SECTION AV
AUDIO, VISUAL & NAVIGATION SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006225819

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” 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 that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the “SRS AIR BAG”.**
- **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 Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precaution for Trouble Diagnosis

INFOID:0000000006216211

AV COMMUNICATION SYSTEM

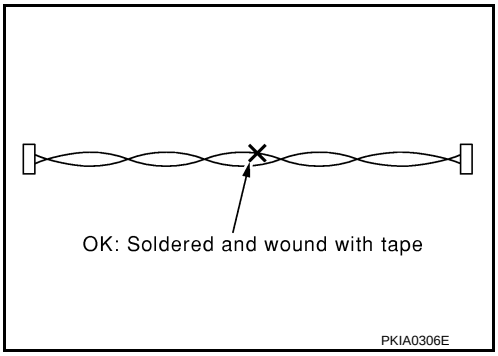
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

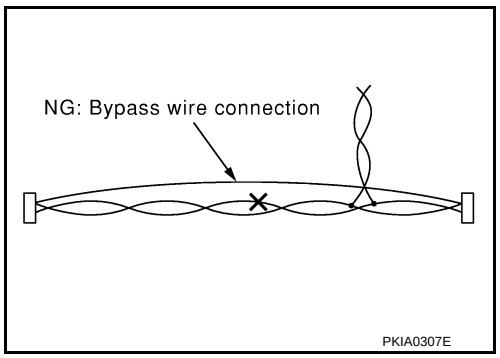
INFOID:0000000006216212

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.)



PREPARATION

PREPARATION

Commercial Service Tools

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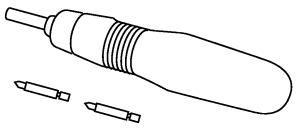
Tool		Description
Power tool	 PBIC0191E	Loosening screws

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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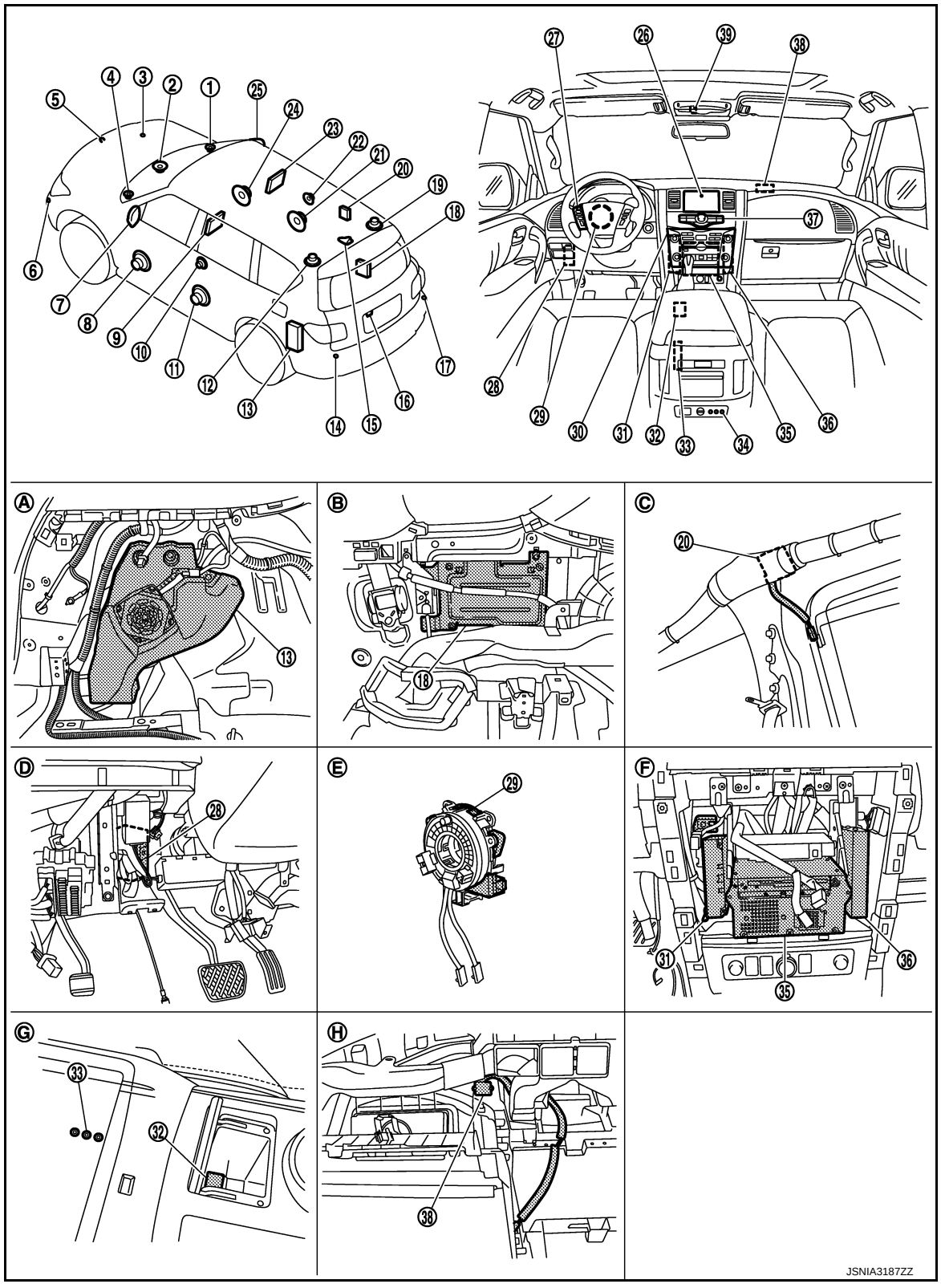

1.	Squawker RH	2.	Center speaker	3.	Corner sensor front RH
4.	Squawker LH	5.	Front camera	6.	Corner sensor front LH
7.	Side camera LH	8.	Front door speaker LH	9.	Headrest display unit LH
10.	Rear door tweeter LH	11.	Rear door speaker LH	12.	Roof speaker LH
13.	Woofer	14.	Corner sensor rear LH	15.	Satellite radio antenna
16.	Rear camera	17.	Corner sensor rear RH	18.	BOSE amp.
19.	Roof speaker RH	20.	Antenna amp.	21.	Rear door speaker RH
22.	Rear door tweeter RH	23.	Headrest display unit RH	24.	Front door speaker RH
25.	Side camera RH and infrared LED (auxiliary lighting)	26.	Front display unit	27.	Steering switch
28.	Sonar control unit	29.	Steering angle sensor	30.	Preset switch
31.	Around view monitor control unit	32.	USB connector	33.	Front auxiliary input jacks
34.	Rear auxiliary input jacks	35.	AV control unit	36.	Video distributor
37.	Multifunction switch	38.	GPS antenna	39.	Microphone
A.	Luggage side lower finisher LH removed condition	B.	Luggage side lower finisher RH removed condition	C.	Headlining assembly removed condition
D.	Instrument lower panel LH removed condition	E.	Spiral cable part	F.	Cluster lid C removed condition
G.	Within center console	H.	Instrument panel rear side		

Component Description

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Part name	Description
AV control unit	• Integrates hard disk drive (HDD) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by communication. It operates each system according to communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, navigation, USB connection, DVD play and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the illumination signals that are required for the front display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake). • The RGB digital image signal and composite image signal are output to front display unit. • Switches image and sound output to video distributor, inputting image switch signal from headrest display unit via AV communication. • Amp. ON signal and mode change signal transmitted to BOSE amp. • Update of map data is performed with the DVD-ROM.
Front display unit	• Front display image is controlled by the serial communication from AV control unit. • RGB digital image signal is input from AV control unit. • Composite image signal is input from AV control unit. • Camera image signal is input from around view monitor control unit. • Touch panel function can be operated for each system by touching a display directly.
Headrest display unit	• Composite image signal [USB (video data), DVD and auxiliary input images] is input from the video distributor. • It receives the DVD/AUX/USB sound signal from the video distributor, and then transmits it to the headphones. • Outputs image switch signal to video distributor via hard wire, according to rear seat remote controller operation. • Outputs image switch signal to AV control unit via AV communication, according to rear seat remote controller operation.

Part name	Description
Video distributor	• It receives the image signal and sound signal from the AV control unit and then transmits it to the headrest display unit. • It receives the image signal and sound signal from the auxiliary input jacks and then transmits it to the headrest display unit. • Switches image and sound output to headrest display unit, inputting image switch signal from headrest display unit via hard wire.
Front auxiliary input jacks	Image signal and sound signal of auxiliary input is transmitted to AV control unit.
Rear auxiliary input jacks (Mobile entertainment system)	Image signal and sound signal of auxiliary input is transmitted to video distributor.
BOSE amp.	Inputs sound signal from AV control unit, and outputs sound signal to each speaker.
Front door speaker	• Outputs sound signal from BOSE amp. • Outputs high, mid and low range sounds.
Rear door speaker	• Outputs sound signal from BOSE amp. • Outputs high, mid and low range sounds.
Squawker	• Outputs sound signal from BOSE amp. • Outputs high and mid range sounds.
Rear door tweeter	• Outputs sound signal from BOSE amp. • Outputs high range sounds.
Roof speaker	• Outputs sound signal from BOSE amp. • Outputs high and mid range sounds.
Center speaker	• Outputs sound signal from BOSE amp. • Outputs high and mid range sounds.
Woofer	• Outputs sound signal from BOSE amp. • Outputs low range sounds.
Multifunction switch	• Operation panel is equipped with the centralized switch where audio, auxiliary input and navigation, etc. operations are integrated. • Connected with preset switch via hardwire and operation signal is transmitted to AV control unit via AV communication.
Preset switch	• Operation panel is equipped with the centralized switch where audio and air conditioner, etc. operations are integrated. • Connected with multifunction switch via hardwire, and operation signal is transmitted to AV control unit via AV communication. • The disk ejection operating signal is performed by hardwire.
Steering switch	• Operations for audio, hands-free phone and navigation, etc. are possible. • Steering switch signal (operation signal) is output to AV control unit.
Around view monitor control unit	• It supplies power to front camera, rear camera, and side camera. And then it superimposes the images from each camera and outputs them to front display unit. • Superimpose the guiding line, predicted course line and sonar indicator to the camera image that outputs to front display unit. • It performs the reception/transmission of communication signal with each camera. • It transmits the sonar operation signal from sonar control unit and receives the sonar information from sonar control unit via AV communication. • It transmits the information received/transmitted with sonar control unit via AV communication to AV control unit.
Front camera	• It inputs the power supply from around view monitor control unit and outputs the image of the vehicle front to around view monitor control unit. • It performs the reception/transmission of the communication signal with around view monitor control unit.
Rear camera	• It inputs the power supply from around view monitor control unit and outputs the image of the vehicle rear to around view monitor control unit. • It performs the reception/transmission of the communication signal with around view monitor control unit.
Side camera LH	• It inputs the power supply from around view monitor control unit and outputs the image of the vehicle LH to around view monitor control unit. • It performs the reception/transmission of the communication signal with around view monitor control unit.

Part name	Description
Side camera RH	• It inputs the power supply from around view monitor control unit and outputs the image of the vehicle RH to around view monitor control unit. • It performs the reception/transmission of the communication signal with around view monitor control unit.
Infrared LED (Auxiliary lighting)	• It illuminates around the front RH wheel by the power supply from around view monitor control unit to improve nighttime visibility of front-side view. • The infrared LED is an invisible light ray.
Sonar control unit	• It is connected with around view monitor control unit via AV communication and receives the sonar operation signal from around view monitor control unit. • It transmits the sonar detection status to around view monitor control unit via AV communication. • It judges the warning level according to the signal from corner sensor.
Corner sensor	The obstacle distance is detected. The signal is transmitted to sonar control unit.
Steering angle sensor	It is connected to the AV control unit and transmits the steering angle sensor signal via CAN communication.
Microphone	• Used for hands-free phone operation. • Microphone signal is transmitted to AV control unit. • Power (Microphone VCC) is supplied from AV control unit.
GPS antenna	GPS signal is received and transmitted to AV control unit.
Satellite radio antenna	Receives the satellite radio waves and outputs it to AV control unit.
Antenna amp.	• Radio signal received by glass antenna (main) is amplified and transmitted to AV control unit. • Power (antenna amp. ON signal) is supplied from AV control unit.
USB connector	Image signal*1 and sound signal of USB input is transmitted to AV control unit.

*1: Image signals cannot be received from iPod®.

SYSTEM
MULTI AV SYSTEM
MULTI AV SYSTEM : System Diagram

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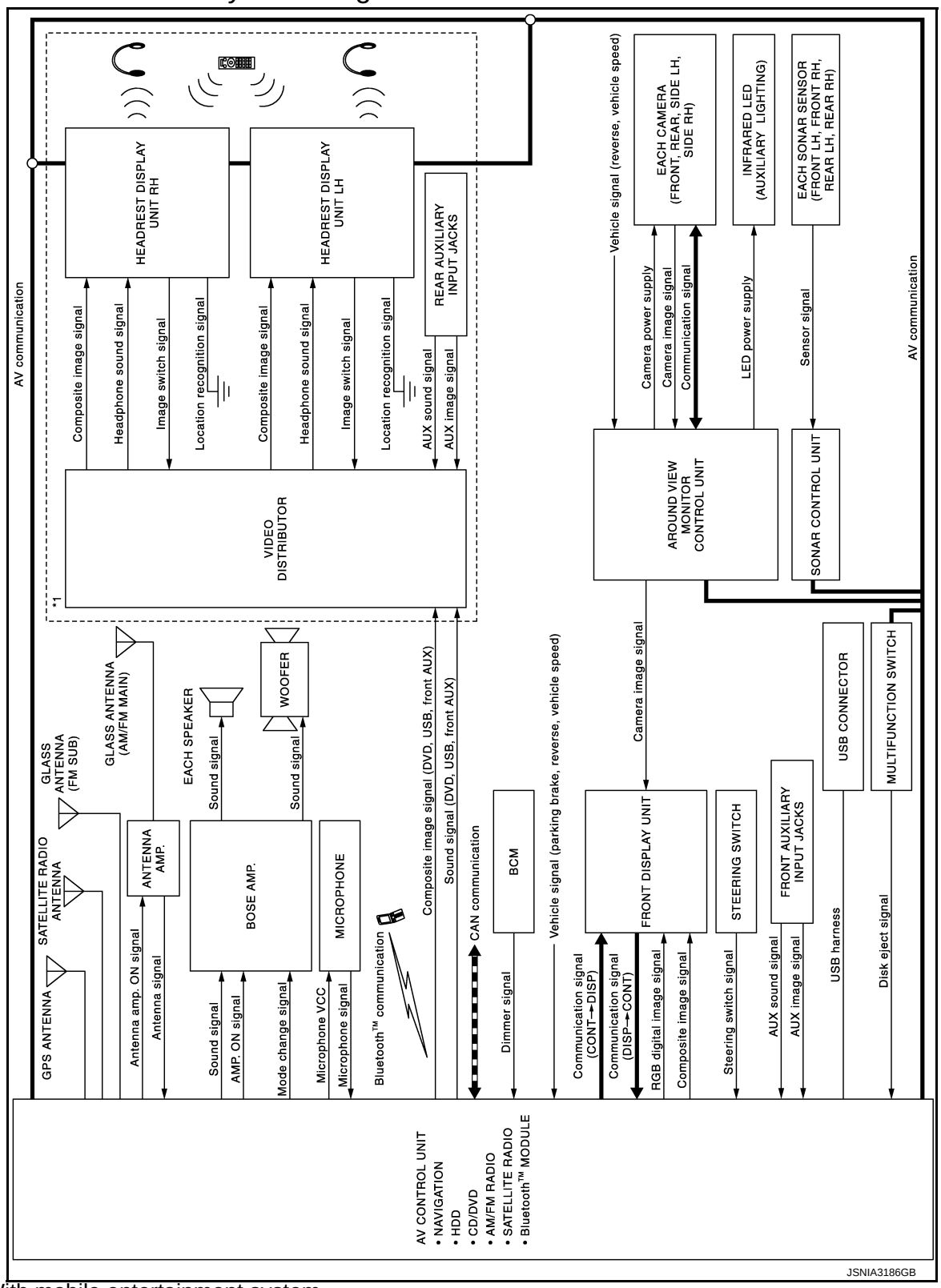

• *1: With mobile entertainment system.

NOTE:

The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

MULTI AV SYSTEM : System Description

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Multi AV system means that the following systems are integrated.

FUNCTION NAME
Navigation system function
Audio function
DVD play function
Front auxiliary input function
USB connection function
Mobile entertainment system
Hands-free phone function
Touch panel function
Around view monitor function
Camera assistance sonar system
Vehicle information function
Auto Light adjustment system

COMMUNICATION SIGNAL

- AV control unit function by transmitting/receiving data one by one with each unit (slave unit) that configures them completely as a master unit by connecting between units that configure MULTI AV system with two AV communication lines (H, L).
- Two AV communication lines (H, L) adopt a twisted pair line that is resistant to noise.
- AV control unit is connected by CAN communication, and it receives data signal from ECM and combination meter It computes and displays fuel economy information value with the obtained information. Transmitting/ receiving of data signal is performed by BCM. Also, it transmits the required signal of vehicle setting and receives the response signal.
- AV control unit is connected with front display unit and serial communication, and it transmits the required signal of display and display control and receives the response signal from front display unit.

NAVIGATION SYSTEM FUNCTION

Description

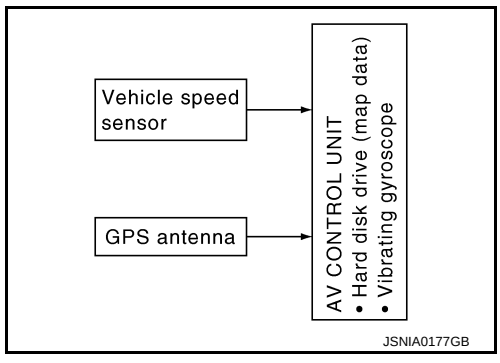
- The AV control unit controls navigation function while GPS tuner has built-in map data, GYRO (angle speed sensor), on the HDD (Hard Disk Drive).
- The AV control unit inputs operation signal with communication signal, through display (touch panel) and multifunction switch and steering switch.
- Guide sound is output to front speaker through BOSE amp. from AV control unit when operating navigation system.
- A vehicle position is calculated with the GYRO (angle speed sensor), vehicle sensor, signal from GPS satellite and map data stored on HDD (Hard Disk Drive), and transmits the map image signal (RGB image, RGB area, RGB image synchronizing) to the display.

Position Detection Principle

The navigation system periodically calculates the current vehicle position according to the following three types of signals.

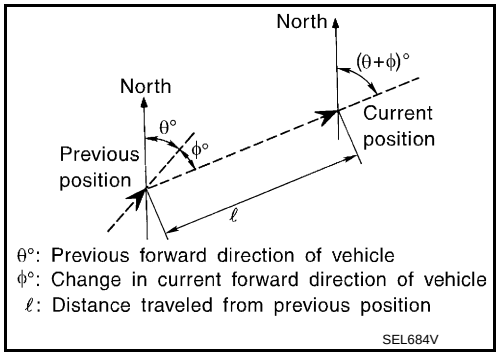
- Travel distance of the vehicle as determined by the vehicle speed sensor
- Vehicle turning angle determined by the gyroscope (angular speed sensor)
- The travel direction of the vehicle determined by the GPS antenna (GPS information)

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data, which is stored in the HDD (Hard Disk Drive) (map-matching), and indicated on the screen with a current location mark. More accurate data is used by comparing position detection results from GPS to the map-matching.



The current position is calculated by detecting the travel distance from the previous calculation point, and its direction change.

- Travel distance
  The travel distance is generated from the vehicle speed sensor input signal. The automatic distance correction function is adopted for preventing a miss-detection of the travel distance because of tire wear etc.
- Travel direction
  The gyroscope (angular velocity sensor) and GPS antenna (GPS information) generate the change of the travel direction. Both have advantages and disadvantages as per the following descriptions.

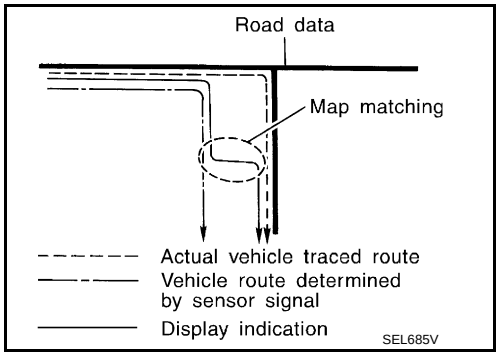


Type	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	The turning angle is precisely detected.	Errors are accumulated when driving a long distance without stopping.
GPS antenna (GPS information)	The travel direction (North/South/East/West) is detected.	The travel direction is not precisely detected when driving slowly.

Input signals 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.

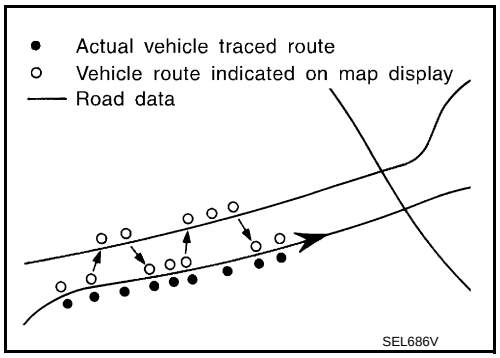
Map-matching

Map-matching repositions the vehicle on the road map when a new location is judged to be more accurate. This is done by comparing the current vehicle position (calculated by the normal position detection method) from the map data stored in the HDD (Hard Disk Drive).

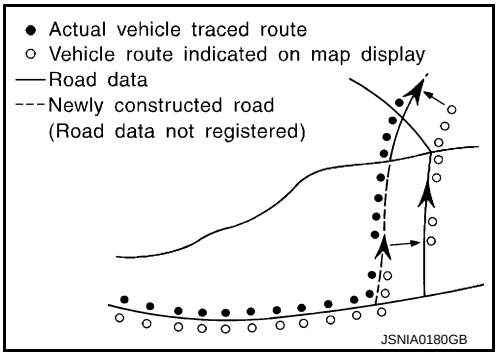


There is a possibility that the vehicle position may not be corrected in the following case, and when vehicle is driven over a certain distance or time in which GPS information is hard to receive. Correct manually the current location mark on the screen.

- In map-matching, several alternative routes are prepared and prioritized in addition to the road judged as currently driving on.
  Therefore, due to errors in the distance and/or direction, an incorrect road may be prioritized, and the current location mark may be repositioned to the incorrect road.
  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, etc.



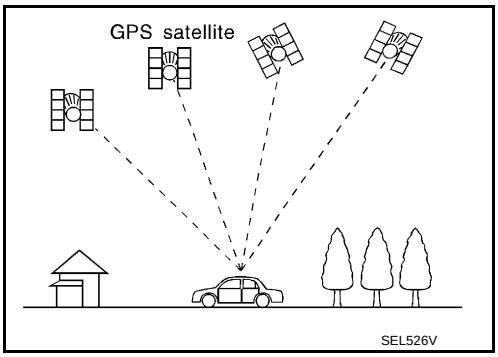
- Map-matching does not function correctly when road on which the vehicle is driving is new, etc. and not recorded in the map data. Also, map-matching does not function correctly when road pattern stored in the map data and the actual road pattern are different due to repair, etc.
  Therefore, the map-matching function judges other road as a currently driving road if the road is not in the map, and displays the current location mark on it. Later, the current location mark may be repositioned to the road if the correct road is detected.
- Effective range for comparing the vehicle position and travel direction calculated by the distance and direction with the road data is limited. Therefore, correction by map-matching is not possible when there is an excessive gap between current vehicle position and the position on the map.



GPS (Global Positioning System)

GPS (Global Positioning System) is developed for and is controlled by the US Department of Defense. The system utilizes GPS satellites (NAVSTAR), transmitting out radio waves while flying on an orbit around the earth at an altitude of approximately 21,000 km (13,049 mile).

The receiver calculates the travel position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves that four or more GPS satellites transmit (three-dimensional positioning). The GPS receiver calculates the travel position in two dimensions (latitude/longitude) with the previous altitude data if the GPS receiver receives only three radio waves (two-dimensional positioning). GPS position correction is not performed while stopping the vehicle.



Accuracy of the GPS will deteriorate under the following conditions:

- In two-dimensional positioning, GPS accuracy will deteriorate when altitude of the vehicle position changes.
- The position of GPS satellite affects GPS detection precision. The position detection may not be precisely performed.
- The position detection is not performed if GPS receiver does not receive radio waves from GPS satellites. (Inside a tunnel, parking in a building, under an elevated highway etc.) GPS receiver may not receive radio waves from GPS satellites if any object is placed on the GPS antenna.

NOTE:

- The detection result has an error of approximately 10 m (32.81 ft) even with a high-precision three dimensional positioning.
- There may be cases when the accuracy is lowered and radio waves are stopped intentionally because the GPS satellite signal is controlled by the US trace control center.

AUDIO FUNCTION

The audio system is equipped with the following functions. Each function is operated with multifunction switch, preset switch, touch panel, steering switch or audio recognition. Operation status of audio is indicated at display.

FUNCTION
AM/FM radio
Satellite radio
CD
Bluetooth™ audio
Music Box (Hard Disk Drive)
Speed sensitive volume
Driver's Audio Stage

Operating Signal

Audio system operation can be performed with multifunction switch, preset switch, steering switch, touch panel function or voice recognition function.

- Operating signal is transmitted to AV control unit with AV communication when it is operated by multifunction switch or preset switch. The disk ejection operating signal is performed by hardwire.
- Operating signal is transmitted to AV control unit with steering switch signal when it is operated by steering switch.

Screen Display

Switching of display is performed with serial communication between front display unit and AV control unit.

AM/FM Radio Mode

- AM/FM radio tuner is built into AV control unit.
- AM/FM radio wave is received by radio antenna, next it is amplified by antenna amp., and finally it is input to AV control unit.
- FM radio wave is received by FM sub antenna, and it is transmitted to the AV control unit directly.
- Audio signal is input to BOSE amp. and BOSE amp. outputs to each speaker.

Satellite Radio Mode

- Satellite radio tuner is built into AV control unit.
- Sound signal (satellite radio) is received by satellite radio antenna and transmitted to AV control unit. AV control unit outputs sound signal to BOSE amp. The signal is also outputted from BOSE amp. to each speaker.

CD Mode

- CD function is built into AV control unit.
- AV control unit outputs audio signal to BOSE amp., and BOSE amp. outputs to each speaker when CD is inserted to AV control unit.

Bluetooth™ Audio Mode

- Bluetooth™ audio function is built into AV control unit.
- Bluetooth™ audio can play music data in the portable audio by means of Bluetooth™ communications between the portable audio and the AV control unit.
- AV control unit outputs audio signal to BOSE amp., and BOSE amp. outputs to each speaker.

Music Box Mode

- Music CD data is stored on HDD that is built into AV control unit, and it can be played.
- AV control unit outputs music (sound signal) that is stored on HDD to BOSE amp., and BOSE amp. outputs to each speaker.

Speed Sensitive Volume

- Volume level of this system gone up and down automatically in proportion to the vehicle speed.
- The control level can be selected by the customer.

Driver's Audio Stage

- Driver's Audio Stage controls the speaker's output characteristic by BOSE amp. so that the driver's seat is to be the center of sounds.
- ON/OFF signals of Driver's Audio Stage are transmitted from AV control unit to BOSE amp. using mode change signal.

DVD PLAY FUNCTION

- DVD is played by inserting DVD into the AV control unit.
- DVD image signals are transmitted to the front display unit, and DVD sound signals are transmitted to each speaker via BOSE amp.
- DVD image signals and sound signals are transmitted to the headrest display unit via the video distributor. The headrest display unit transmits the sound signals to the headphone via infrared communication.

USB CONNECTION FUNCTION

- Connecting iPod® or USB memory allows the driver to play iPod® music files or USB memory-stored music files, video data, and image viewer data.
- Sound signals of music files stored in iPod® or USB memory are transmitted from the USB connector to the AV control unit. The AV control unit transmits the sound signals to the BOSE amp. and video distributor.
- Sound signals transmitted from the BOSE amp. to each speaker, and sound signals transmitted from the video distributor to headphone via headrest display unit
- Video signals and image viewer file signals are transmitted from the USB connector to the AV control unit. The data and files are displayed on the front display unit screen.

< SYSTEM DESCRIPTION >

- Video signals are transmitted from the USB connector to the AV control unit. The data and files are displayed on the headrest display unit screen.
- iPod® is recharged when connected to USB connector.
- Only files that meet the following conditions will be played.

	Music file	Video file	Image viewer file
File format	“MP3”, “WMA”, “AAC”, “M4A”	“DivX”, “MPEG4 (ASF)”	“JPEG”
File extension	“.mp3”, “.wma”, “.aac”, “.m4a”	“.divx”, “.afs”, “.avi”	“.jpg”, “.jpeg”
Maximum file size	2 GB	2 GB	2 MB

NOTE:

- iPod® is a trademark of Apple inc., registered in the U.S. and other countries.
- Image signals cannot be received from iPod®.
- Use the enclosed USB harness when connecting iPod® to USB connector.
- If a video-sound codec combination is not satisfied, its video file may not be played.
- Signals cannot be transmitted to video distributor under the following conditions:
- Only sound signal or only image viewer data is stored in iPod®
- Only sound signal or only image viewer data is stored in USB memory

FRONT AUXILIARY INPUT FUNCTION

- Image and sound can be output from an external device by connecting a device with front auxiliary input jacks.
- AUX image signals are transmitted to each unit as follows:
- To the front display unit via AV control unit.
- To the headrest display unit 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 amp.
- To the video distributor via AV control unit, and headphone sound signals are transmitted to infrared communication between headrest display unit and headphone.

MOBILE 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 unit and headphone.
- Image and sound of external device connected to rear auxiliary input jacks for rear seat can be enjoyed in rear seat using headrest display unit and headphone. 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 unit has the self-diagnosis function. Refer to AV-49, "On Board Diagnosis Function".

NOTE:

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

Operating Signal

- The mobile entertainment system can be controlled by one of the rear seat remote controller.
- It receives the operation signal of the rear seat remote controller by the remote control receiver built into headrest display unit, and then transmits it to the AV control unit and the video distributor.

Headphone Sound

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

Screen headrest display

- Image signal output from AV control unit or rear auxiliary input jacks are transmitted to headrest display unit via video distributor.
- Image switch signal is input from headrest display unit to AV control unit or from headrest display unit to video distributor, according to rear seat remote controller 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 input from headrest display unit to video distributor via hard wire, image output from AV control unit and image output from rear auxiliary input jacks switch.

HANDS-FREE PHONE FUNCTION

- AV control unit includes hands-free phone function.
- Hands-free communication can be operated by connecting using Bluetooth™ communication with cellular phone.
- Operation is performed by steering switch, and operating condition is indicated on display.
- Guide sound that is heard during operation is input from AV control unit to BOSE amp., and is output from front speaker and center speaker.

When A Call Is Originated

Spoken voice sound output from the microphone (microphone signal) is input to AV control unit. AV control unit outputs to cellular phone with Bluetooth™ communication as a TEL voice signal. Voice sound is then heard at the other party.

When Receiving A Call

Voice sound is input to own cellular phone from the other party. TEL voice signal is output to door speaker, and the signal is input to BOSE amp. via AV control unit by establishing Bluetooth™ communication from cellular phone.

TOUCH PANEL SYSTEM

Each operation of multi AV system can be performed by directly touching a front display.

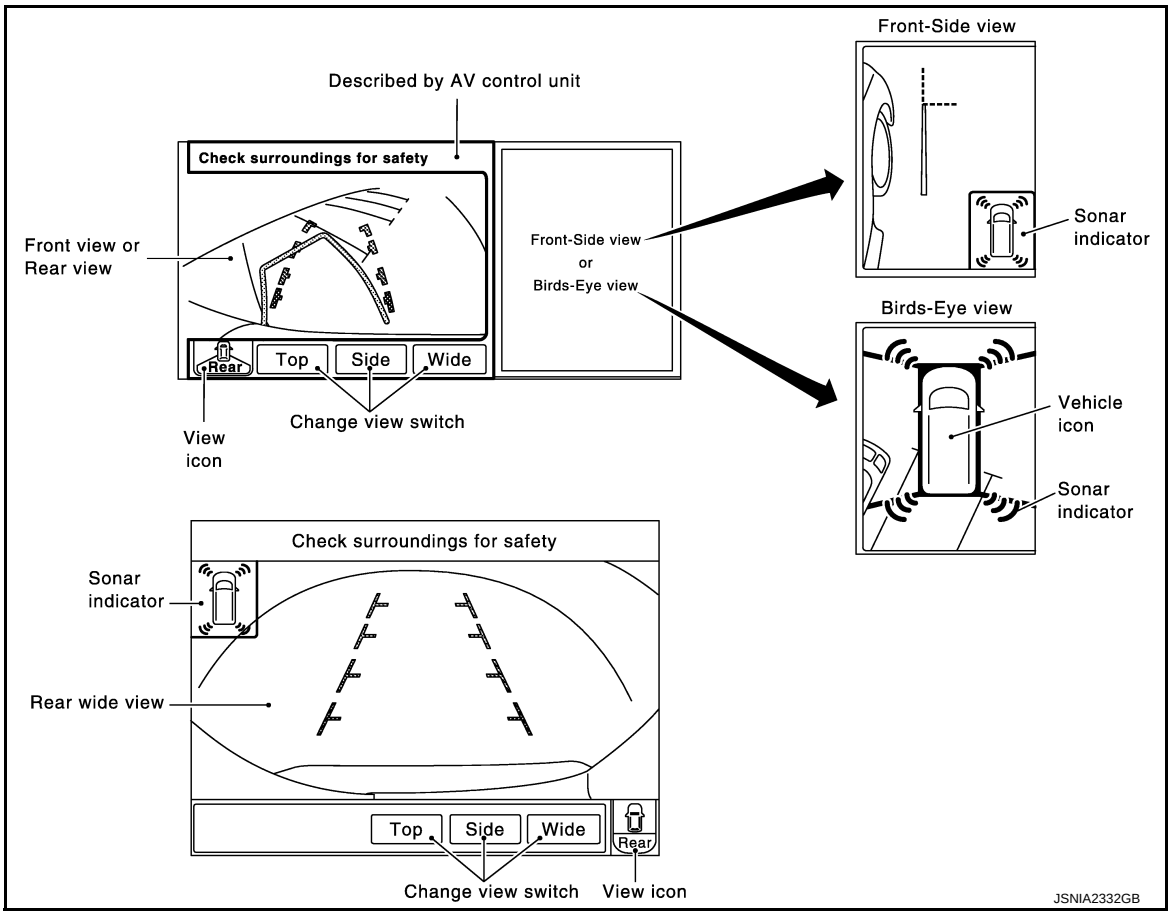
AROUND VIEW MONITOR FUNCTION

- 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 displayed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warm 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 on display. The vehicle icon and sonar indicator that are displayed 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 it 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.

Screen constitution



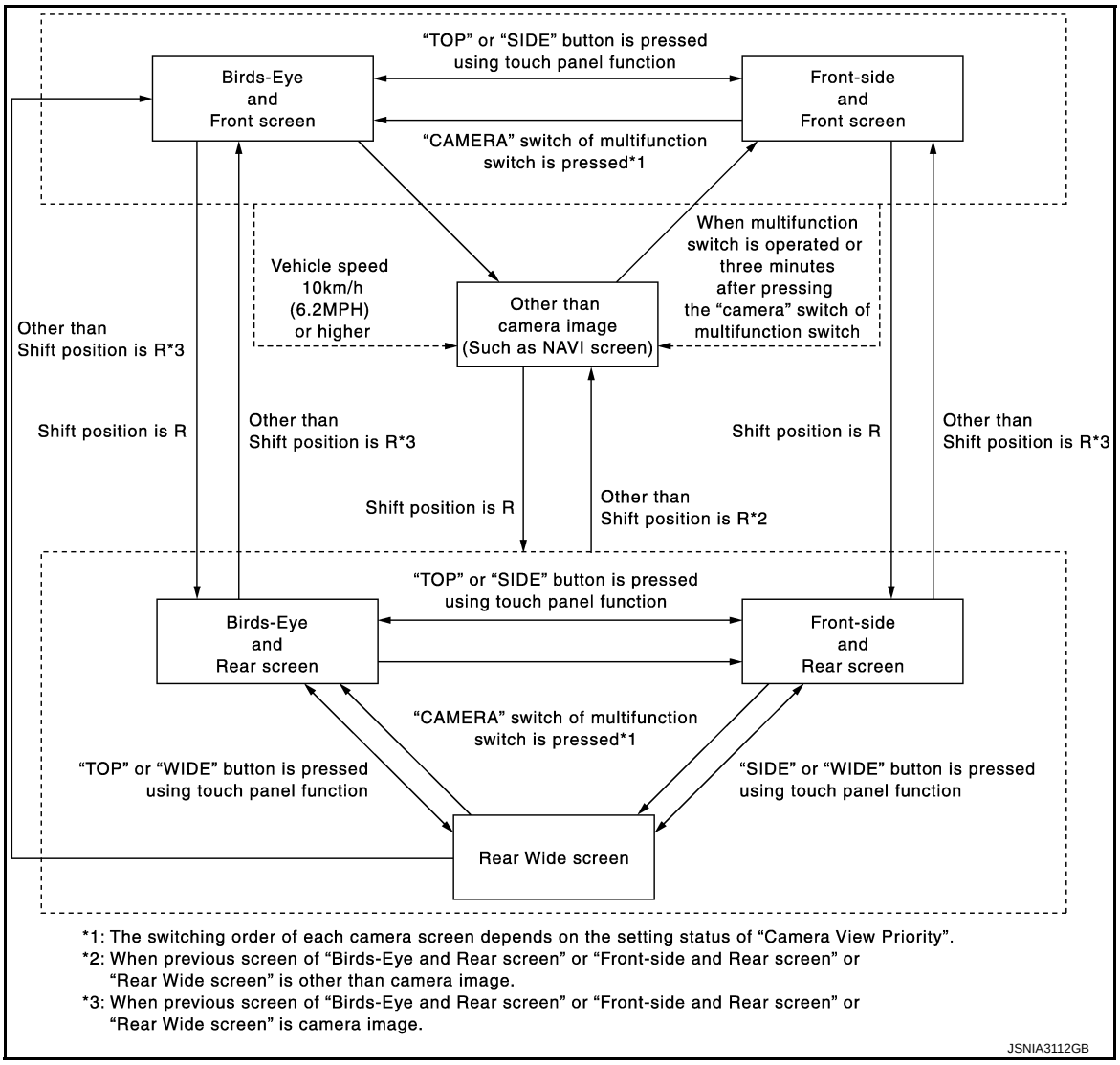
Operation Description

- Around view monitor operates by pressing the “CAMERA” switch of multifunction switch and shifting the selector switch to the reverse position.
- When the selector lever is in any position other than the reverse position, 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 reverse position.
- In the around view monitor, Birds-Eye view, Front-side view and 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 then the screen returns to the screen before displaying the around view monitor when selector lever is in a position other than the reverse position.
- ON/OFF setting of sonar indicator display on the Front-Side view screen can be performed.
- In the 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 (both of buzzer and indicator) operates only when the camera screen is displayed.

  NOTE:

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

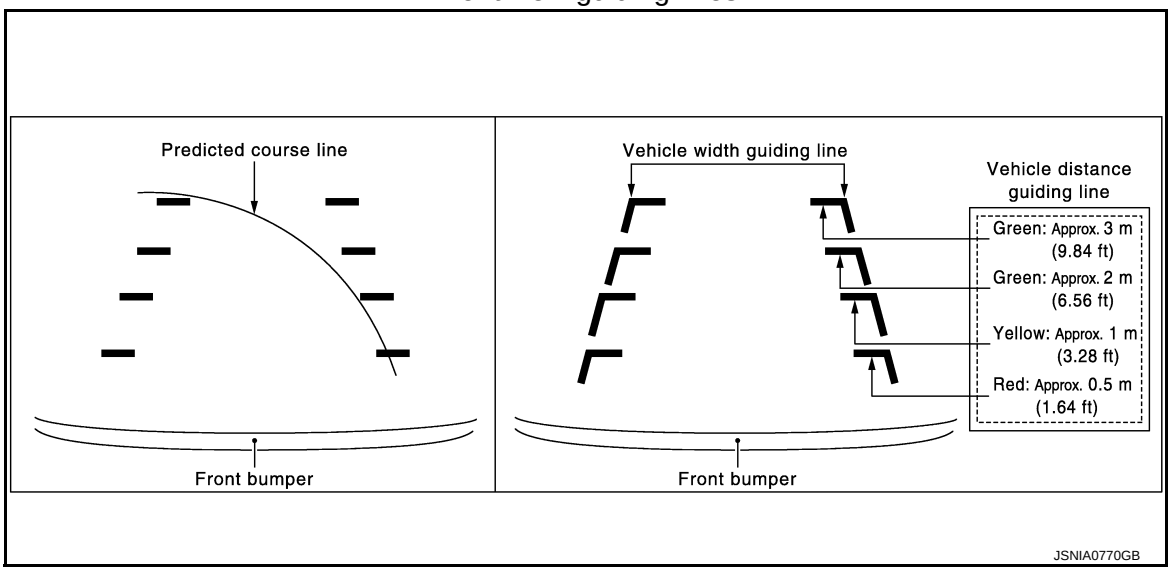
Around view monitor screen transition



FRONT VIEW

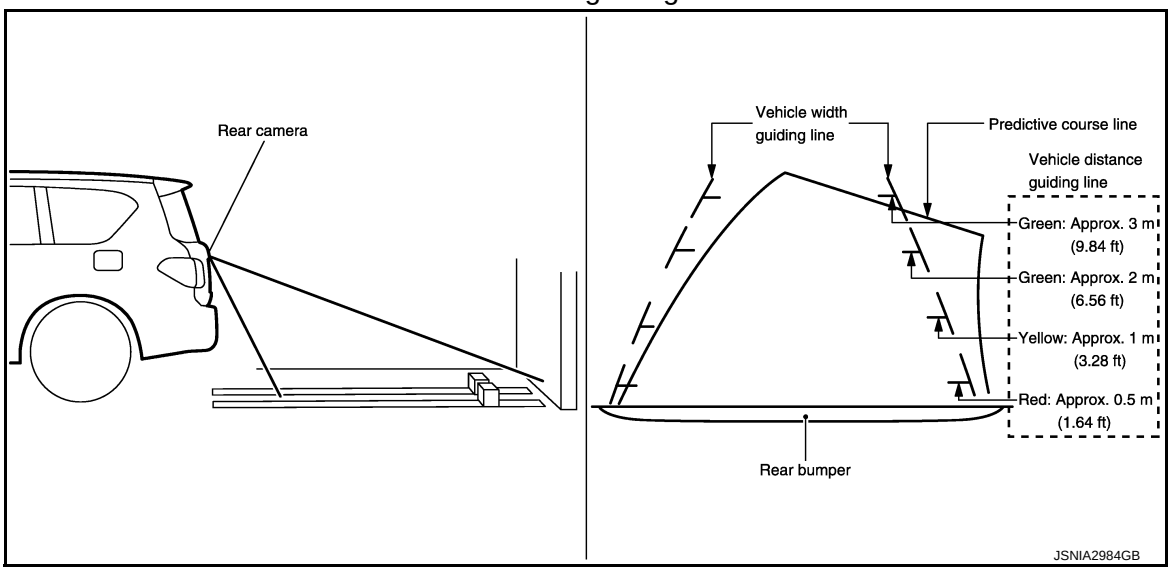
- The front view image is from the front camera.
- When the selector lever is in any position other than the reverse position, the front view is displayed by pressing the "CAMERA" switch. It improves the visibility of obstacles in front of the vehicle and helps driving by the images displayed from Birds-Eye view and Front-Side view.
- Display the vehicle width guiding line and vehicle distance guiding line in front view and display the predictive course line according to the steering angle.
- If the steering angle is within approximately 90 degrees, the predictive course lines on the left/right side are displayed. If the steering angle is exceeding approximately 90 degrees, only the predictive course line on the outside (in the opposite side of steering direction) is displayed.
- AV control unit is connected to the steering angle sensor and receives the steering angle signal via CAN communication. AV control unit is transmits steering angle signal to around view monitor control unit via AV communication.
- Around view monitor control unit controls the direction and distance of the predictive course line according to the sensor signal from steering angle sensor.

