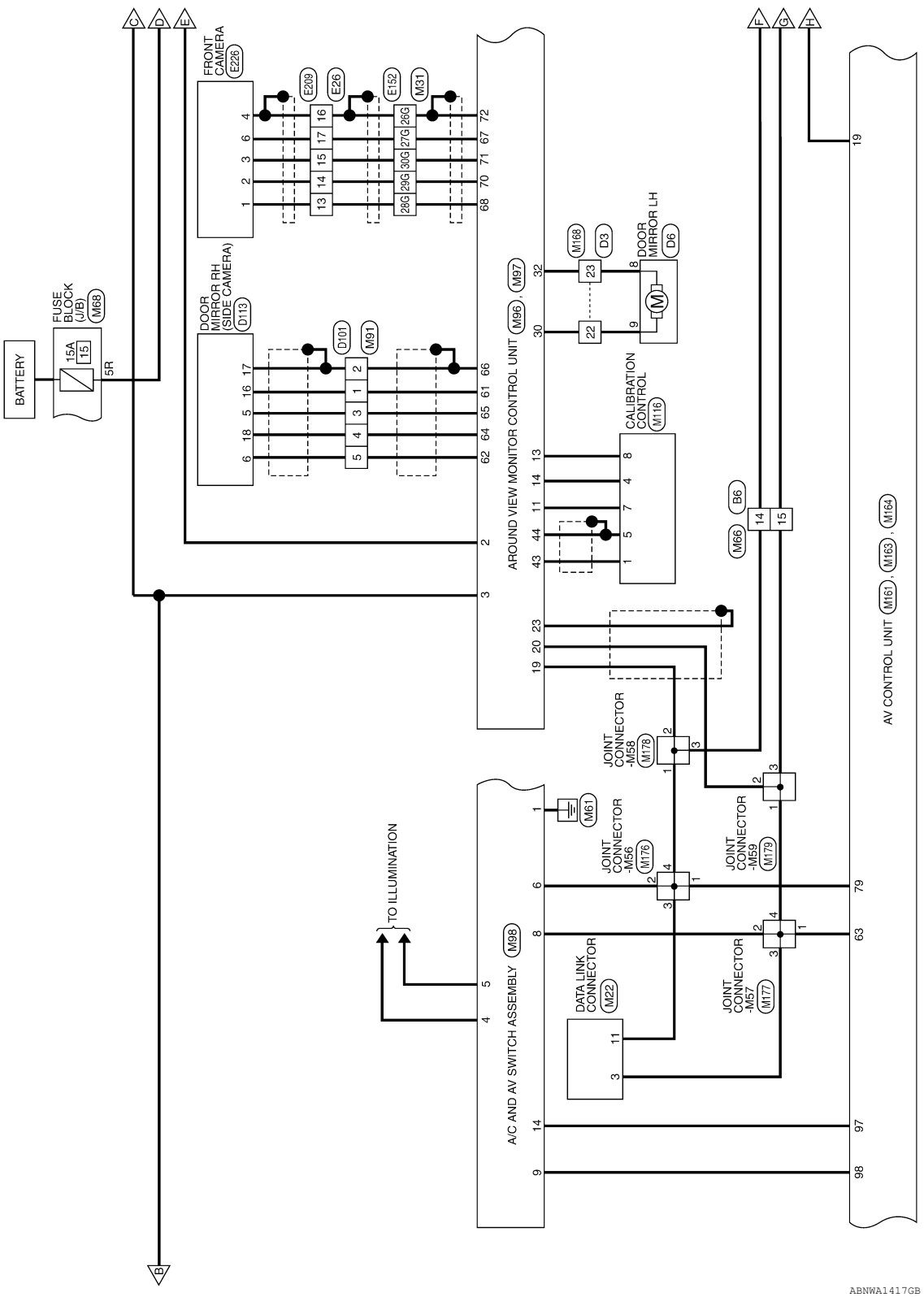
BOSE AUDIO WITH SURROUND SOUND

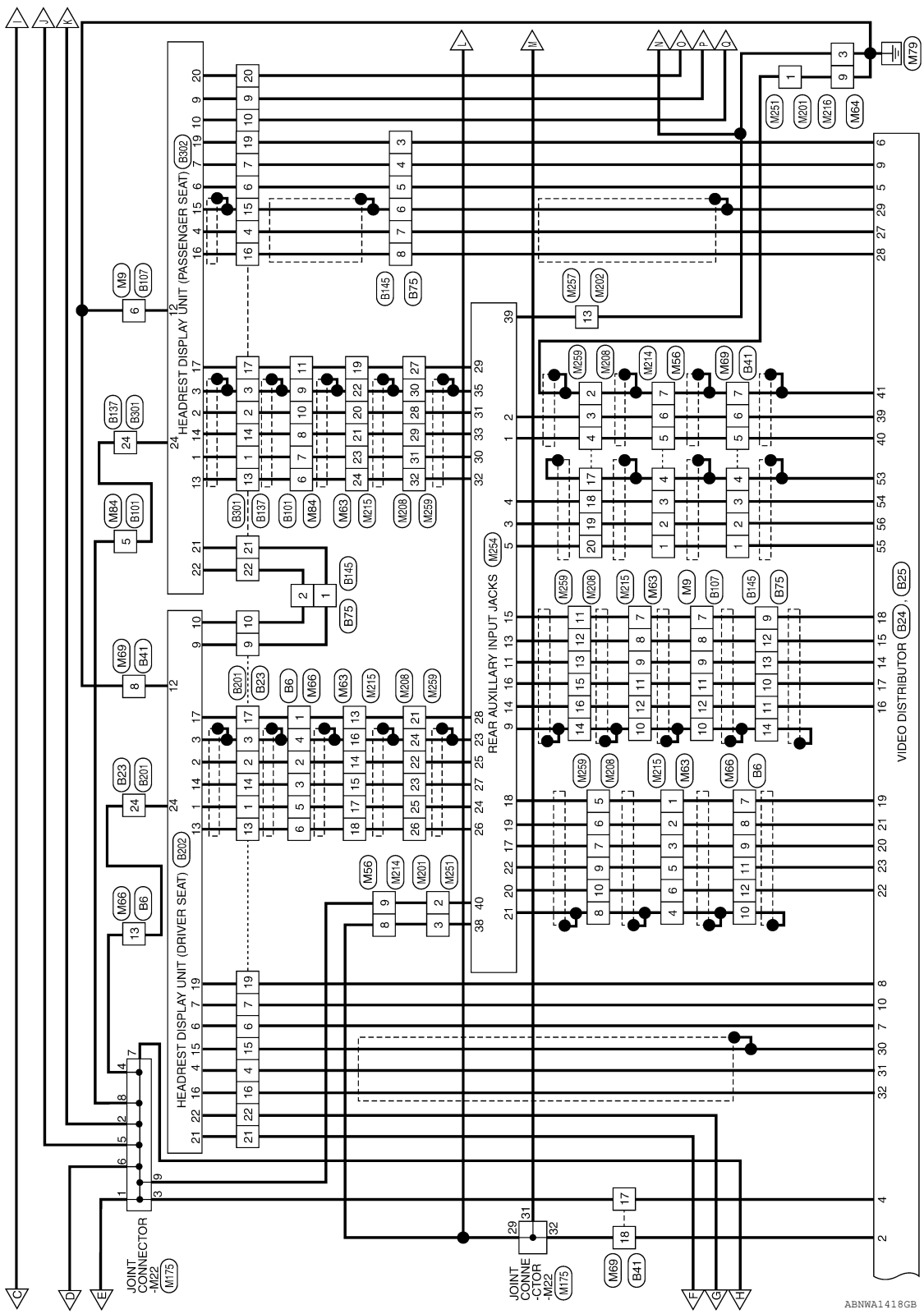
Wiring Diagram

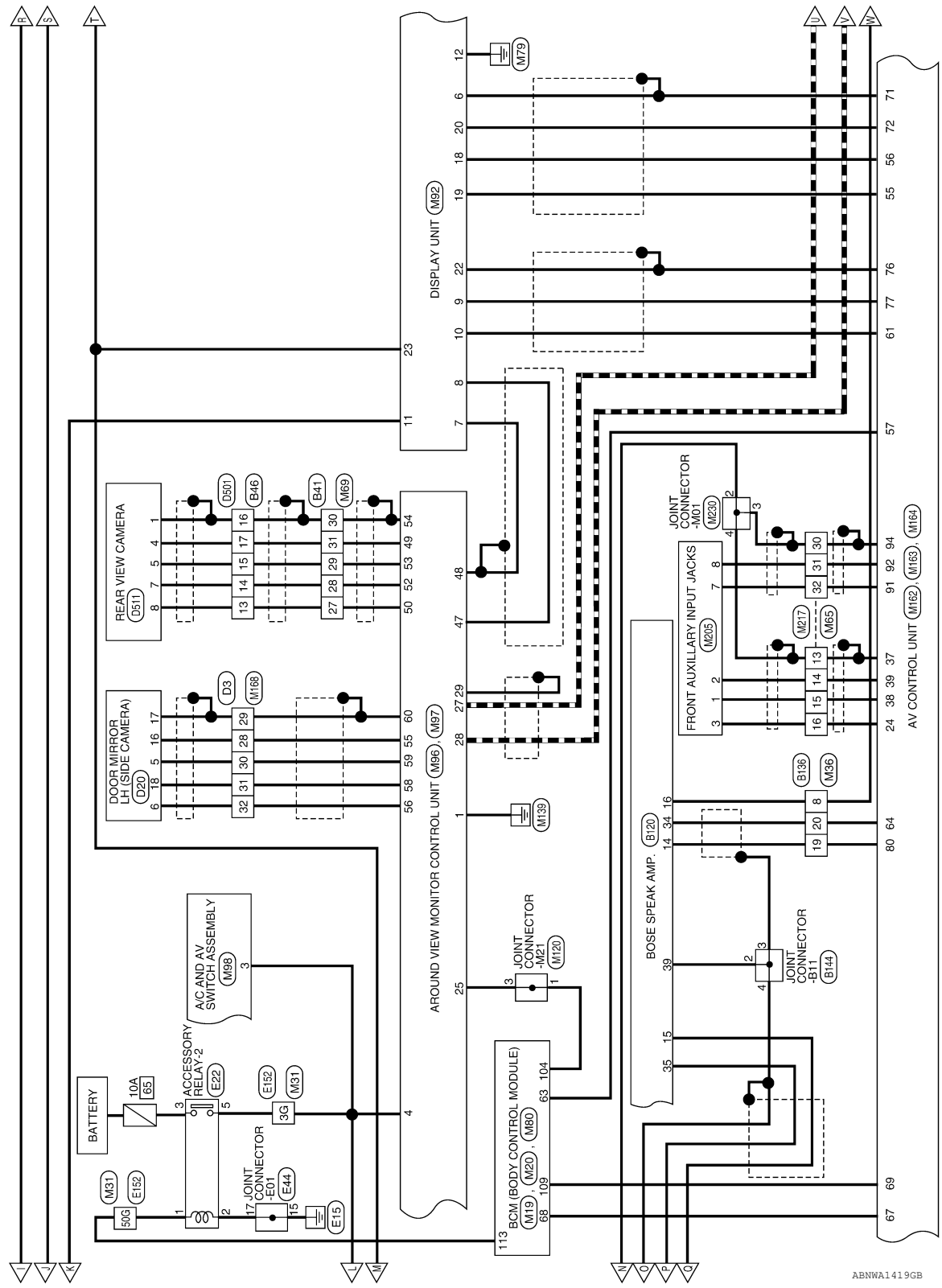
INFOID:0000000008236393

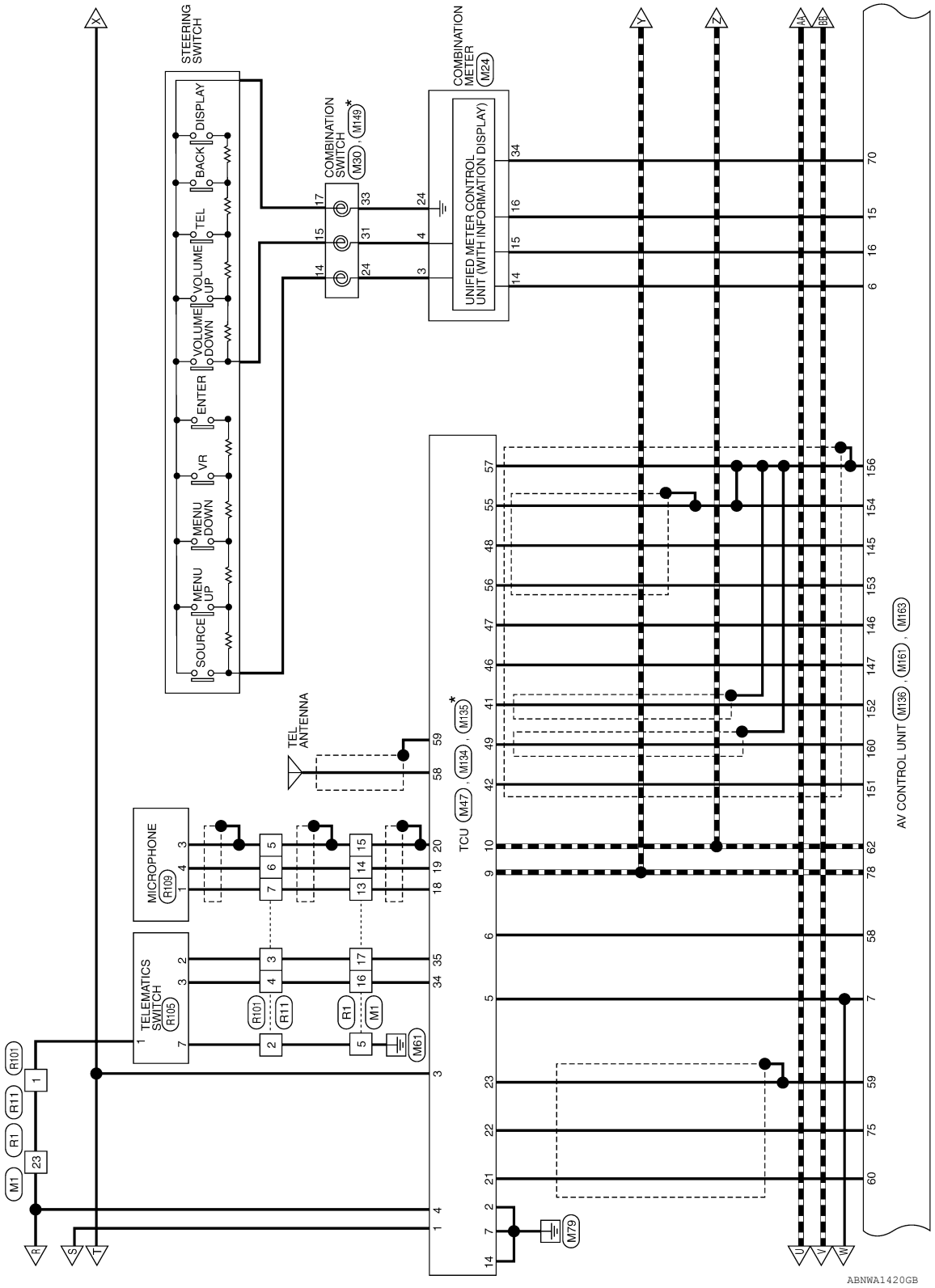


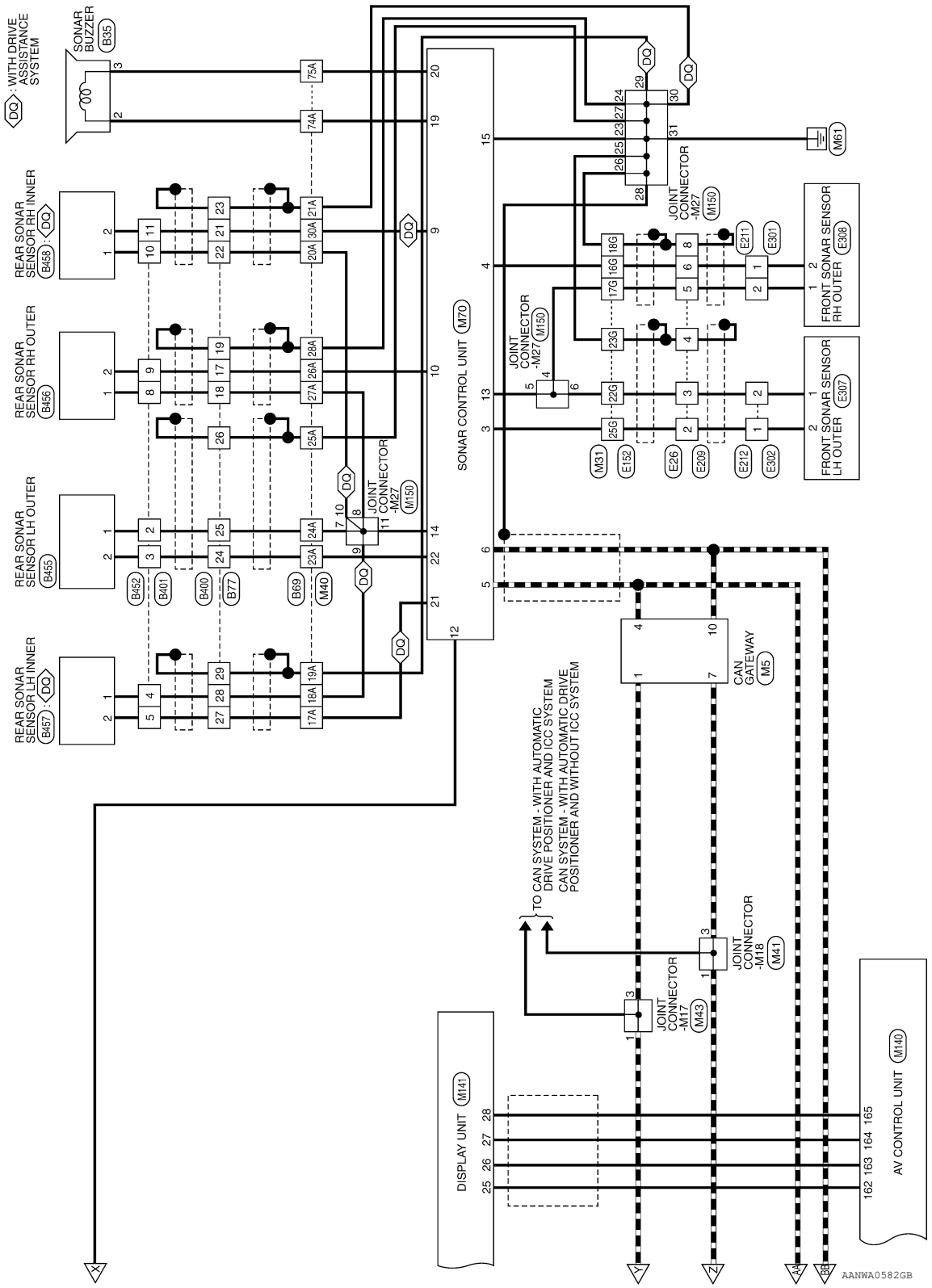

BATTERY
FUSE BLOCK (J/B) M4
10A 58
15A 12
15A 11
14P
15P
E33
B43
4
SUBWOOFER B73
B7
B49
B140
REAR SIDE SPEAKER RH B153
REAR SIDE SPEAKER LH B1
REAR DOOR TWEETER LH D252
REAR DOOR SPEAKER LH D207
REAR DOOR TWEETER RH D352
REAR DOOR SPEAKER RH D307
FRONT DOOR SPEAKER LH D12
FRONT DOOR SPEAKER RH D112
FRONT TWEETER RH M111
FRONT TWEETER LH M109
CENTER SPEAKER M110
INSTRUMENT PANEL TWEETER LH M62
INSTRUMENT PANEL TWEETER RH M73
D251
D202
D201
B51
D351
D302
D301
B139
D2
M167
D102
M158
M10
B111
BOSE SPEAKER AMP. B121, B122
ABNWA1416GB


BATTERY
FUSE BLOCK (J/B) M68
15A 15
5R
FRONT CAMERA E226
E209
E26
E152
M31
DOOR MIRROR RH (SIDE CAMERA) D113
D101
M91
AROUND VIEW MONITOR CONTROL UNIT M96, M97
DOOR MIRROR LH M168 D3 D6
CALIBRATION CONTROL M116
B6 M66
JOINT CONNECTOR -M58 M178
JOINT CONNECTOR -M56 M176
JOINT CONNECTOR -M59 M179
JOINT CONNECTOR -M57 M177
DATA LINK CONNECTOR M22
A/C AND AV SWITCH ASSEMBLY M98
M61
TO ILLUMINATION
AV CONTROL UNIT M161, M163, M164
ABNWA1417GB


HEADREST DISPLAY UNIT (PASSENGER SEAT) B302
HEADREST DISPLAY UNIT (DRIVER SEAT) B202
REAR AUXILLARY INPUT JACKS M254
VIDEO DISTRIBUTOR B24 B25
JOINT CONNECTOR -M22 M175
JOINT CONNE -CTOR -M22 M175
ABNWA1418GB

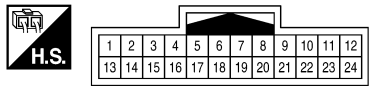

DISPLAY UNIT (M92)
