SECTION AV
AUDIO, VISUAL & NAVIGATION SYSTEM

CONTENTS

NissanConnect Nismo Plus

PRECAUTION

PRECAUTIONS

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

INFOID:0000000011490633

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:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:

Always observe the following items for preventing accidental activation.

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

Precaution for Battery Service

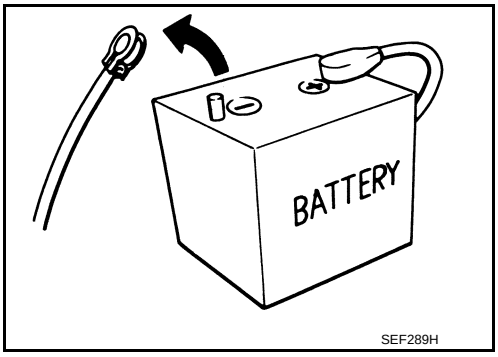
INFOID:0000000011490634

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Precautions for Removing Battery Terminal

INFOID:0000000011490635

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

Precaution for Trouble Diagnosis

INFOID:0000000011490636

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

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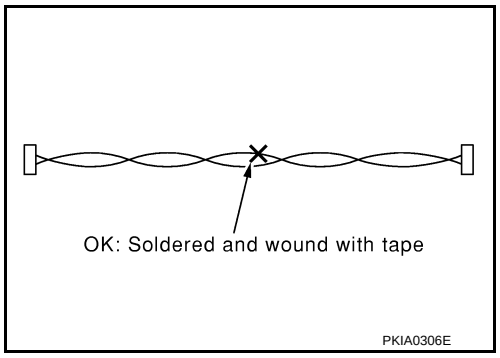
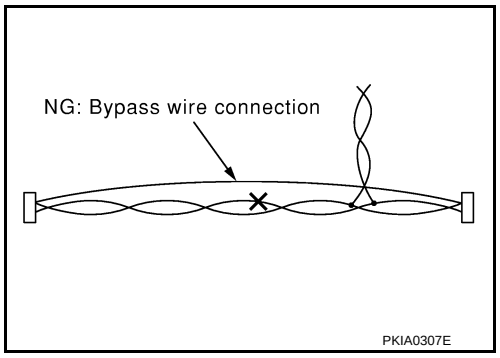
AV COMMUNICATION SYSTEM