Front view guiding lines



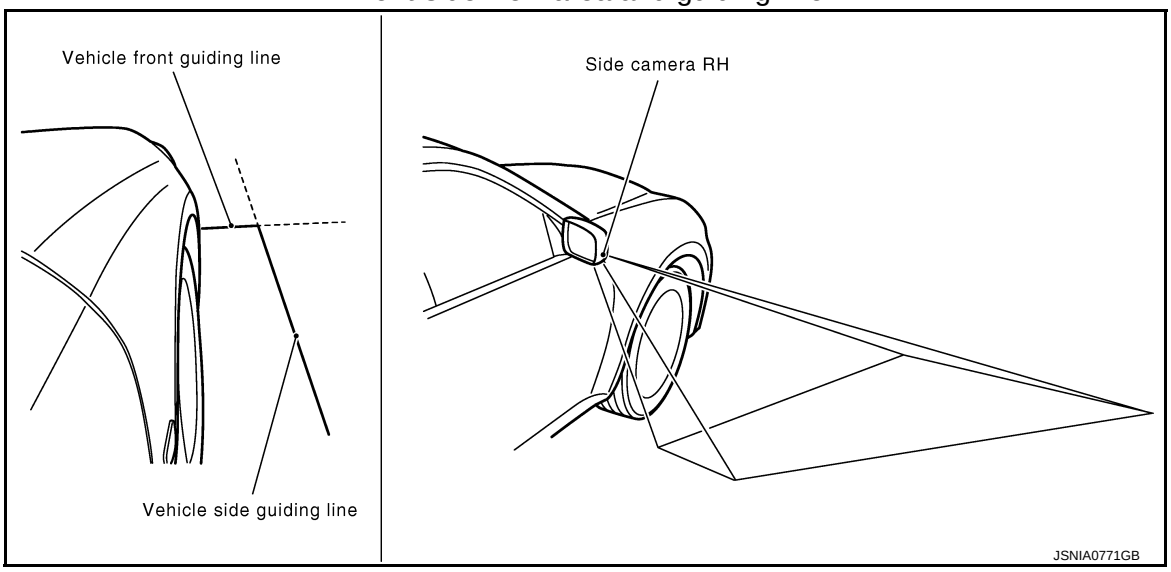
REAR VIEW
- The rear view image is from the rear camera.
- When the selector lever is in the reverse position, the rear view is displayed. Backing and parking are improved by the images from Birds-Eye view and Front-Side view. The rear wide view function allows the display of an image with a 180° horizontal angle.
- Display the vehicle width guiding line and vehicle distance guiding line in Rear view and display the predictive course line according to the steering angle (except when using the rear wide view function).
- The predictive course line is not displayed at the steering neutral position.
- AV control unit is connected to the steering angle sensor and receives the steering angle signal via CAN communication. AV control unit is transmits steering angle signal to around view monitor control unit via AV communication.
- Around view monitor control unit controls the direction and distance of predictive course line according to the sensor signal from steering angle sensor.

Rear view guiding lines



FRONT-SIDE VIEW
- The front-side view image is from the side camera RH.
- In Front-Side view, display the vehicle distance guiding line and vehicle width guiding line.
- The infrared LED illumination is installed on the door mirror RH to illuminate around the front wheels.

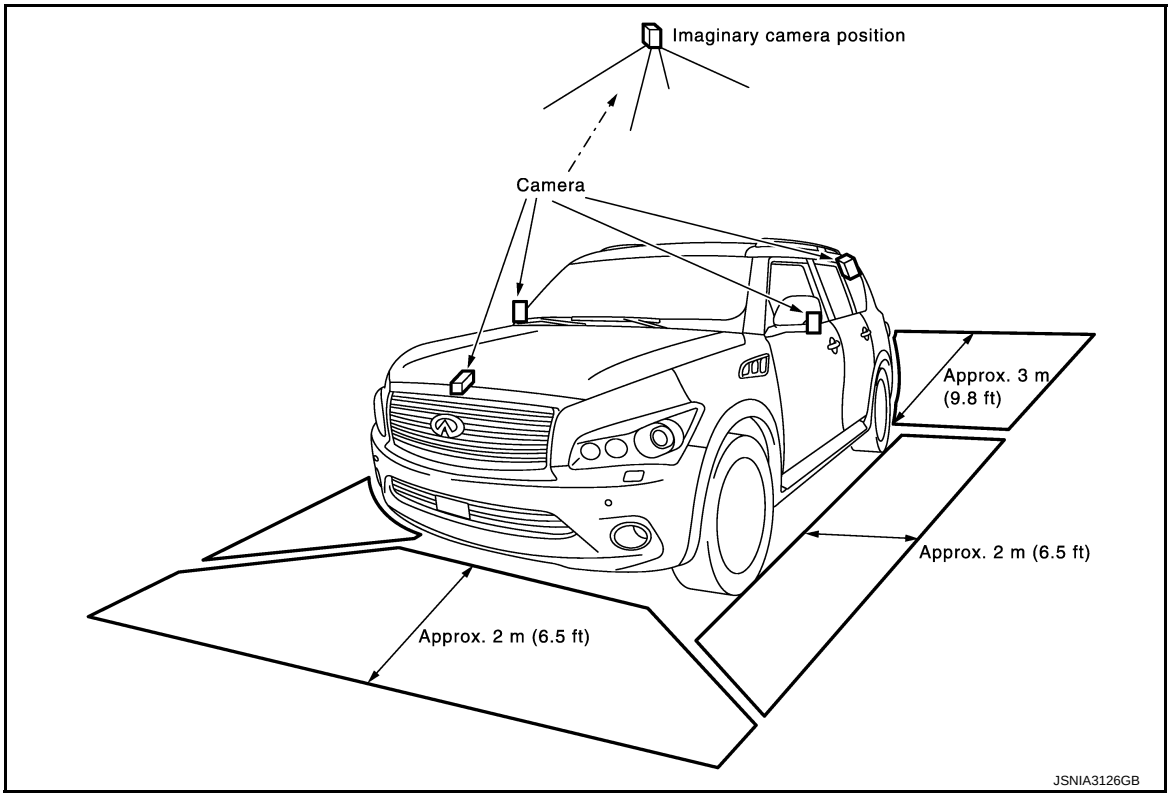
Front-side view area and guiding line



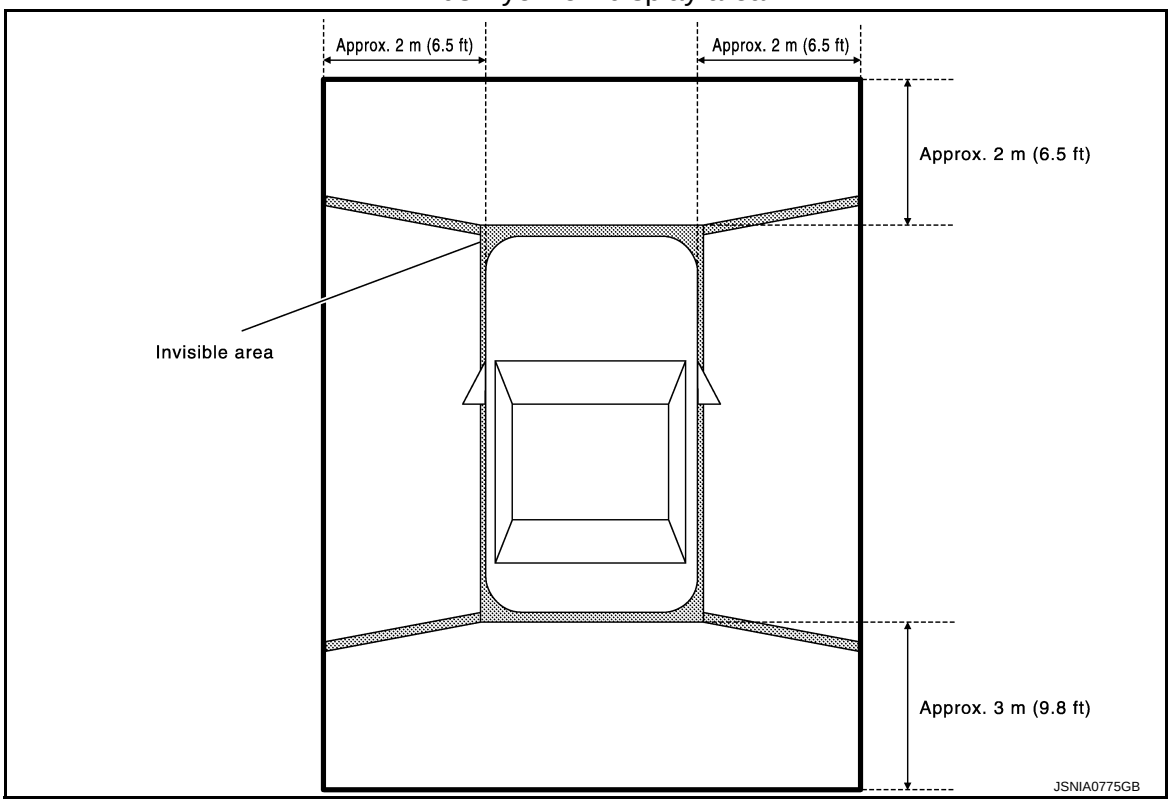
BIRDS-EYE VIEW

- The image from the 4 cameras is cut out and converted into the overhead view, and the surroundings of the vehicle is displayed in birds-eye view.
- 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 as an information for the user. (OFF setting can be performed)

Birds-Eye view display image



Birds-Eye view display area



Camera Image Operation Principle

- If the information writing to around view monitor control unit and the information from the camera are not matched, the applicable camera position is indicated as an error on the Birds-Eye view display. (Calibration operation is necessary when replacing each camera or when replacing around view monitor control unit.)
- Around view monitor control unit receives the camera switch signal from AV control unit via AV communication by pressing the “CAMERA” switch of multifunction switch.
- Around view monitor control unit that receives the camera switch signal supplies the power to each camera and inputs the camera image from each camera.
- When the selector lever is in the reverse position, around view monitor control unit receives the reverse signal, supplies the power to each camera, and inputs the camera image from each camera.
- Around view monitor control unit that receives the camera image signal from each camera cuts out the required screen for each view, superimposes the camera image, vehicle icon, guiding lines, sonar indicator, and outputs them to the front display unit.

CAMERA ASSISTANCE SONAR FUNCTION

- Install the corner sensor on the front bumper and rear bumper. It detects the obstacles around the vehicle when the around view monitor is displayed. It warns of the approach to the obstacles with the buzzer and indicator in the display linked with the around view monitor system.
- It displays the distance between the bumper and obstacle with the color of sonar indicator in the display and the blinking cycle of indicator in 3 stages.
- The buzzer warns of the distance to the obstacles with the cycle in 3 stages.

System Operation Description

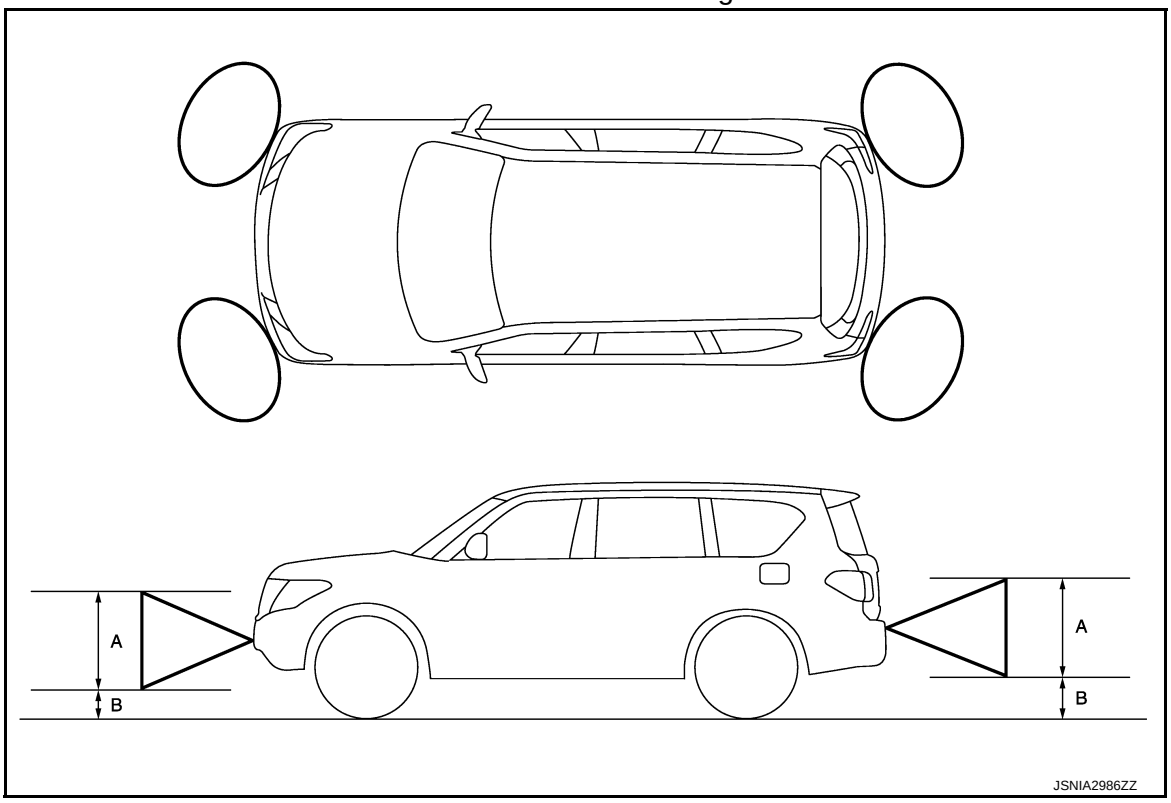
- Around view monitor control unit transmits the sonar operation signal via AV communication to sonar control unit to control the operation of sonar indicator and sonar buzzer.
- Sonar control unit that receives the sonar operation signal from around view monitor control unit transmits the detection signal and detection distance signal according to the signal from corner sensor via AV 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 a signal transmitted from the corner sensor into a detection distance signal and transmits it to the AV control unit via AV communication. When receiving the detection signal, the AV control unit activates each speaker via BOSE amp.

- Sonar control unit has the diagnosis function. It can detect the corner sensor malfunction or sensor harness open circuit. It transmits the diagnosis results to around view monitor control unit and always displays the sonar indicator in red to inform the user.

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)

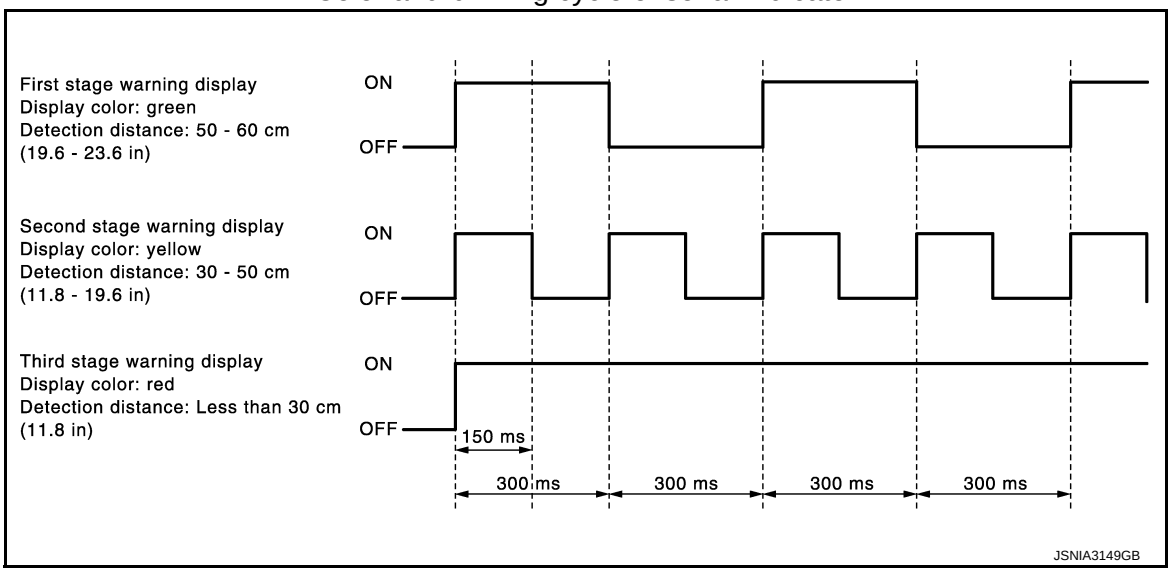
Detection distance

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.

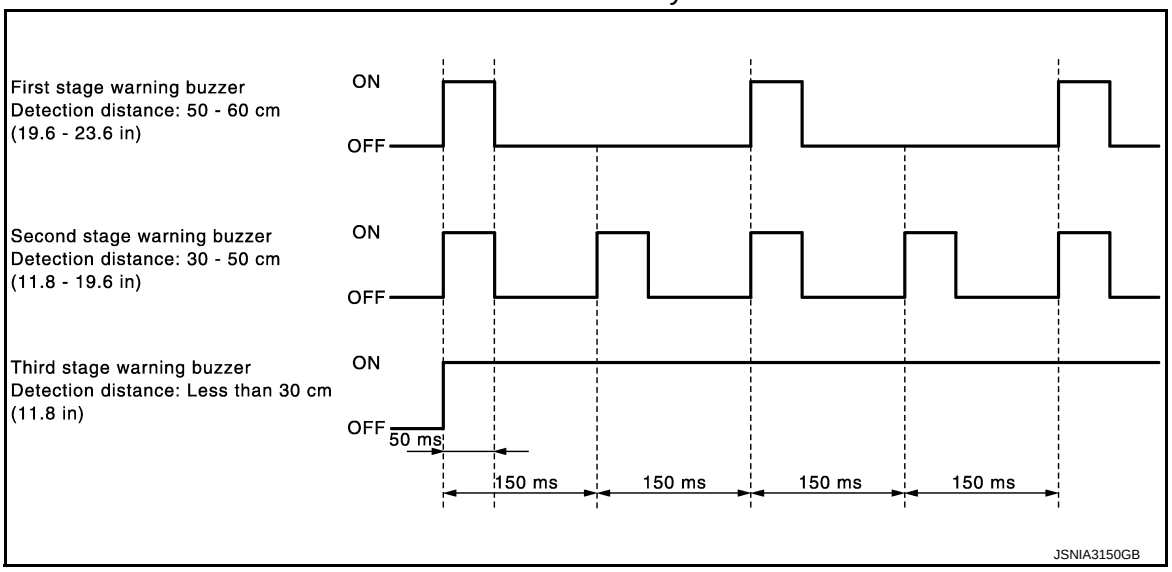
Color and blinking cycle of sonar indicator



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.

AUTO LIGHT ADJUSTMENT SYSTEM

When the light switch is in the 1st or 2nd position, the dimming of the display is judged according to a dimming signal transmitted from BCM to the AV control unit. Display illuminance is independent of vehicle exterior illuminance detected by the auto light detecting sensor even when the light switch is in 1st or 2nd position.

MULTI AV SYSTEM : Fail-Safe

INFOID:0000000006216217

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

FAIL-SAFE CONDITIONS

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

Display

The messages displayed on fail-safe conditions are as shown below:

Fail-safe mode	Display (display of the fail-safe condition)
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		When Fail-safe Function is activated
Air conditioner	Operation	Only multifunction switch (preset switch) can be operated.
	Display	• LED of multifunction switch (preset switch) illuminates. • Aimed temperature, blow angle, and flow rate are displayed in simplified mode.
Audio	Operation	Only ON/OFF and volume control operations by multifunction switch (preset switch) are possible.
	Display	No 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	Cannot be operated.
Navigation	Operation	Cannot be operated.
Self diagnosis		The display in simplified mode of fail-safe condition
CONSULT-III diagnosis		Cannot be operated.

Ability Operation Mode

There is an ability operation mode for Fail-safes due to low or high ambiance temperature.
If HDD data can be read, fail-safe is shown, then normal displays are displayed only for functions which can be operated.

RELEASE CONDITIONS OF FAIL-SAFE

Fail-safe is released on following conditions and normal mode is restored.

When The Temperature of HDD Is Low or High

If the ambient temperature becomes out of fail-safe condition range, normal mode is restored.

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:0000000006216218

- The AV control unit diagnosis function starts up with multifunction switch operation and the AV control unit performs a diagnosis for each unit in the system during the on board diagnosis.
- Perform a CONSULT-III diagnosis if the on board diagnosis does not start, e.g., the screen does not display anything, the multifunction switch does not function, etc.

On Board Diagnosis Function

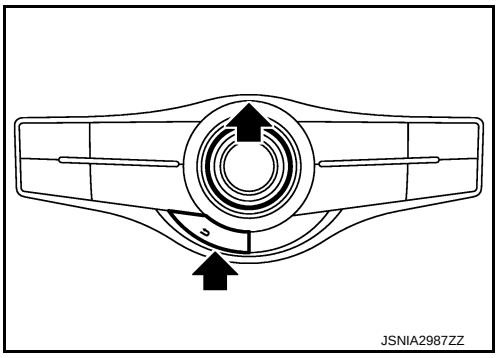
INFOID:0000000006216219

MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

The ON/OFF operation (continuity) of each switch in the multifunction switch and preset switch can be checked.

Self-diagnosis Mode

- Press the “BACK” switch and the “UP” switch of the 8-direction switches within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more. Then the buzzer sounds, all indicators of the preset switch illuminate, and the self-diagnosis mode starts.
- The continuity of each switch at the ON position can be checked by pressing the switch. The buzzer sounds if the switch is normal.
  NOTE:
  The hazard switch and disk eject switch cannot be checked.



Finishing Self-diagnosis Mode

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

ON BOARD DIAGNOSIS

Description

- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- The self-diagnosis mode performs diagnoses on the AV control unit, connections between system components as well as connections between AV control unit and GPS antenna. Then it displays the diagnosis results on the display.
- The confirmation/adjustment mode allows the technician to check, modify or adjust the vehicle signals and set values, as well as to monitor the system error records and system communication status. The checking, modifying or adjusting generally require human intervention and judgment (the system cannot make judgment automatically).

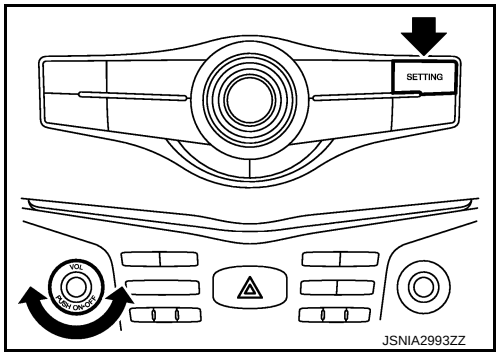
On Board Diagnosis Item

Mode	Description
Self Diagnosis	• AV control unit diagnosis. • Diagnoses the connections across system components, between AV control unit and GPS antenna.

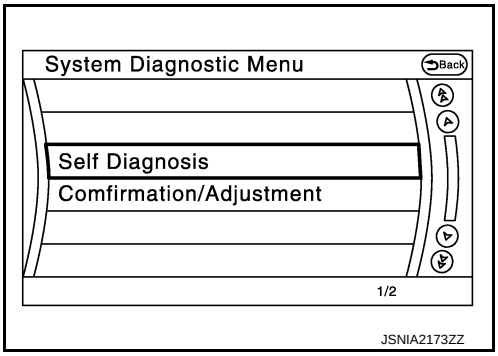
Mode			Description
Confirmation/ Adjustment	Display Diagnosis		The following check functions are available: color tone check by color bar display and white display, light and shade check by gray scale display and touch panel calibration response check.
	Vehicle Signals		Diagnosis of signals can be performed 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		The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.
	Camera		It can perform the confirmation of a signal connection to around view monitor control unit, the calibration of each camera, Correct Draw Line of Camera Image, and Fine Tuning of Birds-Eye View.
	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.

METHOD OF STARTING

1. Start the engine.
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 the self-diagnosis mode is started, the trouble diagnosis initial screen is displayed.)
   - Shifting from current screen to previous screen is performed by pressing “BACK” button.



4. Items of “Self Diagnosis” and “Confirmation/Adjustment” can be selected on the trouble diagnosis initial screen.



SELF-DIAGNOSIS MODE

1. Start the self-diagnosis function and select “Self Diagnosis”.

- Self-diagnosis subdivision screen is displayed, and the self-diagnosis mode starts.
- The bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.

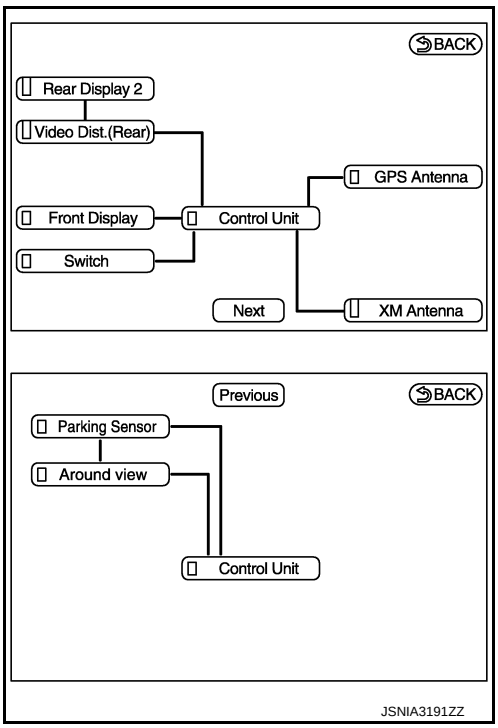
2. Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

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

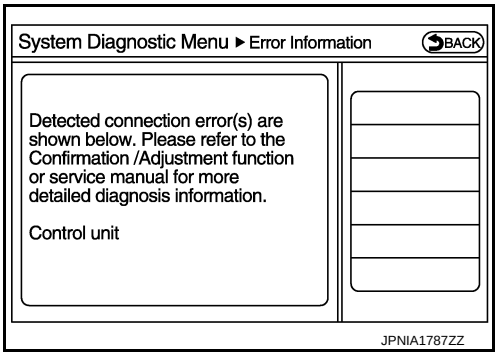
NOTE:

Control unit (AV control unit) is displayed in red.

- Replace AV control unit if “Self-Diagnosis did not run because of a control unit malfunction” is indicated. The symptom is AV control unit internal error. Refer to AV-212, "Removal and Installation".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.



- The comments of the self-diagnosis results can be viewed with a component in the diagnosis result screen.



Detection Range of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between AV control unit and each unit and the internal operation of the AV control unit.
- Because the start condition of diagnosis function is a switch operation, the on board diagnosis function cannot be started up if any malfunction is detected in the communication circuit between AV control unit and multifunction switch.

SELF-DIAGNOSIS RESULTS

Check the applicable display at the following table, and then repair the malfunctioning parts.

Only Unit Part Is Displayed In Red.

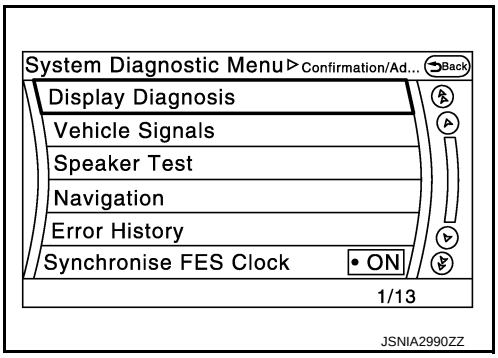
Screen switch	Description	Possible malfunction location / Action to take
Control Unit	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.

A Connecting Cable Between Units Is Displayed In Yellow.

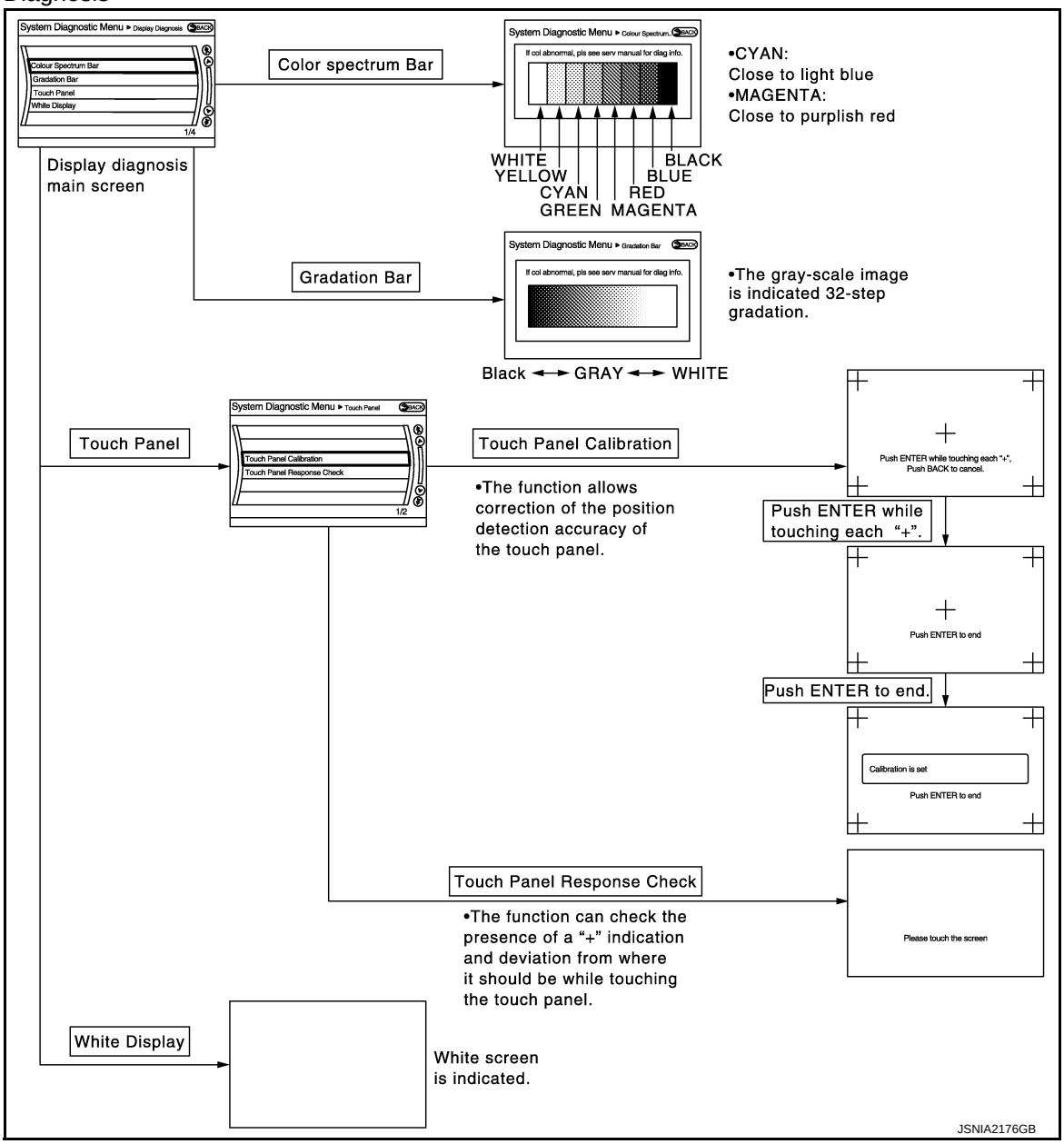
Area with yellow connection lines	Description	Possible malfunction location / Action to take
Control unit ⇔ Front Display	Serial communication circuits between AV control unit and front display unit are malfunctioning.	Serial communication circuits between AV control unit and front display unit.
Control 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 ⇔ 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.
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.

CONFIRMATION/ADJUSTMENT MODE

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

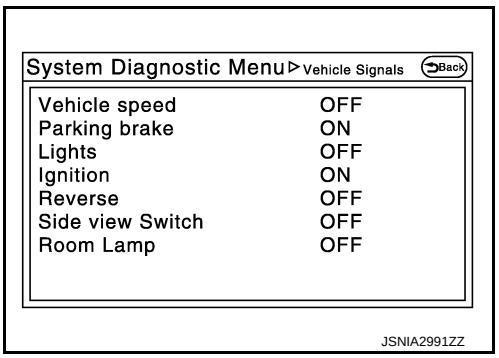


Display Diagnosis



Vehicle Signals

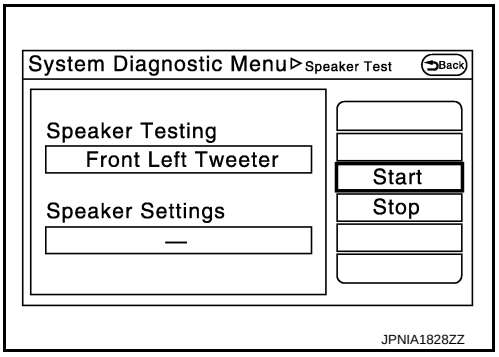
A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



Diagnosis item	Display	Vehicle status	Remarks
Vehicle speed	ON	Vehicle speed >= 8 km/h (5 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed < 8 km/h (5 MPH)	
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Lights	ON	Block the light from the auto light optical sensor when the lighting switch is 1st or 2nd.	—
	OFF	Either of the following conditions. • Lighting switch is OFF • Expose the auto light optical sensor to light when the lighting switch is 1st or 2nd.	
Ignition	ON	Ignition switch is ON.	—
	OFF	Ignition switch is in ACC position.	
Reverse	ON	Selector lever is in “R” position.	Changes in indication may be delayed. This is normal.
	OFF	Selector lever is in other than “R” position.	
Side view Switch	OFF	—	This item is displayed, but cannot be monitored.
Room Lamp	OFF	—	This item is displayed, but cannot be monitored.

Speaker Test

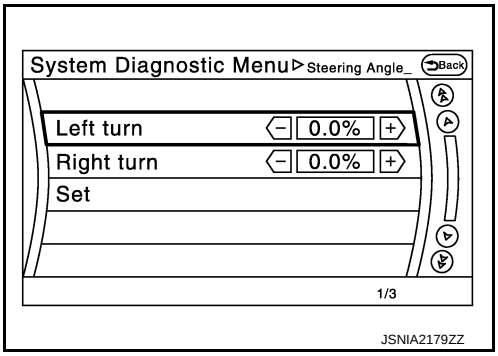
Select “SPEAKER DIAGNOSIS” to display the Speaker Diagnosis screen. Press “Start” to generate a test tone in a speaker. Press “Start” to generate a test tone in the next speaker. Press “Stop” to stop the test tones.



Navigation

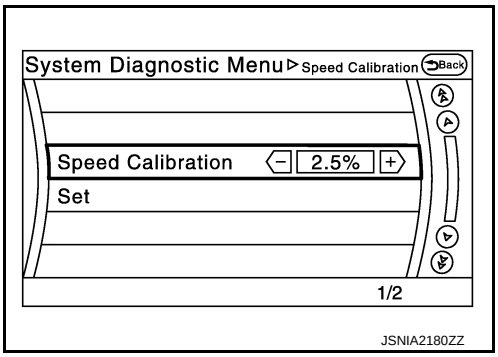
STEERING ANGLE ADJUSTMENT

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.

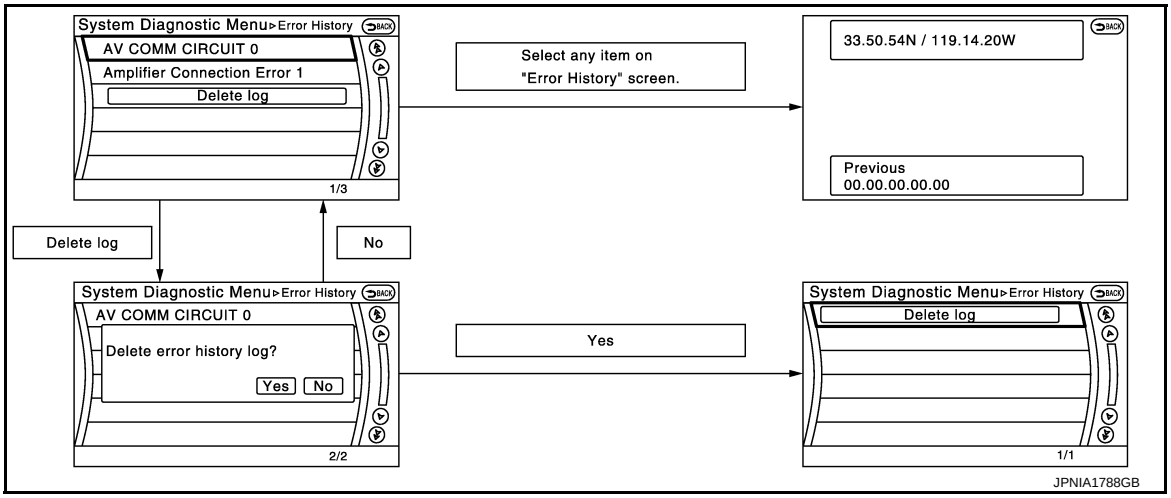
Count up method A

- 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-III.

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-III.

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

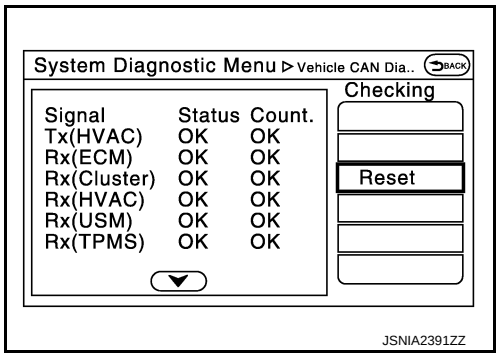
Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT-III, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-39, "CONSULT-III Function".
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
Connection Of Gyro		
Connection of G Sensor		
CAN Controller Memory Error		
Bluetooth Module Connection Error		
Sub CPU Connection Error		
Audio connection error		
DSP Connection Error	AV control unit malfunction is detected.	• If a disc can be played, 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-212, "Removal and Installation".
DSP Communication Error		
HDD Connection 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-212, "Removal and Installation".
HDD Read Error		
HDD Write Error		
HDD Communication Error		
HDD Access Error		
GPS Communication Error	GPS malfunction is detected.	• An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. • Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".
GPS ROM Error		
GPS RAM Error		
GPS RTC Error		

Error item	Description	Possible malfunction factor/Action to take
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.
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-212, "Removal and Installation".
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor. Refer to AV-39, "CONSULT-III Function".
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.
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.

Error item	Description	Possible malfunction factor/Action to take
• 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 • 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.
• AV COMM CIRCUIT • Switches Connection Error • Sonar Connection Error • AVM 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 • 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.

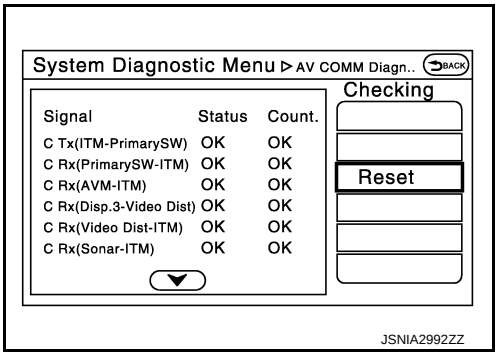


Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(TPMS)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39
Rx(ACC)	OK / ???	OK / 0 – 39
RX(VDC)	OK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

NOTE:
“???” indicates UNKWN.

AV COMM Diagnosis

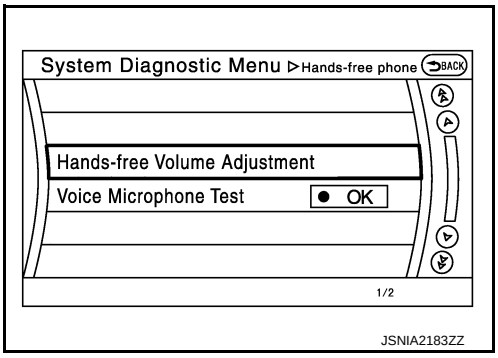
- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays “OK” if any malfunction was not detected in the past and displays “0” if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle. 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(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
C Rx(Sonar–AVM)	OK / ???	OK / 0 – 39
C Rx(R.RemoteCont–ITM)	OK / ???	OK / 0 – 39

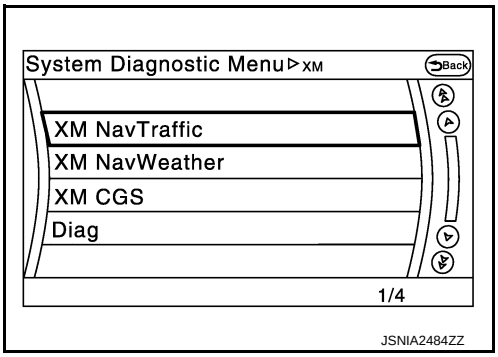
NOTE:
“???” indicates UNKWN

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



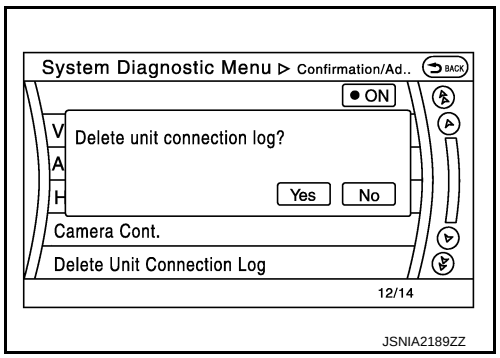
Camera.
Refer to AV-44, "On Board Diagnosis Function".

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.)

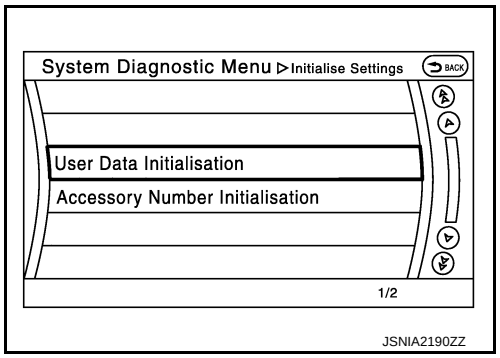


Initialize Settings

“User Data Initialization” and “Accessory Number Initialization” are possible.

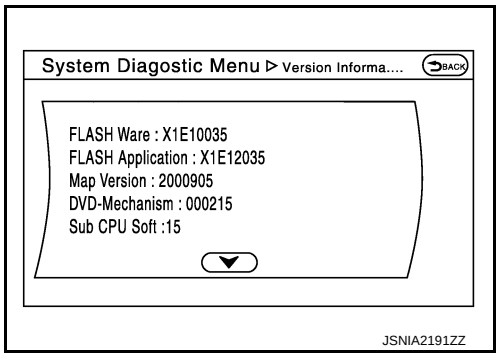
CAUTION:

- **Never perform Accessory Number Initialization except when configuration is unsuccessful.**
- **Accessory Number Initialization requires configuration. For details, refer to AV-109, "Description".**



Version Information

Version information of the AV control unit is displayed.



CONSULT-III Function

INFOID:0000000006216220

APPLICATION ITEMS

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

Diagnosis mode	Description
Ecu Identification	The part number of AV control unit can be checked.
Self Diagnostic Result	Performs a diagnosis on the AV control unit and a connection diagnosis for the communication circuit of the Multi AV system, and displays the current and past malfunctions collectively.

Diagnosis mode	Description
Data Monitor	The diagnosis of vehicle signal that is input to the AV control unit can be performed.
Work Support	Steering angle sensor can be adjusted.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing AV control unit.

AV Communication
When “AV communication” of “CAN Diag Support Monitor” is selected, the following function will be performed.

AV communication	AV&NAVI C/U	Displays the communication status from AV control unit to each unit as well as the error counter.
	AUDIO	Displays the AV control unit communication status and the error counter.

ECU IDENTIFICATION
The part number of AV control unit is displayed.

SELF DIAGNOSIS RESULT
- In CONSULT-III self-diagnosis, self-diagnosis results and error history are displayed collectively.
- The current malfunction indicates “CRNT”. The past malfunction indicates “PAST”.
- The timing is displayed as “0” if any of the error codes [U1000], [U1010], [U1300] and [U1310] is detected. The counter increases by 1 if the condition is normal at the next ignition switch ON cycle.

Self-diagnosis Results Display Item

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Refer to AV-118, "Diagnosis Procedure".
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]	AV control unit malfunction is detected.	
GYRO NO CONN [U1201]		
G-SENSOR NO CONN [U1202]		
CAN CONT [U1216]		
BLUETOOTH MODULE [U1217]		
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		
HDD CONN [U1218]	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-212, "Removal and Installation".
HDD READ [U1219]		
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
GPS COMM [U1204]	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-212, "Removal and Installation".
GPS ROM [U1205]		
GPS RAM [U1206]		
GPS RTC [U1207]		
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.