M79
REAR VIEW CAMERA (D511)
D501
B46
B41
M69
DOOR MIRROR LH (SIDE CAMERA) (D20)
D3
M168
AROUND VIEW MONITOR CONTROL UNIT (M96), (M97)
M139
A/C AND AV SWITCH ASSEMBLY (M98)
JOINT CONNECTOR -M21 (M120)
BCM (BODY CONTROL MODULE) (M19), (M20), (M80)
BATTERY
10A 65
ACCESSORY RELAY-2 (E22)
E152
M31
3G
50G
JOINT CONNECTOR -E01 (E44)
E15
JOINT CONNECTOR -M01 (M230)
FRONT AUXILLARY INPUT JACKS (M205)
M217
M65
AV CONTROL UNIT (M162), (M163), (M164)
BOSE SPEAK AMP. (B120)
B136
M36
JOINT CONNECTOR -B11 (B144)
ABNWA1419GB


STEERING SWITCH
SOURCE
MENU UP
MENU DOWN
VR
ENTER
VOLUME DOWN
VOLUME UP
TEL
BACK
DISPLAY
COMBINATION SWITCH (M30) , (M149) *
COMBINATION METER (M24)
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
TEL ANTENNA
MICROPHONE (R109)
TELEMATICS SWITCH (R105)
TCU (M47) , (M134) , (M135) *
AV CONTROL UNIT (M136) , (M161) , (M163)
(M61)
(M79)
ABNWA1420GB


DQ : WITH DRIVE ASSISTANCE SYSTEM
SONAR BUZZER B35
REAR SONAR SENSOR RH INNER B458 : DQ
REAR SONAR SENSOR RH OUTER B456
REAR SONAR SENSOR LH OUTER B455
REAR SONAR SENSOR LH INNER B457 : DQ
SONAR CONTROL UNIT M70
JOINT CONNECTOR -M27 M150
JOINT CONNECTOR -M27 M150
JOINT CONNECTOR -M27 M150
FRONT SONAR SENSOR RH OUTER E308
FRONT SONAR SENSOR LH OUTER E307
M61
M31
E152
E26
E209
E212
E302
E211
E301
CAN GATEWAY M5
TO CAN SYSTEM - WITH AUTOMATIC DRIVE POSITIONER AND ICC SYSTEM
CAN SYSTEM - WITH AUTOMATIC DRIVE POSITIONER AND WITHOUT ICC SYSTEM
JOINT CONNECTOR -M18 M41
JOINT CONNECTOR -M17 M443
DISPLAY UNIT M141
AV CONTROL UNIT M140
AANWA0582GB

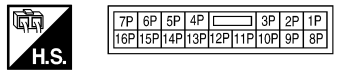
BOSE AUDIO SYSTEM CONNECTORS - WITH SURROUND SOUND SYSTEM AND REAR SEAT ENTERTAINMENT SYSTEM

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



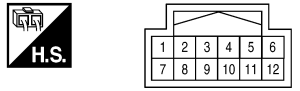
Terminal No.	Color of Wire	Signal Name
5	B	–
13	W	–
14	B	–
15	SHIELD	–
16	R	–
23	P	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



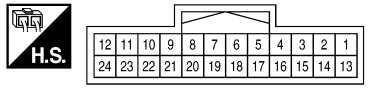
Terminal No.	Color of Wire	Signal Name
14P	Y	–
15P	L	–

Connector No.	M5
Connector Name	CAN GATEWAY
Connector Color	WHITE



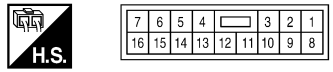
Terminal No.	Color of Wire	Signal Name
1	L	–
4	L	–
7	P	–
10	P	–

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	GR	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	W	–
12	B	–

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
3	G	–
4	L	–
5	Y	–
6	G	–
7	W	–

Terminal No.	Color of Wire	Signal Name
8	G	–
9	W	–
10	W	–
11	R	–
12	G	–
13	G	–
14	W	–
15	G	–
16	W	–

ABNIA3554GB

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
63	BG	I-KEY LINK SIGNAL
68	P	MR OUTPUT

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

92	91	90	89	88	87	86	85	84	83	82	81
104	103	102	101	100	99	98	97	96	95	94	93

Terminal No.	Color of Wire	Signal Name
104	LG	REVERSE LAMP OUT

Connector No.	M22
Connector Name	DATA LINK CONNE CTOR
Connector Color	WHITE

H.S.

9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
3	LG	–
11	SB	–

Connector No.	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
3	P	STRG SW INPUT 1
4	BG	STRG SW INPUT 2
14	G	STRG SW OUTINPUT 1
15	W	STRG SW OUTINPUT 2
16	B	STRG SW OUTPUT GND
24	R	STRG SW GND
34	GR	SPEED 8P/R

Connector No.	M25
Connector Name	AV CONTROL UNIT
Connector Color	PINK

H.S.

Terminal No.	Color of Wire	Signal Name
188	B	–
189	SHIELD	–

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

25	24	31	32
			33

Terminal No.	Color of Wire	Signal Name
24	P	AUDIO STRG SW REMOTE A
31	BG	AUDIO STRG SW REMOTE B
33	R	AUDIO STRG SW GND

ABNIA3555GB

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1A	2A	3A	4A	5A
6A	7A	8A	9A	10A

11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A
	22A	23A	24A	25A	26A	27A	28A	29A	30A	

31A	32A	33A	34A	35A	36A	37A	38A	39A	40A	41A
	42A	43A	44A	45A	46A	47A	48A	49A	50A	

51A	52A	53A	54A	55A	56A	57A	58A	59A	60A	61A
	62A	63A	64A	65A	66A	67A	68A	69A	70A	

71A	72A	73A	74A	75A	76A	77A	78A	79A	80A	81A
	82A	83A	84A	85A	86A	87A	88A	89A	90A	

91A	92A	93A	94A	95A
96A	97A	98A	99A	100A

Terminal No.	Color of Wire	Signal Name
17A	W	–
18A	B	–
19A	SHIELD	–
20A	B	–
21A	SHIELD	–
23A	W	–
24A	B	–
25A	SHIELD	–
26A	W	–
27A	B	–
28A	SHIELD	–
30A	W	–
74A	BR	–
75A	LG	–

Connector No.	M36
Connector Name	WIRE TO WIRE
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
8	G	–
9	B	–
10	W	–
11	SHIELD	–
12	W	–
13	B	–
14	SHIELD	–
15	B	–
16	W	–
17	SHIELD	–
19	LG	–
20	SB	–
21	B	–
22	W	–
23	SHIELD	–
24	W	–
25	B	–
26	SHIELD	–
27	B	–
28	W	–
29	SHIELD	–
30	B	–
31	W	–
32	SHIELD	–

Connector No.	M31
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	81G
	82G	83G	84G	85G	86G	87G	88G	89G	90G	

91G	92G	93G	94G	95G
96G	97G	98G	99G	100G

Terminal No.	Color of Wire	Signal Name
3G	P	–
16G	R	–
17G	B	–
18G	SHIELD	–
22G	B	–
23G	SHIELD	–
25G	R	–
26G	SHIELD	–
27G	B	–
28G	W	–
29G	B	–
30G	R	–
32G	G	–
50G	L	–

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Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	–
3	P	–

Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
3	L	–

Connector No.	M47
Connector Name	TCU
Connector Color	WHITE

H.S.

2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39

Terminal No.	Color of Wire	Signal Name
1	Y	B+
2	B	GND
3	P	ACC
4	LG	IGN
5	G	ACC OUT
6	G	AV ACC
7	B	GND
8	–	–
9	L	V-CAN H
10	P	V-CAN L
11	–	–
12	–	–
13	–	–
14	B	AUDIO TYPE CONFIG 1
15	–	–
16	–	–
17	–	–
18	W	MIC VCC
19	B	MIC SIG
20	SHIELD	MIC GND
21	W	MIC VCC DETECTION
22	B	DCM MIC SIG
23	SHIELD	DCM MIC GND
24	–	–
25	–	–
26	–	–
27	–	–
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	R	ECALL SW
35	W	LED A
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–

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Connector No.	M55
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
137	G	VBUS
138	W	USB GND
139	R	USB D+
140	L	USB D-
141	SHIELD	SHIELD

Connector No.	M62
Connector Name	INSTRUMENT PANEL TWEETER LH
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
2	W	–
3	B	–
4	SHIELD	–

Terminal No.	Color of Wire	Signal Name
5	B	–
6	W	–
7	SHIELD	–
8	P	–
9	Y	–

Connector No.	M63
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–
7	V	–
8	G	–
9	R	–

Terminal No.	Color of Wire	Signal Name
10	SHIELD	–
11	W	–
12	B	–
13	L	–
14	G	–
15	R	–
16	SHIELD	–
17	W	–
18	B	–
19	L	–
20	G	–
21	R	–
22	SHIELD	–
23	W	–
24	B	–

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Connector No.	M64
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
3	B	–
9	B	–

Connector No.	M65
Connector Name	WIRE TO WIRE
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
13	SHIELD	–
14	B	–
15	R	–
16	W	–
30	SHIELD	–
31	B	–
32	W	–

Connector No.	M66
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
1	L	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–

Terminal No.	Color of Wire	Signal Name
7	SB	–
8	G	–
9	R	–
10	SHIELD	–
11	W	–
12	Y	–
13	Y	–
14	SB	–
15	LG	–

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

H.S.

7R	6R	5R	4R		3R	2R	1R
16R	15R	14R	13R	12R	11R	10R	9R	8R

Terminal No.	Color of Wire	Signal Name
2R	LG	–
5R	Y	–

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Connector No.	M69
Connector Name	WIRE TO WIRE
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	R	–
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	W	–
7	SHIELD	–
8	B	–
17	Y	–
18	P	–

Terminal No.	Color of Wire	Signal Name
19	B	–
20	W	–
21	SHIELD	–
22	W	–
23	R	–
24	SHIELD	–
25	B	–
26	G	–
27	B	–
28	R	–
29	G	–
30	SHIELD	–
31	W	–

Connector No.	M70
Connector Name	SONAR CONTROL UNIT
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	–	–
2	–	–
3	R	FOL SENSOR SIGNAL
4	R	FOL SENSOR SIGNAL
5	B	V CAN-H
6	W	V CAN-L
7	–	–
8	–	–
9	W	RIR SENSOR SIGNAL
10	W	ROR SENSOR SIGNAL
11	–	–
12	LG	IGN
13	B	FR SENSOR GND
14	B	FR SENSOR GND
15	B	GND
16	–	–
17	–	–
18	–	–
19	BR	SPEAKER PWR
20	LG	SPEAKER RR SIGNAL
21	W	RIL SENSOR SIGNAL
22	W	ROL SENSOR SIGNAL
23	–	–
24	–	–

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Connector No.	M73
Connector Name	INSTRUMENT PANEL TWEETER RH
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
109	R	REVERSE SIGNAL
113	R	ACC RELAY OUT

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	Y	–
6	B	–
7	W	–
8	R	–
9	SHIELD	–
10	G	–
11	L	–

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–
2	SHIELD	–
3	G	–
4	R	–
5	B	–

Connector No.	M92
Connector Name	DISPLAY UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	–	–
4	–	–
5	–	–
6	SHIELD	FRONT COMP SHIELD
7	SHIELD	SHIELD
8	B	R CAMERA COMP

Terminal No.	Color of Wire	Signal Name
9	B	FRONT DISP IT
10	W	IT FRONT DISP
11	Y	BATT
12	B	GND
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	B	FRONT COMP +
19	W	FRONT COMP -
20	R	FRONT COMP SYNC
21	–	–
22	SHIELD	SHIELD
23	P	ACC
24		

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Terminal No.	Color of Wire	Signal Name
21	–	–
22	–	–
23	SHIELD	M-CAN GND
24	–	–
25	LG	REV
26	–	–
27	B	V-CAN1 H
28	W	V-CAN1 L
29	SHIELD	V-CAN1 GND
30	W	MIRROR SIGNAL 2
31	–	–
32	G	MIRROR SIGNAL 1
33	–	–
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–

Connector No.	M96
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE

H.S.

2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	Y	+B
3	LG	IGN
4	P	ACC
5	–	–
6	–	–
7	–	–
8	–	–
9	–	–
10	–	–
11	G	SIGNAL GND
12	–	–
13	P	CAMERA DIRECT OFF
14	BG	RX
15	–	–
16	–	–
17	–	–
18	–	–
19	B	M-CAN-1H
20	W	M-CAN-1L

Connector No.	M95
Connector Name	WIRE TO WIR E
Connector Color	GRAY

H.S.

1	2	3

Terminal No.	Color of Wire	Signal Name
1	B	–
2	B	–
3	B	–

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Connector No.	M97
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Color	WHITE

H.S.