Error item	Description	Possible malfunction factor/Action to take
DSP CONN [U121D] DSP COMM [U121E]	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-212, "Removal and Installation".
DVD COMM [U1227]	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-212, "Removal and Installation".
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.
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-64, "Work Procedure".
FRONT DISP CONN [U1243]	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.
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
• AV COMM CIRCUIT [U1300] • VIDEO DIST CONN [U1246]	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 DISP CONN [U125A]	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.
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.
USB OVERCURRENT [U1263]	Detection of overcurrent in USB connecter.	Check USB harness between the AV control unit and USB connector.
ANTENNA AMP TERMINAL [OPEN or SHORT] [U1264]	Radio antenna amp. ON signal circuit malfunction is detected.	Radio antenna amp. ON signal circuit between AV control unit and antenna amp.
AMP ON TERMINAL [GND-SHORT or VB-SHORT] [U1265]	BOSE amp. ON signal circuit malfunction is detected.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.

Error item	Description	Possible malfunction factor/Action to take
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	When either one of the following items are detected: • multifunction switch power supply and ground circuits are 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 [U1300] • AROUND CAMERA CONN [U125B]	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 [U1300] • SONAR CONN [U125C]	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.
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B]	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 [U1300] • SWITCH CONN [U1240] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B] • VIDEO DIST CONN [U1246]		

DATA MONITOR

ALL SIGNALS

- Displays the status of the following vehicle signals inputted into the AV control unit.
- For each signal, actual signal can be compared with the condition recognized on the system.

Display Item	Display	Vehicle status	Remarks
VHCL SPD SIG	On	Vehicle speed >= 8 km/h (5 MPH)	Changes in indication may be delayed. This is normal.
	Off	Vehicle speed < 8 km/h (5 MPH)	
PKB SIG	On	Parking brake is applied.	
	Off	Parking brake is released.	
ILLUM SIG	On	Block the light from the auto light optical sensor when the lighting switch is 1st or 2nd.	—
	Off	Either of the following conditions. • Lighting switch is OFF • Expose the auto light optical sensor to light when the lighting switch is 1st or 2nd.	
IGN SIG	On	Ignition switch is ON	
	Off	Ignition switch is in ACC position	
REV SIG	On	Selector lever is in R position	Changes in indication may be delayed. This is normal.
	Off	Selector lever is in any position other than R	

Display Item	Display	Vehicle status	Remarks
SIDE VIEW SW	Off	—	This item is displayed, but cannot be monitored.
ROOM LAMP	Off	—	This item is displayed, but cannot be monitored.

SELECTION FROM MENU

Allows the technician to select which vehicle signals should be displayed and displays the status of the selected vehicle signals.

Item to be selected	Description
VHCL SPD SIG	The same as when “ALL SIGNALS” is selected.
PKB SIG	
ILLUM SIG	
IGN SIG	
REV SIG	
SIDE VIEW SW	
ROOM LAMP	

WORK SUPPORT

Adjusts the neutral position of the steering angle sensor.

CAUTION:

For vehicles with VDC, adjust the steering angle sensor neutral position on the ABS actuator control unit side.

Item	Description
ST ANGLE SENSOR ADJUSTMENT	Adjusts the neutral position of the steering angle sensor.

CONFIGURATION

Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	• Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

On Board Diagnosis Function

INFOID:0000000006216221

The diagnosis function of around view monitor control unit is displayed when selecting “Camera Cont.” of Confirmation/Adjustment mode in the multi AV system.

Around view monitor control unit diagnosis item

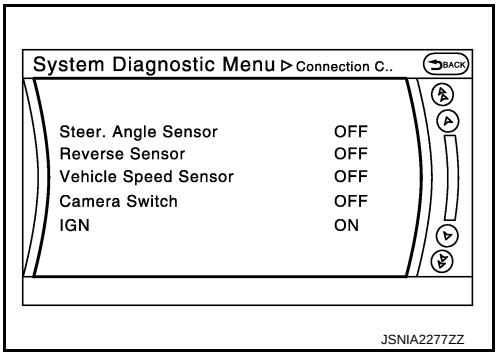
AV control unit Confirmation/Adjustment mode			Function
Camera Cont.	Connection Confirmation		The status of signals input to around view monitor control unit can be checked.
	Calibrating Camera Image	Rear Camera	Performs the calibration of rear camera.
		Pass-Side Camera	Performs the calibration of side camera RH.
		Front Camera	Performs the calibration of front camera.
		Dr-Side Camera	Performs the calibration of side camera LH.
		Initialize Camera Image Calibration*	The calibration can be initialized to NISSAN factory shipment condition.
	Fine Tuning of Bird’s-Eye View		• The confirmation and adjustment of the difference between each camera can be performed. • The system changes to the ZOOM function by the operation of shift and the ZOOM ratio of each camera can be changed.
	Correct Draw Line of Wide View	Rear-Wide View	The position of rear wide view guideline can be changed.

CAUTION:

***: Never perform other operations for approximately 10 seconds after performing "Initialize Camera Image Calibration".**

Connection Confirmation

The status of signals inputted to around view monitor control unit can be checked.



Connection Confirmation item list

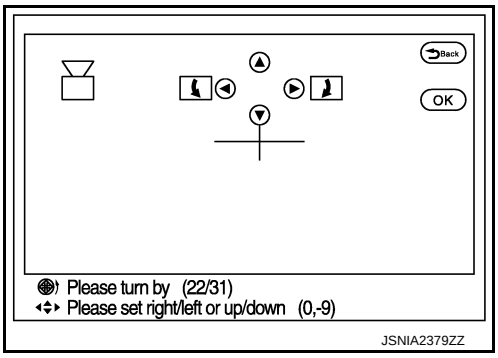
Diagnosis item	Display	Description
Steer. Angle Sensor	ON/OFF	Input status of steering angle sensor is displayed by ON/OFF.
Reverse Sensor	ON/OFF	Input status of reverse signal inputted to around view monitor control unit is displayed by ON/OFF in real time.
Vehicle Speed Sensor	ON/OFF	• Input status of vehicle speed signal inputted to around view monitor control unit is displayed by ON/OFF. • When the vehicle speed signal is input, it is turned ON. It remains ON until connection confirmation mode is stopped.
Camera Switch	ON/OFF	• The status of camera switch signal received via AV communication from AV control unit is displayed by ON/OFF. • When the camera switch signal is received once, it is turned ON. It remains ON until connection confirmation mode is stopped.
IGN	ON/OFF	Input status of ignition signal inputted to around view monitor control unit is displayed by ON/OFF in real time.
ILL	ON/OFF	Input status of illumination signal inputted to around view monitor control unit is displayed by ON/OFF in real time.

Diagnosis item	Display	Description
Type of Steer. Angle Sensor	Abslt.	The input type of steering angle sensor is displayed. (“Abslt.” is displayed on this model.)
Type of Steer. Gear ratio	1	The type of steering gear ratio is displayed. (“1” is displayed on this model.)
Left or Right Steer.	Right/Left	The steering position is displayed.
Rear Camera Image Output signal	OK/NG	The input status of rear camera image signal is displayed by OK/NG in real time.
Rear Camera COMM Status	OK/NG	The communication status with rear camera is displayed by OK/NG in real time.
Rear Camera COMM Line	OK/NG	The status of communication line with rear camera is displayed by OK/NG in real time.
Front Camera Image Output signal	OK/NG	The input status of front camera image signal is displayed by OK/NG in real time.
Front Camera COMM Status	OK/NG	The communication status with front camera is displayed by OK/NG in real time.
Front Camera COMM Line	OK/NG	The status of communication line with front camera is displayed by OK/NG in real time.
Pass-Side Camera Image Output signal	OK/NG	The input status of side camera RH image signal is displayed by OK/NG in real time.
Pass-Side Camera COMM Status	OK/NG	The communication status with side camera RH is displayed by OK/NG in real time.
Pass-Side Camera COMM Line	OK/NG	The status of communication line with side camera RH is displayed by OK/NG in real time.
Dr-Side Camera Image Output signal	OK/NG	The input status of side camera LH image signal is displayed by OK/NG in real time.
Dr-Side Camera COMM Status	OK/NG	The communication status with side camera LH is displayed by OK/NG in real time.
Dr-Side Camera COMM Line	OK/NG	The status of communication line with side camera LH is displayed by OK/NG in real time.

Calibrating Camera Image

- Perform the calibration of camera image caused by the incorrect mounting position of each camera, etc. Always perform calibration after performing the following work.
- When each camera or each camera mount (door mirror, front grille, etc.) is removed
- When replacing around view monitor control unit
- When performing the calibration initialization, it can be set to the NISSAN factory shipment condition.

Refer to AV-112, "Work Procedure" for the calibration procedure.



Adjustment range

Rotating direction	: 31 patterns (16 on the center)
Upper/lower direction	: (–99) – (+99)
Left/right direction	: (–99) – (+99)

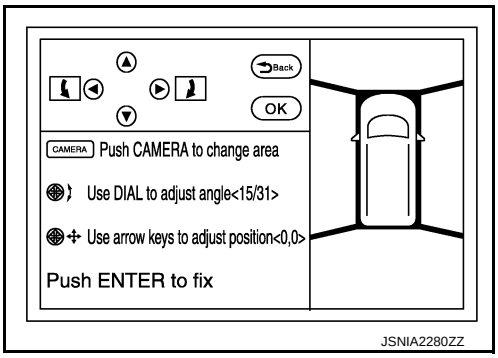
Calibrating Camera Image item

Items	Description
Rear Camera	Performs the calibration of rear camera.
Pass-Side Camera	Performs the calibration of side camera RH.
Front Camera	Performs the calibration of front camera.
Dr-Side Camera	Performs the calibration of side camera LH.
Initialize Camera Image Calibration*	The calibration can be initialized to the factory shipment setting.

CAUTION:

***: Never perform other operations for approximately 10 seconds after performing "Initialize Camera Image Calibration".**

Fine Tuning of Birds-Eye View



- The fine adjustment function of camera calibration can check and adjust the difference between each camera.
- Fine adjustments can be performed for each camera. Move the "+"-mark to select the camera by pressing the "CAMERA" switch.
- Perform the adjustment with the center dial and upper/lower/left/right switches.

CAUTION:

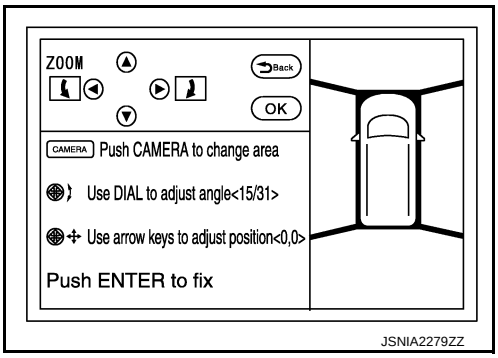
Operate the center dial slowly because the changing of the screen takes approximately 1 second.

NOTE:

- It can be initialized to the NISSAN factory shipment setting with "Initialize Camera Image Calibration" of "Calibrating Camera Image".
- The adjustment value is cancelled in this mode by performing "Initialize Camera Image Calibration".

Adjustment range	
Rotating direction	: 31 patterns (16 on the center)
Upper/lower direction	: (–99) – (+99)
Left/right direction	: (–99) – (+99)

ZOOM function



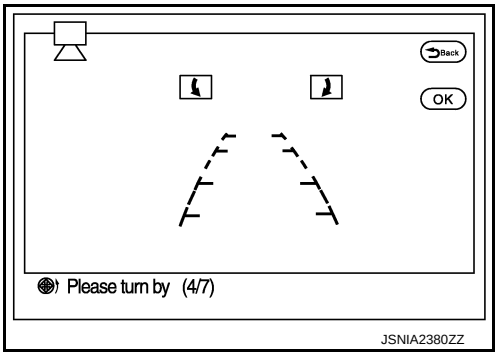
- The ZOOM ratio of camera can be changed when calibrating the camera.
- It shifts to ZOOM function mode by shifting the selector lever to a position other than the "R" position → "R" position → other than "R" position in the "Fine Tuning of Birds-Eye View" mode.
- The changing of ZOOM ratio can be performed for each camera. Move the "+"-mark to select the camera by pressing "CAMERA" switch and press the left/right switch to change the ZOOM ratio.

NOTE:

- When the position is not correct in "Fine Tuning of Birds-Eye View" mode, use this "ZOOM" function to adjust it.
- If this function is used, always adjust the upper/lower/left/right position again on the "Fine Tuning of Birds-Eye View" screen.

Correct Draw Line of Wide View

The display position of guiding lines when displayed on the rear-wide view can be changed.



Adjustment range	
Rotating direction	: 7 patterns

Correct Draw Line of Camera Image item

Items	Description
Rear-Wide View	The position of rear wide view guideline can be changed.

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

CONSULT-III Function

INFOID:0000000006216222

APPLICATION ITEMS

CONSULT-III 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-77, "DTC Index".

DATA MONITOR

Monitor Item	Display	Description
SONAR OPE	On	Around view monitor is ON. (sonar system is ON)
	Off	Around view monitor is OFF. (sonar system is OFF)
BUZZER OUTPUT*	On	Buzzer (forward) is output condition.
	Off	Buzzer (forward) is non-output condition.
CR SEN [FL] CR SEN [FR] CR SEN [RL] CR SEN [RR]	ERROR	When a sensor is abnormal.
	LV.0	When a sensor is not detection.
	LV.2	The distance between the corner sensor and an obstacle is 50 cm (19.6 in) or more and less then 60 cm (23.6 in).
	LV.3	The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).
	LV.4	The distance between corner sensor and an obstacle less than 30 cm (11.8 in).

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

ACTIVE TEST

Active test item	Function
BUZZER	This test is able to check buzzer operation.
SONAR SENSOR	This test is able to check each sonar sensor operation.

WORK SUPPORT

Work support item	Function
CORNER SEN DISTANCE SET	Corner sensor warning buzzer distance is adjustable to 4 phases.

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:0000000006216223

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

On Board Diagnosis Function

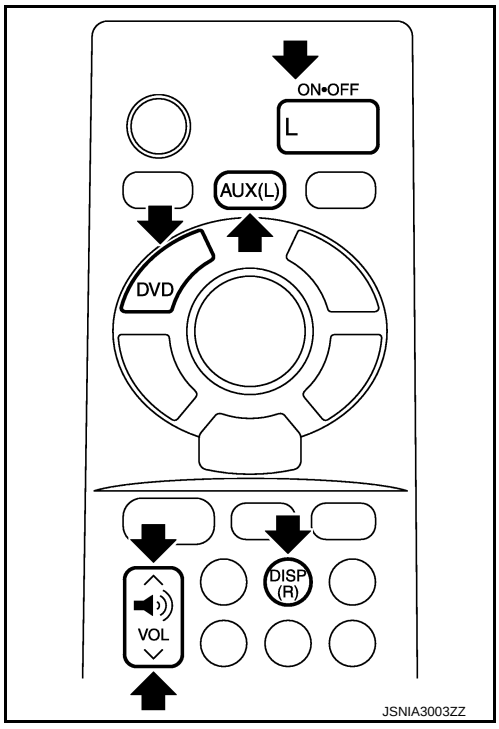
INFOID:0000000006216224

Self-diagnosis mode can check the following items.

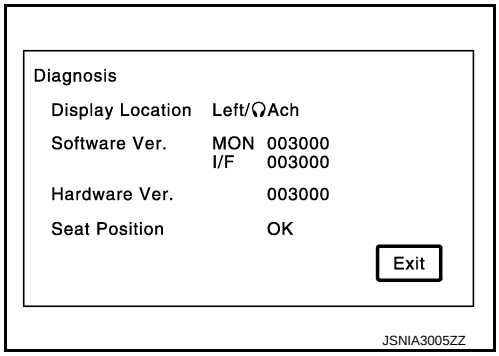
Diagnosis item	Display	Description
Display Location	Left/Right/Unknown	Installation location of headrest display unit is displayed. **NOTE:** If displayed location is different from the actual location or shown as “unknown”, check location recognition signal circuit.
Software Ver.	*****	Software version 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.

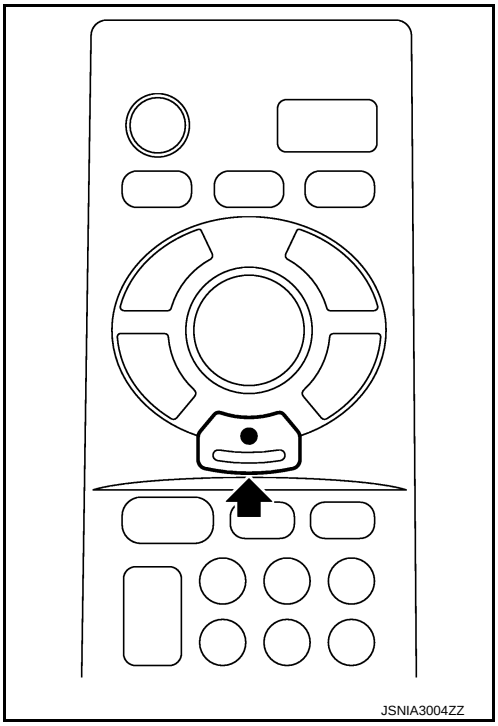


4. When the rear seat remote operation is performed as shown on procedure 3, self-diagnosis screen is displayed.



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

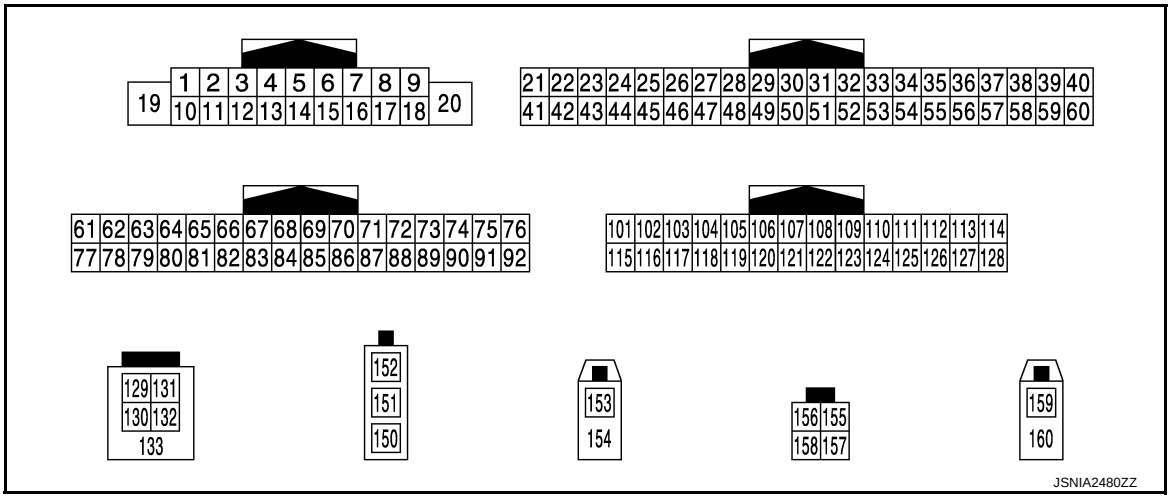
INFOID:0000000006216225

VALUES ON THE DIAGNOSIS TOOL

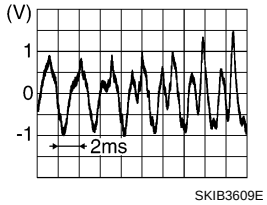
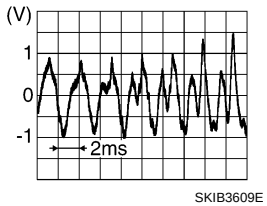
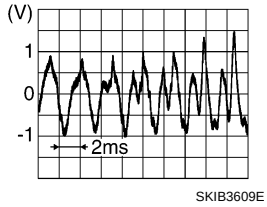
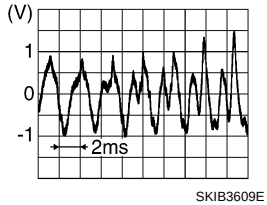
CONSULT-III MONITOR ITEM

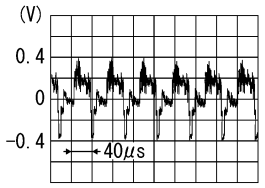
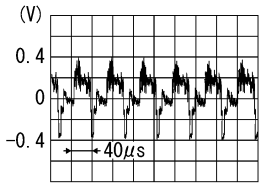
Monitor Item	Condition		Value/Status
VHCL SPD SIG	Ignition switch ON	Vehicle speed >= 8 km/h (5 MPH)	On
		Vehicle speed < 8 km/h (5 MPH)	Off
PKB SIG	Ignition switch ON	Parking brake is applied.	On
		Parking brake is released.	Off
ILLUM SIG	Ignition switch ON	Block the light from the auto light optical sensor when the lighting switch is 1st or 2nd.	On
		Expose the auto light optical sensor to light when the lighting switch is OFF, 1st or 2nd.	Off
IGN SIG	Ignition switch ON	—	On
	Ignition switch ACC	—	Off
REV SIG	Ignition switch ON	Selector lever is in the R position	On
		Selector lever in any position other than R	Off
SIDE VIEW SW	Ignition switch ON	This item is displayed, but cannot be monitored.	Off
ROOM LAMP	Ignition switch ON	This item is displayed, but cannot be monitored.	Off

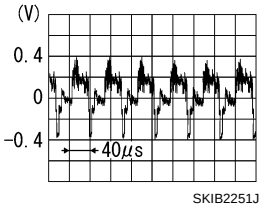
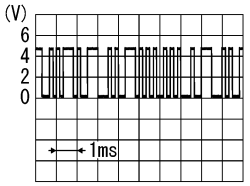
TERMINAL LAYOUT

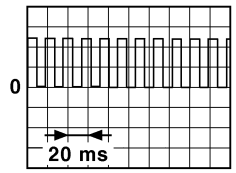
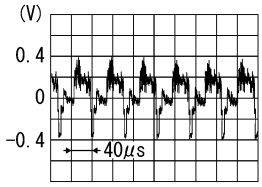
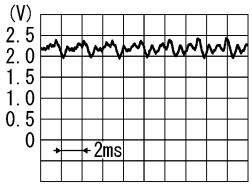
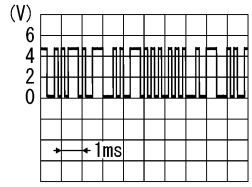
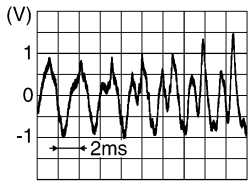


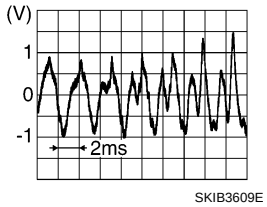
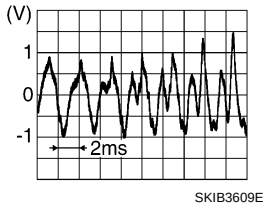
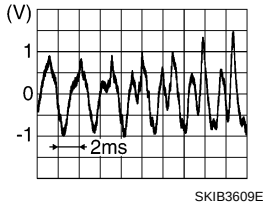
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (W/B)	Ground	BOSE amp. ON signal	Output	Ignition switch ACC	—	12.0 V
2 (L)	3 (P)	Sound signal front LH	Output	Ignition switch ON	Sound output	 SKIB3609E
4 (V)	5 (LG)	Sound signal rear LH	Output	Ignition switch ON	Sound output	 SKIB3609E
6 (Y/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 (V)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
11 (Y/L)	12 (Y/G)	Sound signal front RH	Output	Ignition switch ON	Sound output	 SKIB3609E
13 (O)	14 (W)	Sound signal rear RH	Output	Ignition switch ON	Sound output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
16 (Y/L)	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/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
26 (LG)	Ground	AUX image signal	Input	Ignition switch ON	At front AUX image is displayed.	 SKIB2251J
29 (W/B)	Ground	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.	0 V
					Except for above.	5.0 V
30 (R/W)	Ground	Mode change signal	Output	Ignition switch ON	Driver's Audio Stage ON	0 V
					Driver's Audio Stage OFF	8.5 V
33 (L)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
34 (P)	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
46 (V)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
47	—	Shield	—	—	—	—
49 (R/W)	Ground	Switch ground	—	Ignition switch ON	—	0 V
53	—	Shield	—	—	—	—
65 (W)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is applied.	0 V
					Parking brake is released.	4.5 V
67 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
68 (R)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
72 (Y/G)	Ground	Microphone VCC	Output	Ignition switch ON	—	5.0 V
73 (Y/G)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
74 (P)	—	CAN–L	Input/ Output	—	—	—
75 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
76 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
79 (L/O)	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)	12.0 V
80 (GR/L)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
81 (R/Y)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever is in R position.	12.0 V
					Selector lever is in other than R position.	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
82 (BR/W)	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
83	—	Shield	—	—	—	—
84 (W/B)	Ground	Composite image synchronizing signal	Output	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
87 (Y/L)	71	Microphone signal	Input	Ignition switch ON	Give a voice.	 PKIB5037J
88	—	Shield	—	—	—	—
89 (Y/L)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
90 (L)	—	CAN–H	Input/ Output	—	—	—
91 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
92 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
104 (W)	119 (W/L)	AUX sound signal LH	Input	Ignition switch ON	When front AUX mode is selected.	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
106 (W)	120 (R)	Sound signal LH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	 SKIB3609E
107 (B)	121 (G)	Sound signal RH	Output	Ignition switch ON	When DVD or USB mode is selected on headrest display unit LH or RH.	 SKIB3609E
117	—	Shield	—	—	—	—
118 (O)	119 (W/L)	AUX sound signal RH	Input	Ignition switch ON	When front AUX mode is selected.	 SKIB3609E
122	—	Shield	—	—	—	—
129 (G)	—	USB ground	—	—	—	—
130 (R)	—	USB D– signal	—	—	—	—
131 (W)	—	V BUS signal	—	—	—	—
132 (L)	—	USB D+ signal	—	—	—	—
133	—	Shield	—	—	—	—
150	—	FM sub	Input	—	—	—
151	—	AM-FM main	Input	—	—	—
152	Ground	Antenna amp. ON signal	Input	Ignition switch ON	—	12.0 V
153	Ground	GPS antenna signal	Input	Ignition switch ON	Not connected GPS antenna connector.	5.0 V
154	—	Shield	—	—	—	—
157	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			
158	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	1.3 V
159	Ground	Satellite radio antenna signal	Input	Ignition switch ON	Not connected satellite antenna connector.	5.0 V

Fail-Safe

INFOID:0000000006216226

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

FAIL-SAFE CONDITIONS

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

Display

The messages displayed on fail-safe conditions are as shown below:

Fail-safe mode	Display (display of the fail-safe condition)
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		When Fail-safe Function is activated
Air conditioner	Operation	Only multifunction switch (preset switch) can be operated.
	Display	• LED of multifunction switch (preset switch) illuminates. • Aimed temperature, blow angle, and flow rate are displayed in simplified mode.
Audio	Operation	Only ON/OFF and volume control operations by multifunction switch (preset switch) are possible.
	Display	No 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	Cannot be operated.
Navigation	Operation	Cannot be operated.
Self diagnosis		The display in simplified mode of fail-safe condition
CONSULT-III diagnosis		Cannot be operated.

Ability Operation Mode

There is an ability operation mode for Fail-safes due to low or high ambiance temperature.

If HDD data can be read, fail-safe is shown, then normal displays are displayed only for functions which can be operated.

RELEASE CONDITIONS OF FAIL-SAFE

Fail-safe is released on following conditions and normal mode is restored.

When The Temperature of HDD Is Low or High

If the ambient temperature becomes out of fail-safe condition range, normal mode is restored.

DTC Index

INFOID:0000000006216227

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-118, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [1010]	AV-119, "DTC Logic"
U1200	Cont Unit [U1200]	AV-120, "DTC Logic"
U1201	GYRO NO CONN [U1201]	AV-121, "DTC Logic"
U1202	G-SENSOR NO CONN [U1202]	AV-122, "DTC Logic"
U1204	GPS COMM [U1204]	AV-123, "Diagnosis Procedure"
U1205	GPS ROM [U1205]	AV-124, "Diagnosis Procedure"
U1206	GPS RAM [U1206]	AV-125, "Diagnosis Procedure"
U1207	GPS RTC [U1207]	AV-126, "Diagnosis Procedure"
U1216	CAN CONT [U1216]	AV-127, "DTC Logic"
U1217	BLUETOOTH MODULE [U1217]	AV-128, "DTC Logic"
U1218	HDD CONN [U1218]	AV-129, "Diagnosis Procedure"
U1219	HDD READ [U1219]	AV-130, "Diagnosis Procedure"
U121A	HDD WRITE [U121A]	AV-131, "Diagnosis Procedure"
U121B	HDD COMM [U121B]	AV-132, "Diagnosis Procedure"
U121C	HDD ACCESS [U121C]	AV-133, "Diagnosis Procedure"
U121D	DSP CONN [U121D]	AV-134, "Diagnosis Procedure"
U121E	DSP COMM [U121E]	AV-135, "Diagnosis Procedure"
U1225	USB CONTROLLER [U1225]	AV-136, "DTC Logic"
U1227	DVD COMM [U1227]	AV-137, "Diagnosis Procedure"
U1228	SUB CPU CONN [U1228]	AV-138, "DTC Logic"
U1229	iPod CERTIFICATION [U1229]	AV-139, "DTC Logic"
U122A	CONFIG UNFINISH [U122A]	AV-140, "Diagnosis Procedure"
U122E	Built-in AUDIO CONN [U122E]	AV-141, "DTC Logic"
U1232	ST ANGLE SEN CALIB [1232]	AV-142, "Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-143, "Diagnosis Procedure"
U1244	GPS ANTENNA CONN [U1244]	AV-145, "Diagnosis Procedure"
U1258	XM ANTENNA CONN [U1258]	AV-146, "Diagnosis Procedure"
U125A	3RD DISP CONN [U125A]	AV-147, "Diagnosis Procedure"
U1263	USB OVERCURRENT [U1263]	AV-148, "Diagnosis Procedure"
U1264	ANTENNA AMP TERMINAL [OPEN or SHORT] [U1264]	AV-149, "Diagnosis Procedure"
U1265	AMP ON TERMINAL [GND-SHORT or VB-SHORT] [U1265]	AV-150, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-152, "DTC Logic"

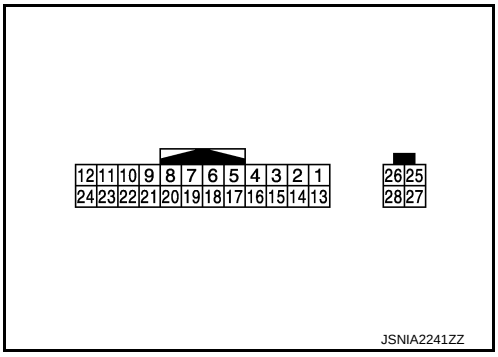
DTC	Display item	Refer to
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	AV-151, "Description"
U1300 U1246	• AV COMM CIRCUIT [U1300] • VIDEO DIST CONN [U1246]	
U1300 U125B	• AV COMM CIRCUIT [U1300] • AROUND CAMERA CONN [U125B]	
U1300 U125C	• AV COMM CIRCUIT [U1300] • SONAR CONN [U125C]	
U1300 U1240 U125C U125B	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B]	
U1300 U1240 U125C U125B U1246	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B] • VIDEO DIST CONN [U1246]	

FRONT DISPLAY UNIT

Reference Value

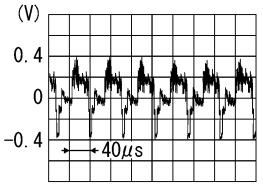
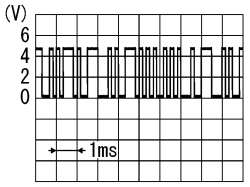
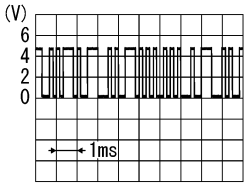
INFOID:0000000006216228

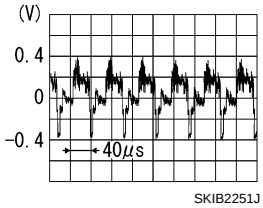
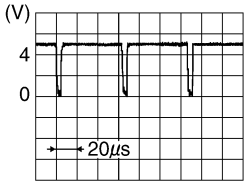
TERMINAL LAYOUT



JSNIA2241ZZ

PHYSICAL VALUES

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

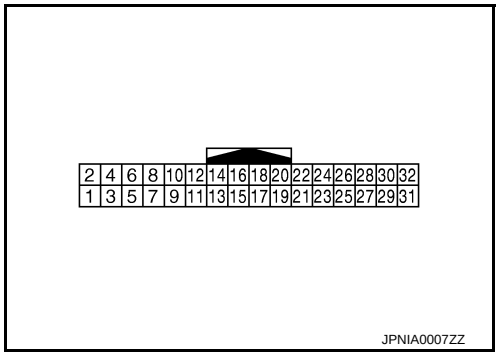
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (R)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
19 (W)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
20 (W/B)	Ground	Composite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

HEADREST DISPLAY UNIT

Reference Value

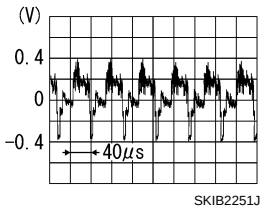
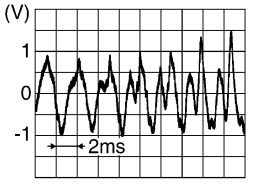
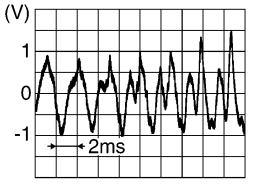
INFOID:0000000006216229

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (L)	Ground	Ground	—	Ignition switch ON	—	0 V
2 (V)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
3 (GR)	Ground	Ground	—	Ignition switch ON	—	0 V
4 (L/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
9 (B/R)	Ground	Location recognition signal for headrest display unit RH	Input	Ignition switch ON	—	0 V
10 (L/B)	Ground	Location recognition signal for headrest display unit LH	Input	Ignition switch ON	—	0 V
11 (B)	—	AV communication signal (H)	Input/ Output	—	—	—
12 (G)	—	AV communication signal (H)	Input/ Output	—	—	—
13 (R)	—	AV communication signal (L)	Input/ Output	—	—	—
14 (W)	—	AV communication signal (L)	Input/ Output	—	—	—
15	—	Shield	—	—	—	—
18 (W/R)	Ground	ACC signal	Input	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V

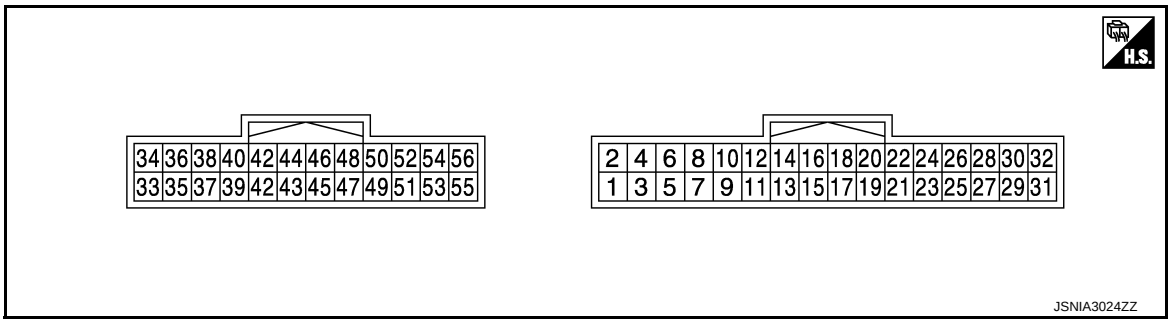
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
19 (L/Y)	Ground	Cont. ground	—	Ignition switch ON	—	0 V
20 (W/L)	Ground	Image switch signal	Output	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit.	0.5 V
					When rear AUX image is displayed on headrest display unit.	4.5 V
23 (R/L)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
24 (Y)	Ground	Composite image signal	Input	Ignition switch ON	When DVD, USB or front AUX image is displayed on headrest display unit.	 SKIB2251J
25	—	Shield	—	—	—	—
27 (R/W)	Ground	AV ground	—	Ignition switch ON	—	0 V
28	—	Shield	—	—	—	—
30 (P)	29 (BR)	Headphone sound signal RH	Input	Ignition switch ON	Headphone sound output.	 SKIB3609E
32 (SB)	31 (LG)	Headphone sound signal LH	Input	Ignition switch ON	Headphone sound output.	 SKIB3609E

VIDEO DISTRIBUTOR

Reference Value

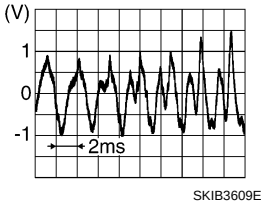
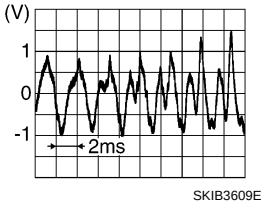
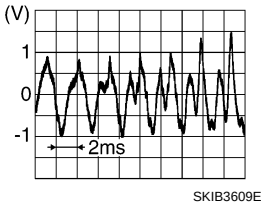
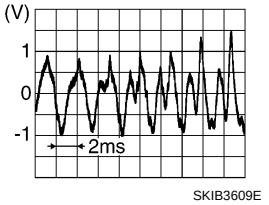
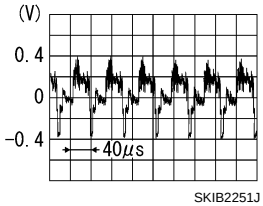
INFOID:0000000006216230

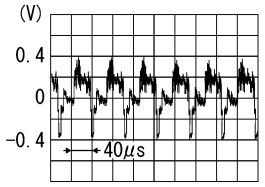
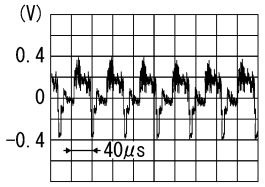
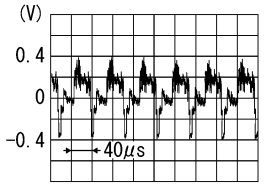
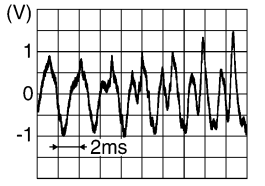
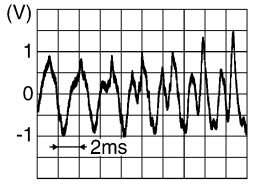
TERMINAL LAYOUT

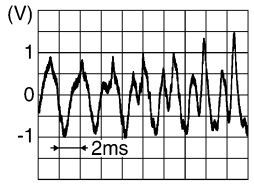
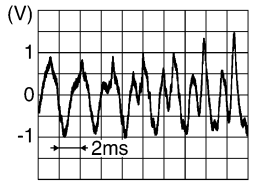


PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	—	Ground	—	Ignition switch ON	—	0 V
2 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
3 (B)	—	Ground	—	Ignition switch ON	—	0 V
4 (V)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
5 (V/W)	Ground	Cont. ground for headrest display unit RH	—	Ignition switch ON	—	0 V
6 (L/W)	Ground	ACC signal for headrest display unit RH	Output	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
7 (W/R)	Ground	Cont. ground for headrest display unit LH	—	Ignition switch ON	—	0 V
8 (GR/R)	Ground	ACC signal for headrest display unit LH	Output	Ignition switch OFF	—	3.3 V
				Ignition switch ACC	—	0 V
9 (O/B)	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 (R/B)	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 (B)	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 (W)	17 (R)	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 (P/L)	Ground	AV ground for headrest display unit RH	—	Ignition switch ON	—	0 V
19 (P)	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 (R)	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 (Y/L)	Ground	Composite image signal ground for headrest display unit LH	—	Ignition switch ON	—	0 V
32 (Y/G)	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 (L)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
34 (P)	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 (LG)	39 (V)	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	—	—	—	—

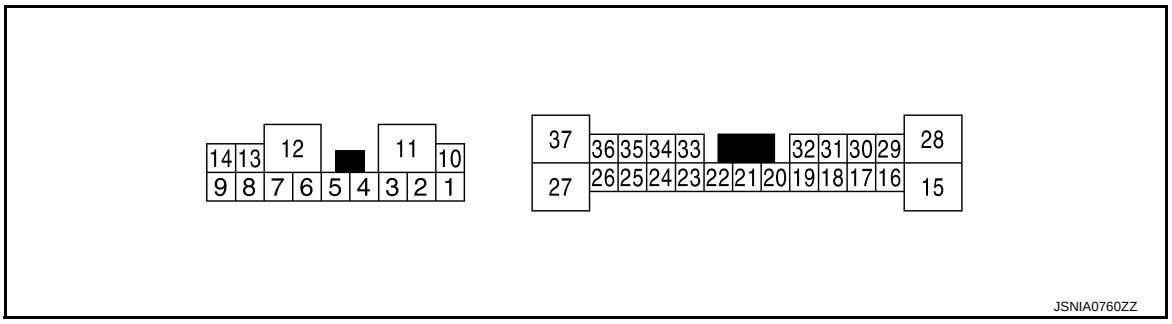
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
54 (B)	56 (R)	AUX sound signal LH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E
55 (W)	56 (R)	AUX sound signal RH	Input	Ignition switch ON	When rear AUX mode is selected on headrest display unit LH or RH.	 SKIB3609E

BOSE AMP.