42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72
41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71

Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	B	EXTERNAL VIDEO OUTPUT +
44	SHIELD	EXTERNAL VIDEO OUTPUT -
45	–	–
46	–	–
47	B	VIDEO OUTPUT +
48	SHIELD	VIDEO OUTPUT -
49	W	RV SERIAL SIGNAL
50	B	RV POWER
51	–	–
52	R	RV POWER GND

Terminal No.	Color of Wire	Signal Name
53	G	RV VIDEO +
54	SHIELD	RV VIDEO -
55	B	SV2 SERIAL SIGNAL
56	W	SV2 POWER
57	–	–
58	G	SV2 POWER GND
59	R	SV2 VIDEO +
60	SHIELD	SV2 POWER GND
61	W	SV1 SERIAL SIGNAL
62	B	SV1 POWER
63	–	–
64	R	SV1 POWER GND
65	G	SV1 VIDEO +
66	SHIELD	SV1 VIDEO -
67	B	FV SERIAL SIGNAL
68	W	FV POWER
69	–	–
70	G	FV POWER GND
71	R	FV VIDEO +
72	SHIELD	FV VIDEO -

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	GR	–
3	P	–
4	R	–
5	B	–
6	SB	–
8	LG	–
9	V	–
14	Y	–

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	R	–

Connector No.	M110
Connector Name	CENTER SPEAKER
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

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	B	–

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Connector No.	M115
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	SHIELD	–
2	W	–
3	G	–
4	R	–
6	L	–

Connector No.	M116
Connector Name	CALIBRATION CONTROL
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
4	BG	–
5	SHIELD	–
7	G	–
8	P	–

Connector No.	M120
Connector Name	JOINT CONNECTOR-M21
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
3	LG	–

Connector No.	M133
Connector Name	AV CONTROL UNIT
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
166	B	–

Connector No.	M134
Connector Name	TCU
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
41	W	U-VOICE
42	L	VOICE GND
43	–	–
44	–	–
45	–	–

Terminal No.	Color of Wire	Signal Name
46	–	–
47	B	VBUS
48	B	D-
49	B	D-VOICE
50	–	–
51	–	–
52	–	–
53	–	–
54	–	–
55	SHIELD	GND(USB GND)
56	L/W	D+
57	SHIELD	CONN CHASSIS GND

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Connector No.	M135
Connector Name	TCU
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
58	B	–
59	SHIELD	–

Connector No.	M136
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
145	W	U-VOICE
146	L	VOICE GND
147	–	–
148	–	–
149	–	–

Terminal No.	Color of Wire	Signal Name
150	–	–
151	B	VBUS
152	B	D-
153	B	D-VOICE
154	–	–
155	–	–
156	–	–
157	–	–
158	–	–
159	SHIELD	GND(USB GND)
160	L/W	D+
161	SHIELD	CONN CHASSIS GND

Connector No.	M138
Connector Name	WIRE TO WIRE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M140
Connector Name	AV CONTROL UNIT
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
162	SHIELD	GND
163	SHIELD	GND
164	B	GVIF-
165	B	GVIF+

Connector No.	M141
Connector Name	DISPLAY UNIT
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
25	SHIELD	GND
26	SHIELD	GND
27	B	GVIF+
28	B	GVIF-

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Connector No.	M150
Connector Name	JOINT CONNECTOR-M27
Connector Color	WHITE

H.S.

11	10	9	8	7	6	5	4	3	2	1
22	21	20	19	18	17	16	15	14	13	12
33	32	31	30	29	28	27	26	25	24	23

Terminal No.	Color of Wire	Signal Name
4	B	–
5	B	–
6	B	–
7	B	–
8	B	–
9	B	–
10	B	–
11	B	–
23	B	–
24	SHIELD	–
25	SHIELD	–
26	SHIELD	–
27	SHIELD	–
28	SHIELD	–
29	SHIELD	–
30	SHIELD	–
31	GR	–

Connector No.	M149
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
14	B	–
15	GR	–
17	BR	–

Connector No.	M143
Connector Name	AV CONTROL UNIT
Connector Color	GRAY

H.S.

142	143	144

Terminal No.	Color of Wire	Signal Name
142	B	ANT MAIN
143	B	ANT +B
144	B	ANT SUB

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Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–

Connector No.	M161
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–
2	B	FR LH PRE+
3	W	FR LH PRE-
4	B	RR LH PRE+
5	W	RR LH PRE-
6	G	STRG SW A

Terminal No.	Color of Wire	Signal Name
7	G	ACC
8	–	–
9	–	–
10	BR	SHIELD
11	W	FR RH PRE+
12	B	FR RH PRE-
13	B	RR RH PRE+
14	W	RR RH PRE-
15	B	STRG SW GND
16	W	STRG SW B
17	–	–
18	–	–
19	Y	+B
20	GR	GND

Connector No.	M162
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
21	–	–
22	–	–
23	–	–
24	R	AUX AUDIO LH
25	–	–
26	W	HP1 LH+
27	B	HP1 RH+

Terminal No.	Color of Wire	Signal Name
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	–	–
35	–	–
36	–	–
37	SHIELD	AUX SHIELD
38	W	AUX AUDIO RH

Terminal No.	Color of Wire	Signal Name
39	B	AUX AUDIO-
40	R	HP1 LH-
41	G	HP1 RH-
42	SHIELD	HP1 SHIELD
43	–	–
44	–	–
45	–	–
46	–	–
47	–	–
48	–	–

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Connector No.	M163
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

Terminal No.	Color of Wire	Signal Name
49	–	–
50	–	–
51	–	–
52	–	–
53	G	PKB_SIG
54	–	–
55	W	NAVI COMP1-
56	B	NAVI COMP1+
57	BG	RESERVE I1
58	G	RESERVE I2
59	SHIELD	MIC GND
60	W	MIC VCC
61	W	IT-DISP
62	P	V-CAN L
63	LG	M-CAN L
64	LG	M-CAN L TRM
65	–	–
66	–	–
67	P	MR OUTPUT
68	LG	IGN
69	R	REVERSE SIG
70	BG	SPEED
71	SHIELD	NAVI COMP1 SHIELD
72	R	GND
73	–	–
74	–	–
75	B	MIC SIG
76	SHIELD	DISP SHIELD
77	B	DISP-IT
78	L	V-CAN H
79	SB	M-CAN H
80	SB	M-CAN H TRM

Connector No.	M164
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

81	83	85	87	89	91	93	95	97	99	h01	h03	h05	h07	h09	h11	h13	h15	h17	h19
82	84	86	88	90	92	94	96	98	100	h02	h04	h06	h08	h10	h12	h14	h16	h18	h20

Terminal No.	Color of Wire	Signal Name
81	–	–
82	–	–
83	–	–
84	–	–
85	–	–
86	–	–
87	–	–
88	–	–
89	–	–
90	–	–
91	W	AUX VIDEO+
92	B	AUX VIDEO-
93	–	–
94	SHIELD	VIDEO SHIELD
95	–	–
96	–	–
97	Y	DVD EJECT
98	V	EJECT GND
99	–	–
100	–	–
101	–	–
102	–	–
103	–	–
104	–	–
105	W	NAVI COMP2-
106	SHIELD	NAVI COMP2 SHIELD
107	B	NAVI COMP2+
108	–	–
109	–	–
110	–	–
111	–	–
112	–	–
113	–	–
114	–	–
115	–	–
116	–	–
117	–	–
118	–	–
119	–	–
120	–	–

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Connector No.	M165
Connector Name	AV CONTROL UNIT
Connector Color	WHITE

H.S.

121	122	123	124	125	126	127	128
129	130	131	132	133	134	135	136

Terminal No.	Color of Wire	Signal Name
121	–	–
122	B	GUIDE+
123	W	GUIDE-
124	B	SUB WOOFER PRE+
125	W	CENTER PRE+
126	Y	CENTER SHIELD
127	–	–
128	–	–
129	–	–
130	–	–
131	SHIELD	GUIDE SHIELD
132	W	SUB WOOFER PRE-
133	B	CENTER PRE-
134	–	–
135	–	–
136	–	–

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

Connector No.	M168
Connector Name	WIRE TO WIRE
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
22	W	–
23	G	–
28	B	–
29	SHIELD	–
30	R	–
31	G	–
32	W	–

Connector No.	M170
Connector Name	JOINT CONNECTOR-M09
Connector Color	WHITE

H.S.

11	10	9	8	7	6	5	4	3	2	1
22	21	20	19	18	17	16	15	14	13	12
33	32	31	30	29	28	27	26	25	24	23

Terminal No.	Color of Wire	Signal Name
1	SHIELD	–
2	Y	–
3	SHIELD	–
6	BR	–
7	SHIELD	–
8	SHIELD	–
9	SHIELD	–
10	SHIELD	–

Connector No.	M175
Connector Name	JOINT CONNECTOR-M22
Connector Color	WHITE

H.S.

11	10	9	8	7	6	5	4	3	2	1
22	21	20	19	18	17	16	15	14	13	12
33	32	31	30	29	28	27	26	25	24	23

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	Y	–
3	Y	–
4	Y	–
5	Y	–
6	Y	–
7	Y	–
8	Y	–
9	Y	–
29	P	–
31	P	–
32	P	–

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Connector No.	M176
Connector Name	JOINT CONNECTOR-M56
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	SB	–
3	SB	–
4	SB	–

Connector No.	M177
Connector Name	JOINT CONNECTOR-M57
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	LG	–
3	LG	–
4	LG	–

Connector No.	M178
Connector Name	JOINT CONNECTOR-M58
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	SB	–
2	SB	–
3	SB	–

Connector No.	M179
Connector Name	JOINT CONNECTOR-59
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	LG	
2	LG	
3	LG	

Connector No.	M201
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

Terminal No.	Color of Wire	Signal Name
1	B	–
2	Y	–
3	V	–

Connector No.	M202
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
13	B	–

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Connector No.	M205
Connector Name	FRONT AUXILIARY INPUT JACKS
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	AUX AUDIO RH+
2	B	AUX AUDIO GND
3	W	AUX AUDIO LH+
7	W	AUX VIDEO+
8	B	AUX VIDEO-

Connector No.	M208
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	SHIELD	–
3	B	–
4	W	–
5	SB	–
6	G	–
7	R	–
8	SHIELD	–
9	W	–
10	B	–
11	V	–
12	G	–
13	R	–
14	SHIELD	–
15	W	–
16	B	–
17	SHIELD	–
18	B	–
19	R	–
20	W	–
21	L	–
22	G	–
23	R	–
24	SHIELD	–
25	W	–
26	B	–
27	L	–
28	G	–
29	R	–
30	SHIELD	–
31	W	–
32	B	–

Connector No.	M209
Connector Name	USB INTERFACE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–
3	R	–
4	L	–
5	SHIELD	–

Connector No.	M210
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	SHIELD	–
2	W	–
3	G	–
4	R	–
6	L	–

ABNIA3571GB

Connector No.	M214
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
1	W	–
2	R	–
3	B	–
4	SHIELD	–
5	W	–
6	B	–
7	SHIELD	–
8	V	–
9	Y	–

Connector No.	M215
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
1	SB	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	W	–
12	B	–
13	L	–
14	G	–
15	R	–
16	SHIELD	–
17	W	–
18	B	–
19	L	–
20	G	–
21	R	–
22	SHIELD	–
23	W	–
24	B	–

Connector No.	M216
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

Terminal No.	Color of Wire	Signal Name
3	B	–
9	B	–

Connector No.	M217
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
13	SHIELD	–
14	B	–
15	R	–
16	W	–
30	SHIELD	–
31	B	–
32	W	–

Connector No.	M230
Connector Name	JOINT CONNECTOR -M01
Connector Color	WHITE

H.S.

6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	B	–
3	SHIELD	–
4	SHIELD	–

ABNIA3572GB

Terminal No.	Color of Wire	Signal Name
19	G	–
20	B	–
21	SHIELD	–
22	W	–
23	SHIELD	–
24	W	–
25	G	–
26	B	–
27	R	–
28	L	–
29	P	–
30	W	–
31	G	–
32	B	–
33	R	–
34	–	–
35	SHIELD	–
36	–	–
37	–	–
38	V	–
39	B	–
40	Y	–

Connector No.	M254
Connector Name	REAR AUXILIARY INPUT JACKS
Connector Color	WHITE

H.S.

2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39

Terminal No.	Color of Wire	Signal Name
1	W	–
2	B	–
3	B	–
4	R	–
5	W	–
6	–	–
7	–	–
8	–	–
9	SHIELD	–
10	–	–
11	R	–
12	–	–
13	G	–
14	B	–
15	V	–
16	W	–
17	R	–
18	BG	–

Connector No.	M251
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	B	–
2	Y	–
3	V	–

ABNIA3573GB

Terminal No.	Color of Wire	Signal Name
16	B	–
17	SHIELD	–
18	R	–
19	B	–
20	W	–
21	L	–
22	G	–
23	R	–
24	SHIELD	–
25	W	–
26	B	–
27	P	–
28	G	–
29	R	–
30	SHIELD	–
31	W	–
32	B	–

Connector No.	M259
Connector Name	WIRE TO WIRE
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
2	SHIELD	–
3	B	–
4	W	–
5	BG	–
6	G	–
7	R	–
8	SHIELD	–
9	W	–
10	B	–
11	V	–
12	G	–
13	R	–
14	SHIELD	–
15	W	–

Connector No.	M257
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
13	B	–

ABNIA3574GB

Connector No.	M500
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
2	B	–
3	B	–

Connector No.	M501
Connector Name	ANTENNA BASE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M502
Connector Name	ANTENNA BASE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
2	B	–

Connector No.	M503
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M504
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	M505
Connector Name	GLASS ANTENNA (FM SUB)
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

ABNIA3575GB

Connector No.	M509
Connector Name	WIRE TO WIRE
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

Connector No.	E22
Connector Name	ACCESSORY RELAY-2
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	B	–
3	R	–
5	P	–

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	R	–
8	SHIELD	–
13	R	–
14	B	–
15	G	–
16	SHIELD	–
17	W	

Connector No.	E33
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	G	–

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
15	GR	–
17	B	–

Connector No.	E52
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–

ABNIA3576GB

Connector No.	E152
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		

81G	80G	79G	78G	77G	76G	75G	74G	73G	72G	71G
90G	89G	88G	87G	86G	85G	84G	83G	82G		

95G	94G	93G	92G	91G
100G	99G	98G	97G	96G

Terminal No.	Color of Wire	Signal Name
3G	P	–
16G	R	–
17G	B	–
18G	SHIELD	–
22G	B	–
23G	SHIELD	–
25G	W	–
26G	SHIELD	–
27G	W	–
28G	R	–
29G	B	–
30G	G	–
32G	LG	–
50G	G	–

Connector No.	E209
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
2	L	–
3	B	–
4	SHIELD	–
5	B	–
6	R	–
8	SHIELD	–
13	R	–
14	B	–
15	G	–
16	SHIELD	–
17	W	–

Connector No.	E211
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–

Connector No.	E212
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

Connector No.	E226
Connector Name	FRONT CAMERA
Connector Color	BLACK

H.S.

1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–
3	G	–
4	SHIELD	–
6	W	–

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Connector No.	E307
Connector Name	FRONT SONAR SENSOR LH OUTER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

Connector No.	E302
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	P	–

Connector No.	E301
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	P	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–
3	R	–
4	SHIELD	–
5	W	–
6	B	–
7	V	–
8	G	–
9	B	–
10	SHIELD	–
11	R	–
12	W	–
13	SB	–
14	SB	–
15	LG	–

Connector No.	B1
Connector Name	REAR SIDE SPEAKER LH
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

Connector No.	E308
Connector Name	FRONT SONAR SENSOR RH OUTER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

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Terminal No.	Color of Wire	Signal Name
18	V	–
19	V	–
20	B	–
21	G	–
22	W	–
23	R	–
24	–	–
25	–	–
26	–	–
27	W	–
28	B	–
29	SHIELD	–
30	SHIELD	–
31	P	–
32	L	–

Connector No.	B24
Connector Name	VIDEO DISTRIBUTOR
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	B	–
2	V	–
3	B	–
4	W	–
5	BR	–
6	L	–
7	SB	–
8	BR	–
9	SB	–
10	L	–
11	–	–
12	–	–
13	–	–
14	R	–
15	G	–
16	B	–
17	W	–

Connector No.	B23
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
1	W	–
2	G	–
3	SHIELD	–
4	P	–
6	SB	–
7	L	–
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	L	–
17	P	–
19	BR	–
20	–	–
21	LG	–
22	SB	–
24	SB	–

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Connector No.	B25
Connector Name	VIDEO DISTRIBUTOR
Connector Color	WHITE

H.S.

34	36	38	40	42	44	46	48	50	52	54	56
33	35	37	39	41	43	45	47	49	51	53	55

Terminal No.	Color of Wire	Signal Name
33	W	–
34	G	–
35	SHIELD	–
36	–	–
37	–	–
38	–	–
39	W	–
40	B	–

Terminal No.	Color of Wire	Signal Name
41	SHIELD	–
42	–	–
43	–	–
44	–	–
45	W	–
46	R	–
47	B	–
48	G	–
49	SHIELD	–
50	–	–
51	–	–
52	–	–
53	SHIELD	–
54	B	–
55	R	–
56	W	–

Connector No.	B35
Connector Name	SONAR BUZZER
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	P	–
3	V	–

Terminal No.	Color of Wire	Signal Name
29	G	–
30	SHIELD	–
31	B	–

Connector No.	B41
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
1	R	–
2	W	–
3	B	–
4	SHIELD	–
5	B	–
6	W	–
7	SHIELD	–
8	B	–
17	V	–
18	W	–
19	B	–
20	W	–
21	SHIELD	–
22	W	–
23	R	–
24	SHIELD	–
25	B	–
26	G	–
27	W	–
28	R	–

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Connector No.	B43
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	P	–

Connector No.	B46
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
13	W	–
14	R	–
15	G	–
16	SHIELD	–
17	B	–

Connector No.	B49
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
9	G	–
10	W	–
11	P	–
12	R	–
13	SHIELD	–
14	B	–
15	W	–
16	W	–

Connector No.	B51
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
11	R	–
12	P	–

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
17A	W	–
18A	B	–
19A	SHIELD	–
20A	W	–
21A	SHIELD	–
23A	W	–
24A	B	–
25A	SHIELD	–
26A	W	–
27A	B	–
28A	SHIELD	–
30A	B	–
74A	P	–
75A	V	–

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Terminal No.	Color of Wire	Signal Name
8	B	–
9	V	–
10	W	–
11	B	–
12	G	–
13	R	–
14	SHIELD	–

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
5	Y	–
6	B	–
7	W	–
8	R	–
9	SHIELD	–
10	G	–
11	SB	–

Connector No.	B73
Connector Name	SUBWOOFER
Connector Color	GRAY

H.S.

2	4	6
1	3	5

Terminal No.	Color of Wire	Signal Name
1	B	–
2	W	–
4	W	–
5	B	–
6	G	–

Connector No.	B75
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	LG	–
2	SB	–
3	L	–
4	SB	–
5	BR	–
6	SHIELD	–
7	W	–

Connector No.	B77
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	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
17	W	–
18	B	–
19	SHIELD	–
21	B	–
22	B	–
23	B	–
24	W	–

Terminal No.	Color of Wire	Signal Name
25	B	–
26	SHIELD	–
27	B	–
28	B	–
29	B	–

ABNIA3582GB

Connector No.	B107
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
6	B	–
7	V	–
8	G	–
9	R	–
10	SHIELD	–
11	B	–
12	W	–

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–
3	R	–
4	LG	–
5	Y	–
6	P	–
7	R	–
8	G	–
9	W	–
10	G	–
11	G	–
12	W	–
13	W	–
14	P	–
15	G	–
16	R	–

Connector No.	B120
Connector Name	BOSE SPEAKER AMP.
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
1	–	–
2	–	–
3	–	–
4	W	–
5	W	–
6	W	–
7	W	–
8	W	–
9	W	–
10	B	–
11	–	–
12	–	–
13	–	–
14	LG	–
15	LG	–
16	W	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–
21	–	–
22	–	–
23	–	–
24	B	–
25	B	–
26	B	–
27	B	–
28	B	–
29	B	–
30	W	–
31	–	–
32	–	–
33	–	–
34	SB	–
35	B/Y	–
36	–	–
37	–	–
38	–	–
39	B	–
40	–	–

ABNIA3583GB

Connector No.	B121
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN

H.S.

54	53	52	51	50
49	48	47	46	45	44	43	42	41

Terminal No.	Color of Wire	Signal Name
41	G	–
42	W	–
43	W	–
44	P	–
45	P	–
46	R	–
47	B	–
48	R	–
49	W	–
50	LG	–
51	Y	–
52	B	–
53	G	–
54	B	–

Connector No.	B122
Connector Name	BOSE SPEAKER AMP.
Connector Color	BROWN

H.S.

77	76	75	74	73	72	71	70	69	68
67	66	65	64	63	62	61	60	59	58	57	56	55

Terminal No.	Color of Wire	Signal Name
55	W	–
56	R	–
57	P	–
58	R	–
59	G	–
60	–	–
61	–	–
62	W	–
63	W	–
64	G	–
65	SHIELD	–

Terminal No.	Color of Wire	Signal Name
66	–	–
67	–	–
68	–	–
69	G	–
70	W	–
71	R	–
72	W	–
73	G	–
74	G	–
75	W	–
76	–	–
77	–	–

Connector No.	B136
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	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
8	W	–
9	B	–

Terminal No.	Color of Wire	Signal Name
10	W	–
11	SHIELD	–
12	B	–
13	W	–
14	SHIELD	–
15	B	–
16	W	–
17	SHIELD	–
19	B	–
20	W	–
21	B	–

Terminal No.	Color of Wire	Signal Name
22	W	–
23	SHIELD	–
24	B	–
25	W	–
26	SHIELD	–
27	W	–
28	B	–
29	SHIELD	–
30	B	–
31	W	–
32	SHIELD	–

ABNIA3584GB

Connector No.	B137
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
1	W	–
2	G	–
3	SHIELD	–
4	Y	–
6	BR	–
7	LG	–

Terminal No.	Color of Wire	Signal Name
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	O	–

Terminal No.	Color of Wire	Signal Name
17	SB	–
19	SB	–
20	SHIELD	–
21	LG	–
22	SB	–
24	Y	–

Connector No.	B139
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
11	W	–
12	G	–

Connector No.	B140
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

Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–
11	P	–
12	R	–
13	SHIELD	–
14	W	–
15	B	–
16	W	–

Connector No.	B144
Connector Name	JOINT CONNECTOR-B11
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
2	B	–
3	SHIELD	–
4	SHIELD	–

ABNIA3585GB

Connector No.	B145
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	SB	–
3	SB	–
4	L	–
5	BR	–
6	SHIELD	–

Terminal No.	Color of Wire	Signal Name
7	Y	–
8	O	–
9	V	–
10	B	–
11	W	–
12	G	–
13	R	–
14	SHIELD	–

Connector No.	B153
Connector Name	REAR SIDE SPEAKER RH
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–
3	SHIELD	–
4	P	–
6	SB	–
7	L	–

Terminal No.	Color of Wire	Signal Name
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	L	–
17	P	–
19	BR	–
20	–	–
21	LG	–
22	SB	–
24	SB	–

ABNIA3596GB

Connector No.	B202
Connector Name	HEADREST DISPLAY UNIT (DRIVER SEAT)
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	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	P	REAR 1 COMP -
5	–	–
6	SB	CONT GND
7	L	AUX REQ. OUT
8	–	–
9	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	–	–
12	B	GND
13	B	REAR 1 HP LH+
14	R	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	L	REAR 1 COMP+
17	P	AV GND
18	–	–
19	BR	ACC DET. IN
20	–	–
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	–	–
24	SB	BAT

Connector No.	B301
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
1	W	–
2	G	–
3	SHIELD	–
4	Y	–
6	BR	–
7	LG	–
9	LG	–
10	SB	–
13	B	–
14	R	–
15	SHIELD	–
16	O	–
17	SB	–
19	SB	–
20	SHIELD	–
21	LG	–
22	SB	–
24	Y	–

Connector No.	B302
Connector Name	HEADREST DISPLAY UNIT (PASSENGER SEAT)
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	W	REAR 1 HP LH-
2	G	REAR 1 HP LRH-
3	SHIELD	REAR 1 HP SHIELD
4	Y	REAR 1 COMP -
5	–	–
6	BR	CONT GND
7	LG	AUX REQ. OUT
8	–	–
9	LG	M-CAN 2 L
10	SB	M-CAN 2 H
11	–	–
12	B	GND
13	B	REAR 1 HP LH+
14	R	REAR 1 HP RH+
15	SHIELD	REAR 1 COMP SHIELD
16	O	REAR 1 COMP+
17	SB	AV GND
18	–	–
19	SB	ACC DET. IN
20	SHIELD	SHIELD M-CAN
21	LG	M-CAN 1 L
22	SB	M-CAN 1 H
23	–	–
24	Y	BAT

ABNIA3597GB

Connector No.	B400
Connector Name	WIRE TO WIRE
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
17	W	–
18	B	–
19	SHIELD	–
20	R	–
21	B	–

Connector No.	B401
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

1	2	3	4	5	6
7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
2	B	–
3	W	–
4	B	–
5	W	–
8	B	–
9	W	–
10	W	–
11	B	–

Terminal No.	Color of Wire	Signal Name
22	W	–
23	SHIELD	–
24	W	–
25	B	–
26	SHIELD	–
27	W	–
28	B	–
29	SHIELD	–

Connector No.	B452
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

1	2	3	4	5	6
7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
2	P	–
3	G	–
4	L	–
5	Y	–
8	L	–
9	W	–
10	P	–
11	G	–

Connector No.	B455
Connector Name	REAR SONAR SENSOR LH OUTER
Connector Color	BLACK

H.S.