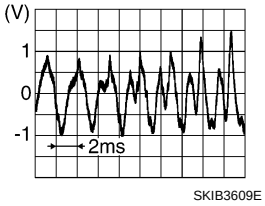
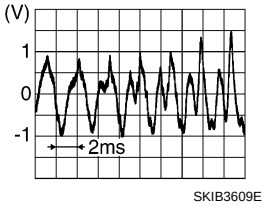
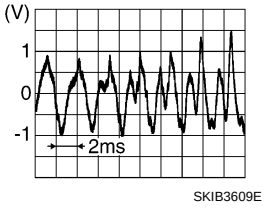
Reference Value

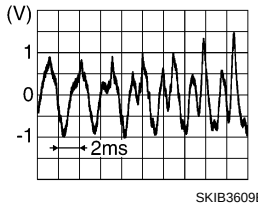
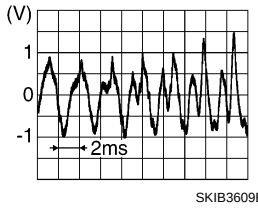
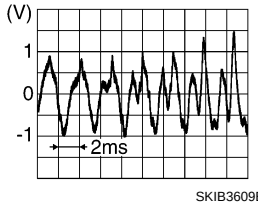
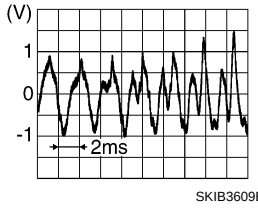
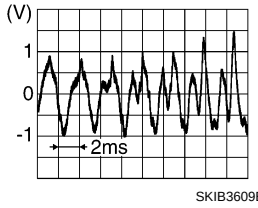
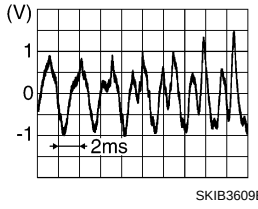
INFOID:0000000006216231

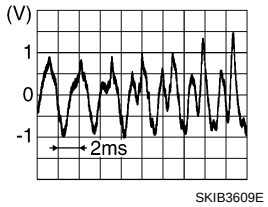
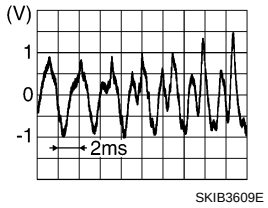
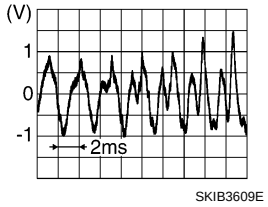
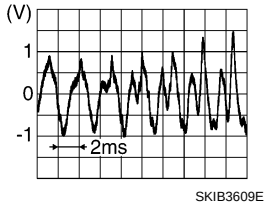
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (R/B)	2 (W/B)	Sound signal squawker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
4 (L)	3 (O)	Sound signal squawker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
10 (R)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
11 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	—	Ground	—	Ignition switch ON	—	0 V
13 (W)	8 (R)	Sound signal woofer	Output	Ignition switch ON	Sound output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
14 (V)	9 (L)	Sound signal rear door speaker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
16 (R)	17 (W)	Sound signal roof speaker LH and RH	Output	Ignition switch ON	Sound output	 SKIB3609E
18 (V)	19 (Y)	Sound signal front door speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
20 (W/B)	Ground	BOSE amp. ON signal	Input	Ignition switch ON	—	12.0 V
24 (V)	23 (LG)	Sound signal rear LH	Input	Ignition switch ON	Sound output	 SKIB3609E
26 (O)	25 (W)	Sound signal rear RH	Input	Ignition switch ON	Sound output	 SKIB3609E
28 (L)	15 (R/Y)	Sound signal rear door speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E

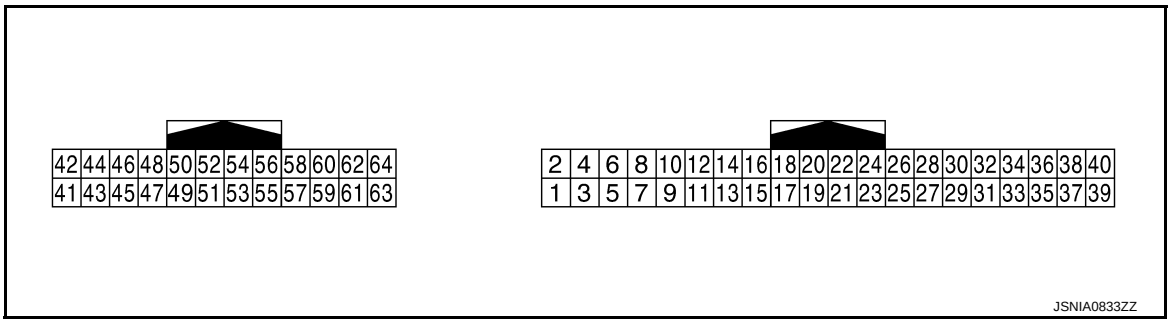
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
29 (GR/R)	30 (G/R)	Sound signal center speaker	Output	Ignition switch ON	Sound output	 SKIB3609E
31 (L/W)	32 (L)	Sound signal front door speaker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
33 (Y/L)	34 (Y/G)	Sound signal front RH	Input	Ignition switch ON	Sound output	 SKIB3609E
35 (L)	36 (P)	Sound signal front LH	Input	Ignition switch ON	Sound output	 SKIB3609E
37 (R/W)	Ground	Mode change signal	Input	Ignition switch ON	Driver's Audio Stage ON	0 V
					Driver's Audio Stage OFF	8.5 V

AROUND VIEW MONITOR CONTROL UNIT

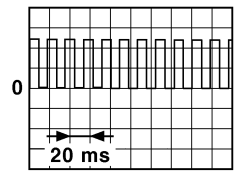
Reference Value

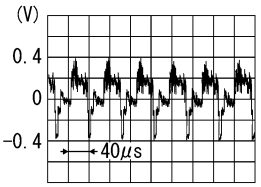
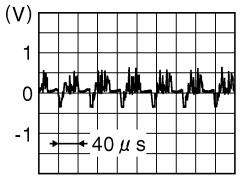
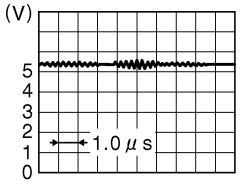
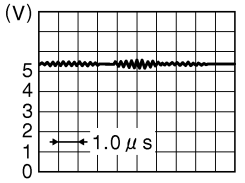
INFOID:0000000006216232

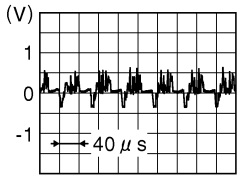
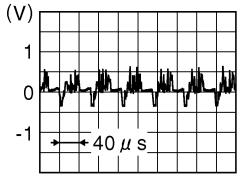
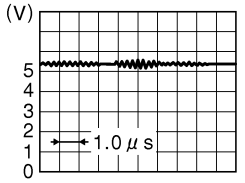
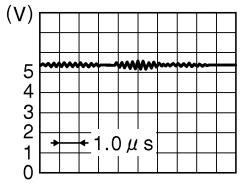
TERMINAL LAYOUT

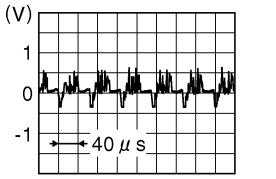


PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
2 (Y/G)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
3 (GR/L)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (V)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
5 (L/W)	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0 V
					Lighting switch is ON.	12.0 V
6 (BR/ W)	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
7 (P)	Ground	Reverse signal	Input	Ignition switch ON	R position	12.0 V
					Other than R position	0 V
9 (B/O)	Ground	Control signal	—	Ignition switch ON	—	0 V
13 (B/O)	Ground	Control signal	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
17 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
18 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
23 (LG)	Ground	Auxiliary infrared LED power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	5.5 V
27 (W)	Ground	Camera image signal	Output	Ignition switch ON	At camera image display	 SKIB2251J
28	—	Shield	—	—	—	—
29 (Y)	30 (G)	Side camera passenger side image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
31	—	Shield	—	—	—	—
32 (B)	Ground	Side camera passenger side ground	—	Ignition switch ON	—	0 V
33 (W)	Ground	Side camera passenger side communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
34 (R)	Ground	Side camera passenger side power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
35 (Y)	Ground	Rear camera communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
36 (R)	Ground	Rear camera power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
37	—	Shield	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
38 (W)	Ground	Rear camera ground	—	Ignition switch ON	—	0 V
39 (G)	40 (B)	Rear camera image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
41 (Y)	42 (G)	Front camera image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB
43	—	Shield	—	—	—	—
44 (B)	Ground	Front camera ground	—	Ignition switch ON	—	0 V
45 (W)	Ground	Front camera communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
46 (R)	Ground	Front camera power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
47 (W)	Ground	Side camera driver side communication signal	Input/ Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0836GB
48 (R)	Ground	Side camera driver side power supply	Output	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	6.0 V
49	—	Shield	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
50 (B)	Ground	Side camera driver side ground	—	Ignition switch ON	—	0 V
51 (Y)	52 (G)	Side camera driver side image signal	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

Reference Value

INFOID:0000000006216233

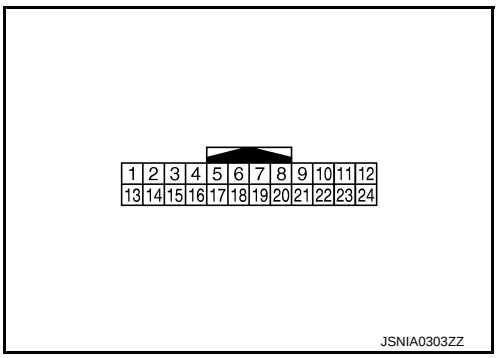
VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

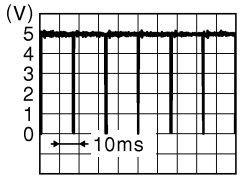
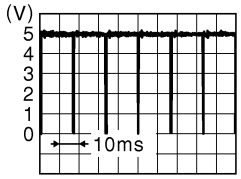
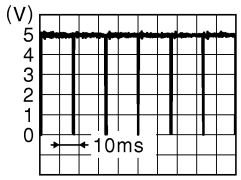
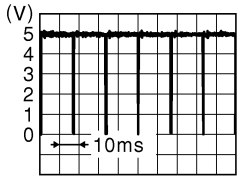
Monitor Item	Condition		Value/Status
SONAR OPE	Ignition switch ON	Around view monitor operating (sonar operating).	On
		Around view monitor non-operating (sonar non-operating).	Off
BUZZER OUTPUT*	Ignition switch ON	Buzzer (forward) is output condition.	On
		Buzzer (forward) is not output condition.	Off
CR SEN [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 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
		The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
CR SEN [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 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
		The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
CR SEN [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 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
		The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4
CR SEN [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 50 cm (19.6 in) or more and less then 60 cm (23.6 in).	LV.2
		The distance between the corner sensor and an obstacle is 30 cm (11.8 in) or more and less then 50 cm (19.6 in).	LV.3
		The distance between corner sensor and an obstacle less than 30 cm (11.8 in).	LV.4

*: 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 (G/R)	12 (G/O)	Corner sensor signal front LH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0837GB
4 (G/Y)	12 (G/O)	Corner sensor signal front RH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0837GB
5 (G/R)	12 (G/O)	Corner sensor signal rear LH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0837GB
6 (G/Y)	12 (G/O)	Corner sensor signal rear RH	Input	Ignition switch ON	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0837GB
13 (V)	Ground	ACC power supply	Input	Ignition switch ACC	—	12.0 V
18 (SB)	—	K-line (CONSULT-III)	—	—	—	—
19 (SB)	—	AV communication (H)	Input/ Output	—	—	—

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
20 (LG)	—	AV communication (L)	Input/ Output	—	—	—
24 (B)	Ground	Ground	—	Ignition switch ON	—	0 V

Fail-Safe

INFOID:0000000006216234

- Sonar control unit has diagnosis function which can detect corner sensor malfunction and sensor harness disconnection.
- It transmits the malfunction status to around view monitor control unit and informs the malfunction to the user by displaying continuously red sonar indicator.

DTC Index

INFOID:0000000006216235

DTC	Display item	Malfunction is detected when...	Reference
B2700	CORNER SENSOR [FL] [B2700]	Corner sensor front LH is malfunctioning.	AV-153, "DTC Logic"
B2701	SENSOR HARNESS OPEN [CR-FL] [B2701]	Corner sensor front LH harness circuit is open.	AV-154, "Diagnosis Procedure"
B2702	CORNER SENSOR [FR] [B2702]	Corner sensor front RH is malfunctioning.	AV-155, "DTC Logic"
B2703	SENSOR HARNESS OPEN [CR-FR] [B2703]	Corner sensor front RH harness circuit is open.	AV-156, "Diagnosis Procedure"
B2704	CORNER SENSOR [RL] [B2704]	Corner sensor rear LH is malfunctioning.	AV-157, "DTC Logic"
B2705	SENSOR HARNESS OPEN [CR-RL] [B2705]	Corner sensor rear LH harness circuit is open.	AV-158, "Diagnosis Procedure"
B2706	CORNER SENSOR [RR] [B2706]	Corner sensor rear RH is malfunctioning.	AV-159, "DTC Logic"
B2707	SENSOR HARNESS OPEN [CR-RR] [B2707]	Corner sensor rear RH harness circuit is open.	AV-160, "Diagnosis Procedure"

NOTE:
"TIME" means the following.
- 0: Means detected malfunction at present. (From malfunction detection to turning ignition switch OFF)
- 1–39: Means detected malfunction in past.

WIRING DIAGRAM

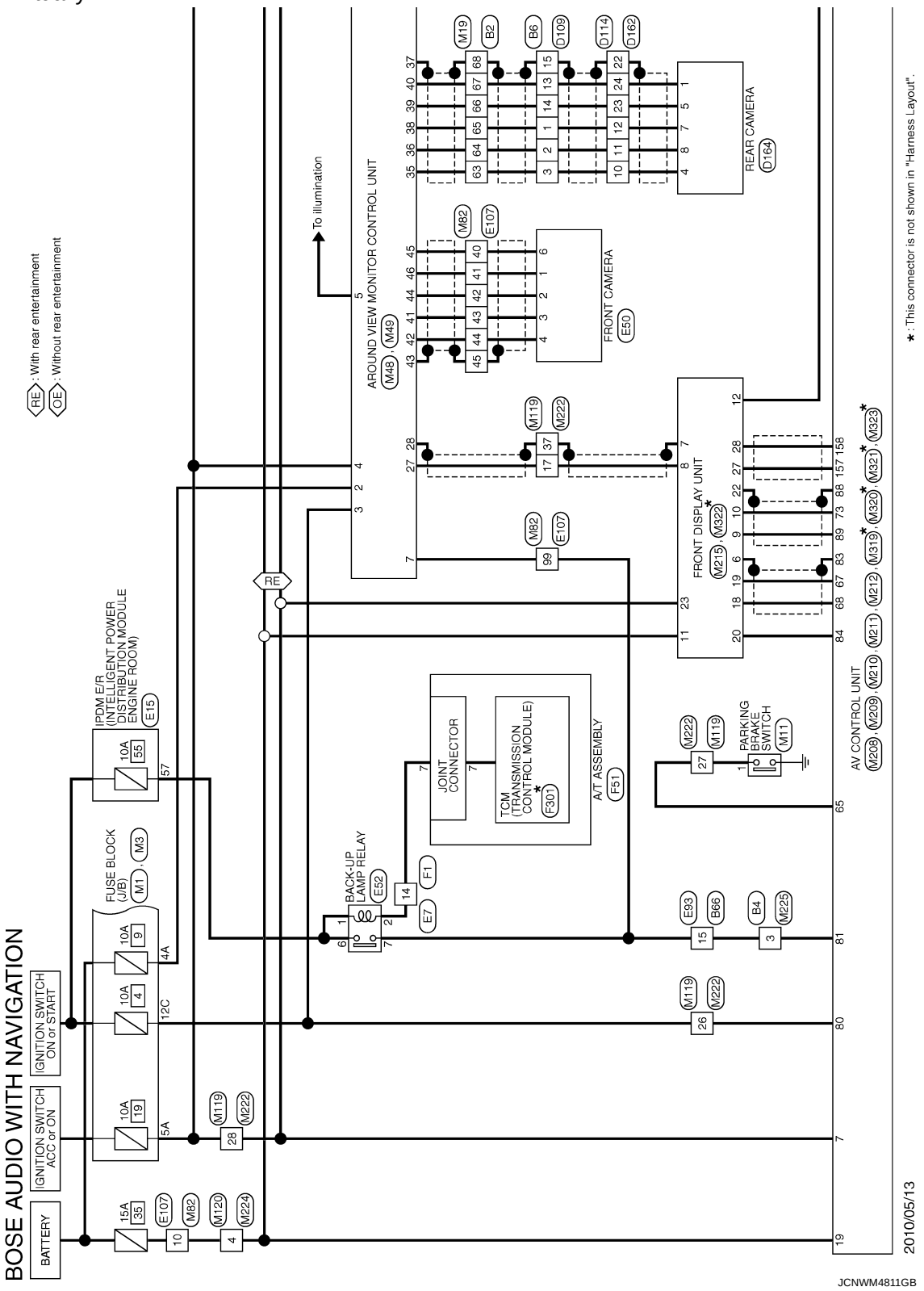
BOSE AUDIO WITH NAVIGATION

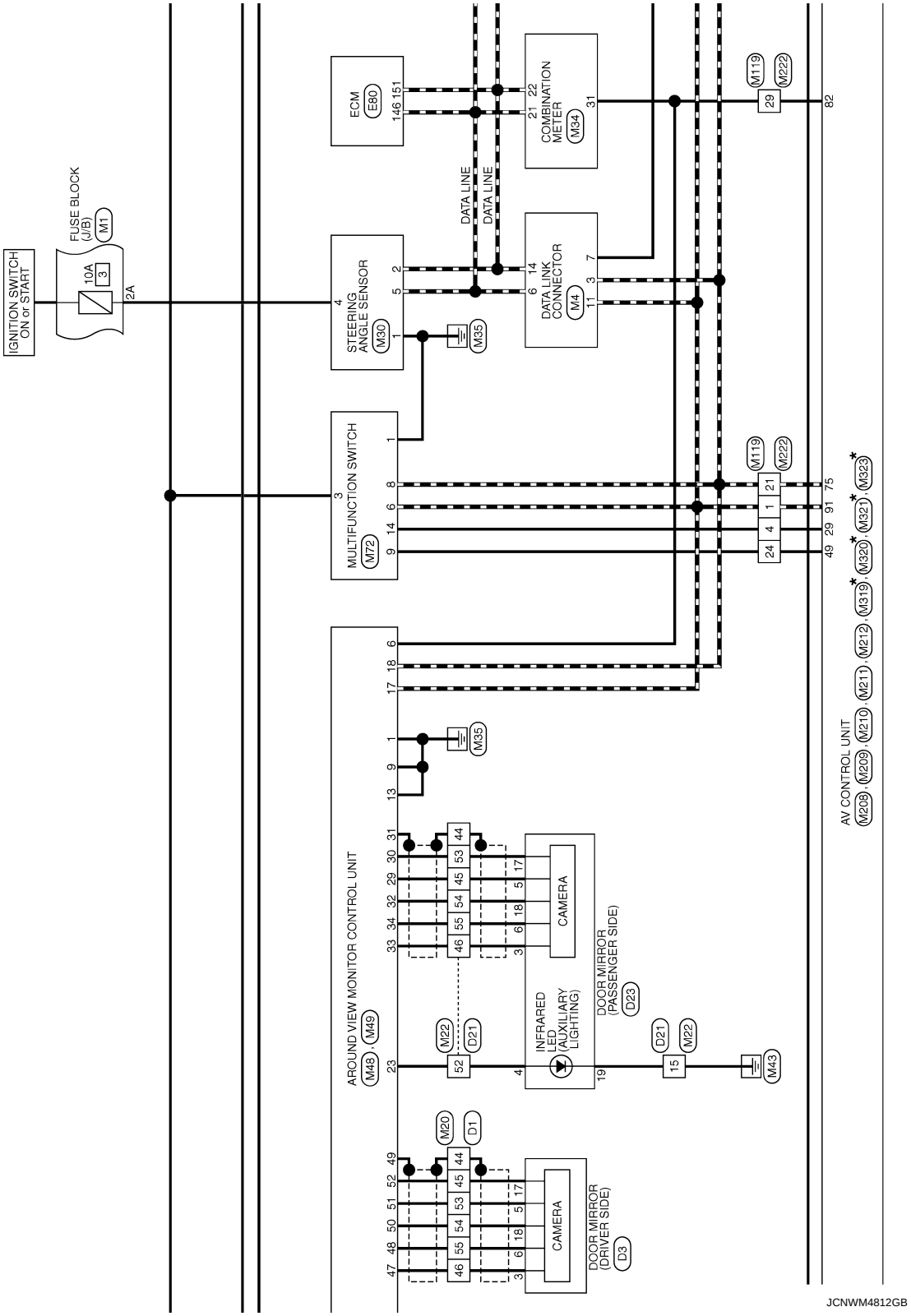
Wiring Diagram

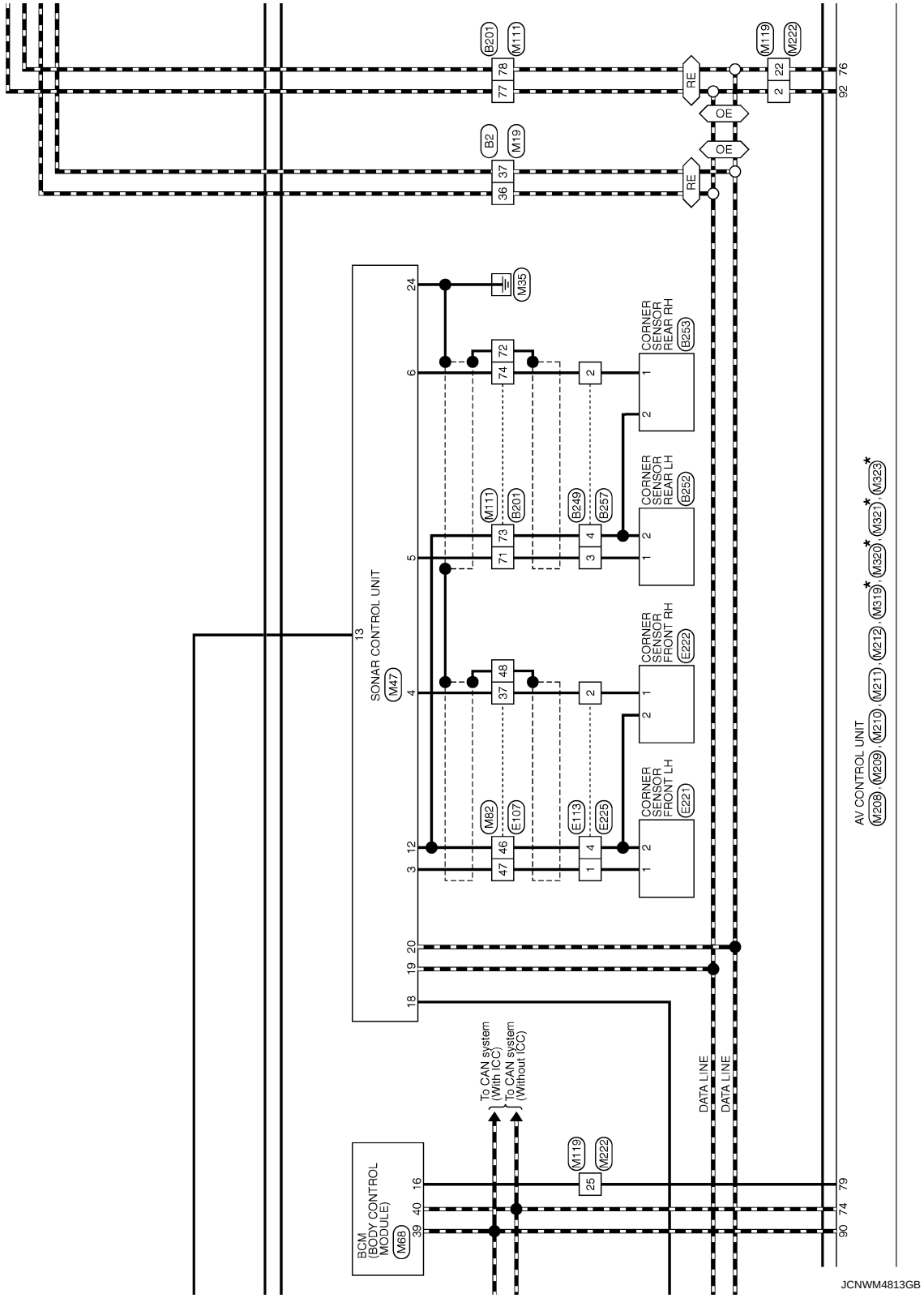
INFOID:0000000006216236

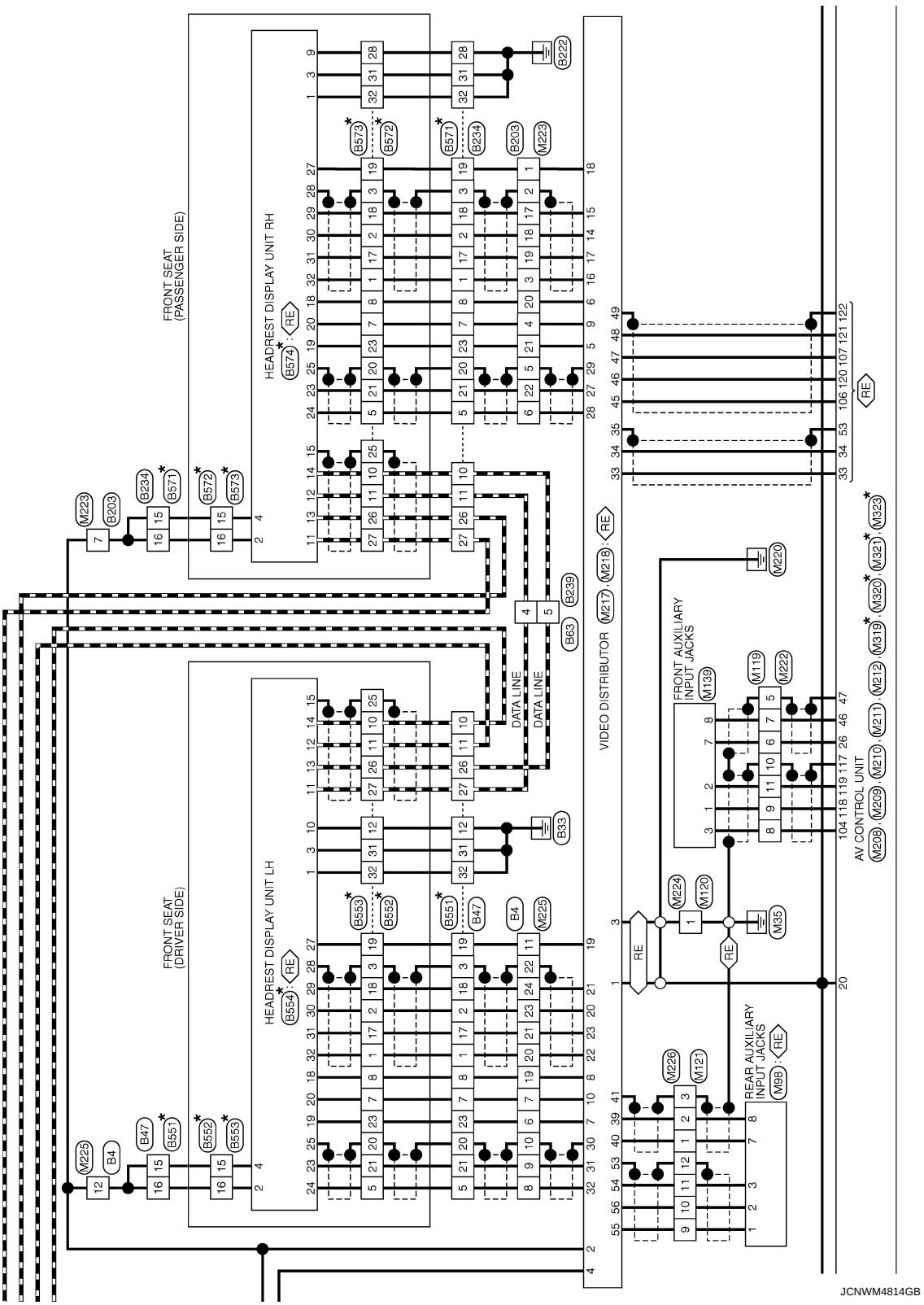
NOTE:

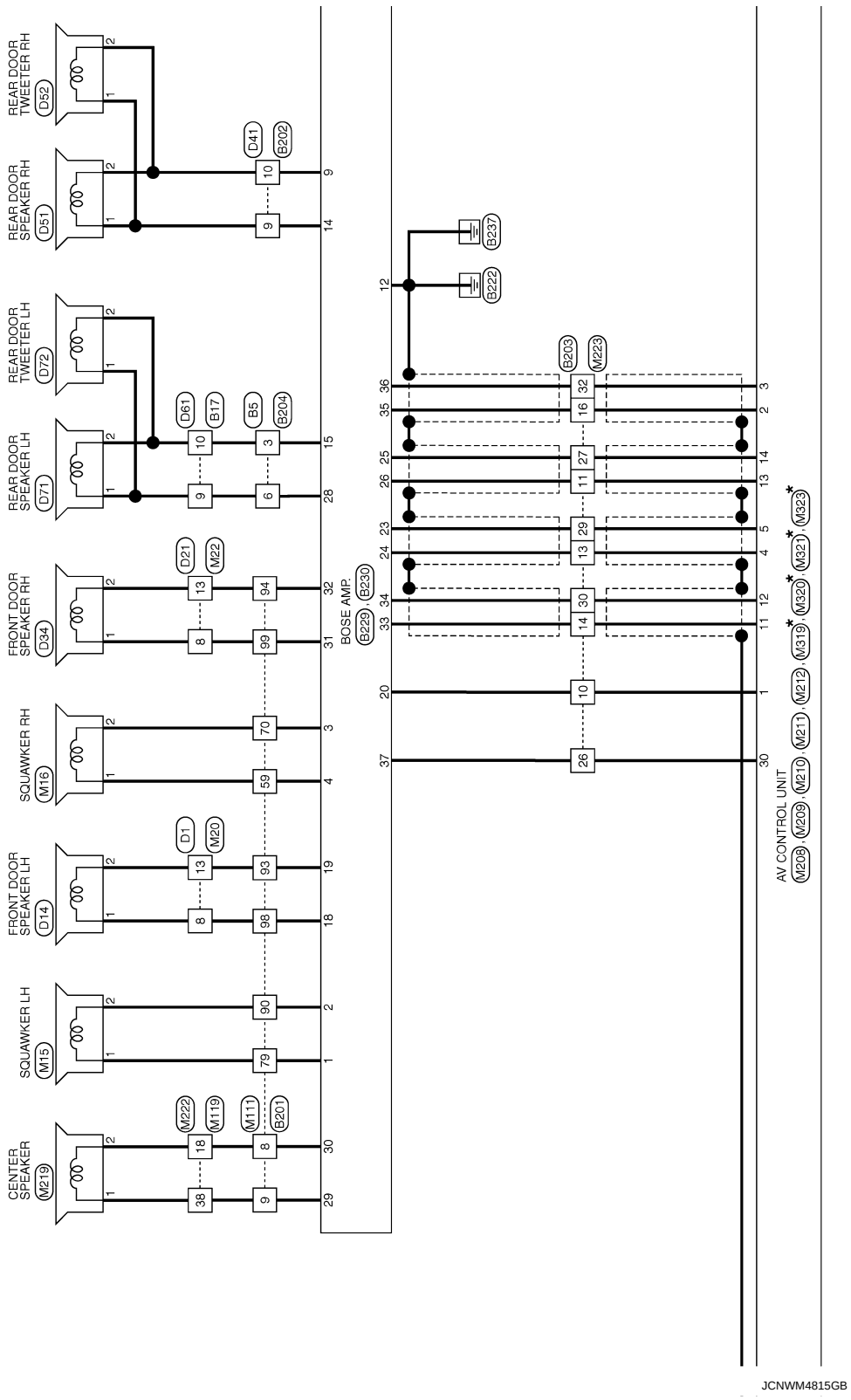
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

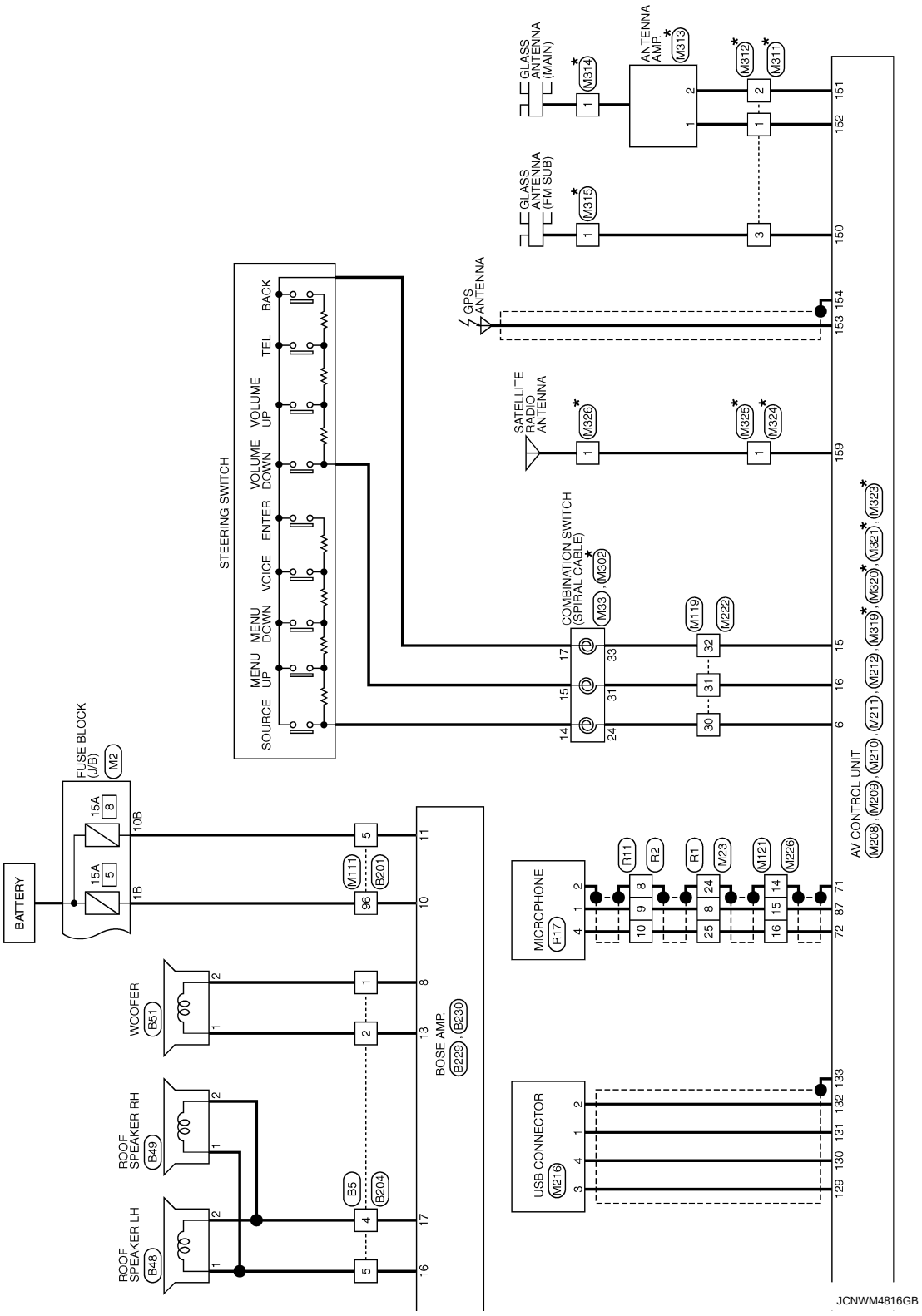



IGNITION SWITCH ON or START
FUSE BLOCK (J/B) M1
10A 3
2A
ECM E80
146 151
DATA LINE
DATA LINE
COMBINATION METER M34
21 22
31
M119 M222
29
82
STEERING ANGLE SENSOR M30
4
2
5
1
M35
DATA LINK CONNECTOR M4
14 7
6 3
11
MULTIFUNCTION SWITCH M72
3
1
8
6
14
9
M119 M222
21
1
4
24
75
91
29
49
AV CONTROL UNIT
M208, M209, M210, M211, M212, M319*, M320*, M321*, M323*
AROUND VIEW MONITOR CONTROL UNIT
M48, M49
6
18
17
1
9
13
M35
31
30
29
32
34
33
44
53
45
54
55
46
17
5
18
6
3
CAMERA
DOOR MIRROR (PASSENGER SIDE) D23
INFRARED LED (AUXILIARY LIGHTING)
M22
D21
52
23
4
19
D21
M22
15
M43
M20
D1
49
52
51
50
48
47
44
45
53
54
55
46
17
5
18
6
3
CAMERA
DOOR MIRROR (DRIVER SIDE) D3
JCNWM4812GB


B201
M111
78
77
RE
M119
M222
22
2
76
92
OE
OE
B2
M19
37
36
RE
M35
24
6
72
74
2
CORNER SENSOR REAR RH
B253
1
2
CORNER SENSOR REAR LH
B252
M111
B201
B249
B257
73
71
4
3
5
SONAR CONTROL UNIT
13
M47
4
48
37
CORNER SENSOR FRONT RH
E222
M82
E107
E113
E225
46
47
12
3
CORNER SENSOR FRONT LH
E221
20
19
18
To CAN system (With ICC)
To CAN system (Without ICC)
DATA LINE
DATA LINE
BCM (BODY CONTROL MODULE)
M68
16
40
39
M119
M222
25
79
74
90
AV CONTROL UNIT
M208, M209, M210, M211, M212, M319*, M320*, M321*, M323*
JCNWM4813GB


FRONT SEAT (PASSENGER SIDE)
HEADREST DISPLAY UNIT RH
FRONT SEAT (DRIVER SIDE)
HEADREST DISPLAY UNIT LH
DATA LINE
DATA LINE
VIDEO DISTRIBUTOR
FRONT AUXILIARY INPUT JACKS
REAR AUXILIARY INPUT JACKS
AV CONTROL UNIT
JCNWM4814GB


REAR DOOR TWEETER RH D52
REAR DOOR SPEAKER RH D51
REAR DOOR TWEETER LH D72
REAR DOOR SPEAKER LH D71
FRONT DOOR SPEAKER RH D34
SQUAWKER RH M16
FRONT DOOR SPEAKER LH D14
SQUAWKER LH M15
CENTER SPEAKER M219
BOSE AMP B229 B230
B237
B222
B203 M223
AV CONTROL UNIT M208 M209 M210 M211 M212 M319* M320* M321* M323*
JCNWM4815GB


BATTERY
FUSE BLOCK (J/B) M2
15A 8
15A 5
10B
1B
STEERING SWITCH
SOURCE
MENU UP
MENU DOWN
VOICE
ENTER
VOLUME DOWN
VOLUME UP
TEL
BACK
COMBINATION SWITCH (SPIRAL CABLE) M33, M302
M119
M222
GLASS ANTENNA (MAIN) M314
ANTENNA AMP. M313
M312
M311
GLASS ANTENNA (FM SUB) M315
GPS ANTENNA
SATELLITE RADIO ANTENNA M326
M325
M324
AV CONTROL UNIT M208, M209, M210, M211, M212, M319, M320, M321, M323
MICROPHONE R17
R11
R2
R1
M23
M121
M226
USB CONNECTOR M216
WOOFER B51
ROOF SPEAKER RH B49
ROOF SPEAKER LH B48
BOSE AMP. B229, B230
M111
B201
B5
B204
JCNWM4816GB

BOSE AUDIO WITH NAVIGATION

Connector No.	B2
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	L	–
3	BR	–
5	R/W	–
6	L	–
7	V	–
9	G	–
11	W/B	–
12	BR	–
13	G/R	–
14	B/Y	–
15	W/R	–
16	GR/R	–
18	G/W	–
19	V	–
20	W/G	–
21	B/W	–
22	V	–
23	SHIELD	–
24	G	–
25	O	–
26	Y	–
27	L/O	–
28	Y/R	–
29	L	–
30	R	–
31	G/Y	–
32	B/SB	–
33	LG/R	–
34	BR/W	–
35	GR/R	–
36	SB	–
37	LG	–
38	L	–
39	P	–
40	W/G	–
42	G/R	–
43	V/W	–
44	LG/B	–
45	R/Y	–
46	B	–
49	GR	–
50	R/B	–
51	W/R	–
52	BR/Y	–
53	O/B	–
54	G/O	–
55	R/B	–
56	LG/R	–
57	GR/R	–
58	Y/G	–
59	V/W	–
60	R	–
63	Y	–
64	R	–
65	W	–
66	G	–
67	B	–
68	SHIELD	–
69	LG/B	–
70	P/L	–
71	L	–
72	R	–
77	Y/B	–
78	Y/L	–
79	Y	–
80	W/R	–
81	Y/L	–
83	BR	–
84	L/O	–
86	O	–
87	W/R	–
88	O	–
89	W/L	–
90	GR/L	–
91	W	–
92	G	–
94	W/R	–
96	L/W	–
97	R	–
98	V	–
99	L/W	–
100	P/B	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
3	R/Y	–
6	W/R	–
7	R/B	–
8	Y/G	–
9	Y/L	–
10	SHIELD	–
11	P	–
12	Y/R	–
19	GR/R	–
20	W	–
21	R	–
22	SHIELD	–
23	B	–
24	G	–

Connector No.	B5
Connector Name	WIRE TO WIRE
Connector Type	NS06FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	W	–
3	R/Y	–
4	W	–
5	R	–
6	L	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	Y	–
5	LG	–
6	GR	–
7	L/O	–
8	Y	–
9	L	–
10	B/W	–
11	W/G	–
12	W/R	–
13	B	–
14	G	–
15	SHIELD	–
17	BR/Y	–
18	W/L	–
19	Y/L	–
20	G/Y	–
21	L/Y	–
22	L/W	–
23	G/W	–
24	L/R	–

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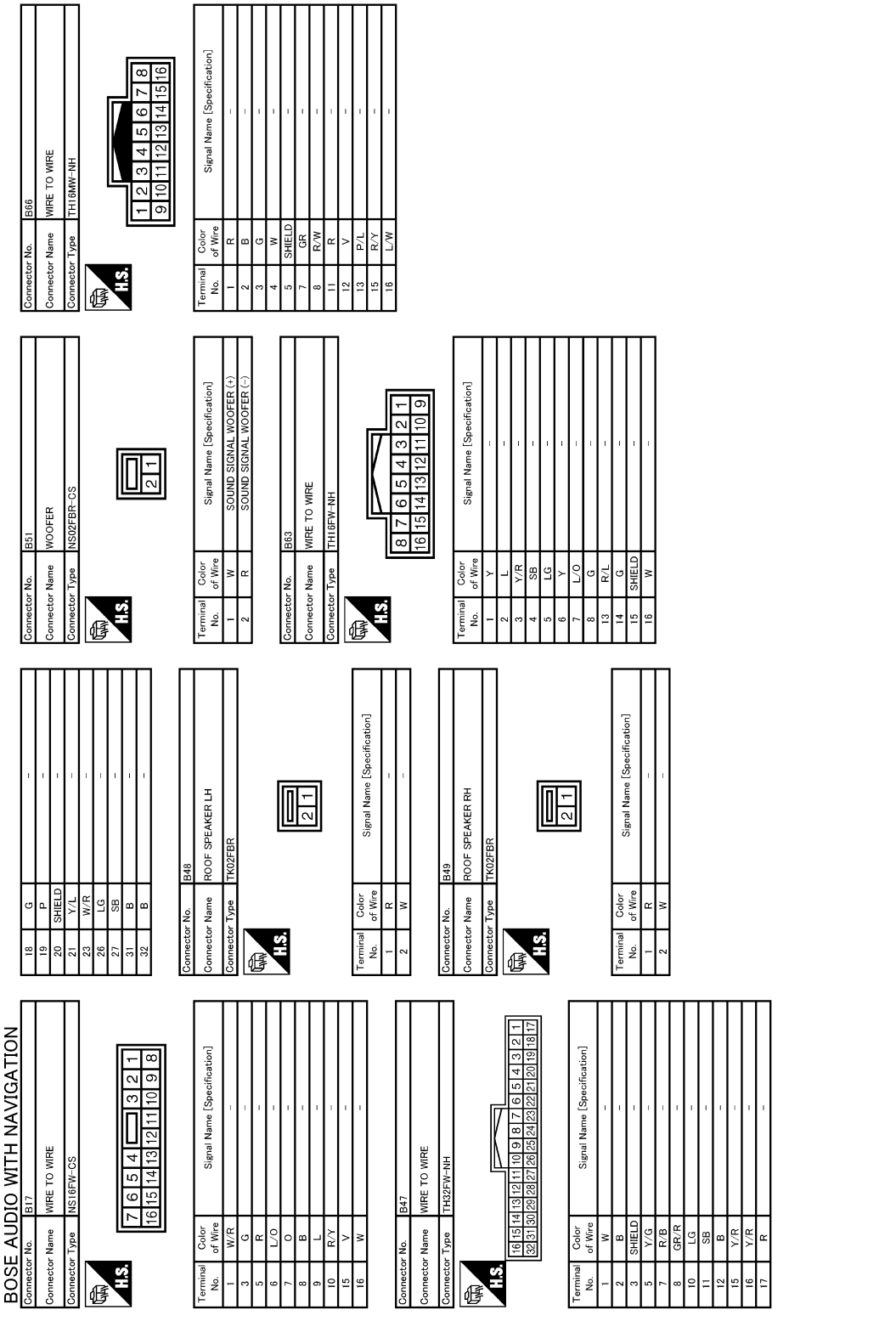
BOSE AUDIO WITH NAVIGATION
Connector No. B17
Connector Name WIRE TO WIRE
Connector Type NS16FW-CS
H.S.
7 6 5 4 3 2 1
16 15 14 13 12 11 10 9 8
Terminal No. | Color of Wire | Signal Name [Specification]
1 W/R –
3 G –
5 R –
6 L/O –
7 O –
8 B –
9 L –
10 R/Y –
15 V –
16 W –
Connector No. B47
Connector Name WIRE TO WIRE
Connector Type TH32FW-NH
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 [Specification]
1 W –
2 B –
3 SHIELD –
5 Y/G –
7 R/B –
8 GR/R –
10 LG –
11 SB –
12 B –
15 Y/R –
16 Y/R –
17 R –
18 G –
19 P –
20 SHIELD –
21 Y/L –
23 W/R –
26 LG –
27 SB –
31 B –
32 B –
Connector No. B48
Connector Name ROOF SPEAKER LH
Connector Type TK02FBR
H.S.
2 1
Terminal No. | Color of Wire | Signal Name [Specification]
1 R –
2 W –
Connector No. B49
Connector Name ROOF SPEAKER RH
Connector Type TK02FBR
H.S.
2 1
Terminal No. | Color of Wire | Signal Name [Specification]
1 R –
2 W –
Connector No. B51
Connector Name WOOFER
Connector Type NS02FBR-CS
H.S.
2 1
Terminal No. | Color of Wire | Signal Name [Specification]
1 W SOUND SIGNAL WOOFER (+)
2 R SOUND SIGNAL WOOFER (–)
Connector No. B63
Connector Name WIRE TO WIRE
Connector Type TH16FW-NH
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 [Specification]
1 Y –
2 L –
3 Y/R –
4 SB –
5 LG –
6 Y –
7 L/O –
8 G –
13 R/L –
14 G –
15 SHIELD –
16 W –
Connector No. B66
Connector Name WIRE TO WIRE
Connector Type TH16MW-NH
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 [Specification]
1 R –
2 B –
3 G –
4 W –
5 SHIELD –
7 GR –
8 R/W –
11 R –
12 V –
13 P/L –
15 R/Y –
16 L/W –
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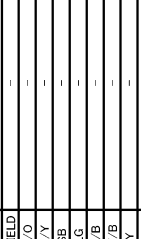
Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