3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

Connector No.	B456
Connector Name	REAR SONAR SENSOR RH OUTER
Connector Color	BLACK

H.S.

3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
2	W	–

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Connector No.	B457
Connector Name	REAR SONAR LH INNER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

Connector No.	B458
Connector Name	REAR SONAR SENSOR RH INNER
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	G	–

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	B	–
13	W	–
14	B	–
15	SHIELD	–
16	P	–
17	BG	–
24	W	–

Connector No.	R11
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	R	–
3	W	–
4	B	–
5	SHIELD	–
6	B	–
6	W	–

Connector No.	R101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	V	–
2	R	–
3	G	–
4	P	–
5	GR	–
6	L	–
7	R	–

Connector No.	R105
Connector Name	TELEMATICS SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	V	–
2	G	–
3	P	–
7	R	–

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Connector No.	R109
Connector Name	MICROPHONE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
3	GR	–
4	L	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	G	–
8	W	–

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
22	Y	–
23	LG	–
28	G	–
29	SHIELD	–
30	R	–
31	B	–
32	W	–

Connector No.	D6
Connector Name	DOOR MIRROR LH (WITH AUTOMATIC DRIVE POSITIONER)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
8	LG	–
9	Y	–

Connector No.	D12
Connector Name	FRONT DOOR SPEAKER LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

Connector No.	D20
Connector Name	DOOR MIRROR LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	R	–
6	W	–
16	G	–
17	SHIELD	–
18	B	–

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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	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
1	G	–
2	SHIELD	–
3	R	–
4	B	–
5	W	–

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8	9	10
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Terminal No.	Color of Wire	Signal Name
9	G	–
10	W	–

Connector No.	D112
Connector Name	FRONT DOOR SPEAKER RH
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	G	–
2	W	–

Connector No.	D113
Connector Name	DOOR MIRROR RH
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
5	R	–
6	W	–
16	G	–
17	SHIELD	–
18	B	–

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5
6	7	8	9	10	11	12
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Terminal No.	Color of Wire	Signal Name
11	Y	–
12	LG	–

Connector No.	D202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

5	4	3	2	1
12	11	10	9	8	7	6
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Terminal No.	Color of Wire	Signal Name
10	LG	–
11	Y	–

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Connector No.	D207
Connector Name	REAR DOOR SPEAKER LH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	Y	–

Connector No.	D251
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
10	LG	–
11	BR	–

Connector No.	D252
Connector Name	REAR DOOR TWEETER LH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	BR	–

Connector No.	D301
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
11	G	–
12	W	–

Connector No.	D302
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
10	W	–
11	G	–

Connector No.	D307
Connector Name	REAR DOOR SPEAKER RH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

AANIA0745GB

Connector No.	D351
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
10	LG	–
11	BR	–

Connector No.	D352
Connector Name	REAR DOOR TWEETER RH
Connector Color	BROWN

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	BR	–

Connector No.	D501
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
13	W	–
14	B	–
15	R	–
16	SHIELD	–
17	G	–

Connector No.	D511
Connector Name	REAR VIEW CAMERA
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	SHIELD	–
4	G	–
5	R	–
7	B	–
8	W	–

AANIA0746GB

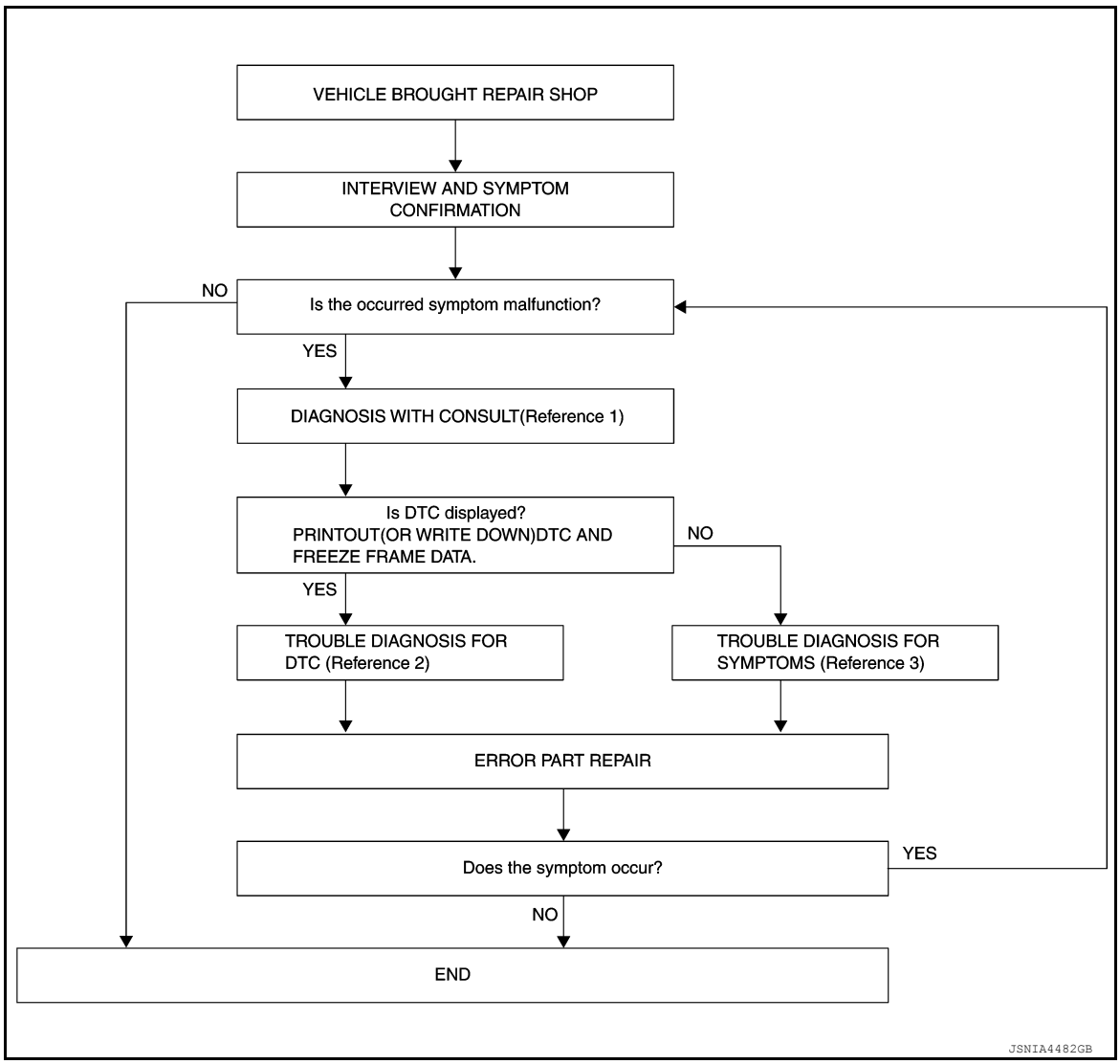
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000008233676

OVERALL SEQUENCE



- Reference 1··· Refer to AV-705, "CONSULT Function".
- Reference 2··· Refer to AV-708, "DTC Index".
- Reference 3··· Refer to AV-823, "Symptom Table".

DETAILED FLOW

1. INTERVIEW AND SYMPTOM CONFIRMATION

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.

Is the occurred symptom malfunction?

YES >> GO TO 2.
NO >> Inspection End.

2. DIAGNOSIS WITH CONSULT

1. Connect CONSULT and perform a self-diagnosis for “TELEMATICS”. Refer to AV-705, "CONSULT Function".
2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Is DTC displayed?

YES >> GO TO 4.
NO >> GO TO 5.

3. TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC Index. Refer to AV-708, "DTC Index".

>> GO TO 6.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the symptom table. Refer to AV-823, "Symptom Table".

>> GO TO 6.

5. ERROR PART REPAIR

1. Repair or replace the identified malfunctioning parts.
2. Perform a self-diagnosis for “TELEMATICS” with CONSULT.
3. Check that the symptom does not occur.

Does the symptom occur?

YES >> GO TO 1.
NO >> Inspection End.

INSPECTION AND ADJUSTMENT
ADDITIONAL SERVICE WHEN REPLACING TCU

ADDITIONAL SERVICE WHEN REPLACING TCU : Description

INFOID:0000000008233680

When TCU is replaced, TCU activation operation is required.

Preparation before activation operation
- Subscribe to telematics service
- Preregister user ID and password (can be performed from owner homepage)

ADDITIONAL SERVICE WHEN REPLACING TCU : Work Procedure

INFOID:0000000008233681

1.READING OF VIN DATA

CONSULT work support
Select SAVE VIN DATA, then START on SAVE VIN DATA screen to save the VIN data stored in replaced TCU in CONSULT. If it cannot be saved, writing operation must be performed manually.

>> GO TO 2.

2.TCU REPLACEMENT

Replace TCU. Refer to AV-827, "Removal and Installation".

>> GO TO 3.

3.NOTICE TO CARRIER ATX HELP DESK

Contact ATX help desk to notice the termination of replaced TCU and connection of new TCU. (VIN is required)

Can ID data be saved to CONSULT at 1st step?

YES >> GO TO 4.
NO >> GO TO 5.

4.AUTOMATIC WRITING OF VIN DATA TO TCU

CONSULT work support
Select WRITE VIN DATA, then START at WRITE SAVED VIN DATA screen to write the VIN data saved in CONSULT into new TCU.

>> GO TO 6.

5.MANUAL WRITING OF VIN DATA TO TCU

CONSULT work support
Select VIN REGISTRATION, WRITE VIN DATA then START on changing screen to write the VIN data saved into new TCU.

>> GO TO 6.

6.TCU ACTIVATION

CONSULT work support
1. Wait for 5 seconds or more after turning the power switch ON.
2. Touch TELEMATICS on the CONSULT screen.
3. After performing System Call of CONSULT, touch the Work support tab.
4. On the work support screen of CONSULT, select TCU ACTIVATE SETTING and touch Start.
5. On the TCU ACTIVATE SETTING screen, touch Start to set to ON. Touch End.
6. Exit from CONSULT.
7. Turn the power switch OFF.
8. Wait (at least 10 seconds) until the power switch indicator turns OFF to shut down TCU.

>> WORK END.

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Logic

INFOID:0000000008233685

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1000]	TCU is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:0000000008233686

1.PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Perform Self Diagnostic Result for TELEMATICS.

Is CAN COMM CIRCUIT displayed?

YES >> Refer to LAN-22, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-53, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000008233687

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

U1A00 TCU

DTC Logic

INFOID:0000000008233688

CONSULT Display	DTC Detection Condition	Possible Cause
ACC NO CONN [U1A00]	No input of ACC signal	• ACC power circuit. • TCU.

Diagnosis Procedure

INFOID:0000000008233689

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1.CHECK ACC POWER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCU connector M47.
3. Check voltage between TCU connector and ground.

TCU		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M47	3	—	Ignition switch: ACC	Battery voltage

Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".
NO >> Repair or replace harness or connectors.

U1A01 TCU

DTC Logic

INFOID:0000000008233690

CONSULT Display	DTC Detection Condition	Possible Cause
INTERNAL ERROR (TCU) [U1A01]	Malfunction in TCU is detected.	Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

U1A02 TCU

DTC Logic

INFOID:0000000008233691

CONSULT Display	DTC Detection Condition	Possible Cause
TEL COMMUNICATION MODULE [U1A02]	Malfunction in communication module of TCU is detected.	Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

U1A03 TCU

DTC Logic

INFOID:0000000008233692

CONSULT Display	DTC Detection Condition	Possible Cause
SIM CARD [U1A03]	SIM card not inserted or unable to read.	• Check SIM card installation. • Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

U1A04 TCU

DTC Logic

INFOID:0000000008233693

CONSULT Display	DTC Detection Condition	Possible Cause
VIN UNFINISHED [U1A04]	Unwritten VIN number is detected.	• Write VIN number using CONSULT. Refer to AV-804, "ADDITIONAL SERVICE WHEN REPLACING TCU : Work Procedure". • Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

U1A05 TCU

DTC Logic

INFOID:0000000008233694

CONSULT Display	DTC Detection Condition	Possible Cause
USB COMM [U1A05]	Malfunction in USB communication between TCU and AV control unit.	• Harness or connectors. • Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000008233695

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1. CHECK USB CIRCUITS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect TCU connector M134 and AV control unit connector M136.
3. Check continuity between TCU connector M134 and AV control unit connector M136.

TCU		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M134	41	M136	152	Yes
	42		151	
	46		147	
	47		146	
	48		145	
	49		160	
	55		154	
	56		153	
	57		156	

4. Check the continuity between TCU connector M134 and ground.

TCU		Ground	Continuity
Connector	Terminal		
M134	41	—	No
	46		
	47		
	48		
	49		
	56		

Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".
NO >> Repair or replace harness or connectors.

U1A07 TEL ANTENNA

DTC Logic

INFOID:0000000008233696

CONSULT Display	DTC Detection Condition	Possible Cause
TEL ANTENNA SHORT [U1A07]	TEL antenna short circuit.	• TEL antenna harness or connector. • Replace TEL antenna if malfunction occurs constantly. Refer to AV-830, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000008233697

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1. CHECK TEL ANTENNA CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect TEL antenna connector.
3. Check continuity between TEL antenna connector M135 terminals.

TEL antenna connector M135 terminals		Continuity
58	59	No

Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".
NO >> Replace TEL antenna. Refer to AV-830, "Removal and Installation".

U1A08 TEL ANTENNA

DTC Logic

INFOID:0000000008233698

CONSULT Display	DTC Detection Condition	Possible Cause
TEL ANTENNA NO CONN [U1A08]	No TEL antenna connection.	• TEL antenna. • Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000008233699

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1. CHECK AV CONTROL UNIT VOLTAGE

1. Turn ignition switch ON.
2. Check voltage between TEL antenna connector M135 and ground.

TEL antenna		Ground	Reference value
(+)		(−)	
Connector	Terminal		
M135	58	—	2.8 V

Is the inspection result normal?

YES >> Replace TEL antenna. Refer to AV-830, "Removal and Installation".
NO >> Replace TCU. Refer to AV-827, "Removal and Installation".

U1A0B MICROPHONE

DTC Logic

INFOID:0000000008333562

CONSULT Display	DTC Detection Condition	Possible Cause
MIC IN CONN [U1A0B]	No input of microphone circuits.	• Harness or connectors. • Microphone. • Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000008333563

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1.CHECK MIC IN SIGNAL CIRCUIT AND MIC VCC CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect TCU connector M47 and microphone connector.
3. Check continuity between TCU connector M47 and microphone connector R109.

TCU		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M47	18	R109	1	Yes
	19		4	
	20		3	

4. Check the continuity between TCU connector M47 and ground.

TCU		Ground	Continuity
Connector	Terminal		
M47	18	—	No
	19		

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK MIC VCC VOLTAGE

1. Connect TCU connector M47 and microphone connector.
2. Turn ignition switch ON.
3. Check voltage between TCU connector M47 terminals.

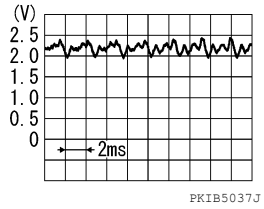
TCU connector M47		Voltage (Approx.)
(+)	(−)	
Terminal	Terminal	
18	20	5.0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace TCU. Refer to AV-827, "Removal and Installation".

3.CHECK MIC IN SIGNAL

Check signal between TCU connector M47.

TCU connector M47		Condition	Reference value
(+)	(–)		
Terminal	Terminal		
19	20	Speak into microphone.	

Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".
NO >> Replace microphone. Refer to AV-828, "Removal and Installation".

U1A0C MICROPHONE

DTC Logic

INFOID:0000000008333564

CONSULT Display	DTC Detection Condition	Possible Cause
MIC OUT CONN [U1A0C]	No output of microphone circuits.	• Harness or connectors. • Microphone. • Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000008333565

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1.CHECK DCM MIC SIGNAL CIRCUIT AND DCM MIC VCC CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect TCU connector M47 and AV control unit connector M122.
3. Check continuity between TCU connector M47 and AV control unit connector M122.

TCU		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M47	21	M122	60	Yes
	22		75	
	23		59	

4. Check the continuity between TCU connector M47 and ground.

TCU		Ground	Continuity
Connector	Terminal		
M47	21	—	No
	22		

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK DCM MIC VCC VOLTAGE

1. Connect TCU connector M47 and AV control unit connector M122.
2. Turn ignition switch ON.
3. Check voltage between AV control unit connector M122 terminals.

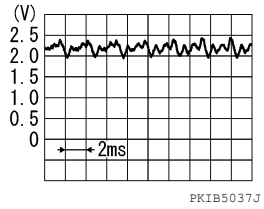
AV control unit connector M122		Voltage (Approx.)
(+)	(−)	
Terminal	Terminal	
60	59	5.0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace TCU. Refer to AV-827, "Removal and Installation".

3.CHECK DCM MIC SIGNAL

Check signal between AV control unit connector M122.

AV control unit connector M122		Condition	Reference value
(+)	(–)		
Terminal	Terminal		
60	59	Speak into microphone.	

Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-825, "Removal and Installation - AV Control Unit".

U1A0E TELEMATICS SWITCH

DTC Logic

INFOID:0000000008333566

CONSULT Display	DTC Detection Condition	Possible Cause
SOS SWITCH ON STUCK [U1A0E]	ECALL SW short circuit.	• Harness or connectors. • Telematics switch. • Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000008333567

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1.CHECK ECALL SW CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect TCU connector M47 and telematics switch connector.
3. Check the continuity between TCU connector M47 and ground.

TCU		Ground	Continuity
Connector	Terminal		
M47	34	—	No

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK TELEMATICS SWITCH

Check continuity between telematics switch terminals.

Telematics switch		Condition	Continuity
Terminal	Terminal		
3	7	Switch pressed	Yes
		Switch released	No

Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".
NO >> Replace telematics switch.

U1A0F TELEMATICS SWITCH

DTC Logic

INFOID:0000000008333568

CONSULT Display	DTC Detection Condition	Possible Cause
SOS SWITCH NO CONN [U1A0F]	LED A open circuit.	• Harness or connectors. • Telematics switch. • Replace TCU if malfunction occurs constantly. Refer to AV-827, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000008333569

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1.CHECK LED A CIRCUIT CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect TCU connector M47 and telematics switch connector.
3. Check continuity between TCU connector M47 and telematics switch connector R105.

TCU		Telematics switch		Continuity
Connector	Terminal	Connector	Terminal	
M47	35	R105	2	Yes

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2.CHECK TELEMATICS SWITCH

Check continuity between telematics switch terminals.

Telematics switch		Condition	Continuity
Terminal	Terminal		
2	7	Switch pressed	Yes
		Switch released	No

Is the inspection result normal?

YES >> Replace TCU. Refer to AV-827, "Removal and Installation".
NO >> Replace telematics switch.

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000008233700

Regarding Wiring Diagram information, refer to AV-709, "Wiring Diagram" (Bose Audio w/o Surround Sound) or AV-755, "Wiring Diagram" (Bose Audio with Surround Sound).

1.CHECK FUSE

Check that the following fuses are not blown.

Terminal No.	Signal name	Fuse No.
1	Battery power supply	15 (15A)
3	ACC power supply	65 (10A)
4	Ignition signal	29 (5A)

Are the fuses blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCU connector M47.
3. Check voltage between TCU connector and ground.

AV control unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M47	1	—	Ignition switch: OFF	Battery voltage
	3		Ignition switch: ACC	
	4		Ignition switch: ON	

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between TCU connector M47 and ground.

TCU		Ground	Continuity
Connector	Terminal		
M47	2	—	Yes
	7		
	14		

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace harness or connectors.

SYMPTOM DIAGNOSIS

TELEMATICS SYSTEM

Symptom Table

INFOID:0000000008233701

TELEMATICS SYSTEM

Symptom	Display icon	Error message	Possible cause
Telematics operation not available.	—	Telematics unit is not connected.	Perform self-diagnosis with CONSULT. Refer to AV-705, "CONSULT Function".
		The connection to the center failed.	Check ON/OFF status of TCU using the data monitor of CONSULT. • Replace TCU if it is ON. Refer to AV-827, "Removal and Installation". • Turn it ON again if it is OFF. Replace TCU if ON is switched to OFF. Refer to AV-827, "Removal and Installation".
		No service.	Use a cellular phone to check reception. • If service is available, replace TCU or TEL antenna. - For TCU replacement, refer to AV-827, "Removal and Installation". - For TEL antenna replacement, refer to AV-830, "Removal and Installation". • If the service is not available, move the vehicle to the position where service is available and perform the operation again.
		Service inoperative due to poor reception.	Use a cellular phone to check reception. • If it is OK, there may be a cause at the INFINITI CONNECTION Data Center. Check connection after a short period of time. If there is no problem at the INFINITI CONNECTION Data Center, replace TCU or TEL antenna. - For TCU replacement, refer to AV-827, "Removal and Installation". - For TEL antenna replacement, refer to AV-830, "Removal and Installation". • If it is NG, check connection again after a short period of time.
		Service not registered.	Check input of user ID and password from the navigation setting screen. If malfunction such as input or no memory despite input is detected, replace AV control unit. Refer to AV-388, "Removal and Installation - AV Control Unit" (Bose Audio w/o Surround Sound) or AV-668, "Removal and Installation - AV Control Unit" (Bose Audio with Surround Sound).
		TCU line is used.	Check connection after a short period of time. Replace TCU if it is frequently displayed. Refer to AV-827, "Removal and Installation".
		The connection to the center failed.	There may be a cause at the INFINITI CONNECTION Data Center. Check connection after a short period of time. If there is no problem at the INFINITI CONNECTION Data Center, replace TCU or TEL antenna. • For TCU replacement, refer to AV-827, "Removal and Installation". • For TEL antenna replacement, refer to AV-830, "Removal and Installation".

NORMAL OPERATING CONDITION

Description

INFOID:0000000008233702

NOTE:
For Telematics system operation detail information, refer to Navigation system Owner's Manual.