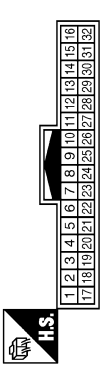
Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	–
2	G	–
3	W	–
5	W/B	–
6	L/Y	–
7	R	–
8	G/R	–
9	GR/R	–
11	W	–
12	V	–
13	Y	–
16	L/O	–
17	GR/L	–
18	R/G	–
19	L/Y	–
20	G/Y	–
21	R	–
22	GR	–
27	L/W	–
29	W	–
30	R/L	–
31	Y/L	–
32	W/R	–
33	W/G	–
34	L/R	–
39	P/B	–
40	W/R	–
41	R	–
42	L	–
43	B/W	–
51	L/B	–
52	L/R	–
53	SB	–
54	V/W	–
59	L	–
60	GR	–
61	P/L	–
62	B/SB	–
63	R/Y	–
64	BR	–
70	O	–
71	G/R	–
72	SHIELD	–
73	G/O	–
74	G/Y	–
77	SB	–
78	LG	–
79	R/B	–
90	W/B	–
93	Y	–
94	L	–
95	L/R	–
96	R	–
97	W	–
98	V	–
99	L/W	–
100	W	–

Connector No.	B202
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	W/R	–
3	R	–
5	G	–
6	L	–
7	R	–
8	B	–
9	V	–
10	L	–
15	V	–
16	W	–

Connector No.	B203
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

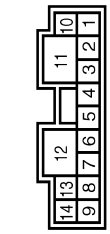


Terminal No.	Color of Wire	Signal Name [Specification]
1	P/L	–
2	B/W	–
3	W	–
4	O/B	–
5	SHIELD	–
6	R	–
7	Y/R	–
10	W/B	–
11	O	–
13	V	–
14	Y/L	–
16	L	–
17	G	–
18	B	–
19	R	–
20	L/W	–
21	V/W	–
22	W	–
26	R/W	–
27	W	–
29	LG	–
30	Y/G	–
32	P	–

Connector No.	B204
Connector Name	WIRE TO WIRE
Connector Type	NS06MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	SOUND SIGNAL SQUAWKER LH (+)
2	W/B	SOUND SIGNAL SQUAWKER LH (–)
3	O	SOUND SIGNAL SQUAWKER RH (–)
4	L	SOUND SIGNAL SQUAWKER RH (+)
8	R	SOUND SIGNAL WOOFER (–)
9	L	SOUND SIGNAL REAR DOOR SPEAKER RH (–)
10	R	BATTERY
11	W/B	BATTERY
12	B	GND
13	W	SOUND SIGNAL WOOFER (+)
14	V	SOUND SIGNAL REAR DOOR SPEAKER RH (+)

Connector No.	B229
Connector Name	BOSE AMP.
Connector Type	SGA12FBR-SJA2



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	W	–
3	R/Y	–
4	W	–
5	R	–
6	L	–

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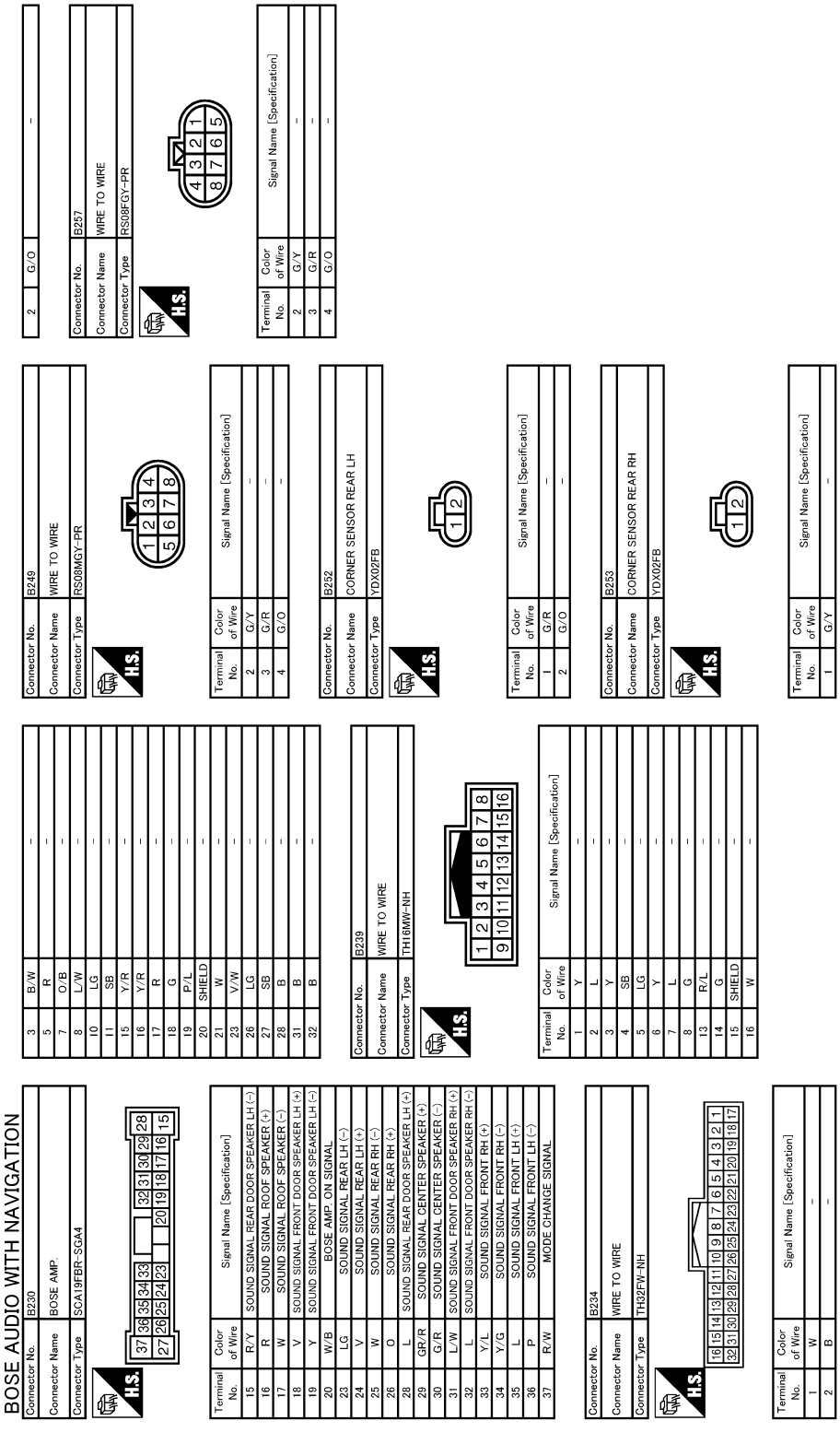

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Connector No.	B551
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	SB	–
2	P	–
3	SHIELD	–
5	Y	–
7	W/L	–
8	W/R	–
10	W	–
11	G	–
12	L/B	–
15	L/R	–
16	V	–
17	LG	–
18	BR	–
19	R/W	–
20	SHIELD	–
21	R/L	–
23	L/Y	–
26	R	–
27	B	–
31	GR	–
32	L	–

Connector No.	B552
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	SB	–

2	P	–
3	SHIELD	–
5	Y	–
7	W/L	–
8	W/R	–
10	W	–
11	G	–
12	L/B	–
15	L/R	–
16	V	–
17	LG	–
18	BR	–
19	R/W	–
20	SHIELD	–
21	R/L	–
23	L/Y	–
26	R	–
27	B	–
31	GR	–
32	L	–

Connector No.	B553
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	SB	–
2	P	–
3	SHIELD	–
5	Y	–
7	W/L	–
8	W/R	–
10	W	–
11	G	–
12	L/B	–
15	L/R	–
16	V	–
17	LG	–
18	BR	–
19	R/W	–
20	SHIELD	–

21	R/L	–
23	L/Y	–
25	SHIELD	–
26	R	–
27	B	–
31	GR	–
32	L	–

Connector No.	B554
Connector Name	HEADREST DISPLAY UNIT LH
Connector Type	TH32FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	GND
2	V	BAT
3	GR	GND
4	L/R	BAT
10	L/B	LOCATION RECOGNITION SIGNAL - FOR HEADREST DISPLAY UNIT LH
11	B	AV COMM (H)
12	G	AV COMM (H)
13	R	AV COMM (L)
14	W	AV COMM (L)
15	SHIELD	SHIELD
18	W/R	ACC SIGNAL
19	L/Y	CONT. GND
20	W/L	IMAGE SWITCH SIGNAL
23	R/L	COMPOSITE IMAGE SIGNAL GND
24	Y	COMPOSITE IMAGE SIGNAL
25	SHIELD	SHIELD
27	R/W	AV GND
28	SHIELD	SHIELD
29	BR	HEADPHONE SOUND SIGNAL RH (–)
30	P	HEADPHONE SOUND SIGNAL RH (+)
31	LG	HEADPHONE SOUND SIGNAL LH (–)
32	SB	HEADPHONE SOUND SIGNAL LH (+)

Connector No.	B571
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	SB	–
2	P	–
3	SHIELD	–
5	Y	–
7	W/L	–
8	W/R	–
10	W	–
11	G	–
15	L/R	–
16	V	–
17	LG	–
18	BR	–
19	R/W	–
20	SHIELD	–
21	R/L	–
23	L/Y	–
26	R	–
27	B	–
28	B/R	–
31	GR	–
32	L	–

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Connector No.	B572
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

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

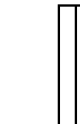
Terminal No.	Color of Wire	Signal Name [Specification]
1	SB	–
2	P	–
3	SHIELD	–
5	Y	–
7	W/L	–
8	W/R	–
10	W	–
11	G	–
15	L/R	–
16	V	–
17	LG	–
18	BR	–
19	R/W	–
20	SHIELD	–
21	R/L	–
23	L/Y	–
25	SHIELD	–
26	R	–
27	B	–
28	B/R	–
31	GR	–
32	L	–

Connector No.	B573
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

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 [Specification]
1	L	GND
2	V	BAT
3	GR	GND
4	L/R	BAT
9	B/R	LOCATION RECOGNITION SIGNAL FOR HEADREST DISPLAY UNIT RH
11	B	AV COMM (H)
12	G	AV COMM (H)
13	R	AV COMM (L)
14	W	AV COMM (L)
15	SHIELD	SHIELD
18	W/R	ACC SIGNAL
19	L/Y	CONT. GND
20	W/L	IMAGE SWITCH SIGNAL
23	R/L	COMPOSITE IMAGE SIGNAL GND

Connector No.	B574
Connector Name	HEADREST DISPLAY UNIT RH
Connector Type	TH32FW-NH



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

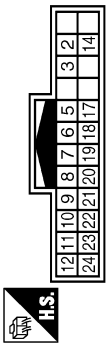
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	P	–
3	SHIELD	–
5	Y	–
7	W/L	–
8	W/R	–
10	W	–
11	G	–
15	L/R	–
16	V	–
17	LG	–
18	BR	–
19	R/W	–
20	SHIELD	–
21	R/L	–
23	L/Y	–
25	SHIELD	–
26	R	–
27	B	–
28	B/R	–
31	GR	–
32	L	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

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
55	54	53	52	51	50	49	48	47	46	45	44	43	42	41

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	W	–
3	V	–
4	Y	–
5	LG/R	–
6	BR/W	–
8	V	–
9	G	–
10	L	–
11	L/O	–
13	Y	–
14	R	–
15	B	–
18	B	–
19	R	–
20	P	–
22	V	–
23	P/B	–
25	BR/W	–
26	W/R	–
28	W/G	–
33	V/W	–
36	W/B	–
37	BR/Y	–
38	SB	–
39	W/L	–
40	L/W	–
41	Y/G	–
42	P/L	–
43	LG	–
44	SHIELD	–
45	G	–
46	W	–
47	O	–
48	G/W	–
49	Y	–
50	L/Y	–
51	GR/R	–
52	LG/B	–
53	Y	–
54	B	–
55	R	–

Connector No.	D3
Connector Name	DOOR MIRROR (DRIVER SIDE)
Connector Type	TH24MW-NH



12	11	10	9	8	7	6	5		3	2	
24	23	22	21	20	19	18	17				14

Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/W	–
3	W	SIDE CAMERA LH COMM
5	Y	SIDE CAMERA LH IMAGE SIGNAL
6	R	SIDE CAMERA LH POWER SUPPLY
7	L	–
8	O	–
9	W/B	–
10	SB	–
11	BR/Y	–
12	L/W	–
14	P	–
17	G	SIDE CAMERA LH IMAGE GND
18	B	SIDE CAMERA LH GND
19	B	–
20	G	–
21	L/Y	–
22	G/W	–
23	W/L	–
24	Y	–

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Connector No.	D14
Connector Name	FRONT DOOR SPEAKER LH
Connector Type	NS02FW-CS

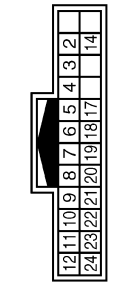
Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	Y	–

Connector No.	D21
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	W	–
3	V	–
5	P/L	–
6	L/R	–
8	L/W	–
9	G/Y	–
10	L	–
11	L/O	–
13	L	–
14	R	–
15	B	–
18	B/W	–
19	R	–
20	P	–
22	Y/R	–
23	LG/B	–
25	R/W	–
26	W/R	–
36	G/O	–

37	Y/B	–
38	V	–
39	W/L	–
40	L/O	–
44	SHIELD	–
45	Y	–
46	W	–
47	LG	–
48	L/R	–
49	Y	–
50	R/B	–
52	LG	–
53	G	–
54	B	–
55	R	–

Connector No.	D23
Connector Name	DOOR MIRROR (PASSENGER SIDE)
Connector Type	TH24MW-NH

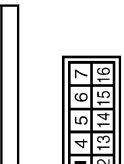


Terminal No.	Color of Wire	Signal Name [Specification]
2	R/W	–
3	W	SIDE CAMERA LH COMM
4	LG	SIDE CAMERA LH IMAGE SIGNAL
5	Y	SIDE CAMERA LH POWER SUPPLY
6	R	–
7	L	–
8	LG	–
9	G/O	–
10	V	–
11	Y/B	–
12	L/O	–
14	P	–
17	G	SIDE CAMERA LH IMAGE GND
18	B	SIDE CAMERA LH GND
19	B	–
20	G/Y	–
21	R/B	–
22	L/R	–
23	W/L	–
24	Y	–

Connector No.	D34
Connector Name	FRONT DOOR SPEAKER RH
Connector Type	NS02FW-CS

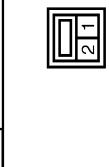
Terminal No.	Color of Wire	Signal Name [Specification]
1	L/W	–
2	L	–

Connector No.	D41
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



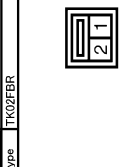
Terminal No.	Color of Wire	Signal Name [Specification]
1	W/R	–
3	R	–
5	G	–
6	L	–
7	R	–
8	B	–
9	V	–
10	L	–
15	V	–
16	W	–

Connector No.	D51
Connector Name	REAR DOOR SPEAKER RH
Connector Type	NS02FBR-CS



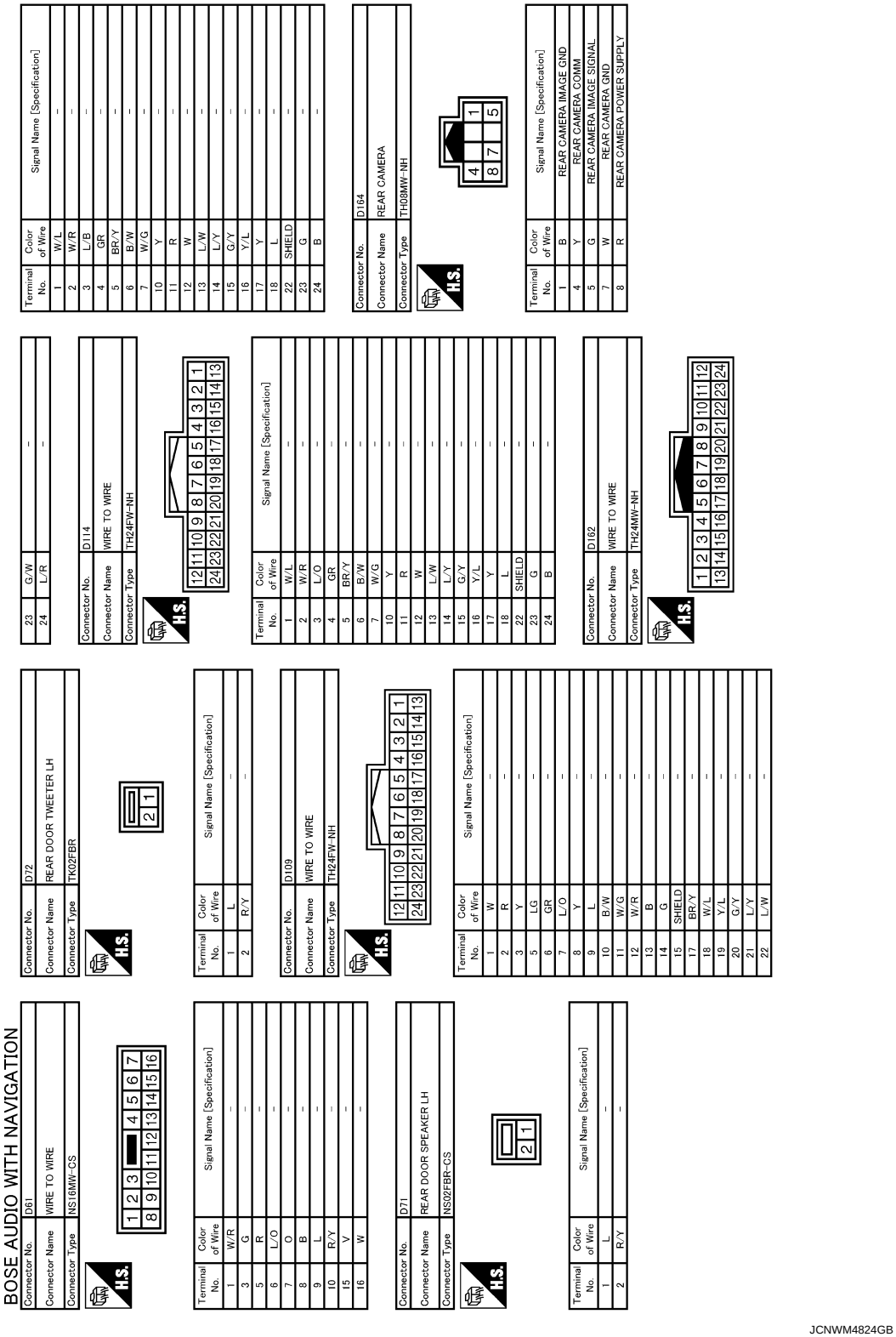
Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	L	–

Connector No.	D52
Connector Name	REAR DOOR TWEETER RH
Connector Type	TK02FBR



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	L	–

JCNWM4823GB



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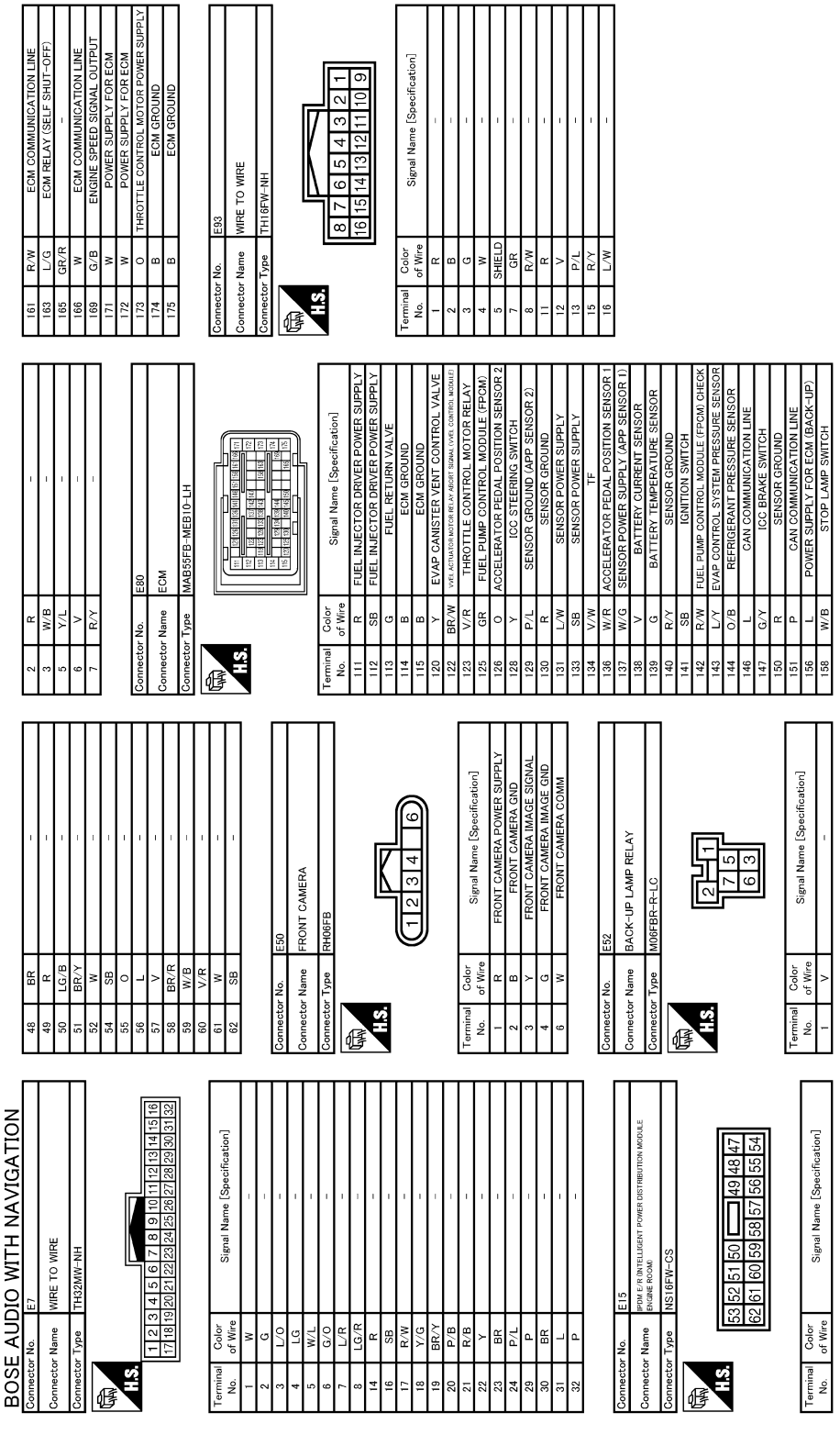

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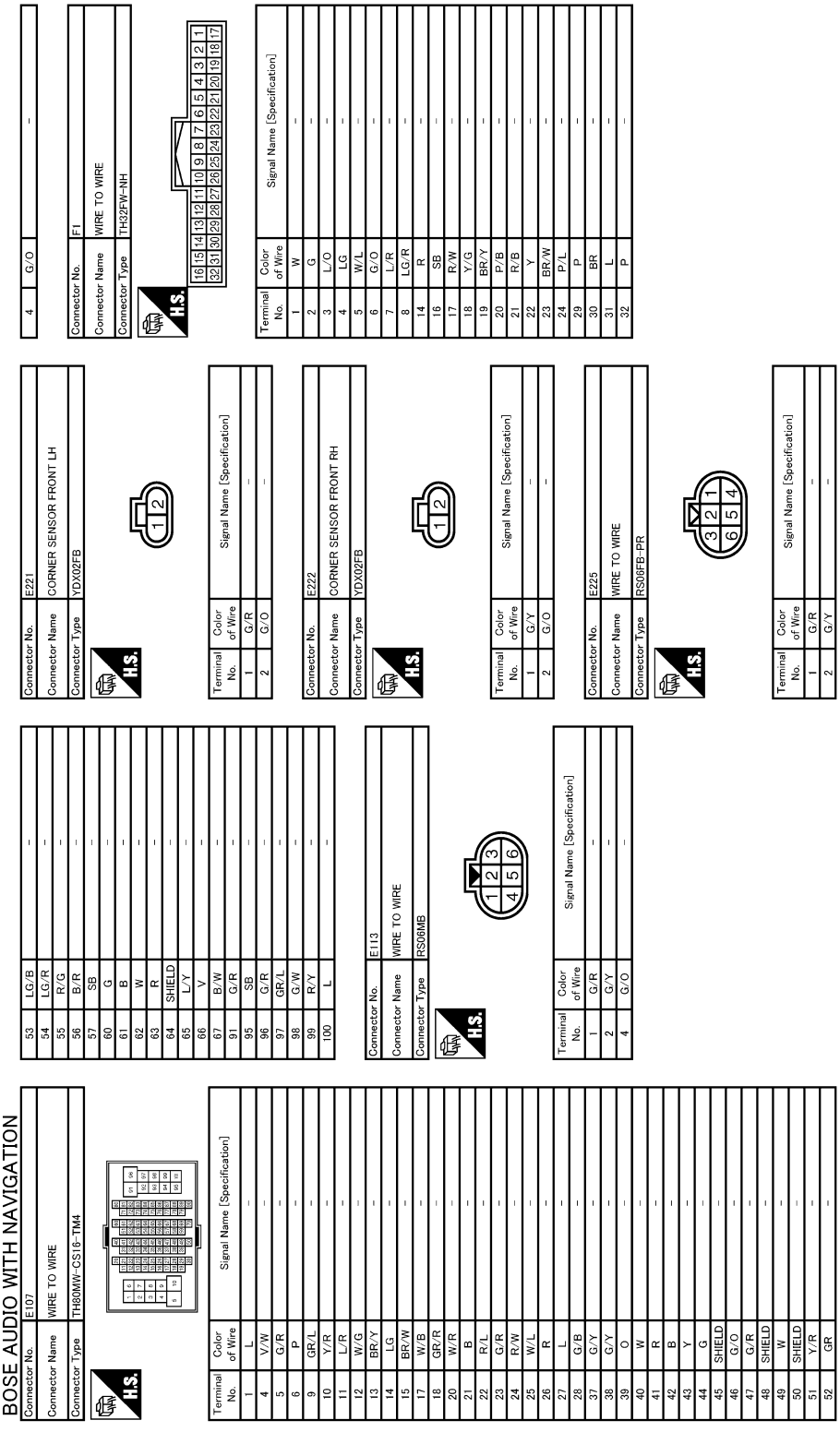

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BOSE AUDIO WITH NAVIGATION

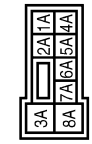
Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	RK10FG

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	P	–
3	L	–
4	SB	–
5	B	–
6	V	–
7	R	–
8	P	–
9	BR	–
10	B	–

Connector No.	F301
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FG

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	VIGN
2	–	BATT
3	–	CAN-H
4	–	K LINE
5	–	GND
6	–	VIGN
7	–	REV LAMP RLY
8	–	CAN-L
9	–	START RLY
10	–	GND

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2

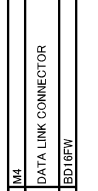


Terminal No.	Color of Wire	Signal Name [Specification]
1A	Y	–
2A	GR	–
3A	W	–
4A	Y/G	–
5A	V	–
6A	L/W	–
7A	LG	–
8A	W	–

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS

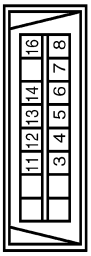
Terminal No.	Color of Wire	Signal Name [Specification]
1B	R	–
3B	R	–
4B	B	–
5B	BR	–
6B	Y	–
7B	G	–
8B	L/O	–
10B	W/B	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
6C	R	–
7C	B	–
8C	W	–
10C	GR	–
11C	R/L	–
12C	GR/L	–

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	–
4	B	–
5	B	–
6	L	–
7	SB	–
8	GR	–
11	SB	–
12	R	–
13	L	–
14	P	–
16	Y	–

Connector No.	M11
Connector Name	PARKING BRAKE SWITCH
Connector Type	P01FB-A

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–

Connector No.	M15
Connector Name	SQUAWKER LH
Connector Type	TK02FBR

Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	–
2	W/B	–

Connector No.	M16
Connector Name	SQUAWKER RH
Connector Type	TK02FBR

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	O	–

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BOSE AUDIO WITH NAVIGATION

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	L	–
3	BR	–
5	R/W	–
6	L	–
7	V	–
9	G	–
11	W/B	–
12	BR	–
13	G/R	–
14	B/Y	–
15	W/R	–
16	GR/R	–
18	G/W	–
19	V	–
20	W/G	–
21	B/W	–
22	V	–
23	SHIELD	–
24	G	–
25	O	–
26	Y	–
27	L/O	–
28	Y/R	–
29	L	–
30	R	– [With ICC]
30	P	– [Without ICC]
31	G/Y	–
32	B/SB	–
33	LG/R	–
34	BR/W	–
35	GR/R	–
36	SB	–
37	LG	–
38	L	–
39	P	–
40	W/G	–
42	G/R	–
43	V/W	–
44	LG/B	–
45	R/Y	–
46	B	–
49	GR	–
50	R/B	–
51	W/R	–
52	BR/Y	–
53	O/B	–
54	G/O	–
55	R/B	–
56	LG/R	–
57	GR/R	–
58	Y/G	–
59	V/W	–
60	R	–
63	Y	–
64	R	–
65	W	–
66	G	–
67	B	–
68	SHIELD	–
69	LG/B	–
70	P/L	–
71	L	–
72	R	–
77	Y/B	–
78	Y/L	–
79	Y	–
80	W/R	–
81	Y/L	–
83	BR/W	–
84	L/O	–
86	O	–
87	W/R	–
88	O	–
89	W/L	–
90	GR/L	–
91	W	–
92	G	–
94	W/R	–
96	L/W	–
97	R	–
98	V	–
99	L/W	–
100	P/B	–

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	W	–
3	V	–
4	Y	–
5	LG/R	–
6	BR/W	–
8	V	–
9	G	–
10	L	–
11	L/O	–
13	Y	–
14	R	–
15	B	–
18	B	–
19	R	–
20	P	–
22	V	–
23	P/B	–
25	BR/W	–
26	W/R	–
28	W/G	–
33	V/W	–
36	W/B	–
37	BR/Y	–
38	SB	–
39	W/L	–
40	L/W	–
41	Y/G	–
42	P/L	–
43	LG	–
44	SHIELD	–
45	G	–
46	W	–
47	O	–
48	G/W	–
49	Y	–
50	L/Y	–
51	GR/R	–
52	LG/B	–
53	Y	–
54	B	–
55	R	–

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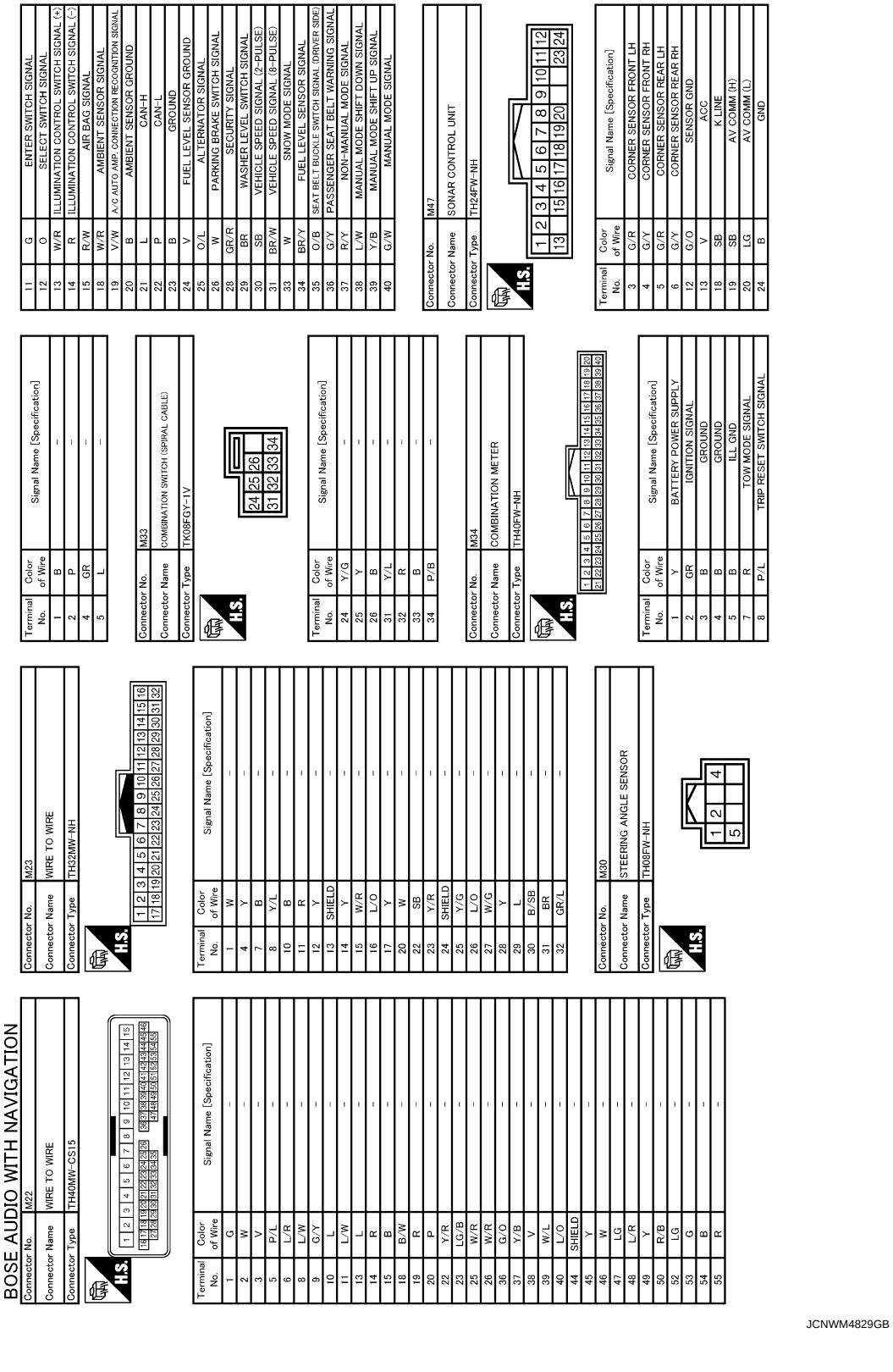

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BOSE AUDIO WITH NAVIGATION

Connector No.	M48
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
2	Y/G	BATTERY
3	GR/L	IGNITION SIGNAL
4	V	ACC
5	L/W	ILLUMINATION SIGNAL
6	BR/W	VEHICLE SPEED SIGNAL (8-PULSE)
7	P	REVERSE SIGNAL
9	B/O	CONTROL SIGNAL
13	B/O	CONTROL SIGNAL
17	SB	AV COMM (H)
18	LG	AV COMM (L)
23	LG	AUXILIARY INFRARED LED (+)
27	W	CAMERA IMAGE SIGNAL
28	SHIELD	SHIELD
29	Y	SIDE CAMERA RH IMAGE SIGNAL
30	G	SIDE CAMERA RH IMAGE GND
31	SHIELD	SHIELD
32	B	SIDE CAMERA RH GND
33	W	SIDE CAMERA RH COMM
34	R	SIDE CAMERA RH POWER SUPPLY
35	Y	REAR CAMERA COMM
36	R	REAR CAMERA POWER SUPPLY
37	SHIELD	SHIELD
38	W	REAR CAMERA GND
39	G	REAR CAMERA IMAGE SIGNAL
40	B	REAR CAMERA IMAGE GND

Connector No.	M49
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH24FW-NH

H.S.

42	44	46	48	50	52	54	56	58		
41	43	45	47	49	51	53		57		

Terminal No.	Color of Wire	Signal Name [Specification]
41	Y	FRONT CAMERA IMAGE SIGNAL
42	G	FRONT CAMERA IMAGE GND
43	SHIELD	SHIELD
44	B	FRONT CAMERA GND
45	W	FRONT CAMERA COMM
46	R	FRONT CAMERA POWER SUPPLY
47	W	SIDE CAMERA LH COMM
48	R	SIDE CAMERA LH POWER SUPPLY
49	SHIELD	SHIELD
50	B	SIDE CAMERA LH GND
51	Y	SIDE CAMERA LH IMAGE SIGNAL
52	G	SIDE CAMERA LH IMAGE GND

Connector No.	M68
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

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 [Specification]
2	BR/Y	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	V	COMBI SW INPUT 1
8	V	POWER WINDOW SW COMM
9	R	STOP LAMP SW 1
11	R	L&R SENSOR SERIAL LINK
14	P/B	OPTICAL SENSOR
16	L/O	DIMMER SIGNAL
17	Y/G	SENSOR PWR SPLY
18	B/Y	RECEIVER/SENSOR GND
19	BR	RECEIVER PWR SPLY
20	G/R	KYLS ENT RECEIVER COMM
21	P	NATS ANT AMP.
22	W/B	KYLS ENT RECEIVER RSSI
23	GR/R	SECURITY IND CONT
24	SB	DONGLE LINK
25	LG/R	NATS ANT AMP.
29	W	HAZARD SW
30	W/L	BK DOOR OPNR SW
31	W/G	DR DOOR UNLOCK SENSOR
32	LG	COMBI SW OUTPUT 5
33	Y	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/W	COMBI SW OUTPUT 2
36	SB	COMBI SW OUTPUT 1
37	G/Y	SHIFT P
39	L	CAN-H
40	P	CAN-L

Connector No.	M72
Connector Name	MULTIFUNCTION SWITCH
Connector Type	TH16FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
3	V	ACC
4	L/W	ILL
5	B/O	ILL CONT
6	SB	AV COMM (H)
8	LG	AV COMM (L)
9	R/W	SW GND
14	W/B	DISK EJECT SIGNAL

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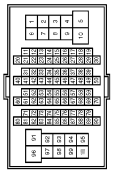
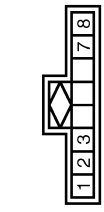
BOSE AUDIO WITH NAVIGATION

Connector No.	M62
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



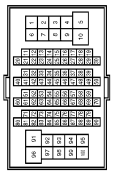
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
4	V/W	–
5	G/R	–
6	P	–
9	GR/L	–
10	Y/R	–
11	L/R	–
12	W/G	–
13	BR/Y	–
14	LG	–
15	BR/W	–
17	W/B	–
18	GR/R	–
20	W/R	–
21	B	–
22	R/L	–
23	G/R	–
24	R/W	–
25	W/L	–
26	R	–
27	L	–
28	B/SB	–
37	G/Y	–
38	G/Y	–
39	O	–
40	W	–
41	R	–
42	B	–
43	Y	–
44	G	–
45	SHIELD	–
46	G/O	–
47	G/R	–
48	SHIELD	–
49	W	–
50	SHIELD	–
51	Y/R	–
52	GR	–
53	LG/B	–
54	LG/R	–
55	R/G	–
56	B/O	–
57	SB	–
60	G	–
61	B	–
62	W	–
63	R	–
64	SHIELD	–
65	L/Y	–
66	V	–
67	B/W	–
91	G/R	–
95	SB	–
96	G/R	–
97	GR/L	–
98	G/W	–
99	P	–
100	L	–

Connector No.	M98
Connector Name	REAR AUXILIARY INPUT JACKS
Connector Type	A08FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	AUX SOUND SIGNAL RH (+)
2	R	AUX SOUND SIGNAL GND
3	B	AUX SOUND SIGNAL LH (+)
7	LG	AUX IMAGE SIGNAL
8	V	AUX IMAGE SIGNAL GND

Connector No.	M111
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	–
2	G	–
3	W/R	–
5	W/B	–
6	L/Y	–
7	R	–
8	G/R	–
9	GR/R	–
11	W	–
12	V	–
13	Y	–
16	L/O	–
17	GR/L	–
18	R/G	–
19	L/Y	–
20	G/Y	–
21	R	–
22	GR	–
27	L/O	–
29	SB	–
30	R/L	–
31	Y/L	–
32	W/R	–
33	W/G	–
34	L/R	–
39	P/B	–
40	W/R	–
41	R	–
42	L/W	–
43	B/W	–
51	O/L	–
52	L/R	–
53	SB	–
54	V/W	–
59	L	–
60	GR	–
61	P/L	–
62	B/SB	–
63	R/Y	–
64	BR	–
70	O	–
71	G/R	–
72	SHIELD	–
73	G/O	–
74	G/Y	–
77	SB	–
78	LG	–
79	R/B	–
90	W/B	–
93	Y	–
94	L	–
95	L/R	–
96	R	–
97	W	–
98	V	–
99	L/W	–
100	W	–

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BOSE AUDIO WITH NAVIGATION

Connector No.	M119
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	SB	–
2	SB	–
3	L	–
4	W/B	–
5	SHIELD	–
6	LG	–
7	V	–
8	W	–
9	O	–
10	SHIELD	–
11	W/L	–
17	W	–
18	G/R	–
21	LG	–
22	LG	–
23	P	–
24	R/W	–
25	L/O	–
26	GR/L	–
27	W	–
28	V	–
29	BR/W	–
30	Y/G	–
31	Y/L	–
32	B	–
37	SHIELD	–
38	GR/R	–

Connector No.	M120
Connector Name	WIRE TO WIRE
Connector Type	NS04MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
4	Y/R	–

Connector No.	M121
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	V	–
3	SHIELD	–
9	W	–
10	R	–
11	B	–
12	SHIELD	–
14	SHIELD	–
15	Y/L	–
16	Y/G	–

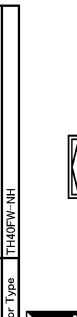
Connector No.	M139
Connector Name	FRONT AUXILIARY INPUT JACKS
Connector Type	A08FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	AUX SOUND SIGNAL RH (+)
2	W/L	AUX SOUND SIGNAL GND
3	W	AUX SOUND SIGNAL LH (+)
7	LG	AUX IMAGE SIGNAL
8	V	AUX IMAGE SIGNAL GND

Connector No.	M208
Connector Name	AV CONTROL UNIT
Connector Type	TH18FW-CS2

Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BOSE AMP. ON SIGNAL
2	L	SOUND SIGNAL FRONT LH (+)
3	P	SOUND SIGNAL FRONT LH (–)
4	V	SOUND SIGNAL REAR LH (+)
5	LG	SOUND SIGNAL REAR LH (–)
6	Y/G	STRG SW A
7	V	ACC
11	Y/L	SOUND SIGNAL FRONT RH (+)
12	Y/G	SOUND SIGNAL FRONT RH (–)
13	O	SOUND SIGNAL REAR RH (+)
14	W	SOUND SIGNAL REAR RH (–)
15	B	STRG SW GND
16	Y/L	STRG SW B
19	Y/R	BATTERY
20	B	GND

Connector No.	M209
Connector Name	AV CONTROL UNIT
Connector Type	TH40FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
26	LG	AUX IMAGE SIGNAL
29	W/B	DISK EJECT SIGNAL
30	R/W	MODE CHANGE SIGNAL
33	L	COMPOSITE IMAGE SIGNAL GND
34	P	COMPOSITE IMAGE SIGNAL
46	V	AUX IMAGE GND
47	SHIELD	SHIELD
49	R/W	SWITCH GND
53	SHIELD	SHIELD