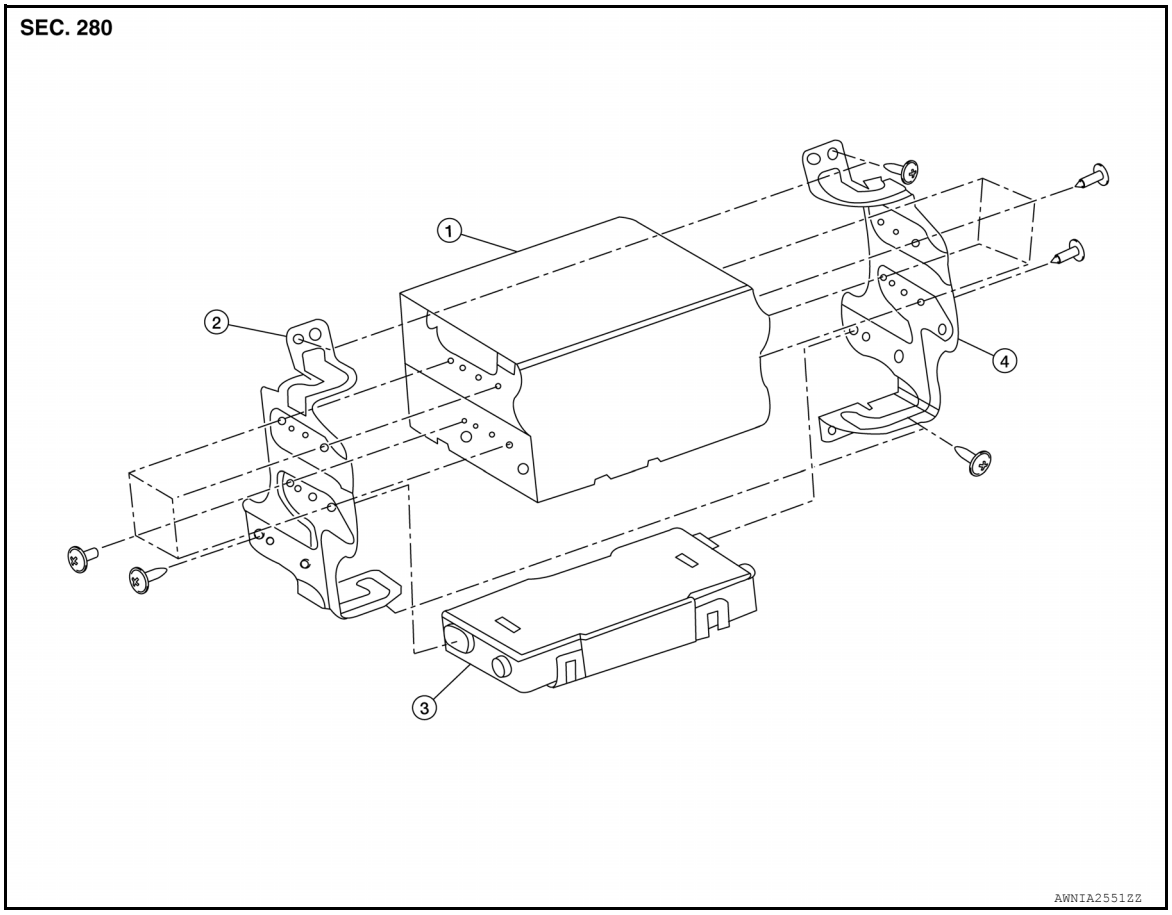
Symptom	Possible cause	Possible solution
The system cannot connect to the Infiniti CONNECT Data Center.	A subscription for the CONNECT service has not been established.	Sign up for a subscription to the CONNECT service. For details about subscriptions, contact an Infiniti dealer or visit the Infiniti CONNECT Data Center website.
	The user ID and password are not entered.	Enter the user ID and password.
	The communication line is busy.	Try again after a short period of time.
	The vehicle is in a location where reception is difficult.	When the vehicle moves to an area where radio waves can be transmitted sufficiently, communication will be restored. When the icon on the display shows that the vehicle is inside the communication area, the system can be used.
	TCU reception is insufficient.	When the vehicle moves to an area where radio waves can be transmitted sufficiently, communication will be restored. When the icon on the display shows that the vehicle is inside the communication area, the system can be used.
Some of the items that are displayed on the menu screen cannot be selected.	The vehicle is being driven and some menu items are disabled.	The vehicle is being driven. Stop the vehicle in a safe location and apply the parking brake before operating the functions.
Some parts of the screen are not displayed		Operate the system after stopping the vehicle in a safe location and applying the parking brake.
The system does not announce information.	The volume level is set to the minimum.	Adjust the volume level by operating the VOL switches located on the control panel or on the steering wheel switch while the system is announcing information.

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

INFOID:0000000008472312



1. AV control unit
2. AV control unit bracket LH
3. A/C auto amp.
4. AV control unit bracket RH

Removal and Installation - AV Control Unit

INFOID:0000000008297257

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Description".

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
2. Remove cluster lid C upper. Refer to IP-21, "Removal and Installation - Cluster Lid C Upper".
3. Remove the screws, then pull out the AV control unit.
4. Disconnect the harness connectors from the AV control unit and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **When replacing AV control unit, perform "WRITE CONFIGURATION". Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Description".**

Removal and Installation - AV and AC Switch Assembly

INFOID:0000000008297258

REMOVAL

CAUTION:

Before replacing AV control unit, perform "READ CONFIGURATION" to save current vehicle specification. Refer to AV-541, "CONFIGURATION (AV CONTROL UNIT) : Description".

1. Disconnect the negative battery terminal. Refer to PG-92, "Removal and Installation".
2. Remove cluster lid C. Refer to IP-21, "Removal and Installation - Cluster Lid C Upper"
3. Remove the AV and AC switch assembly screws (A), then separate the cluster lid C from AV and AC switch assembly.
4. Release upper pawls and remove AV and AC switch assembly

INSTALLATION

Installation is in the reverse order of removal.

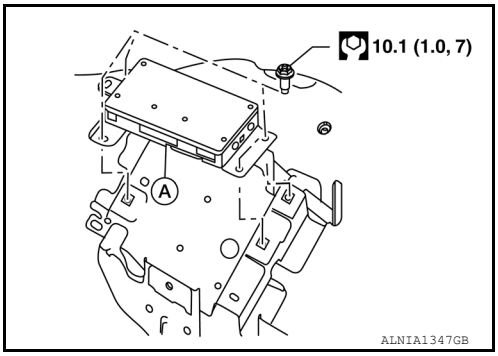
TCU

Removal and Installation

INFOID:0000000008233707

REMOVAL

1. Check the SIM ID. Refer to AV-705, "CONSULT Function".
2. Remove the CVT shift selector. Refer to TM-171, "Removal and Installation".
3. Disconnect the harness connectors from TCU.
4. Remove the TCU screws and then remove TCU (A) with the bracket attached.
5. Remove the bracket screw and remove the bracket from TCU (A).



NOTE:
If it is difficult to remove the harness clip and the antenna feeder clip, remove the screw first and pull TCU forward together with the bracket. Be careful not to apply a load to the harness.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

- When TCU is replaced, perform activation. Refer to AV-804, "ADDITIONAL SERVICE WHEN REPLACING TCU : Work Procedure".
- When replacing the TCU, it is necessary to contact the communications service provider to activate the new TCU. Please refer to the appropriate Nissan Technical Service Bulletin for the correct TCU activation procedure and communications provider contact information.

MICROPHONE

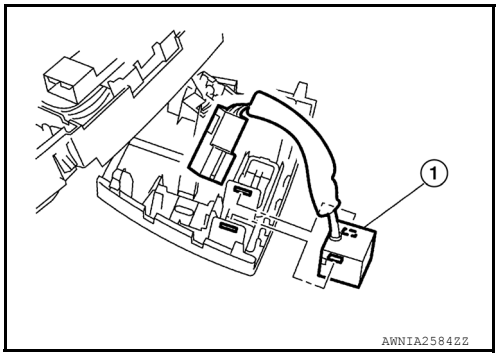
Removal and Installation

INFOID:0000000008233706

REMOVAL

1. Remove the front room/map lamp assembly. Refer to INT-25, "Removal and Installation".
2. Remove the microphone (1) from the front room/map lamp assembly.

CAUTION:
Carefully handle the pawl that retain the microphone because the pawl is fragile.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:
Check the microphone for looseness after installation.

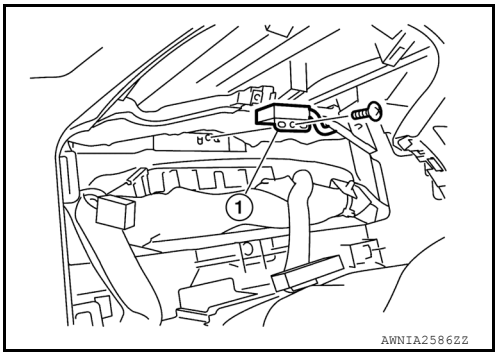
GPS ANTENNA

Removal and Installation

INFOID:0000000008297259

REMOVAL

1. Remove combination meter. Refer to IP-15, "Removal and Installation".
2. Disconnect harness connector from AV control unit.
3. Remove feeder clips.
4. Remove GPS antenna screws, then remove GPS antenna (1).



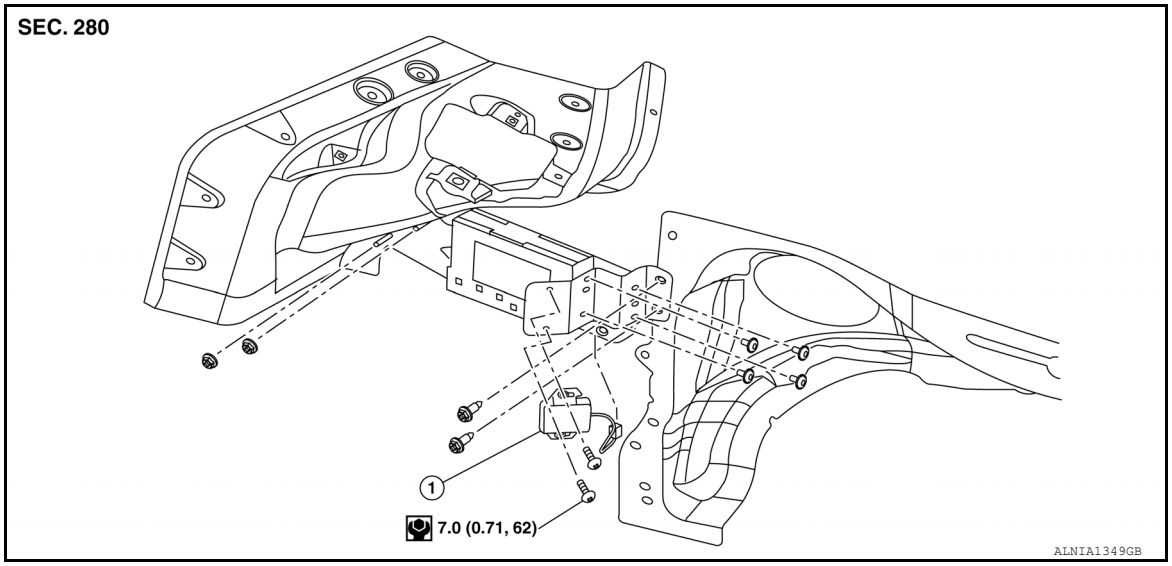
INSTALLATION

Installation is in the reverse order of removal.

TEL ANTENNA

Exploded View

INFOID:0000000008368165



1. Tel antenna

Removal and Installation

INFOID:0000000008233709

REMOVAL

1. Remove luggage side lower finisher (LH). Refer to INT-29, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation".
2. Disconnect harness connector from Bluetooth Control Unit.
3. Remove screws and then remove TEL antenna.

INSTALLATION

Installation is in the reverse order of removal.