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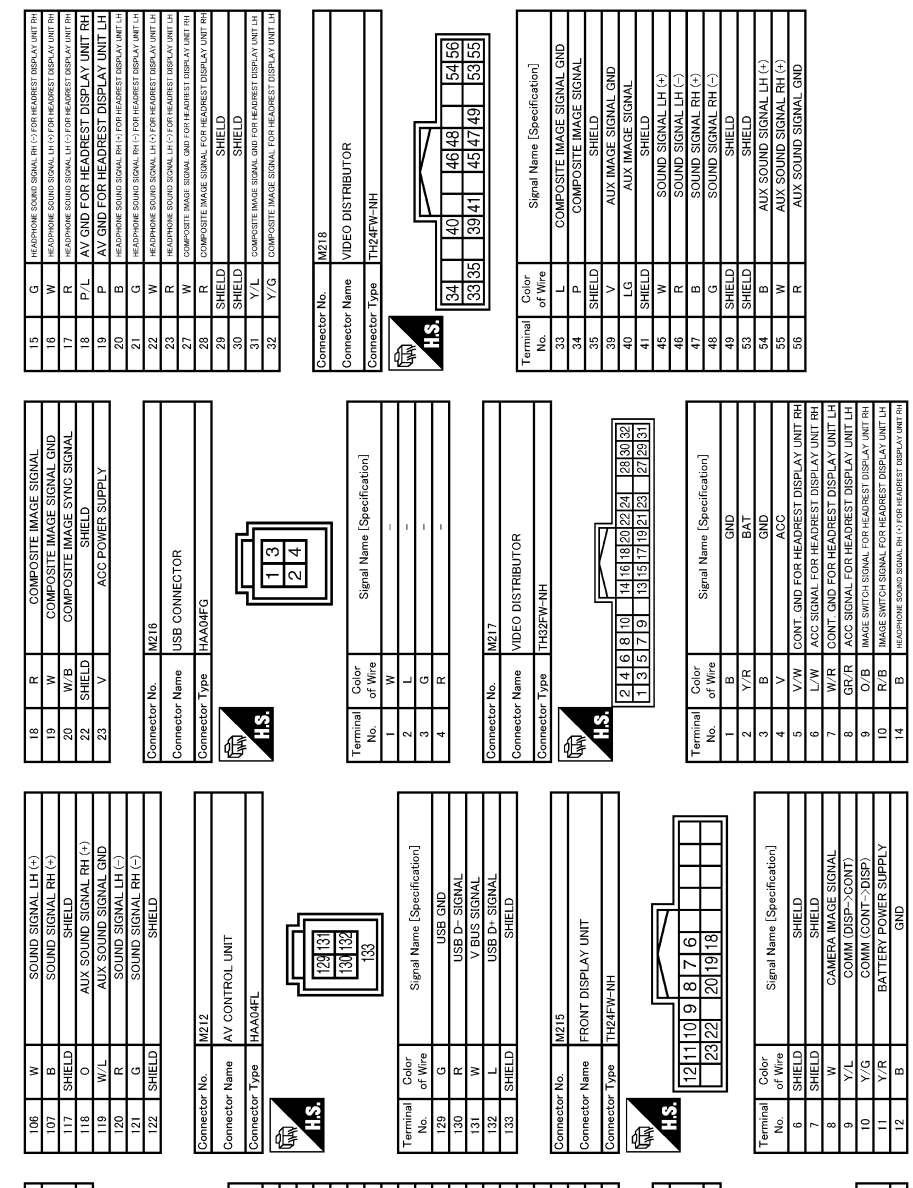

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BOSE AUDIO WITH NAVIGATION

Connector No.	M219
Connector Name	CENTER SPEAKER
Connector Type	TK02FBR

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR/R	–
2	G/R	–

Connector No.	M222
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	SB	–
2	SB	–
3	L	–
4	W/B	–
5	SHIELD	–
6	LG	–
7	V	–
8	W	–
9	O	–
10	SHIELD	–
11	W/L	–
17	W	–
18	G/R	–
21	LG	–
22	LG	–
23	P	–
24	R/W	–
25	L/O	–
26	GR/L	–
27	W	–

28	V	–
29	BR/W	–
30	Y/G	–
31	Y/L	–
32	B	–
37	SHIELD	–
38	GR/R	–

Connector No.	M223
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	P/L	–
2	SHIELD	–
3	W	–
4	O/B	–
5	SHIELD	–
6	R	–
7	Y/R	–
10	W/B	–
11	O	–
13	V	–
14	Y/L	–
16	L	–
17	G	–
18	B	–
19	R	–
20	L/W	–
21	V/W	–
22	W	–
26	R/W	–
27	W	–
29	LG	–
30	Y/G	–
32	P	–

Connector No.	M224
Connector Name	WIRE TO WIRE
Connector Type	NS04FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
4	Y/R	–

Connector No.	M225
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
3	R/Y	–
6	W/R	–
7	R/B	–
8	Y/G	–
9	Y/L	–
10	SHIELD	–
11	P	–
12	Y/R	–
19	GR/R	–
20	W	–
21	R	–
22	SHIELD	–
23	B	–
24	G	–

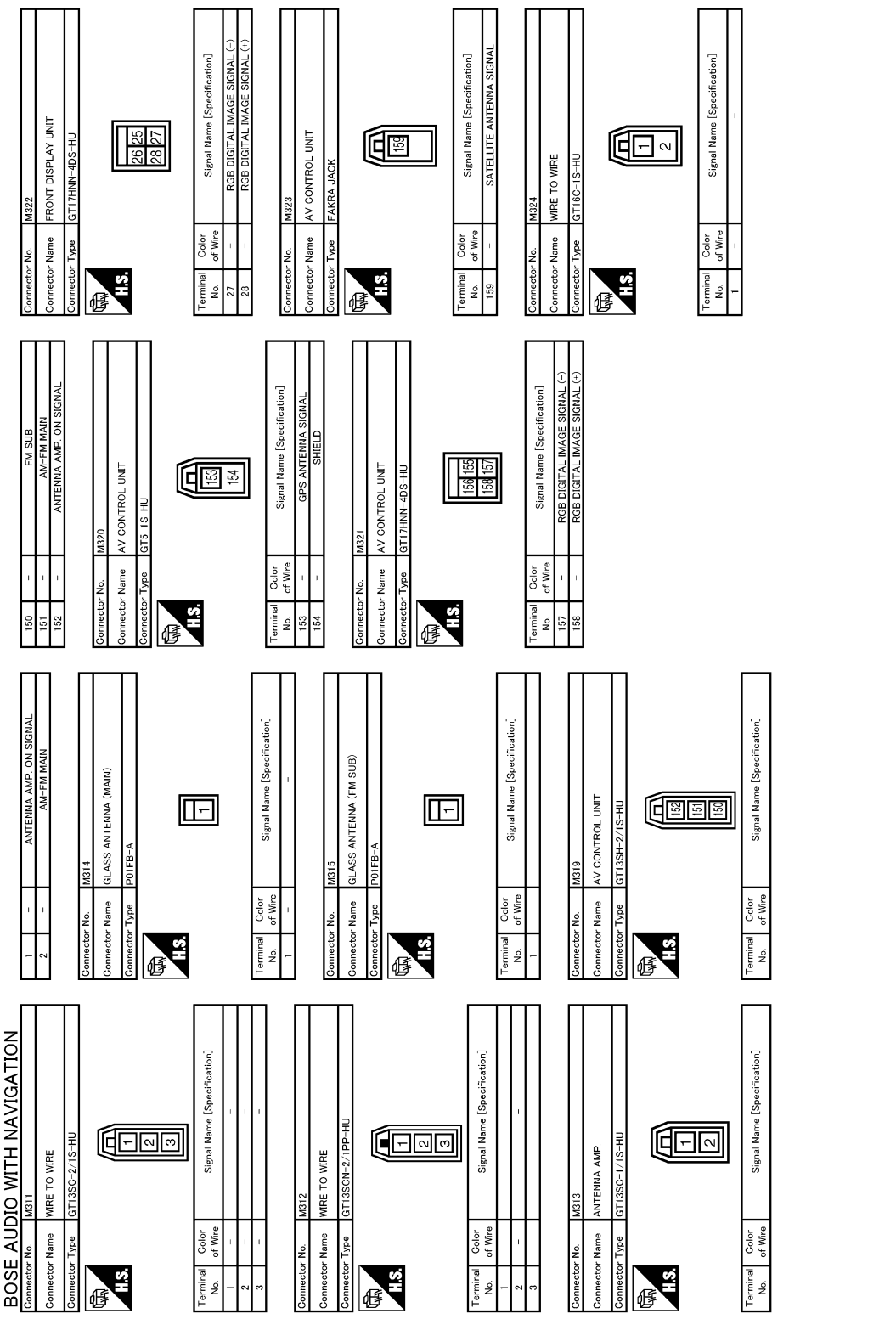
Connector No.	M226
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	V	–
3	SHIELD	–
9	W	–
10	R	–
11	B	–
12	SHIELD	–
14	SHIELD	–
15	Y/L	–
16	Y/G	–

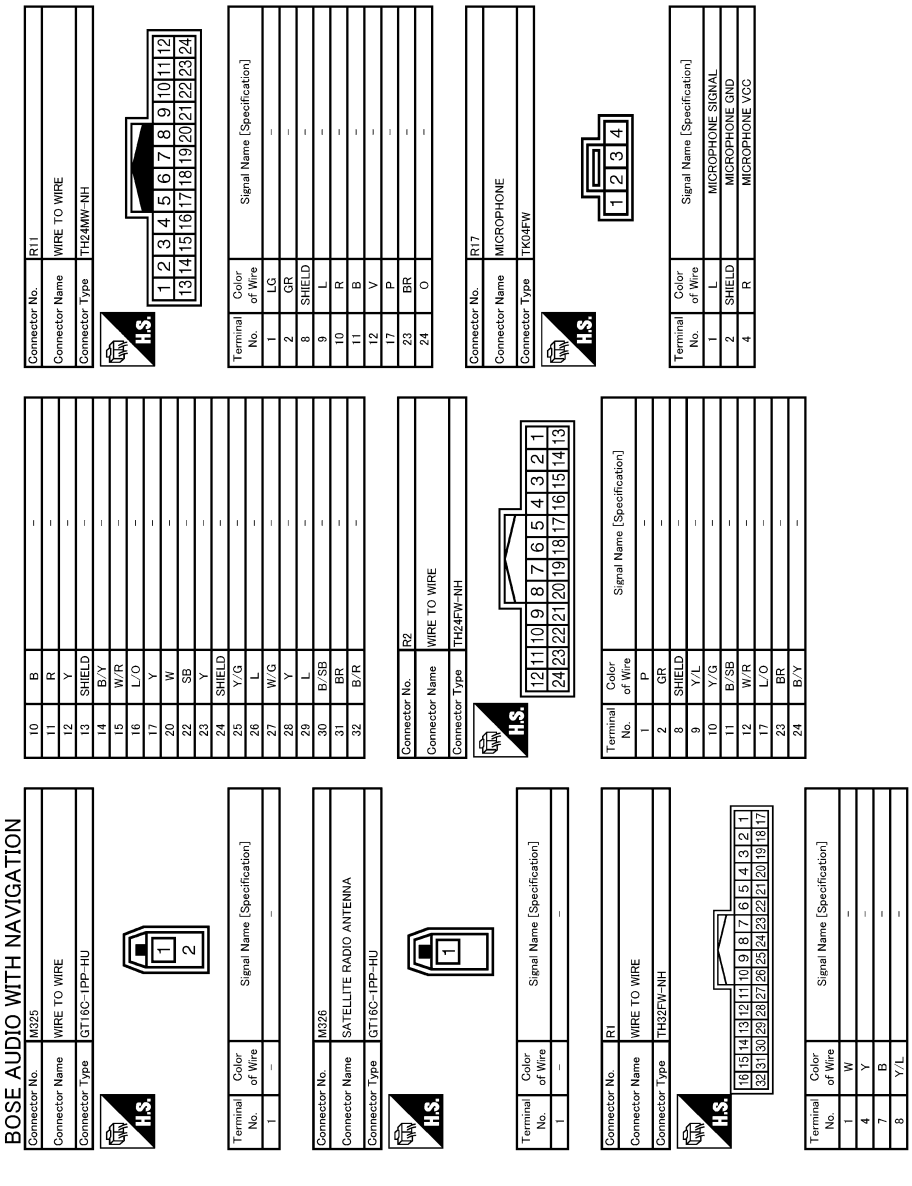
Connector No.	M302
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY

Terminal No.	Color of Wire	Signal Name [Specification]
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–

JCNWM4834GB



JCNWM4835GB



JCNWM4836GB

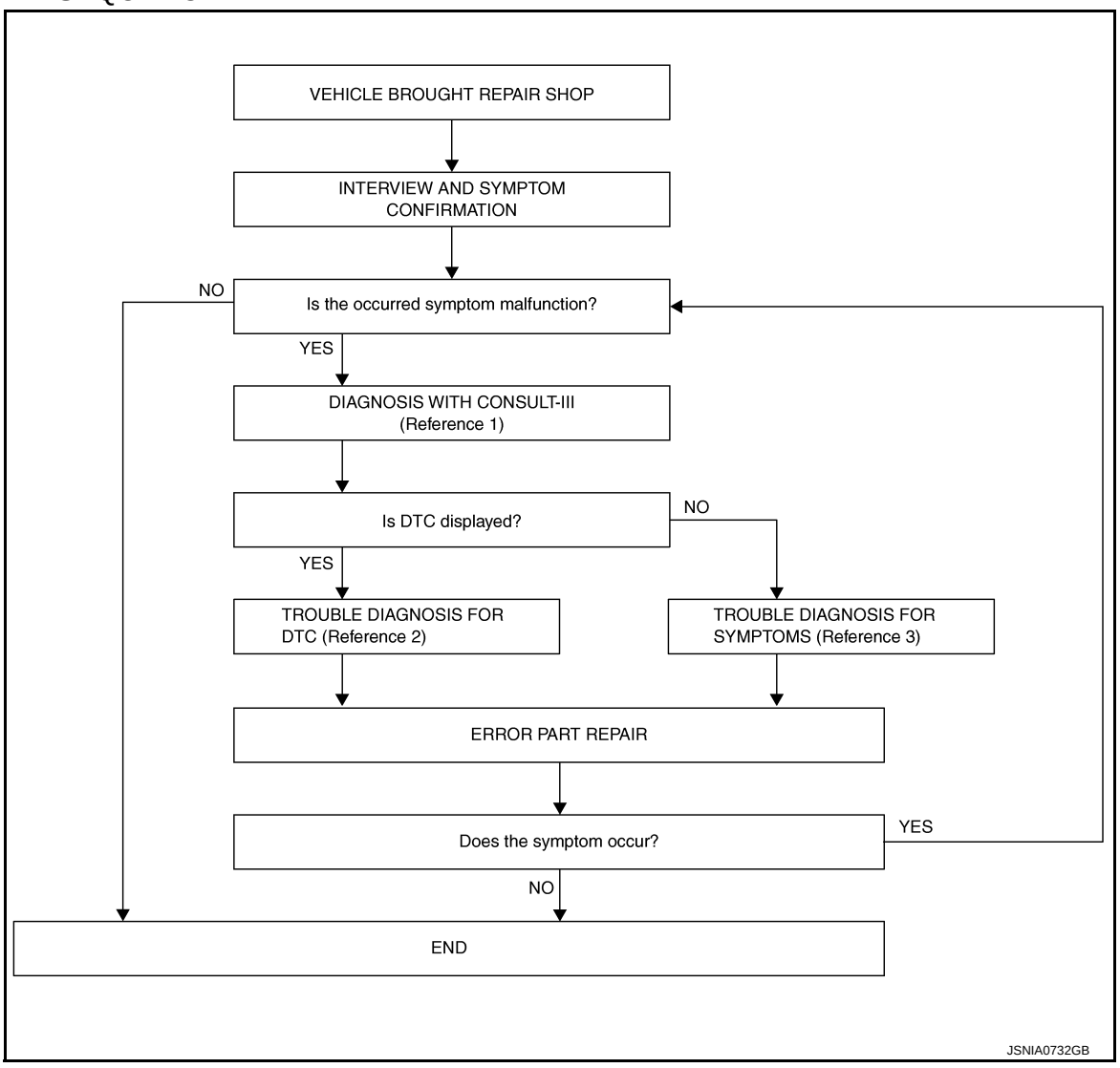
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow (Multi AV)

INFOID:0000000006216237

OVERALL SEQUENCE



- Reference 1··· Refer to AV-39, "CONSULT-III Function".
- Reference 2··· Refer to AV-57, "DTC Index".
- Reference 3··· Refer to AV-199, "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-III

1. Connect CONSULT-III and perform a self-diagnosis for “MULTI AV”. Refer to AV-39, "CONSULT-III Function".
   NOTE:
   Skip to step 4 of the diagnosis procedure if “MULTI AV” is not displayed.
2. Check if any DTC is displayed in the self-diagnosis results.

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-57, "DTC Index".

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-199, "Symptom Table".

>> GO TO 5.

5. ERROR PART REPAIR

1. Repair or replace the identified malfunctioning parts.
2. Perform a self-diagnosis for “MULTI AV” with CONSULT-III.
   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.

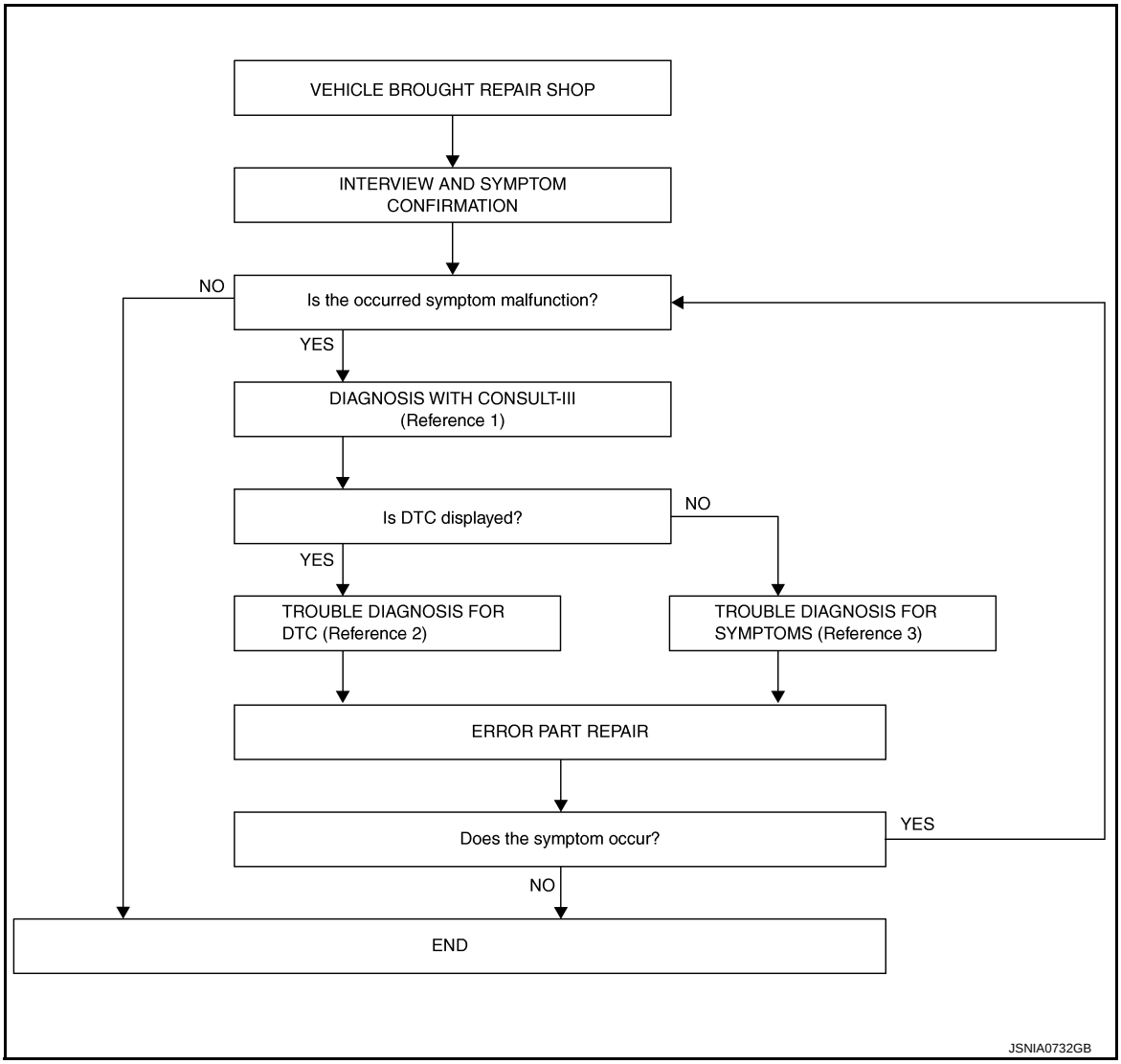
Does the symptom occur?

YES >> GO TO 1.
NO >> INSPECTION END

Work Flow (Camera Assistance Sonar)

INFOID:0000000006216238

OVERALL SEQUENCE



- Reference 1··· Refer to AV-47, "CONSULT-III Function".
- Reference 2··· Refer to AV-77, "DTC Index".
- Reference 3··· Refer to AV-199, "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-III

1. Connect CONSULT-III and perform a self-diagnosis for “SONAR”. Refer to AV-47, "CONSULT-III Function".
   NOTE:
   Skip to step 4 of the diagnosis procedure if “SONAR” is not displayed.

2. Check if any DTC is displayed in the self-diagnosis results.

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-77, "DTC Index".

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-199, "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-III.
   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

ADDITIONAL SERVICE WHEN REPLACING (AV CONTROL UNIT)

Description

INFOID:0000000006216239

BEFORE REPLACEMENT

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

AFTER REPLACEMENT

CAUTION:

When replacing AV control unit, you must perform “WRITE CONFIGURATION” with CONSULT-III.

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

Work Procedure

INFOID:0000000006216240

1.SAVING VEHICLE SPECIFICATION

Ⓜ-CONSULT-III Configuration

Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to AV-109, "Description".

NOTE:

If “READ CONFIGURATION” can not be used, use the “WRITE CONFIGURATION - Manual selection”.

>> GO TO 2.

2.REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to AV-212, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

Ⓜ-CONSULT-III Configuration

Perform “WRITE CONFIGURATION - Config file” or “WRITE CONFIGURATION - Manual selection” to write vehicle specification. Refer to AV-109, "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)

Description

INFOID:0000000006216241

- Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT-III.
- Configuration has three functions as follows.

Function	Description
READ CONFIGURATION	• Reads the vehicle configuration of current AV control unit. • Saves the read vehicle configuration.
WRITE CONFIGURATION-Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION-Config file	Writes the vehicle configuration with saved data.

Work Procedure

INFOID:0000000006216242

NOTE:
If “WRITE CONFIGURATION” is unsuccessful, perform “Accessory Number Initialization”. For details, refer to AV-28, "On Board Diagnosis Function".
After performing “Accessory Number Initialization”, reboot the AV control unit to perform “WRITE CONFIGURATION”.

1.WRITING MODE SELECTION

CONSULT-III Configuration
Select “CONFIGURATION” of “MULTI AV”.

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

2.PERFORM “WRITE CONFIGURATION-CONFIG FILE”

CONSULT-III Configuration
Perform “WRITE CONFIGURATION-Config file”.

>> WORK END

3.PERFORM “WRITE CONFIGURATION-MANUAL SELECTION”

CONSULT-III Configuration
Select “WRITE CONFIGURATION-Manual selection” to write vehicle specifications into the AV control unit. For data to write, refer to AV-109, "Configuration List".

>> 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 List

INFOID:0000000006216243

CAUTION:
Check vehicle specifications before servicing.

MANUAL SETTING ITEM	
Items	Setting value
CAMERA SYSTEM	NONE/AVM
	REAR CAMERA

NOTE:
- AVM: Around view monitor
- Some manual setting items may not be displayed, depending on the vehicle specifications.

PREDICTIVE COURSE LINE CENTER POSITION ADJUSTMENT

Description

INFOID:0000000006216244

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

Work Procedure

INFOID:0000000006216245

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)

Description

INFOID:0000000006216246

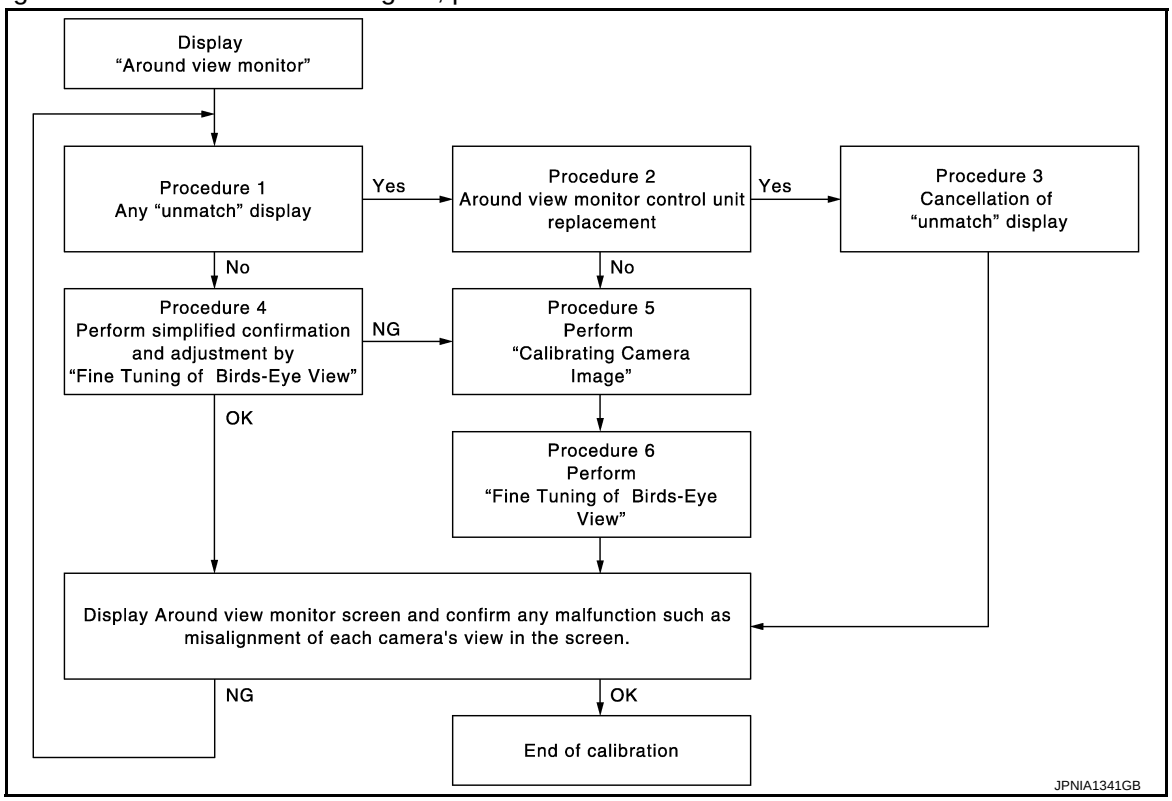
- Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.
- Align the white lines on the road near the vehicle 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.

Work Procedure

INFOID:0000000006216915

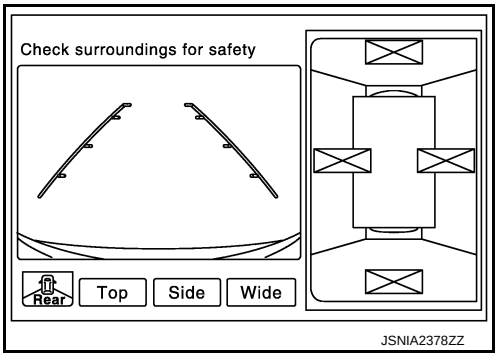
Calibration flowchart

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



NOTE:

In the un-match display, the un-match camera position is indicated as “⊠” on the birds-eye view.



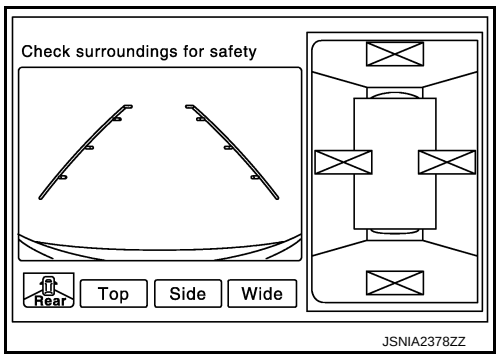
Calibration procedure

1. AROUND VIEW MONITOR SCREEN CONFIRMATION

Check that there is the un-match display in any camera.

Is the un-match display visible?

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



2. CHECK THAT AROUND VIEW MONITOR CONTROL UNIT IS REPLACED

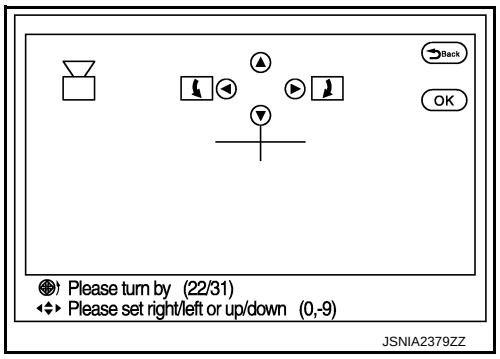
Check that the around view monitor control unit is replaced.

Is the around view monitor control unit replaced?

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

3. RELEASE UN-MATCH DISPLAY (PERFORM ONLY WHEN THE AROUND VIEW MONITOR CONTROL UNIT IS REPLACED)

1. Select “Camera Cont.” of Confirmation/ Adjustment mode, and then set to “Calibrating Camera Image” mode.
2. Press the “ENTER” switch of the multifunction switch on each screen of “Rear Camera”, “Front Camera”, “Dr-Side Camera”, “Pass-Side Camera”.
   CAUTION:
   - **Do never operate the center dial and up/down/left/right switches. Only press the “ENTER” switch.**
   - **Never perform “Initialize Camera Image Calibration”.**
3. Display the around view monitor screen, and check that there is no malfunction such as a difference between each camera image.



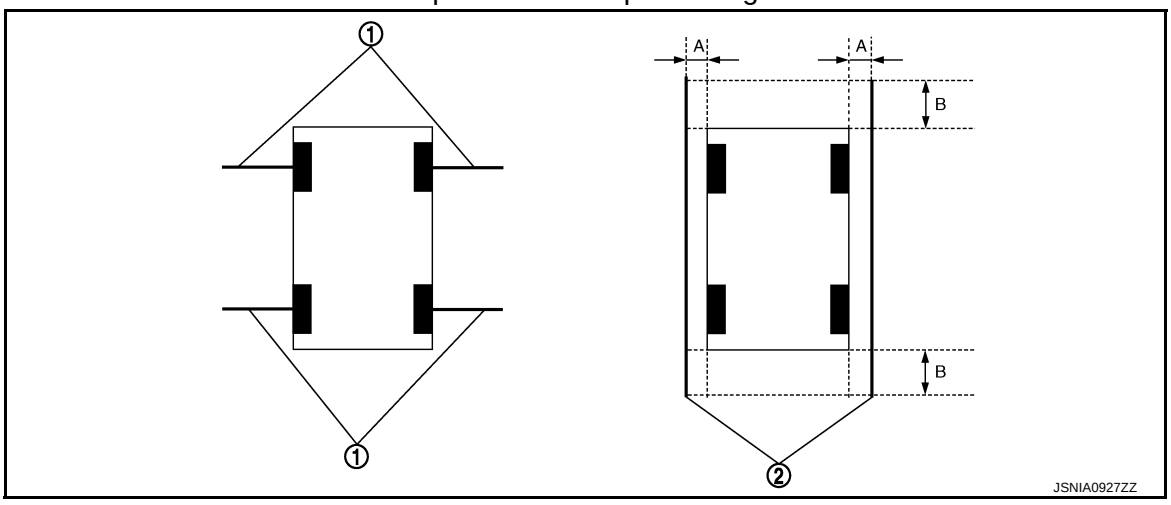
Is there a malfunction?

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)

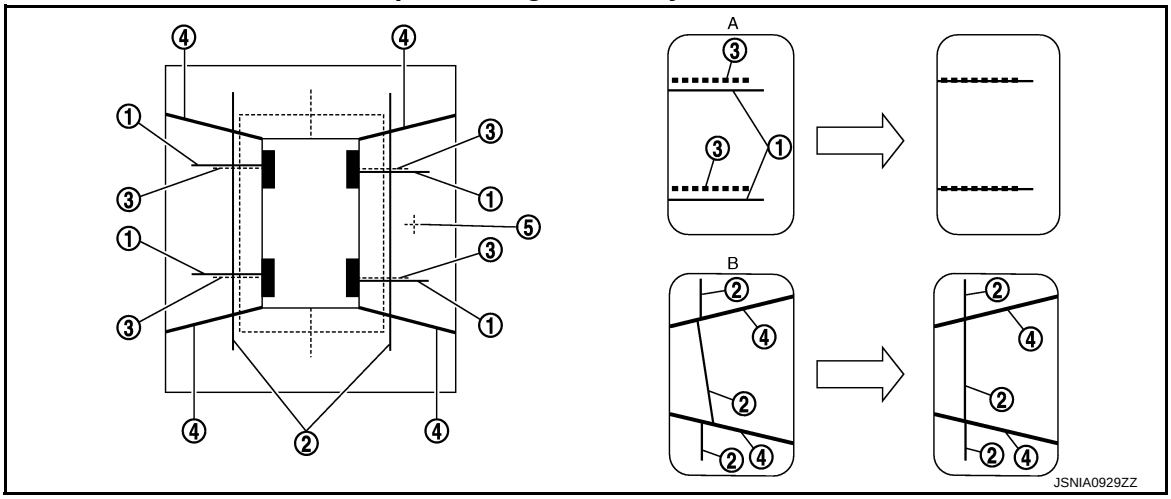
3. Select “Camera Cont.” of Confirmation/ Adjustment mode, and then set to “Fine Tuning of Birds-Eye View” mode.
4. Select left and right cameras by pressing the “CAMERA” switch, and perform the following confirmation.

- Check that target line 1 is aligned with the marker on the screen. Overlap the line aligned to the marker with the upper/lower switches if necessary.
- Check if there is a difference between target lines 2 between cameras. Adjust target lines 2 to be straight lines by operating the center dial and left/right switches if necessary.

CAUTION:

- **Never adjust the front camera and rear camera. Only adjust the right and left cameras.**
- **Operate the center dial slowly because the changing of the screen takes approximately 1 second.**

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 left and right cameras. Check that the difference between target line 1 and the marker on the screen, and between target lines 2 is solved.

NOTE:

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

Is the difference corrected?

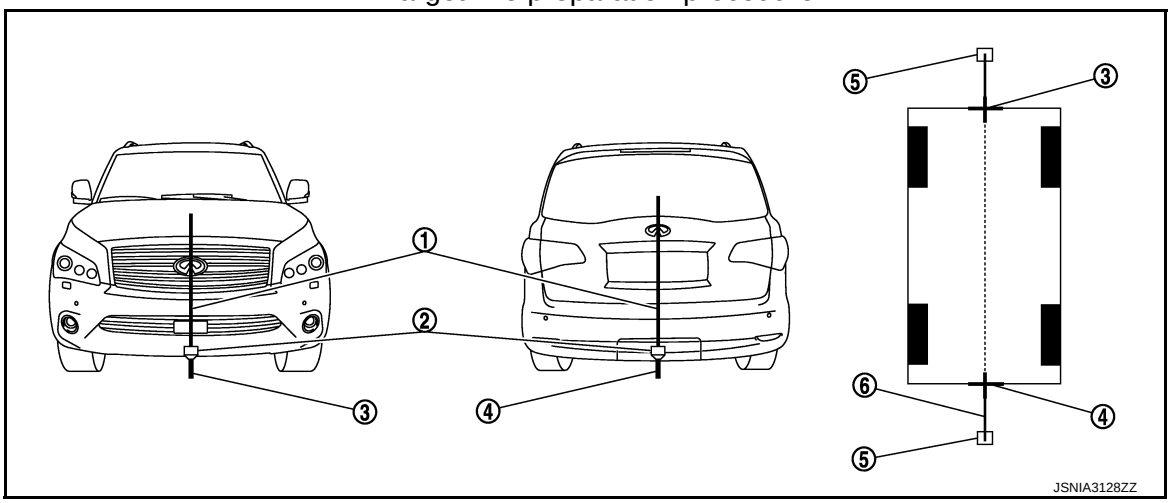
YES >> Finish the writing to around view monitor control unit by pressing “ENTER” switch.
NO >> GO TO 5.

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.

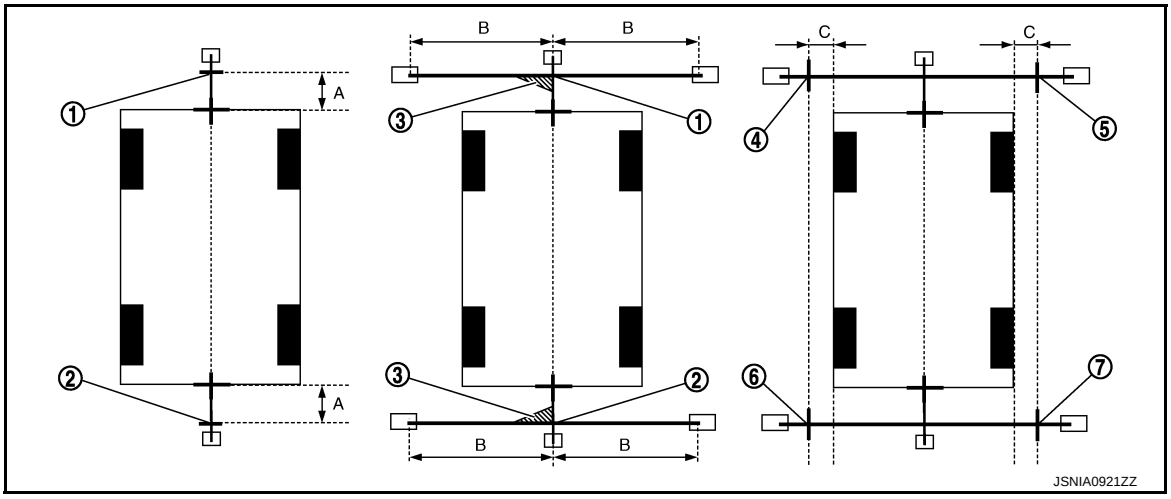
Target line preparation procedure 1



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

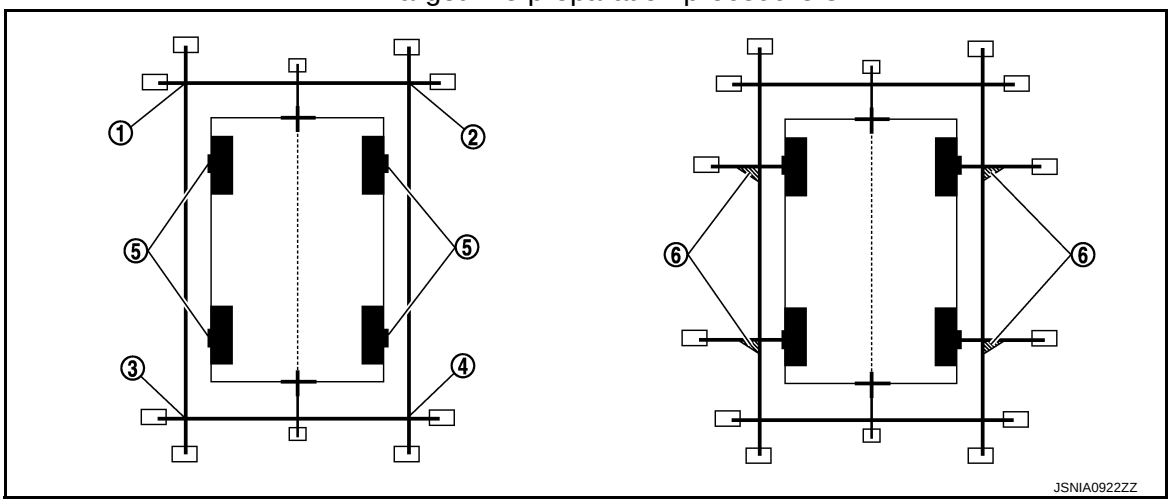


1. Point FM
2. Point RM
3. Triangle scale
4. Point FL (mark)
5. Point FR (mark)
6. Point RL (mark)
7. Point RR (mark)

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

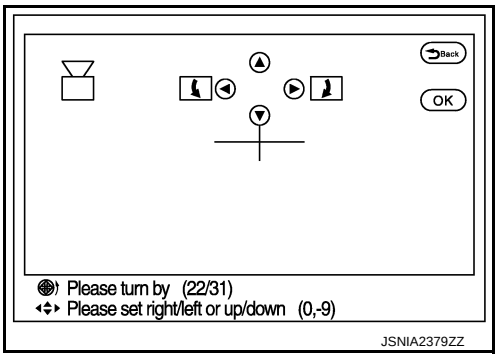


1. Point FL
2. Point FR
3. Point RL
4. Point RR
5. Center position of axle
6. Triangle scale

Perform “Calibrating Camera Image”

1. Select “Camera Cont.” of “Confirmation/ Adjustment” mode, and then set to “Calibrating Camera Image” mode.
2. Overlap the target lines drawn on the ground with the calibration marker on the screen by operating the center dial and upper/lower/left/right switches of multifunction switch on each screen of “Rear Camera”, “Pass-Side Camera”, “Front Camera”, “Dr-Side Camera”.

Adjustment range	
Rotation direction (Center dial)	: 31 patterns (16 on the center)
Upper/lower direction (upper/lower switch)	: –99 – 99
Left/right direction (left/right switch)	: –99 – 99



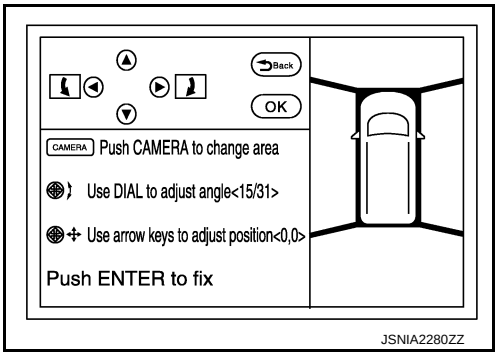
3. “Writing...” is displayed by pressing the “ENTER” switch, and then the adjustment result is written to the around view monitor control unit.
   CAUTION:
   Check that “Writing...” is displayed. Do never perform other operations while “Writing...” is displayed.

>> 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.

1. Select “Camera Cont.” of “Confirmation/ Adjustment” mode, and then set to “Fine Tuning of Birds-Eye View” mode.
2. Operate the center dial and upper/lower/left/right switch to overlap the marker on the screen and the target lines on the ground.
   NOTE:
   Move the “+”- mark on the camera position to adjustment by pressing the “CAMERA” switch.
3. When the target line is overlapped on the marker, press the “ENTER” switch to write the adjustment result to the around view monitor control unit.
   CAUTION:
   Check that “Writing...” is displayed. Do never perform other operations while “Writing...” is displayed.
   NOTE:



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

>> Calibration end

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000006216248

CAN (Controller Area Network) is a serial communication line for real-time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independently). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart. Refer to LAN-28, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

DTC Logic

INFOID:0000000006216249

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Probable malfunction location
U1000	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:0000000006216250

1.PERFORM SELF-DIAGNOSTIC

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

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to LAN-18, "Trouble Diagnosis Procedure".
NO >> Refer to GI-40, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000006216251

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Probable malfunction factor
U1010	CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U1200 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216252

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1200	Cont Unit [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U1201 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216253

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1201	GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U1202 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216254

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1202	G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U1204 AV CONTROL UNIT

Description

INFOID:0000000006216255

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

DTC Logic

INFOID:0000000006216256

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1204	GPS CONN [U1204]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216257

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the self-diagnosis results. Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

YES >> Replace AV control unit. Refer to AV-212, "Removal and Installation".
NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1205 AV CONTROL UNIT

Description

INFOID:0000000006216258

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

DTC Logic

INFOID:0000000006216259

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1205	GPS ROM [U1205]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216260

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the self-diagnosis results. Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

YES >> Replace AV control unit. Refer to AV-212, "Removal and Installation".
NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1206 AV CONTROL UNIT

Description

INFOID:0000000006216261

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

DTC Logic

INFOID:0000000006216262

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1206	GPS RAM [U1206]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216263

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the self-diagnosis results. Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

YES >> Replace AV control unit. Refer to AV-212, "Removal and Installation".
NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1207 AV CONTROL UNIT

Description

INFOID:0000000006216264

An intermittent error caused by strong radio interference may be detected unless any symptoms (GPS reception error, etc.) occur. Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

DTC Logic

INFOID:0000000006216265

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1207	GPS RTC [U1207]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216266

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the self-diagnosis results. Turn ignition switch OFF.
2. Turn ignition switch ON. Perform the self-diagnosis again.
3. Check that the DTC is detected again.

Is any DTC detected?

YES >> Replace AV control unit. Refer to AV-212, "Removal and Installation".
NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1216 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216267

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1216	CAN CONT [U1216]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U1217 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216268

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1217	BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U1218 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216269

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216270

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U1219 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216271

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216272

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U121A AV CONTROL UNIT

DTC Logic

INFOID:0000000006216273

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216274

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U121B AV CONTROL UNIT

DTC Logic

INFOID:0000000006216275

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216276

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U121C AV CONTROL UNIT

DTC Logic

INFOID:0000000006216277

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216278

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U121D AV CONTROL UNIT

DTC Logic

INFOID:0000000006216279

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216280

1.CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U121E AV CONTROL UNIT

DTC Logic

INFOID:0000000006216281

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216282

1.CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U1225 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216283

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1225	USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.

U1227 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216284

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	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-212, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000006216285

1.CHECK PLAYBACK OF A DISK (DVD)

Can a disc (DVD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U1228 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216286

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1228	SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U1229 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216287

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1229	iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U122A AV CONTROL UNIT

DTC Logic

INFOID:0000000006216288

DTC	Display contents of CONSULT-III	DTC detection condition	Action to take
U122A	CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT-III.

Diagnosis Procedure

INFOID:0000000006216289

1.PERFORM THE SELF-DIAGNOSIS

When U122A is detected, write configuration data with CONSULT-III.

>> Write configuration data with CONSULT-III. Refer to AV-39, "CONSULT-III Function".

U122E AV CONTROL UNIT

DTC Logic

INFOID:0000000006216290

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U122E	Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly. Refer to AV-212, "Removal and Installation".

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000006216291

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1232	ST ANGLE SEN CALIB [1232]	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.

Diagnosis Procedure

INFOID:0000000006216292

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.

>> Adjusts the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to BRC-64, "Work Procedure".

U1243 FRONT DISPLAY UNIT

DTC Logic

INFOID:0000000006216293

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1243	FRONT DISP CONN [U1243]	When either one of the following items is detected. • front display unit power supply and ground circuits are malfunctioning. • serial communication circuits between front display unit and AV control unit are malfunctioning.	• Front display unit power supply and ground circuits. • Serial communication circuits between front display unit and AV control unit.

Diagnosis Procedure

INFOID:0000000006216294

1.CHECK FRONT DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUITS

Check front display unit power supply and ground circuits. Refer to AV-161, "FRONT DISPLAY UNIT : Diagnosis Procedure".

Is inspection result normal?

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

2.CHECK CONTINUITY COMMUNICATION CIRCUITS

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

Front display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M215	9	M210	89	Existed
	10		73	

4. Check continuity between front display unit harness connector and ground.

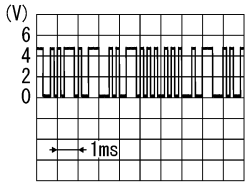
Front display unit		Ground	Continuity
Connector	Terminals		
M215	9		Not existed
	10		

Is inspection result normal?

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

3.CHECK COMMUNICATION SIGNAL

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

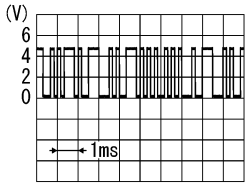
(+)		(–)	Condition	Reference value
Front display unit				
Connector	Terminal			
M215	9	Ground	When adjusting display brightness.	 PKIB5039J

Is inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

4. CHECK COMMUNICATION SIGNAL

Check signal between front display unit harness connector and ground.

(+)		(–)	Condition	Reference value
Front display unit				
Connector	Terminal			
M215	10	Ground	When adjusting display brightness.	 PKIB5039J

Is inspection result normal?

YES >> INSPECTION END
NO >> Replace front display unit. Refer to AV-213, "Removal and Installation".

U1244 GPS ANTENNA

DTC Logic

INFOID:0000000006216295

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	GPS antenna disconnection

Diagnosis Procedure

INFOID:0000000006216296

1.GPS ANTENNA CHECK

Visually check GPS antenna and antenna feeder.

Is inspection result normal?

YES >> GO TO 2.
NO >> Repair 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	(–)	Voltage (Approx.)
Terminal		
153	Ground	5.0 V

Is inspection result normal?

YES >> INSPECTION END
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U1258 SATELLITE RADIO ANTENNA

DTC Logic

INFOID:0000000006226137

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U1258	XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	Satellite radio antenna disconnection.

Diagnosis Procedure

INFOID:0000000006226138

1.SATELLITE RADIO ANTENNA CHECK

Visually check satellite radio antenna and antenna feeder.

Is the inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

1. Disconnect satellite radio antenna connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit and ground.

(+)		
AV control unit	(–)	Voltage (Approx.)
Terminal		
159	Ground	5.0 V

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U125A HEADREST DISPLAY UNIT

DTC Logic

INFOID:0000000006216297

DTC	Display contents of CONSULT-III	DTC Detection Condition	Possible causes
U125A	3RD DISP CONN [U125A]	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.

Diagnosis Procedure

INFOID:0000000006216298

1.CHECK HEADREST DISPLAY UNIT RH POWER SUPPLY AND GROUND CIRCUIT

Check headrest display unit RH power supply and ground circuits. Refer to AV-162, "HEADREST DISPLAY UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK CONTINUITY AV COMMUNICATION CIRCUIT

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

Headrest display unit LH		Headrest display unit RH		Continuity
Connector	Terminals	Connector	Terminals	
B554	11	B574	12	Existed
	13		14	

Is the inspection result normal?

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

3.CHECK LOCATION RECOGNITION SIGNAL CIRCUIT

Check location recognition signal circuit between headrest display unit RH and ground. Refer to AV-175, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace headrest display unit RH. Refer to AV-214, "Exploded View".
NO >> Repair harness or connector.

U1263 USB

DTC Logic

INFOID:0000000006216299

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1263	USB OVERCURRENT [U1263]	Detection of overcurrent in USB connector.	Check USB harness between the AV control unit and USB connector.

Diagnosis Procedure

INFOID:0000000006216300

1.CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-212, "Removal and Installation".
NO >> Replace USB harness.

U1264 ANTENNA AMP.

DTC Logic

INFOID:0000000006216301

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1264	ANTENNA AMP TERMINAL [U1264]	Radio antenna amp. ON circuit is open or shorted.	Check antenna amp. ON signal circuit between the AV control unit and radio antenna amp.

Diagnosis Procedure

INFOID:0000000006216302

1. CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA AMP.

1. Turn ignition switch OFF.
2. Disconnect antenna amp. connector and AV control unit connector.
3. Check continuity between AV control unit harness connector and antenna amp. harness connector.

AV control unit		Antenna amp.		Continuity
Connector	Terminals	Connector	Terminals	
M319	152	M313	1	Existed

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

AV control unit		Ground	Continuity
Connector	Terminals		
M319	152		Not existed

Is the inspection result normal?

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

2. CHECK VOLTAGE AV CONTROL UNIT

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

(+)		(–)	Voltage (Approx.)
AV control unit			
Connector	Terminals		
M319	152	Ground	12.0 V

Is the inspection result normal?

YES >> Replace antenna amp. Refer to AV-224, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U1265 BOSE AMP.

DTC Logic

INFOID:0000000006216303

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1265	AMP ON TERMINAL [U1265]	BOSE amp. ON signal circuit is open or shorted.	Check BOSE amp. ON signal circuit between the AV control unit and BOSE amp.

Diagnosis Procedure

INFOID:0000000006216304

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND BOSE AMP.

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. connector and AV control unit connector.
3. Check continuity between AV control unit harness connector and BOSE amp. harness connector.

AV control unit		BOSE amp.		Continuity
Connector	Terminals	Connector	Terminals	
M208	1	B230	20	Existed

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

AV control unit		Ground	Continuity
Connector	Terminals		
M208	1		Not existed

Is the inspection result normal?

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

2.CHECK VOLTAGE AV CONTROL UNIT

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

(+)		(–)	Voltage (Approx.)
AV control unit			
Connector	Terminals		
M208	1	Ground	12.0 V

Is the inspection result normal?

YES >> Replace BOSE amp. Refer to AV-223, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

U1300 AV COMM CIRCUIT

Description

INFOID:0000000006216305

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

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	When either one of the following items are detected: • multifunction switch power supply and ground circuits are 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.
U1300 U1246	• AV COMM CIRCUIT [U1300] • VIDEO DIST CONN [U1246]	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.
U1300 U125B	• AV COMM CIRCUIT [U1300] • AROUND CAMERA CONN [U125B]	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.
U1300 U125C	• AV COMM CIRCUIT [U1300] • SONAR CONN [U125C]	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.
U1300 U1240 U125C U125B	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B]	AV communication circuits between AV control unit and multifunction switch are malfunctioning.	AV communication circuits between AV control unit and multifunction switch.
U1300 U1240 U125C U125B U1246	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240] • SONAR CONN [U125C] • AROUND CAMERA CONN [U125B] • VIDEO DIST CONN [U1246]		

U1310 AV CONTROL UNIT

DTC Logic

INFOID:0000000006216306

DTC	Display contents of CONSULT-III	DTC detection condition	Possible malfunction factor
U1310	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-212, "Removal and Installation".

B2700 CORNER SENSOR [FL]

DTC Logic

INFOID:0000000006216307

DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2700	CORNER SENSOR [FL] [B2700]	Corner sensor front LH is malfunctioning.	Replace corner sensor front LH.

B2701 SENSOR HARNESS OPEN [CR-FL]

DTC Logic

INFOID:0000000006216308

DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2701	SENSOR HARNESS OPEN [CR-FL] [B2701]	Corner sensor front LH harness circuit is open.	Check corner sensor front LH circuit.

Diagnosis Procedure

INFOID:0000000006216309

1.CHECK HARNESS CORNER SENSOR FRONT LH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and corner sensor front LH connector.
3. Check continuity between sonar control unit harness connector and corner sensor front LH harness connector.

Sonar control unit		Corner sensor front LH		Continuity
Connector	Terminal	Connector	Terminal	
M47	3	E221	1	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M47	3		Not existed

Is the inspection result normal?

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

2.CHECK HARNESS CORNER SENSOR FRONT LH GROUND CIRCUIT

Check continuity between sonar control unit harness connector and corner sensor front LH harness connector.

Sonar control unit		Corner sensor front LH		Continuity
Connector	Terminal	Connector	Terminal	
M47	12	E221	2	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

B2702 CORNER SENSOR [FR]

DTC Logic

INFOID:0000000006216310

DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2702	CORNER SENSOR [FR] [B2702]	Corner sensor front RH is malfunctioning.	Replace corner sensor front RH.

B2703 SENSOR HARNESS OPEN [CR-FR]

DTC Logic

INFOID:0000000006216311

DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2703	SENSOR HARNESS OPEN [CR-FR] [B2703]	Corner sensor front RH harness circuit is open.	Check corner sensor front RH circuit.

Diagnosis Procedure

INFOID:0000000006216312

1.CHECK HARNESS CORNER SENSOR FRONT RH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and corner sensor front RH connector.
3. Check continuity between sonar control unit harness connector and corner sensor front RH harness connector.

Sonar control unit		Corner sensor front RH		Continuity
Connector	Terminal	Connector	Terminal	
M47	4	E222	1	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M47	4		Not existed

Is the inspection result normal?

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

2.CHECK HARNESS CORNER SENSOR FRONT RH GROUND CIRCUIT

Check continuity between sonar control unit harness connector and corner sensor front RH harness connector.

Sonar control unit		Corner sensor front RH		Continuity
Connector	Terminal	Connector	Terminal	
M47	12	E222	2	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

B2704 CORNER SENSOR [RL]

DTC Logic

INFOID:0000000006216313

DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2704	CORNER SENSOR [RL] [B2704]	Corner sensor rear LH is malfunctioning.	Replace corner sensor rear LH.

B2705 SENSOR HARNESS OPEN [CR-RL]

DTC Logic

INFOID:0000000006216314

DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2705	SENSOR HARNESS OPEN [CR-RL] [B2705]	Corner sensor rear LH harness circuit is open.	Check corner sensor rear LH circuit.

Diagnosis Procedure

INFOID:0000000006216315

1.CHECK HARNESS CORNER SENSOR REAR LH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and corner sensor rear LH connector.
3. Check continuity between sonar control unit harness connector and corner sensor rear LH harness connector.

Sonar control unit		Corner sensor rear LH		Continuity
Connector	Terminal	Connector	Terminal	
M47	5	B252	1	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M47	5		Not existed

Is the inspection result normal?

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

2.CHECK HARNESS CORNER SENSOR REAR LH GROUND CIRCUIT

Check continuity between sonar control unit harness connector and corner sensor rear LH harness connector.

Sonar control unit		Corner sensor rear LH		Continuity
Connector	Terminal	Connector	Terminal	
M47	12	B252	2	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

B2706 CORNER SENSOR [RR]

DTC Logic

INFOID:0000000006216316

DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2706	CORNER SENSOR [RR] [B2706]	Corner sensor rear RH is malfunctioning.	Replace corner sensor rear RH.

B2707 SENSOR HARNESS OPEN [CR-RR]

DTC Logic

INFOID:0000000006216317

DTC DETECTION LOGIC

DTC No.	CONSULT-III indication	DTC detection condition	Troubleshooting
B2707	SENSOR HARNESS OPEN [CR-RR] [B2707]	Corner sensor rear RH harness circuit is open.	Check corner sensor rear RH circuit.

Diagnosis Procedure

INFOID:0000000006216318

1.CHECK HARNESS CORNER SENSOR REAR RH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect sonar control unit connector and corner sensor rear RH connector.
3. Check continuity between sonar control unit harness connector and corner sensor rear RH harness connector.

Sonar control unit		Corner sensor rear RH		Continuity
Connector	Terminal	Connector	Terminal	
M47	6	B253	1	Existed

4. Check continuity between sonar control unit harness connector and ground.

Sonar control unit		Ground	Continuity
Connector	Terminal		
M47	6		Not existed

Is the inspection result normal?

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

2.CHECK HARNESS CORNER SENSOR REAR RH GROUND CIRCUIT

Check continuity between sonar control unit harness connector and corner sensor rear RH harness connector.

Sonar control unit		Corner sensor rear RH		Continuity
Connector	Terminal	Connector	Terminal	
M47	12	B253	2	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000006216319

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	19

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between AV control unit harness connectors and ground.

Signal name	Connector	Terminal	Ignition switch position	Value (Approx.)
Battery power supply	M208	19	OFF	Battery voltage
ACC power supply	M208	7	ACC	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connectors.
3. Check continuity between AV control unit harness connectors and ground.

Signal name	Connector	Terminal	Ignition switch position	Continuity
Ground	M208	20	OFF	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

FRONT DISPLAY UNIT

FRONT DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000006216320

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	19

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between front display unit harness connector and ground.

Signal name	Connector	Terminal	Ignition switch position	Value (Approx.)
Battery power supply	M215	11	OFF	Battery voltage
ACC power supply	M215	23	ACC	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check harness between front display unit and fuse.

3.CHECK GROUND CIRCUIT

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

Signal name	Connector	Terminal	Ignition switch position	Continuity
Ground	M215	12	OFF	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

HEADREST DISPLAY UNIT

HEADREST DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000006216321

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between headrest display unit harness connector and ground.

Signal name	Connector	Terminal	Ignition switch position	Value (Approx.)
Battery power supply	B554*1 B574*2	2	OFF	Battery voltage
		4		

- *1: Headrest display unit LH
- *2: Headrest display unit RH

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check harness between headrest display unit and fuse.

3.CHECK GROUND CIRCUIT

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

Signal name	Connector	Terminal	Ignition switch position	Continuity
Ground	B554*1 B574*2	1	OFF	Existed
		3		

- *1: Headrest display unit LH
- *2: Headrest display unit RH

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

VIDEO DISTRIBUTOR

VIDEO DISTRIBUTOR : Diagnosis Procedure

INFOID:0000000006216322

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	19

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between video distributor harness connector and ground.

Signal name	Connector	Terminal	Ignition switch position	Value (Approx.)
Battery power supply	M217	2	OFF	Battery voltage
ACC power supply	M217	4	ACC	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector	Terminal	Ignition switch position	Continuity
Ground	M217	1	OFF	Existed
Ground	M217	3	OFF	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

BOSE AMP.

BOSE AMP. : Diagnosis Procedure

INFOID:0000000006216323

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	5
Battery	8

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between BOSE amp. harness connector and ground.

Signal name	Connector	Terminal	Ignition switch position	Value (Approx.)
Battery power supply	B229	10	OFF	Battery voltage
Battery power supply	B229	11	OFF	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector	Terminal	Ignition switch position	Continuity
Ground	B229	12	OFF	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

AROUND VIEW MONITOR CONTROL UNIT

AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:0000000006216324

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	9
Ignition switch ACC	19

Is inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUITS

Check voltage between around view monitor control unit harness connector and ground.

Signal name	Connector	Terminal	Ignition switch position	Value (Approx.)
Battery power supply	M48	2	OFF	Battery voltage
ACC power supply	M48	4	ACC	Battery voltage

Is inspection result normal?

YES >> GO TO 3.
NO >> Check harness between around view monitor control unit and fuse.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector.
3. Check continuity between around view monitor control unit harness connector and ground.

Signal name	Connector	Terminal	Ignition switch position	Continuity
Ground	M48	1	OFF	Existed

Is inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR)

SONAR CONTROL UNIT (WITH AROUND VIEW MONITOR) : Diagnosis Procedure

INFOID:0000000006216325

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Ignition switch ACC or ON	19

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

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

Signal name	Connector	Terminal	Ignition switch position	Value (Approx.)
Battery power supply	M47	13	ACC	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace sonar control unit power supply harness.

3.CHECK GROUND CIRCUIT

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

Signal name	Connector	Terminal	Ignition switch position	Continuity
Ground	M47	24	OFF	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace sonar control unit ground harness.

RGB DIGITAL IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006216326

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

Diagnosis Procedure

INFOID:0000000006216327

1.CHECK CONTINUITY RGB DIGITAL IMAGE SIGNAL CIRCUIT

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

Front display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M322	27	M321	157	Existed
	28		158	

4. Check continuity between front display unit harness connector and ground.

Front display unit		Ground	Continuity
Connector	Terminals		
M322	27		Not existed
	28		

Is the inspection result normal?

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

2.CHECK RGB DIGITAL IMAGE SIGNAL

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

(+)		(–)	Condition	Voltage (Approx.)
Front display unit				
Connector	Terminal			
M322	27	Ground	—	1.3 V
	28			

Is the inspection result normal?

YES >> Replace front display unit. Refer to AV-213, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO FRONT DISPLAY UNIT)

Description

INFOID:0000000006216328

- DVD is played by inserting DVD into the AV control unit.
- DVD image signals are transmitted to the front display unit and video distributor.
- AV control unit receives the image signal from the front auxiliary input jacks and then transmits it to the front display unit.
- AV control unit receives the image signal from the USB (video data) and then transmits it to the front display unit and video distributor.
- Video distributor receives the image signal from the AV control unit and then transmits it to the headrest display unit.

Diagnosis Procedure

INFOID:0000000006216329

1.CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

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

AV control unit		Front display unit		Continuity
Connector	Terminal	Connector	Terminal	
M210	68	M215	18	Existed

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

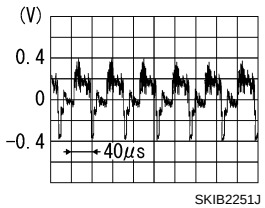
AV control unit		Ground	Continuity
Connector	Terminal		
M210	68		Not existed

Is the inspection result normal?

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

2.CHECK COMPOSITE IMAGE SIGNAL

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

(+)		(–)	Condition	Reference value
AV control unit				
Connector	Terminal			
M210	68	Ground	At DVD image is displayed.	

SKIB2251J

Is the inspection result normal?

YES >> Replace front display unit. Refer to AV-213, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

COMPOSITE IMAGE SIGNAL CIRCUIT (AV CONTROL UNIT TO VIDEO DISTRIBUTOR)

Description

INFOID:0000000006216330

- DVD is played by inserting DVD into the AV control unit.
- DVD image signals are transmitted to the front display unit and video distributor.
- AV control unit receives the image signal from the front auxiliary input jacks and then transmits it to the front display unit.
- AV control unit receives the image signal from the USB (video data) and then transmits it to the front display unit and video distributor.
- Video distributor receives the image signal from the AV control unit and then transmits it to the headrest display unit.

Diagnosis Procedure

INFOID:0000000006216331

1.CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and video distributor connector.
3. Check continuity between AV control unit harness connector and video distributor harness connector.

AV control unit		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	
M209	34	M218	34	Existed

4. Check continuity between video distributor harness connector and ground.

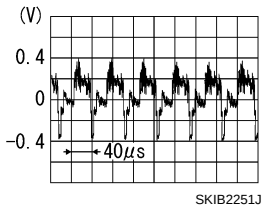
Video distributor		Ground	Continuity
Connector	Terminal		
M218	34		Not existed

Is the inspection result normal?

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

2.CHECK COMPOSITE IMAGE SIGNAL

1. Connect AV control unit connector and video distributor connector.
2. Turn ignition switch ON.
3. Check signal between video distributor harness connector and ground.

(+)		(–)	Condition	Reference value
Video distributor				
Connector	Terminal			
M218	34	Ground	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	

SKIB2251J

Is the inspection result normal?

YES >> Replace video distributor. Refer to AV-215, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

COMPOSITE IMAGE SIGNAL CIRCUIT (VIDEO DISTRIBUTOR TO HEADREST DISPLAY UNIT)

Description

INFOID:0000000006216332

- DVD is played by inserting DVD into the AV control unit.
- DVD image signals are transmitted to the front display unit and video distributor.
- AV control unit receives the image signal from the front auxiliary input jacks and then transmits it to the front display unit.
- AV control unit receives the image signal from the USB (video data) and then transmits it to the front display unit and video distributor.
- Video distributor receives the image signal from the AV control unit and then transmits it to the headrest display unit.

Diagnosis Procedure

INFOID:0000000006216333

1.CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

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

Video distributor		Headrest display unit		Continuity
Connector	Terminal	Connector	Terminal	
M217	32	B554*1	24	Existed
	28	B574*2	24	Existed

*1: Headrest display unit LH
*2: Headrest display unit RH

4. Check continuity between headrest display unit harness connector and ground.

Headrest display unit		Ground	Continuity
Connector	Terminal		
B554*1	24		Not existed
B574*2	24		

*1: Headrest display unit LH
*2: Headrest display unit RH

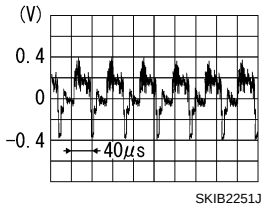
Is the inspection result normal?

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

2.CHECK COMPOSITE IMAGE SIGNAL

1. Connect video distributor connector and rear display unit connector.
2. Turn ignition switch ON.
3. Check signal between rear display unit harness connector using an oscilloscope.

(+)		(–)	Condition	Reference value
Headrest display unit				
Connector	Terminal			

B554*1	24	Ground	When DVD, USB or front AUX image is displayed on headrest display unit LH or RH.	 SKIB2251J
B574*2	24			

*1: Headrest display unit LH
*2: Headrest display unit RH

Is the inspection result normal?

YES >> Replace headrest display unit. Refer to AV-214, "Exploded View".
NO >> Replace video distributor. Refer to AV-215, "Removal and Installation".

AUX IMAGE SIGNAL CIRCUIT (FRONT AUXILIARY INPUT JACKS TO AV CONTROL UNIT)

Description

INFOID:0000000006216334

- Transmits the image signal of AUX device from front auxiliary input jacks to AV control unit.
- AV control unit transmits the image signal that is input to the front display unit.

Diagnosis Procedure

INFOID:0000000006216335

1.CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

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

Front auxiliary input jacks		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M139	7	M209	26	Existed

4. Check continuity between front auxiliary input jacks harness connector and ground.

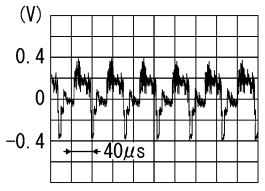
Front auxiliary input jacks		Ground	Continuity
Connector	Terminal		
M139	7		Not existed

Is the inspection result normal?

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

2.CHECK AUX IMAGE SIGNAL

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

(+)		(–)	Condition	Reference value
Front auxiliary input jacks				
Connector	Terminal			
M139	7	Ground	At front AUX image is displayed.	

SKIB2251J

Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-212, "Removal and Installation".
NO >> Check that there is no malfunction in the external device.

AUX IMAGE SIGNAL CIRCUIT (REAR AUXILIARY INPUT JACKS TO VIDEO DISTRIBUTOR)

Description

INFOID:0000000006216336

- Transmits the image signal of AUX device from rear auxiliary input jacks to the video distributor.
- Video distributor transmits the image signal that is input to the headrest display unit.

Diagnosis Procedure

INFOID:0000000006216337

1.CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear auxiliary input jacks connector and video distributor connector.
3. Check continuity between rear auxiliary input jacks harness connector and video distributor harness connector.

Rear auxiliary input jacks		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	
M98	7	M218	40	Existed

4. Check continuity between rear auxiliary input jacks harness connector and ground.

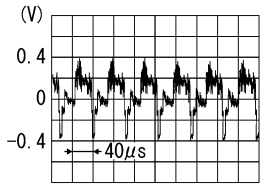
Rear auxiliary input jacks		Ground	Continuity
Connector	Terminal		
M98	7		Not existed

Is the inspection result normal?

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

2.CHECK AUX IMAGE SIGNAL

1. Connect rear auxiliary input jacks connector and video distributor connector.
2. Turn ignition switch ON.
3. Check signal between rear auxiliary input jacks harness connector and ground.

(+)		(–)	Condition	Reference value
Rear auxiliary input jacks				
Connector	Terminal			
M98	7	Ground	At rear AUX image is displayed on headrest display unit.	

SKIB2251J

Is the inspection result normal?

YES >> Replace video distributor. Refer to AV-215, "Removal and Installation".
NO >> Check that there is no malfunction in the external device.

IMAGE SWITCH SIGNAL CIRCUIT

Description

INFOID:0000000006216338

- Image switch signal is input from headrest display unit to video distributor, according to rear seat remote controller operation.
- When image switch signal is input from headrest display unit to video distributor, image output from AV control unit and image output from auxiliary input jacks switch.

Diagnosis Procedure

INFOID:0000000006216339

1.CHECK CONTINUITY IMAGE SWITCH SIGNAL CIRCUIT

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

Headrest display unit		Video distributor		Continuity
Connector	Terminal	Connector	Terminal	
B554*1	20	M217	10	Existed
B574*2	20		9	Existed

*1: Headrest display unit LH
*2: Headrest display unit RH

4. Check continuity between headrest display unit harness connector and ground.

Headrest display unit		Ground	Continuity
Connector	Terminal		
B554*1	20		Not existed
B574*2	20		

*1: Headrest display unit LH
*2: Headrest display unit RH

Is the inspection result normal?

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

2.CHECK VIDEO DISTRIBUTOR VOLTAGE

1. Connect headrest display unit connector and video distributor connector.
2. Turn ignition switch ON.
3. Check voltage between video distributor harness connector and ground.

(+)		(–)	Condition	Voltage (Approx.)
Video distributor				
Connector	Terminal			

M217	9	Ground	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
	10		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

Is the inspection result normal?

YES >> Replace video distributor. Refer to AV-215, "Removal and Installation".
NO >> Replace headrest display unit LH (RH). Refer to AV-214, "Exploded View".

LOCATION RECOGNITION SIGNAL CIRCUIT

Description

INFOID:0000000006216340

The headrest display unit operates by recognizing a mounting position by the input of the location recognition signal.

Diagnosis Procedure

INFOID:0000000006216341

1.CHECK CONTINUITY LOCATION RECOGNITION SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect headrest display unit connector LH (RH).
3. Check continuity between headrest display unit connector LH (RH) harness connector and ground.

Headrest display unit		Ground	Continuity
Connector	Terminals		
B554*1	10		Existed
B574*2	9		

*1: Headrest display unit LH
*2: Headrest display unit RH

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

DISK EJECT SIGNAL CIRCUIT

Description

INFOID:0000000006216342

The eject signal is output to AV control unit when the eject switch of multifunction switch is pressed.

Diagnosis Procedure

INFOID:0000000006216343

1.CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect multifunction switch connector and AV control unit connector.
3. Check continuity between multifunction switch harness connector and AV control unit harness connector.

Multifunction switch		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M72	14	M209	29	Existed

4. Check continuity between multifunction switch harness connector and ground.

Multifunction switch		Ground	Continuity
Connector	Terminal		
M72	14		Not existed

Is the inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

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

(+)		(–)	Condition	Voltage (Approx.)
AV control unit				
Connector	Terminal			
M209	29	Ground	Pressing the eject switch	0 V
			Except for above	5.0 V

Is the inspection result normal?

YES >> Replace preset switch. Refer to AV-227, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

MODE CHANGE SIGNAL CIRCUIT

Description

INFOID:0000000006216344

- AV control unit transmits the mode change signal to BOSE amp.
- Driver's Audio Stage controls the speaker's output characteristic by BOSE amp. so that the driver's seat is to be the center of sounds.

Diagnosis Procedure

INFOID:0000000006216345

1.CHECK CONTINUITY MODE CHANGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. connector and AV control unit connector.
3. Check continuity between BOSE amp. harness connector and AV control unit harness connector.

AV control unit		BOSE amp.		Continuity
Connector	Terminal	Connector	Terminal	
M209	30	B230	37	Existed

4. Check continuity between BOSE amp. harness connector and ground.

BOSE amp.		Ground	Continuity
Connector	Terminal		
B230	37		Not existed

Is the inspection result normal?

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

2.CHECK MODE CHANGE SIGNAL

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

(+)		(–)	Condition	Voltage (Approx.)
BOSE amp.				
Connector	Terminal			
B230	37	Ground	Driver's Audio Stage ON.	0 V
			Driver's Audio Stage OFF.	8.5 V

Is the inspection result normal?

YES >> Replace BOSE amp. Refer to AV-223, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000006216346

Supply power from AV control unit to microphone. The microphone transmits the sound/voice to the AV control unit.

Diagnosis Procedure

INFOID:0000000006216347

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND MICROPHONE CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect AV control unit connector and microphone connector.
3. Check continuity between AV control unit harness connector and microphone harness connector.

AV control unit		Microphone		Continuity
Connector	Terminals	Connector	Terminals	
M210	71	R17	2	Existed
	72		4	
	87		1	

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

AV control unit		Ground	Continuity
Connector	Terminals		
M210	72		Not existed
	87		

Is the inspection result normal?

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

2.CHECK VOLTAGE MICROPHONE VCC

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

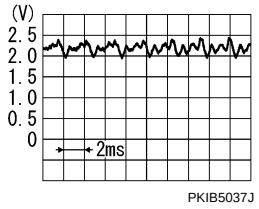
(+)		(–)	Voltage (Approx.)
AV control unit		Ground	
Connector	Terminal		
M210	72		5.0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

3.CHECK MICROPHONE SIGNAL

1. Connect microphone connector.
2. Check signal between AV control unit harness connector.

(+)		(–)		Condition	Reference value
AV control unit		AV control unit			
Connector	Terminal	Connector	Terminal		
M210	87	M210	71	Give a voice.	

PKIB5037J

Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-212, "Removal and Installation".
NO >> Replace microphone. Refer to AV-231, "Removal and Installation".

CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006216348

Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.

Diagnosis Procedure

INFOID:0000000006216349

1.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front display unit connector and around view monitor control unit connector.
3. Check continuity between front display unit harness connector and around view monitor control unit harness connector.

Front display unit		Around view monitor control unit		Continuity
Connector	Terminal	Connector	Terminal	
M215	8	M48	27	Existed

4. Check continuity between front display unit harness connector and ground.

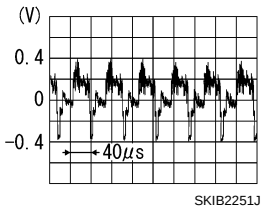
Front display unit		Ground	Continuity
Connector	Terminal		
M215	8		Not existed

Is inspection result normal?

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

2.CHECK CAMERA IMAGE SIGNAL

1. Connect front display unit connector and around view monitor control unit connector.
2. Turn ignition switch ON.
3. Check signal between front display unit harness connector and ground.

(+)		(–)	Condition	Reference value
Front display unit				
Connector	Terminal			
M215	8	Ground	At camera image is displayed.	

SKIB2251J

Is inspection result normal?

YES >> Replace front display unit. Refer to AV-212, "Removal and Installation".
NO >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".

FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:0000000006216350

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predictive course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

Diagnosis Procedure

INFOID:0000000006216351

1.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and front camera connector.
3. Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
M49	45	E50	6	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

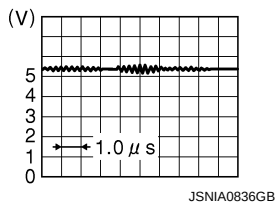
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B49	45		Not existed

Is inspection result normal?

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

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector and front camera connector.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
M49	45	Ground	“CAMERA” switch is ON or shift position is “R”.	

JSNIA0836GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".
NO >> Replace front camera. Refer to AV-234, "Removal and Installation".

FRONT CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006216352

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predictive course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

Diagnosis Procedure

INFOID:0000000006216353

1.CHECK CONTINUITY FRONT CAMERA POWER SUPPLY AND GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and front camera connector.
3. Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
M49	44	E50	2	Existed
	46		1	

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M49	46		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE FRONT CAMERA POWER SUPPLY

1. Connect around view monitor control unit connector and front camera connector.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit harness connector.

(+)		(–)	Condition	Voltage (Approx.)
Around view monitor control unit				
Connector	Terminal			
M49	46	Ground	“CAMERA” switch is ON or shift position is “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".

3.CHECK CONTINUITY FRONT CAMERA IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and front camera connector.
3. Check continuity between around view monitor control unit harness connector and front camera harness connector.

Around view monitor control unit		Front camera		Continuity
Connector	Terminals	Connector	Terminals	
M49	41	E50	3	Existed
	42		4	

4. Check continuity between around view monitor control unit harness connector and ground.

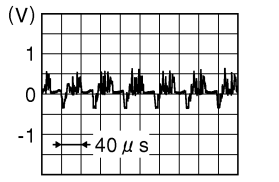
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M49	41, 42		Not existed

Is inspection result normal?

YES >> GO TO 4.
NO >> Repair harness or connector.

4. CHECK FRONT CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector and front camera connector.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit harness connector.

(+)		(–)		Condition	Reference value
Around view monitor control unit					
Connector	Terminal	Connector	Terminal		
M49	41	M49	42	“CAMERA” switch is ON or shift position is “R”.	

JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".
NO >> Replace front camera. Refer to AV-234, "Removal and Installation".

REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:0000000006216354

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predictive course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

Diagnosis Procedure

INFOID:0000000006216355

1.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and rear camera connector.
3. Check continuity between around view monitor control unit harness connector and rear camera harness connector.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
M48	35	D164	4	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

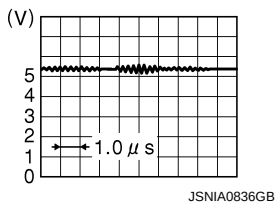
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M48	35		Not existed

Is inspection result normal?

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

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector and rear camera connector.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit harness connector and ground.

(+)		(–)	Condition	Reference value
Around view monitor control unit				
Connector	Terminal			
M48	35	Ground	“CAMERA” switch is ON or shift position is “R”.	

JSNIA0836GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".
NO >> Replace rear camera. Refer to AV-235, "Removal and Installation".

REAR CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006216356

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predictive course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

Diagnosis Procedure

INFOID:0000000006216357

1.CHECK CONTINUITY REAR CAMERA POWER SUPPLY AND GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and rear camera connector.
3. Check continuity between around view monitor control unit harness connector and rear camera harness connector.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector	Terminals	
M48	36	D164	8	Existed
	38		7	

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M48	36		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE REAR CAMERA POWER SUPPLY

1. Connect around view monitor control unit connector and rear camera connector.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit harness connector and ground.

(+)		(–)	Condition	Voltage (Approx.)
Around view monitor control unit				
Connector	Terminal			
M48	36	Ground	“CAMERA” switch is ON or shift position is “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".

3.CHECK CONTINUITY REAR CAMERA IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and rear camera connector.
3. Check continuity between around view monitor control unit harness connector and rear camera harness connector.

Around view monitor control unit		Rear camera		Continuity
Connector	Terminals	Connector	Terminals	
M48	39	D164	5	Existed
	40		1	

4. Check continuity between around view monitor control unit harness connector and ground.

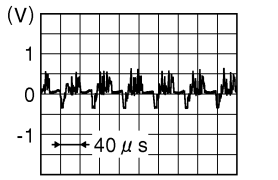
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M48	39, 40		Not existed

Is inspection result normal?

YES >> GO TO 4.
NO >> Repair harness or connector.

4. CHECK REAR CAMERA IMAGE SIGNAL

1. Connect around view monitor control unit connector and rear camera connector.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit harness connector.

(+)		(–)		Condition	Reference value
Around view monitor control unit					
Connector	Terminal	Connector	Terminal		
M48	39	M48	40	“CAMERA” switch is ON or shift position is “R”.	

JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".
NO >> Replace rear camera. Refer to AV-235, "Removal and Installation".

SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:0000000006216358

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predictive course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

Diagnosis Procedure

INFOID:0000000006216359

1.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
3. Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
M49	47	D3	3	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

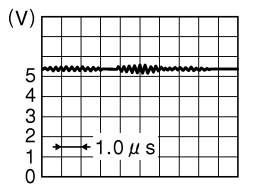
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M49	47		Not existed

Is inspection result normal?

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

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector and door mirror (driver side) connector.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
M49	47	Ground	“CAMERA” switch is ON or shift position is “R”.	

JSNIA0836GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".
NO >> Replace side camera LH. Refer to AV-236, "Removal and Installation".

SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006216360

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predictive course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

Diagnosis Procedure

INFOID:0000000006216361

1.CHECK CONTINUITY SIDE CAMERA LH POWER SUPPLY AND GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
3. Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector	Terminals	
M49	48	D3	6	Existed
	50		18	

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M49	48		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE SIDE CAMERA LH POWER SUPPLY

1. Connect around view monitor control unit connector and door mirror (driver side) connector.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit harness connector and ground.

(+)		(–)	Condition	Voltage (Approx.)
Around view monitor control unit				
Connector	Terminal			
M49	48	Ground	“CAMERA” switch is ON or shift position is “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".

3.CHECK CONTINUITY SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
3. Check continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector	Terminals	
M49	51	D3	5	Existed
	52		17	

4. Check continuity between around view monitor control unit harness connector and ground.

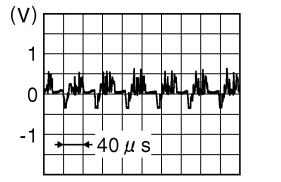
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M49	51, 52		Not existed

Is inspection result normal?

YES >> GO TO 4.
NO >> Repair harness or connector.

4. CHECK SIDE CAMERA LH IMAGE SIGNAL

1. Connect around view monitor control unit connector and door mirror (driver side) connector.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit harness connector.

(+)		(–)		Condition	Reference value
Around view monitor control unit					
Connector	Terminal	Connector	Terminal		
M49	51	M49	52	“CAMERA” switch is ON or shift position is “R”.	

JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".
NO >> Replace side camera LH. Refer to AV-236, "Removal and Installation".

SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:0000000006216362

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predictive course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

Diagnosis Procedure

INFOID:0000000006216363

1.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
3. Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M48	33	D23	3	Existed

4. Check continuity between around view monitor control unit harness connector and ground.

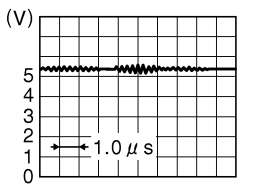
Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M48	33		Not existed

Is inspection result normal?

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

2.CHECK COMMUNICATION SIGNAL

1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit harness connector and ground.

(+) Around view monitor control unit		(–)	Condition	Reference value
Connector	Terminal			
M48	33	Ground	“CAMERA” switch is ON or shift position is “R”.	

JSNIA0836GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".
NO >> Replace side camera RH. Refer to AV-236, "Removal and Installation".

SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006216364

- Around view monitor control unit supplies to the front camera, rear camera and side camera. And then it superimpose the images from each camera and outputs then to the front display unit.
- Superimpose the guiding lines, predictive course line and sonar indicator to the camera image that outputs to the front display unit.
- Around view monitor control unit performs the reception/transmission of communication signal with each camera.

Diagnosis Procedure

INFOID:0000000006216365

1.CHECK CONTINUITY SIDE CAMERA RH POWER SUPPLY AND GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect control unit connector and door mirror (passenger side) connector.
3. Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminals	Connector	Terminals	
M48	32	D23	18	Existed
	34		6	

4. Check continuity between around view monitor control unit harness connector and ground.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
M48	34		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE SIDE CAMERA RH POWER SUPPLY

1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
2. Turn ignition switch ON.
3. Check voltage between around view monitor control unit harness connector and ground.

(+)		(–)	Condition	Voltage (Approx.)
Around view monitor control unit				
Connector	Terminal			
M48	34	Ground	“CAMERA” switch is ON or shift position is “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".

3.CHECK CONTINUITY SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
3. Check continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminals	Connector	Terminals	
M48	29	D23	5	Existed
	30		17	

4. Check continuity between around view monitor control unit harness connector and ground.

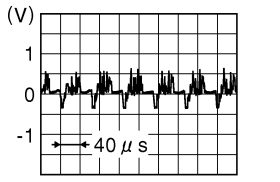
Around view monitor control unit		Ground	Continuity
Connector	Terminals		
M48	29, 30		Not existed

Is inspection result normal?

YES >> GO TO 4.
NO >> Repair harness or connector.

4. CHECK SIDE CAMERA RH IMAGE SIGNAL

1. Connect around view monitor control unit connector and door mirror (passenger side) connector.
2. Turn ignition switch ON.
3. Check signal between around view monitor control unit harness connector.

(+)		(–)		Condition	Reference value
Around view monitor control unit		Around view monitor control unit			
Connector	Terminal	Connector	Terminal		
M48	29	B48	30	“CAMERA” switch is ON or shift position is “R”.	 JSNIA0834GB

Is inspection result normal?

YES >> Replace around view monitor control unit. Refer to AV-233, "Removal and Installation".
NO >> Replace side camera RH. Refer to AV-236, "Removal and Installation".

STEERING SWITCH SIGNAL A CIRCUIT

Description

INFOID:0000000006216366

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000006216367

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT

1. Disconnect AV control unit connector and spiral cable connector.
2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M208	6	M33	24	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M208	6		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-14, "Exploded View".

3.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector and spiral cable connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector.

(+)		(–)		Voltage (Approx.)
AV control unit		AV control unit		
Connector	Terminal	Connector	Terminal	
M208	6	M208	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-193, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering wheel. Refer to ST-33, "Exploded View".

Component Inspection

INFOID:0000000006216368

Measure the resistance between the steering switch connector terminals 14 to 17 and 15 to 17.

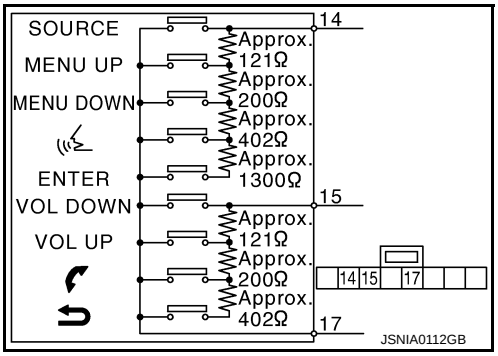
Standard

Between terminals 14 and 17

ENTER switch ON	: 2003 – 2043 Ω
switch ON	: 716 – 730 Ω
MENU DOWN switch ON	: 318 – 324 Ω
MENU UP switch ON	: 120 – 122 Ω
SOURCE switch ON	: 0 Ω

Between terminals 15 and 17

switch ON	: 716 – 730 Ω
switch ON	: 318 – 324 Ω
VOL UP switch ON	: 120 – 122 Ω
VOL DOWN switch ON	: 0 Ω



STEERING SWITCH SIGNAL B CIRCUIT

Description

INFOID:0000000006216369

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000006216370

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

1. Disconnect AV control unit connector and spiral cable connector.
2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M208	16	M33	31	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M208	16		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-14, "Exploded View".

3.CHECK AV CONTROL UNIT VOLTAGE

1. Connect AV control unit connector and spiral cable connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit harness connector.

(+)		(–)		Voltage (Approx.)
AV control unit		AV control unit		
Connector	Terminal	Connector	Terminal	
M208	16	M208	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-195, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering wheel. Refer to ST-33, "Exploded View".

Component Inspection

INFOID:0000000006216371

Measure the resistance between the steering switch connector terminals 14 to 17 and 15 to 17.

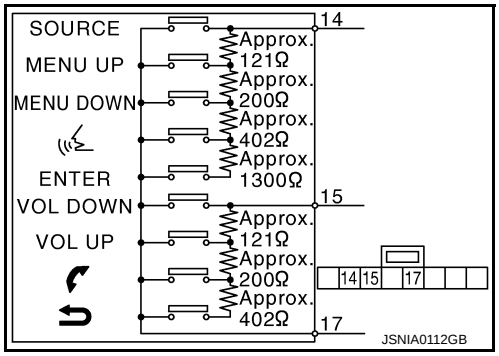
Standard

Between terminals 14 and 17

ENTER switch ON	: 2003 – 2043 Ω
switch ON	: 716 – 730 Ω
MENU DOWN switch ON	: 318 – 324 Ω
MENU UP switch ON	: 120 – 122 Ω
SOURCE switch ON	: 0 Ω

Between terminals 15 and 17

switch ON	: 716 – 730 Ω
switch ON	: 318 – 324 Ω
VOL UP switch ON	: 120 – 122 Ω
VOL DOWN switch ON	: 0 Ω



STEERING SWITCH GROUND CIRCUIT

Description

INFOID:0000000006216372

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000006216373

1.CHECK STEERING SWITCH SIGNAL GROUND CIRCUIT

1. Disconnect AV control unit connector and spiral cable connector.
2. Check continuity between AV control unit harness connector and spiral cable harness connector.

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M208	15	M33	33	Existed

3. Connect AV control unit connector.

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-14, "Exploded View".

3.CHECK GROUND CIRCUIT

1. Connect AV control unit connector.
2. Check continuity between AV control unit harness connector and ground.

AV control unit		Ground	Continuity
Connector	Terminal		
M208	15		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-212, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-197, "Component Inspection".

Is the inspection result normal?

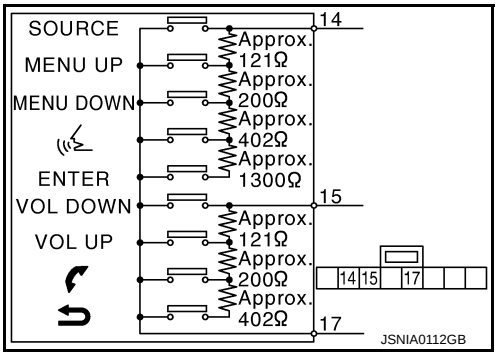
YES >> INSPECTION END
NO >> Replace steering wheel. Refer to ST-33, "Exploded View".

Component Inspection

INFOID:0000000006216374

Measure the resistance between the steering switch connector terminals 14 to 17 and 15 to 17.

Standard



Between terminals 14 and 17

ENTER switch ON	: 2003 – 2043 Ω
switch ON	: 716 – 730 Ω
MENU DOWN switch ON	: 318 – 324 Ω
MENU UP switch ON	: 120 – 122 Ω
SOURCE switch ON	: 0 Ω

Between terminals 15 and 17

switch ON	: 716 – 730 Ω
switch ON	: 318 – 324 Ω
VOL UP switch ON	: 120 – 122 Ω
VOL DOWN switch ON	: 0 Ω

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000006216375

RELATED TO NAVIGATION

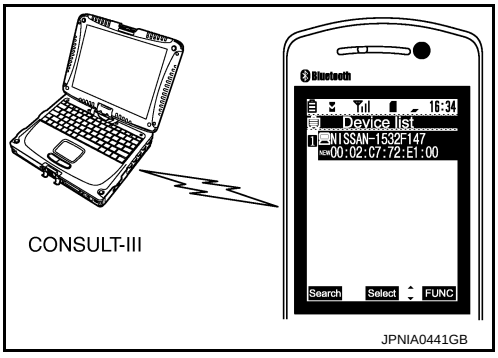
Symptoms	Check items	Probable malfunction location
Multifunction switch and preset switch operation does not work.	• All switches cannot be operated. • “MULTI AV” is displayed on system selection screen when the CONSULT-III is started.	• Multifunction switch power supply and ground circuit malfunction. • AV communication circuit between AV control unit and multifunction switch. Perform CONSULT-III self-diagnosis. Refer to AV-39, "CONSULT-III Function".
	• All switches cannot be operated. • “MULTI AV” is not displayed on system selection screen when the CONSULT-III is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-161, "AV CONTROL UNIT : Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-28, "On Board Diagnosis Function".
Fuel economy display is abnormal.	There is malfunction in the CONSULT-III “self-diagnosis result” of “MULTI AV”. Refer to AV-39, "CONSULT-III Function".	Perform detected DTC diagnosis. Refer to AV-57, "DTC Index".
	There is no malfunction in the CONSULT-III “self-diagnosis results” of “MULTI AV”. Refer to AV-39, "CONSULT-III Function".	Ignition signal circuit malfunction.
Guide sound is not heard or too low.	On the setting display select “system sound (guide sound volume, etc.),” and confirm that guide sound is ON.	AV control unit malfunction. Replace AV control unit. Refer to AV-212, "Removal and Installation".

RELATED TO HANDS-FREE PHONE

Simple Check for Bluetooth™ Communication

If cellular phone and AV control unit cannot be connected with Bluetooth™ communication, following procedure allows the technician to judge which device has malfunction.

1. Turn ON cellular phone, not connecting Bluetooth™ communication.
2. Start CONSULT-III, then start Windows®.
3. Set CONSULT-III near a cellular phone.
4. When operated Bluetooth™ registration by cellular phone, check if CONSULT-III* would be displayed on the device name.
   (If other Bluetooth™ device is located near cellular phone, a name of the device would be displayed also.)
   NOTE:
   *:Displayed device name is “NISSAN-********”.



- If no device name is displayed, cellular phone is malfunctioning. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction. Replace AV control unit. Refer to AV-212, "Removal and Installation".
Hands-free phone cannot be established.	• Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.	
The other party's voice cannot be heard by hands-free phone.	Check the “microphone speaker” in Inspection & Adjustment Mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-178, "Diagnosis Procedure".
The system cannot be operated.	• The voice recognition can be controlled. • Steering switch's ”VOL UP”, “VOL DOWN” and “↩” switch works, but “📞” it does not work.	Steering switch malfunction. Replace steering wheel. Refer to ST-33, "Exploded View".
	Steering switch's “📞”, ”VOL UP”, “VOL DOWN” and “↩” switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-195, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-197, "Diagnosis Procedure".

RELATED TO AROUND VIEW MONITOR

Symptoms	Check items	Probable malfunction location / Action to take
It does not switch to camera image even when the “CAMERA” switch is pressed or the selector lever is in the reverse position.	“Camera Cont.” of “Confirmation/Adjustment” can be selected.	Ignition signal circuit malfunction (around view monitor control unit).
	“Camera Cont.” of “Confirmation/Adjustment” cannot be selected.	• Around view monitor control unit power supply and ground circuits malfunction. Refer to AV-164, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure". • AV communication circuits malfunction. Refer to AV-39, "CONSULT-III Function".
The screen switches when pressing the “CAMERA” switch or shifting the selector lever to the reverse position, however, all views are not displayed.	Only superimposing is displayed. (Only the image displayed by AV control unit is displayed)	Camera image signal circuit between around view monitor control unit and front display unit malfunction. Refer to AV-180, "Diagnosis Procedure".
	Superimposing is not displayed.	Communication circuit between AV control unit and front display unit malfunction. Refer to AV-39, "CONSULT-III Function".
Camera image is rolling.	—	
It cannot be switched to rear view monitor even when the selector lever is in the reverse position.	The front view is displayed normally.	Reverse signal circuit malfunction. (AV control unit)

Symptoms	Check items		Probable malfunction location / Action to take
The predicted course line display in front view and rear view is malfunctioning.	The “Steer. Angle Sensor” is not turned ON at “Connection Confirmation” of “Camera Cont.”		Steering angle sensor signal circuits.
• The front view screen is not displayed. • The front of Birds-Eye view screen is not displayed.	Check the item Front Camera in “Connection Confirmation” mode of “Camera Cont.”	• Image Output Signal: NG • COMM Status: NG • COMM Line: NG	• Front camera image signal circuit malfunction. • Front camera power supply and ground circuits malfunction. Refer to AV-182, "Diagnosis Procedure".
		• Image Output Signal: OK • COMM Status: NG • COMM Line: NG	Front camera communication signal circuit malfunction. Refer to AV-181, "Diagnosis Procedure".
• The rear view screen is not displayed. • The rear of Birds-Eye view screen is not displayed.	Check the item Rear Camera in “Connection Confirmation” mode of “Camera Cont.”	• Image Output Signal: NG • COMM Status: NG • COMM Line: NG	• Rear camera image signal circuit malfunction. • Rear camera power supply and ground circuits malfunction. Refer to AV-185, "Diagnosis Procedure".
		• Image Output Signal: OK • COMM Status: NG • COMM Line: NG	Rear camera communication signal circuits malfunction. Refer to AV-184, "Diagnosis Procedure".
• The front-side screen is not displayed. • The passenger side of Birds-Eye view screen is not displayed.	Check the item Pass-Side Camera in “Connection Confirmation” mode of “Camera Cont.”	• Image Output Signal: NG • COMM Status: NG • COMM Line: NG	• Side camera RH image signal circuit malfunction. • Side camera RH power supply and ground circuits malfunction. Refer to AV-191, "Diagnosis Procedure".
		• Image Output Signal: OK • COMM Status: NG • COMM Line: NG	• Side camera RH communication circuit malfunction. Refer to AV-190, "Diagnosis Procedure".
The driver side of Birds-eye view screen is not displayed.	Check the item Dr-Side Camera at “Connection Confirmation” mode of “Camera Cont.”	• Image Output Signal: NG • COMM Status: NG • COMM Line: NG	• Side camera LH image signal circuit malfunction. • Side camera LH power supply and ground circuits malfunction. Refer to AV-188, "Diagnosis Procedure".
		• Image Output Signal: OK • COMM Status: NG • COMM Line: NG	• Side camera LH communication circuit malfunction. Refer to AV-187, "Diagnosis Procedure".
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).

RELATED TO CAMERA ASSISTANCE SONAR

Symptoms	Check items	Probable malfunction location / Action to take
The malfunction is detected in the sonar indicator (Always displayed in red)	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-III “self-diagnosis” of “SONAR”. Refer to AV-47, "CONSULT-III Function".
	The malfunction is detected in all 4 indicators (Always displayed in red).	• Corner sensor ground circuit malfunction. Perform CONSULT-III “self-diagnosis” of “SONAR”. Refer to AV-47, "CONSULT-III Function". • Sonar control unit power supply and ground circuits malfunction. • AV communication circuits malfunction. Perform CONSULT-III “self-diagnosis” of “MULTI AV”. Refer to AV-39, "CONSULT-III Function".

RELATED TO RGB IMAGE

Symptoms	Check items	Probable malfunction location
RGB image is not shown.	—	RGB digital image signal circuit malfunction. Refer to AV-166, "Diagnosis Procedure".

RELATED TO VOICE CONTROL

Symptoms	Check items	Probable malfunction location
The voice cannot be controlled even if the voice control screen is displayed.	Voice sounds at “Voice Microphone Test” of Confirmation/Adjustment mode.	AV control unit malfunction. Replace AV control unit. Refer to AV-212, "Removal and Installation".
	Voice does not sound at “Voice Microphone Test” of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-178, "Diagnosis Procedure".
The voice cannot be controlled (Voice control screen is not displayed).	• Hands-free phone system can be operated. • Steering switch's “SOURCE”, “MENU UP”, “MENU DOWN” and “ENTER” switch works, but “ ” it does not work.	Steering switch malfunction. Replace steering wheel. Refer to ST-33, "Exploded View".
	Steering switch's “SOURCE”, “MENU UP”, “MENU DOWN”, “ ” and “ENTER” switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-193, "Diagnosis Procedure".
	None of the steering switch operations work.	Steering switch ground circuit malfunction. Refer to AV-197, "Diagnosis Procedure".

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	—	Disk eject signal circuit malfunction. Refer to AV-176, "Diagnosis Procedure".
Audio sound is not heard.	No sound from all speakers.	• Amp. ON signal circuit malfunction. • BOSE amp. power supply and ground circuits malfunction.
	Sound is not heard from woofer.	• Woofer power supply and ground circuit malfunction. • Sound signal (woofer) circuit malfunction.
	Sound is heard only from specific places.	Sound signals circuit of suspect system.

Symptoms	Check items	Probable malfunction location
It does not change to “Driver's Audio Stage” mode.	—	Mode change signal circuit malfunction. Refer to AV-177, "Diagnosis Procedure".
Satellite radio is not received.	There is malfunction in the CONSULT-III self-diagnosis result. Refer to AV-39, "CONSULT-III Function".	Perform detected DTC diagnosis. Refer to AV-57, "DTC Index".
	There is no malfunction in the CONSULT-III self-diagnosis result. Refer to AV-39, "CONSULT-III Function".	Perform the following inspection procedure. 1. Check satellite radio antenna mounting nut for looseness. **NOTE:** Tightening torque: 6.5 N-m (0.66 kg-m, 58 in-lb) 2. Visually check for satellite radio antenna feeder.
AM/FM radio is not received.	Other audio sounds are normal.	• Antenna amp. ON signal circuit malfunction. • Antenna feeder malfunction.

RELATED TO STEERING SWITCH

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch ground circuit malfunction. Refer to AV-197, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch malfunction. Replace steering wheel. Refer to ST-33, "Exploded View".
Steering switch's “SOURCE”, “MENU UP”, “MENU DOWN“, “ ” and “ENTER” switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-193, "Diagnosis Procedure".
Steering switch's “ ”, “VOL UP”, “VOL DOWN” and “ ” switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-195, "Diagnosis Procedure".

RELATED TO USB

NOTE:

Check that there is no malfunction of USB equipment main body before performing a diagnosis.

Symptoms	Check items	Possible malfunction location / Action to take
iPod® or USB memory can not be recognized.	—	• USB harness malfunction. • USB connector malfunction.

iPod® is a trademark of Apple inc., registered in the U.S. and other countries.

RELATED TO DVD MODE

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	—	Disk eject signal circuit malfunction. Refer to AV-176, "Diagnosis Procedure".
DVD image is not displayed.	Front display unit, headrest display unit LH and RH are not displayed.	Perform CONSULT-III self-diagnosis. Refer to AV-39, "CONSULT-III Function".
	Headrest display unit LH and RH are normal.	Composite image signal circuit between AV control unit and front display unit. Refer to AV-167, "Diagnosis Procedure".
	Front display unit is normal.	Refer to “RELATED TO HEADREST DISPLAY UNIT AND REAR AUXILIARY INPUT”
DVD sound is not heard.	No sound from all speakers.	• Amp. ON signal circuit malfunction. • BOSE amp. power supply and ground circuits malfunction.
	Sound is not heard from woofer.	• Woofer power supply and ground circuit malfunction. • Sound signal (woofer) circuit malfunction.
	Sound is heard only from specific places.	Sound signals circuit of suspect system.

RELATED TO FRONT AUXILIARY INPUT

NOTE:
Check that there is no malfunction of AUX equipment main body before performing a diagnosis.

Symptoms	Check items	Probable malfunction location
No voice sound is heard when front AUX mode is selected.	Voice sound is heard when other modes are selected.	AUX sound signal circuit between front auxiliary input jacks and AV control unit.
Image is not displayed when front AUX mode is selected.	DVD image is displayed on front display unit, headrest display unit LH and RH.	AUX image signal circuit between front auxiliary input jacks and AV control unit. Refer to AV-171, "Diagnosis Procedure".
	Headrest display unit LH and RH are normal.	Composite image signal circuit between AV control unit and front display unit. Refer to AV-167, "Diagnosis Procedure".
	Front display unit is normal.	Refer to “RELATED TO HEADREST DISPLAY UNIT AND REAR AUXILIARY INPUT”

RELATED TO HEADPHONE

NOTE:
Check that the remaining amount of the headphone battery is sufficient to perform diagnosis.

Symptoms	Check items	Probable malfunction location
Sound does not come from headrest display units of both side.	The indicator lamp of headphone is illuminated.	Sound signal circuit between AV control unit and video distributor.
	The indicator lamp of headphone is not illuminated.	Headphone malfunction
Sound does not come from headrest display unit LH (RH).	The LED for headphones sound transmission of headrest display unit is illuminated.	Headphone sound signal circuit between video distributor and headrest display unit LH (RH).
	The LED for headphone sound transmission of headrest display unit is not illuminated.	Replace headrest display unit LH (RH). Refer to AV-214, "Exploded View".

RELATED TO HEADREST DISPLAY UNIT AND REAR AUXILIARY INPUT

NOTE:
- Check that there is no malfunction of AUX equipment main body before performing a diagnosis.
- Check that the remaining amount of the rear seat remote controller battery is sufficient to perform diagnosis.

Symptoms	Check items		Probable malfunction location / Action to take
Headrest display unit cannot be powered on for both side.	Headrest display unit can be powered on by “Rear display” in “Settings” menu of front display unit.		Rear seat remote controller malfunction
	• Headrest display unit can not be powered on by “Rear display” in “Settings” menu of front display unit. • Check “Display Location” in diagnosis function of headrest display unit LH. Refer to AV-49, "On Board Diagnosis Function".	Diagnosis result is normal.	• AV communication circuits between AV control unit and headrest display unit LH. • Video distributor power supply and ground circuits. Refer to AV-163, "VIDEO DISTRIBUTOR : Diagnosis Procedure".
		Diagnosis result is not normal.	Location recognition signal circuit between headrest display unit LH and ground. Refer to AV-175, "Diagnosis Procedure".
		Diagnosis function cannot be started.	Headrest display unit LH power supply and ground circuits. Refer to AV-162, "HEADREST DISPLAY UNIT : Diagnosis Procedure".

Symptoms	Check items		Probable malfunction location / Action to take
Headrest display unit RH cannot be powered on.	• Headrest display unit LH is normal. • Check “Display Location” in diagnosis function of headrest display unit RH. Refer to AV-49, "On Board Diagnosis Function".	Diagnosis result is normal.	AV communication circuits between headrest display unit LH and headrest display unit RH.
		Diagnosis result is not normal.	Location recognition signal circuit between headrest display unit RH and ground. Refer to AV-175, "Diagnosis Procedure".
		Diagnosis function cannot be started.	Headrest display unit RH power supply and ground circuits. Refer to AV-162, "HEADREST DISPLAY UNIT : Diagnosis Procedure".
DVD, USB and front AUX image cannot be played on headrest display unit of both side.	• Front display unit is normal. • Rear AUX image is normal.		Composite image signal circuit between AV control unit and video distributor. Refer to AV-168, "Diagnosis Procedure".
Rear AUX image cannot be played on headrest display unit of both side.	DVD, USB and front AUX images are normal.		AUX image signal circuit between rear auxiliary input jacks and video distributor. Refer to AV-172, "Diagnosis Procedure".
DVD, USB, and front AUX image cannot be played only on headrest display unit LH (RH).	—		Composite image signal circuit between video distributor and headrest display unit LH (RH). Refer to AV-169, "Diagnosis Procedure".
It does not change to DVD USB and front AUX mode only on headrest display unit LH (RH).	Rear AUX image is normal.		Image switch signal circuit between headrest display unit LH (RH) and video distributor. Refer to AV-173, "Diagnosis Procedure".
Menu is not displayed on headrest display LH (RH).	—		Replace headrest display unit LH (RH). Refer to AV-214, "Exploded View".

NORMAL OPERATING CONDITION

Description

INFOID:0000000006216376

NOTE:
For Navigation system operation information, refer to Navigation system Owner's Manual.

BASIC OPERATIONS

Symptom	Possible cause	Possible solution
No image is displayed on front display unit.	The display is turned off.	Press "☀/☽" to turn on the display.
	The interior of the vehicle becomes the a little less than 80°C (176°F) or high temperature, and the protection of the display acts, and a display is turned off.	Wait until the interior of the vehicle has cooled down.
No image is displayed on front (rear) display unit	The brightness is at the lowest setting.	Adjust the brightness of the display.
	The systems in the video mode.	Press "DISC-AUX" to change the mode.
Screen not clear.	Contrast setting is not appropriate.	Adjust the contrast of the display.
No voice guidance is available. Or The volume is too high or too low.	The volume is not set correctly, or it is turned off.	Adjust the volume of voice guidance.
	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Press "MAP".
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is low.	Wait until the interior of the vehicle has warmed up.
Some pixels in the display are darker or brighter than others.	This condition is an inherent characteristic of liquid crystal displays.	This is not a malfunction.
Some menu items cannot be selected on front display unit.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the navigation system.
A displayed screen cannot be switched to the "Display Setup" screen of the headrest display unit LH (RH).	"Display Setup" screen is shown on the headrest display unit on the other side.	Press "DISP (L)" or "DISP (R)" to switch to a screen other than "Display Setup" screen.
The set value can not be initialized on the "Display Setup" screen of the headrest display unit LH (RH).	No change in each default value before.	This is not a malfunction.

NOTE:
Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

RELATED TO VOICE RECOGNITION

Related to Basic Operation

Symptom	Possible cause	Possible solution
The system does not recognize your command. or The system recognizes your command incorrectly	The interior of the vehicle is too noisy.	Close the windows or have other occupants quiet.
	The volume of your voice is too low.	Speak louder.
	The volume if your voice is too loud.	Speak softer.
	Your pronunciation is unclear.	Speak clearly.
	You are speaking before the voice recognition is ready	Press and release " " switch on the steering switch, and speak a command after the tone sounds.
	8 seconds or more have passed after you pressed and released " " switch on the steering switch.	Make sure to speak a command within 8 seconds after you press and release " " switch on the steering switch.
	Only a limited range of voice commands is usable for each screen.	Use a correct voice command appropriate for the current screen.
	The fan of the air conditioner is too loud.	Lower the fan speed as necessary as voice command can be recognized more easily.

Related to Item Choice

The system should respond correctly to all voice commands without difficulty. If problems are encountered, follow the solutions given in this guide for the appropriate error.

Where the solutions are listed by number, try each solution in turn, starting with number one, until the problem is resolved.

Symptom/ error message	Solution
Displays "COMMAND NOT RECOGNIZED" or the system fails to interpret the command correctly.	1. Ensure that the command format is valid.
	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.
	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. **NOTE:** If it is too noisy to use the phone, it is likely that voice commands will not be recognized.
	4. If optional words of the command have been omitted, then command should be tried with these in place.
The system consistently selects the wrong voicetag	1. Ensure that the voicetag requested matches what was originally stored. This can be confirmed by giving the "Addressbook" Directory or Phone Directory command.
	2. Replace one of the voicetags being confused with a different voicetag.

Related to Telephone

The system should respond correctly to all voice commands without difficulty. If problems are encountered, try the following solutions.

Where the solutions are listed by number, try each solution in turn, starting with number 1, until the problem is resolved.

Symptom	Solution
System fails to interpret the command correctly.	1. Ensure that the command is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.
	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on). **NOTE:** If it is too noisy to use the phone, it is likely that the voice commands will not be recognized.
	5. If more than one command was said at a time, try saying the commands separately.
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See "Speaker adaptation (SA) mode" earlier in this section. Refer to "OWNER'S MANUAL".

Symptom	Solution
The system consistently selects the wrong voicetag	1. Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the “List Names” command.
	2. Replace one of the names being confused with a new name.

RELATED TO AUDIO

- The majority of the audio malfunctions are the result of outside causes (bad CD, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- 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 then determine the cause.

NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA, AAC, M4A) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the “red book” Compact Disc Standard and may not play.

Symptom	Cause and Counter measure
Cannot play	Check if the CD was inserted correctly.
	Check if the CD is scratched or dirty.
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA/AAC/M4A files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than “.MP3”, “.WMA”, “AAC”, “.M4A”, “.mp3”, “.wma”, “.aac” or “.m4a” cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA/AAC/M4A writing applications or other text editing applications.
	Check if the finalization process, such as session close and disc close, is done for the disc.
	Check if the CD is protected by copyright.
	Disks recorded in live file system format are not supported. (For Microsoft Windows Vista, check the settings.)
Poor sound quality	Check if the CD is scratched or dirty.
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA/AAC/M4A CD, or if it is a multisession disc, some time may be required before the music starts playing.
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.
Move immediately to the next song when playing	When a non-MP3/WMA/AAC/M4A file has been given an extension of “.MP3”, “.WMA”, “AAC”, “.M4A” “.mp3”, “.wma”, “.aac” or “.m4a”, or when play is prohibited by copyright protection, the player will skip to the next song.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.

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

NOTE:

- 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 a time difference between the broadcast waves directly from the station arriving at the antenna and the waves reflected by mountains or buildings.

RELATED TO DVD

Symptom	Possible cause	Possible solution
Not working as operated	Some operations may be rejected or may not function as intended because of the manufacturer's intent, depending on DVD.	This is not a malfunction.
Operation not accepted	If a requested operation is prohibited, then a message is displayed on the screen. (Message display depends on DVD.)	This is not a malfunction.
DVD can not be played	Check that the DVD is inserted in the right place.	Upturn the DVD (facing the title upward).
	Check that there is no condensation inside the player.	Wait until the condensation evaporates (approximately one hour).
	DVD menu is displayed.	Select item to touch “ENTER”.
	Insertion of a DVD with a different region code.	DVDs with a different region code can not be played. Check DVD.
	Some DVD softwares may not be played because not all DVD softwares fully comply in the standard.	This is not a malfunction.
DVD-AUDIO can not be played	DVD-AUDIO may not be playable depending on the vehicle specifications.	This is not a malfunction.
Interruption during playback or flicker in the display	Check that the DVD has no scratches and dirt.	Errors may not be corrected depending on the size of scratches.
		Wipe and clean the dirt on the disc.
Subtitles not shown	Subtitle setting is OFF.	Set subtitle.
	Subtitle is not included in the software.	Check DVD.
Not played in set language	If a language is not included in the DVD, then the DVD is played in a recommended language.	Check DVD.
Not played with set subtitle	If a set subtitle is not included in the DVD, then the DVD is played with a recommended subtitle.	Check DVD.
Angle unchangeable	Plural angles are not recorded in the software.	Check if the DVD is multi–angle capable.
Unusual screen display	Display mode to the output aspect ratio for the DVD software is inappropriate.	Switch to the appropriate display mode.
Distortion in picture	In the process of fast–forward or fast–reverse.	This is not a malfunction.
Low sound quality	Check that the DVD has no scratches and dirt.	Wipe and clean the dirt on the disc.
Subtitle and language not selectable (not played with set subtitle or in set language)	The DVD is not multilanguage–capable.	The inclusion of the number of languages depends on DVD. Languages may be selectable on the Menu screen. Check DVD.
	The DVD has a priority language or setting.	If the DVD has a priority language or settings, then settings changed with this device are not reflected.
Playback time is indicated, but no sound comes out.	Playback of Mix mode Truck 1. (Mix mode: Format including Truck 1 with data other than music and Trucks from Truck 2 with music data.)	Play music data included in trucks from Truck 2.

RELATED TO VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads differ between Plan View and Birdview™.	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.

Symptom	Possible cause	Possible solution
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <Day/Night> when you turn on the headlights.
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press “MAP”.
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press “MAP”.
The location of the vehicle icon is misaligned from the actual position.	When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect.	Drive the vehicle for a while [at approximately 30 km/h (19 MPH) for about 30 minutes] to automatically correct the vehicle icon position. If this does not correct the vehicle icon position, contact an INFINITI dealer.
	The map data has a mistake or is incomplete (the vehicle icon position is always misaligned in the same area).	Updated road information will be included in the next version of the map data.

RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not included in the auto reroute calculation.	If you want to go to that waypoint again, you need to edit the route.
Route information is not displayed.	Route calculation has not yet been performed.	Set the destination and perform route calculation.
	You are not driving on the suggested route.	Drive on the suggested route.
	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calculations multiple times as necessary.
The suggested route is not displayed.	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.

Symptom	Possible cause	Possible solution
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
An indirect route is suggested.	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or ordinary road, and recalculate the route.
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map data.	Updated information will be included in the next version of the data.
The suggested route does not exactly connect to the starting point, waypoints, or destination.	There is no data for route calculation closes to these locations.	Set the starting point, waypoints and destination on a main road, and perform route calculation.

RELATED TO VOICE GUIDANCE

Symptom	Possible cause	Possible solution
Voice guidance is not available	Voice guidance is only available at certain intersections marked with? In some case, voice guidance is not available even when the vehicle should make a turn.	This is not a malfunction.
	The vehicle has deviated from the suggested route.	Go back to the suggested route or request route calculation again
	Voice guide is set to off.	Turn on voice guidance.
	Route guidance is set to off.	Turn on voice guidance.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

RELATED TO TRAFFIC INFORMATION

Symptom	Possible cause	Possible solution
The traffic information is not displayed	The traffic information is not set to on.	Set the traffic information to on.
	You are in an area where traffic information is not available	Scroll to an area where traffic information is available
	You have not subscribed to XM NavTraffic or, your subscription to XM NavTraffic has expired.	Check your subscription status of XM NavTraffic.
	The map scale is set at a level where the display of icons is impossible.	Check that the map scale is set at a level in which the display of icons is possible.
With the automatic detour route search ON, no detour route is set to avoid congested areas.	There is no faster route compared to the current route, based on the road network and traffic information.	The automatic detour search is not intended for avoiding traffic jams. It searches for the fasted rote taking into consideration such things as traffic jams.
The route does not avoid road section with traffic information stating it is closed due to road construction.	The navigation system is designed not to avoid this event because the actual period of closure may differ from the declared roadwork period.	Observe the actual road condition and follow the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the detour distance to avoid the closed road section.
Traffic information displayed differs from information from other media (e.g. radio).	Other media may use different information sources.	Observe the actual road conditions and regulations. Always observe safe driving practices and follow all traffic regulations.

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Removal and Installation

INFOID:0000000006216377

CAUTION:
Before replacing AV control unit, perform “READ CONFIGURATION” to save or print current vehicle specification. For details, refer to AV-108, "Description".

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove AV control unit with a A/C auto amp. as a single unit from the body.
3. Remove bracket screws, and then remove AV control unit.

INSTALLATION

Install in the reverse order of removal.

CAUTION:
Be sure to perform “WRITE CONFIGURATION” when replacing AV control unit.

FRONT DISPLAY UNIT

Removal and Installation

INFOID:0000000006216378

REMOVAL

1. Remove cluster lid D. Refer to IP-13, "Exploded View".
2. Remove front display unit mounting screws.
3. Disconnect front display unit connector to remove front display unit.

INSTALLATION

Install in the reverse order of removal.

HEADREST DISPLAY UNIT

Exploded View

INFOID:0000000006216379

Refer to SE-105, "Exploded View".

Removal and Installation

INFOID:0000000006216380

REMOVAL
Refer to SE-112, "Removal and Installation".

INSTALLATION
Refer to SE-112, "Removal and Installation".

VIDEO DISTRIBUTOR

Removal and Installation

INFOID:0000000006216381

REMOVAL

1. Remove AV control unit. Refer to AV-212, "Removal and Installation".
2. Remove video distributor mounting screws.
3. Disconnect video distributor connector.
4. Remove video distributor and bracket from the vehicle as a single unit.
5. Remove bracket screws to remove video distributor.

INSTALLATION

Install in the reverse order of removal.

FRONT DOOR SPEAKER

Removal and Installation

INFOID:0000000006216382

REMOVAL

1. Remove front door finisher. Refer to INT-13, "Exploded View".
2. Remove front door speaker mounting bolts.
3. Disconnect connector and remove front door speaker from speaker bracket.

INSTALLATION

Install in the reverse order of removal.

REAR DOOR SPEAKER

Removal and Installation

INFOID:0000000006216383

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "Exploded View".
2. Remove rear door speaker mounting bolts.
3. Disconnect connector to remove rear door speaker.

INSTALLATION

Install in the reverse order of removal.

SQUAWKER

Removal and Installation

INFOID:0000000006216384

REMOVAL

1. Remove speaker grille. Refer to IP-13, "Exploded View".
2. Remove squawker mounting screws.
3. Disconnect squawker connector to remove squawker.

INSTALLATION

Install in the reverse order of removal.

REAR DOOR TWEETER

Removal and Installation

INFOID:0000000006216385

REMOVAL

1. Remove rear door garnish. Refer to INT-16, "Exploded View".
2. Remove rear door tweeter mounting screws to remove rear door tweeter.

INSTALLATION

Install in the reverse order of removal.

ROOF SPEAKER

Removal and Installation

INFOID:0000000006216386

REMOVAL

1. Remove roof garnish. Refer to INT-28, "Exploded View".
2. Remove roof speaker mounting screws from bracket.
3. Disconnect roof speaker connector to remove roof speaker.

INSTALLATION

Install in the reverse order of removal.

CENTER SPEAKER

Removal and Installation

INFOID:0000000006216387

REMOVAL

1. Remove upper ventilator grille. Refer to IP-13, "Exploded View".
2. Remove center speaker mounting screws.
3. Disconnect center speaker connector to remove center speaker.

INSTALLATION

Install in the reverse order of removal.

WOOFER

Removal and Installation

INFOID:0000000006216388

REMOVAL

1. Remove luggage side lower finisher LH. Refer to INT-33, "Exploded View".
2. Disconnect woofer connector.
3. Remove woofer mounting bolts to remove woofer.

INSTALLATION

Install in the reverse order of removal.

BOSE AMP.

Removal and Installation

INFOID:0000000006216389

REMOVAL

1. Remove rear ventilator duct lower. Refer to HA-46, "Exploded View".
2. Remove shield bracket. Refer to SR-24, "Exploded View".
3. Remove rear drain hose clip. Obtain a service area. Refer to RF-37, "Exploded View".
4. Remove BOSE amp. mounting bolts.
5. Disconnect BOSE amp. connector to remove BOSE amp.

INSTALLATION

Install in the reverse order of removal.

ANTENNA AMP.

Removal and Installation

INFOID:0000000006216390

REMOVAL

1. Remove side curtain air bag module RH. Refer to SR-19, "Exploded View".
2. Remove antenna amp. mounting screw.
3. Disconnect antenna amp. connector to remove antenna amp.

INSTALLATION

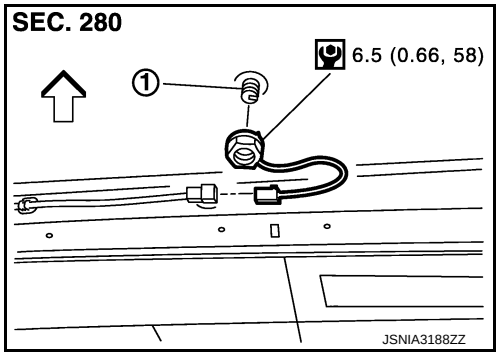
Install in the reverse order of removal.

SATELLITE RADIO ANTENNA

Exploded View

INFOID:0000000006217457

REMOVAL

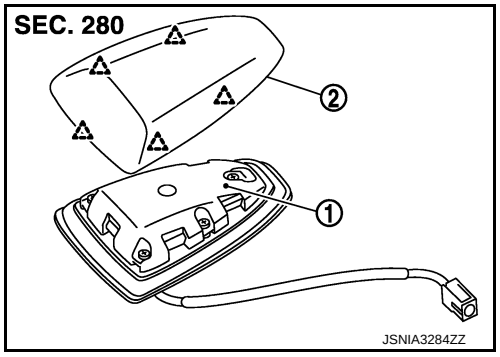


1. Satellite radio antenna

⇦: Vehicle front

Refer to GI-4, "Components" for symbols in the figure.

DISASSEMBLY



1. Satellite radio antenna
2. Cover

△: Pawl

Removal and Installation

INFOID:0000000006217458

REMOVAL

1. Pull headlining assembly (rear). Obtain a service area. Refer to INT-28, "Exploded View".
2. Disconnect antenna feeder connector.
3. Remove nut, and remove satellite radio antenna and the cover from the vehicle as a single unit.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

If the satellite radio antenna mounting nut is tightened looser than the specified torque, then this will lower the sensitivity of the antenna. On the other hand, if the nut is tightened tighter than the specified torque, then this will deform the roof panel.

Disassembly and Assembly

INFOID:0000000006362353

DISASSEMBLY

Insert cloth-covered driver into gaps between satellite radio antenna and the cover, and remove the cover from satellite radio antenna.

ASSEMBLY

Assemble in the reverse order of disassembly.

MULTIFUNCTION SWITCH

Removal and Installation

INFOID:0000000006216391

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Disconnect multifunction switch connector.
3. Remove multifunction switch mounting screws to remove multifunction switch from cluster lid C.

INSTALLATION

Install in the reverse order of removal.

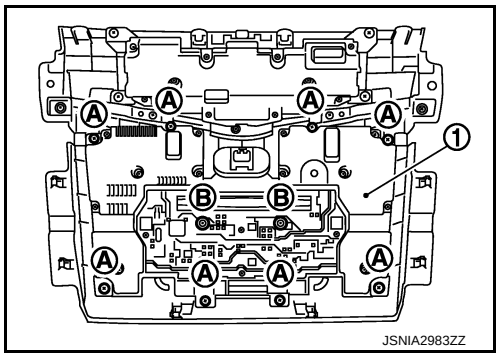
PRESET SWITCH

Removal and Installation

INFOID:0000000006216392

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Disconnect preset switch (1) connector.
3. Remove preset switch mounting screws (A) and (B).
4. Remove preset switch from cluster lid C.



INSTALLATION

Install in the reverse order of removal.

FRONT AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000006216393

REMOVAL

1. Remove center console assembly. Refer to IP-23, "Exploded View".
2. Remove front auxiliary input jacks mounting screws to remove front auxiliary input jacks.

INSTALLATION

Install in the reverse order of removal.

REAR AUXILIARY INPUT JACKS

Removal and Installation

INFOID:0000000006216394

REMOVAL

1. Remove console rear finisher. Refer to IP-23, "Exploded View".
2. Remove rear auxiliary input jacks mounting screws to remove rear auxiliary input jacks.

INSTALLATION

Install in the reverse order of removal.

USB CONNECTOR

Removal and Installation

INFOID:0000000006216395

REMOVAL

1. Remove console finisher assembly. Refer to IP-23, "Exploded View".
2. Press the pawl from the back of console finisher assembly to remove USB connector.

INSTALLATION

Install in the reverse order of removal.

MICROPHONE

Removal and Installation

INFOID:0000000006216396

REMOVAL

1. Remove map lamp assembly. Refer to INT-28, "Exploded View".
2. Remove microphone, stretching pawls of roof console assembly.

INSTALLATION

Install in the reverse order of removal.

GPS ANTENNA

Removal and Installation

INFOID:0000000006216397

REMOVAL

1. Remove instrument panel. Refer to IP-13, "Exploded View".
2. Remove GPS antenna feeder clips.
3. Remove GPS antenna mounting screws to remove GPS antenna.

INSTALLATION

Install in the reverse order of removal.

AROUND VIEW MONITOR CONTROL UNIT

Removal and Installation

INFOID:0000000006216398

REMOVAL

1. Remove AV control unit. Refer to AV-212, "Removal and Installation".
2. Remove around view monitor control unit mounting screws.
3. Disconnect around view monitor control unit connector to remove around view monitor control unit.

INSTALLATION

1. Install in the reverse order of removal.
2. Perform camera image calibration. Refer to AV-112, "Work Procedure".
3. Perform predictive course line center position adjustment. Refer to AV-111, "Work Procedure".

CAUTION:

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

FRONT CAMERA

Removal and Installation

INFOID:0000000006216399

REMOVAL

1. Remove front grille. Refer to EXT-19, "Exploded View".
2. Remove front camera mounting screws to remove front camera.

INSTALLATION

1. Install in the reverse order of removal.
2. Perform camera image calibration. Refer to AV-112, "Work Procedure".

CAUTION:

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

REAR CAMERA

Removal and Installation

INFOID:0000000006216400

REMOVAL

1. Remove back door finisher center upper. Refer to EXT-44, "Exploded View".
2. Remove rear camera mounting screws to remove rear camera.

INSTALLATION

1. Install in the reverse order of removal.
2. Perform camera image calibration. Refer to AV-112, "Work Procedure".

CAUTION:

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

SIDE CAMERA

Removal and Installation

INFOID:0000000006216401

REMOVAL

1. Remove side camera finisher. Refer to MIR-32, "Exploded View".
2. Remove screws to remove side camera.

INSTALLATION

1. Install in the reverse order of removal.
2. Perform camera image calibration. Refer to AV-112, "Work Procedure".

CAUTION:

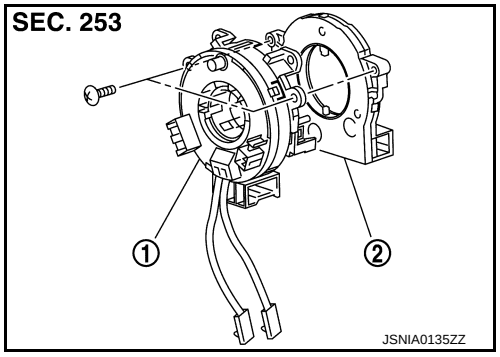
Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

STEERING ANGLE SENSOR

Exploded View

INFOID:0000000006216402

DISASSEMBLY



1. Spiral cable
2. Steering angle sensor

Removal and Installation

INFOID:0000000006216403

REMOVAL

1. Remove spiral cable. Refer to SR-14, "Exploded View".
2. Remove steering angle sensor from spiral cable.

INSTALLATION

1. Install in the reverse order of removal.
2. Perform steering angle sensor neutral position adjustment. Refer to AV-39, "CONSULT-III Function".

SONAR CONTROL UNIT

Removal and Installation

INFOID:0000000006216404

REMOVAL

1. Remove instrument lower panel LH. Refer to IP-13, "Exploded View".
2. Remove sonar control unit mounting screws.
3. Disconnect sonar control unit connector to remove sonar control unit.

INSTALLATION

Install in the reverse order of removal.

SONAR SENSOR

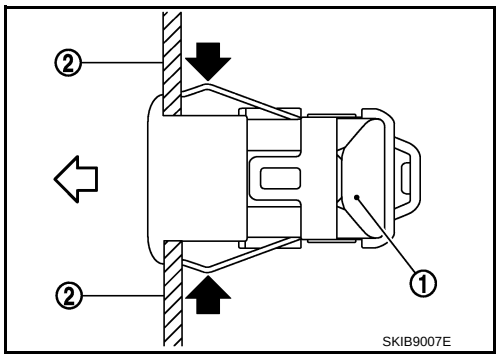
Removal and Installation

INFOID:0000000006216405

REMOVAL

1. Press the spring fixing the sonar sensor (1) (black arrows).
2. Remove the sonar sensor from front bumper or rear bumper to the white arrow direction.
3. Disconnect sonar sensor connector to remove sonar sensor.

(2) : Bumper



INSTALLATION

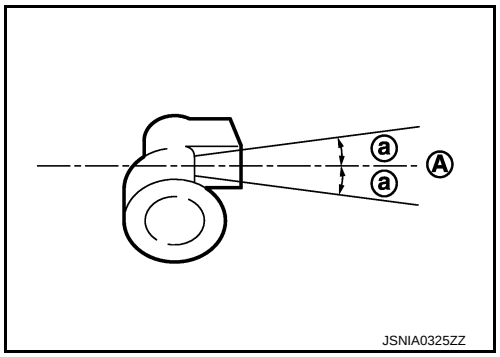
Install the bumper when the pawl engages.

CAUTION:

The connector direction is within ±10° from the horizontal position when assembling the bumper.

A : Horizontal position

a : 10°



ANTENNA FEEDER

Feeder Layout

INFOID:0000000006216406