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



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

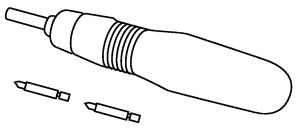


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000011490638

Tool name	Description
Power tool  PBIC0191E	Loosening screws

SYSTEM DESCRIPTION

MULTI AV SYSTEM

Component Parts Location

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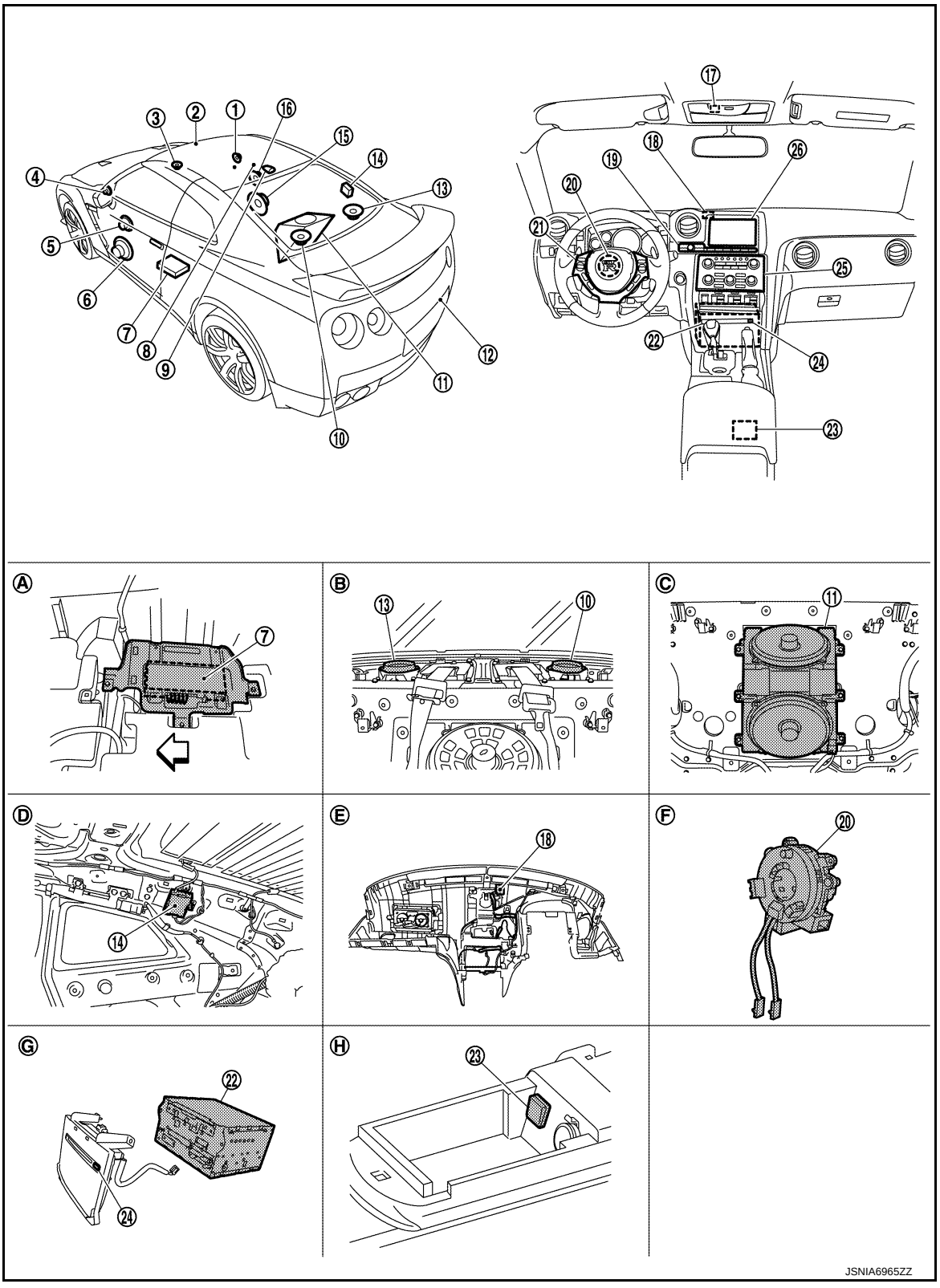


1. Tweeter RH	2. Front microphone (Active noise control system)	3. Center speaker
4. Tweeter LH	5. Front door squawker LH	6. Front door speaker LH
7. BOSE amp.	8. Rear microphone (Active noise control system)	9. Satellite radio antenna
10. Rear speaker LH	11. Woofer	12. Rear view camera
13. Rear speaker RH	14. Antenna amp.	15. Front door speaker RH
16. Front door squawker RH	17. Microphone	18. GPS antenna
19. Multifunction switch	20. Steering angle sensor	21. Steering switch
22. AV control unit	23. USB connector	24. Disk eject switch
25. Preset switch	26. Display unit	
A. Under front LH seat	B. Inside rear parcel	C. Inside rear seat back
D. Inside rear pillar finisher RH	E. Back of instrument panel	F. Spiral cable remove condition
G. Bottom side of cluster lid C	H. Inside console box	

⇦ : Front of vehicle

Component Description

INFOID:0000000011490640

Part name	Description
AV control unit	• Integrates hard disk drive (HDD) allowing map 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, voice control, navigation, USB connection, DVD play function, multifunction meter function 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 is connected to low tire pressure warning control unit with the CAN communication line to obtain necessary information for the tire pressure status. • It inputs the illumination signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake). • Update of map data is performed with the DVD-ROM.
Display unit	• 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. • Touch panel function can be operated for each system by touching a display directly. • Camera image signal is input from rear view camera.
BOSE amp.	Without active noise control system • It inputs the power supply (BOSE amp. ON signal) and audio signal from the AV control unit and outputs the audio signal to each speaker. With active noise control system • BOSE amp. include active noise control system • Generates an antiphase sound weakening interior engine booming noise, mixes the antiphase sound with a sound signal transmitted from the AV control unit, and transmits the mixed sound signal to each speaker. • Input microphone signal transmitted from both front and rear microphone (for active noise control system).
Front door speaker	• Outputs audio signal from BOSE amp. • Outputs high and mid range sound.
Front door squawker	• Outputs audio signal from BOSE amp. • Outputs mid range sound.
Rear speaker	• Outputs audio signal from BOSE amp. • Outputs high and mid range sound.

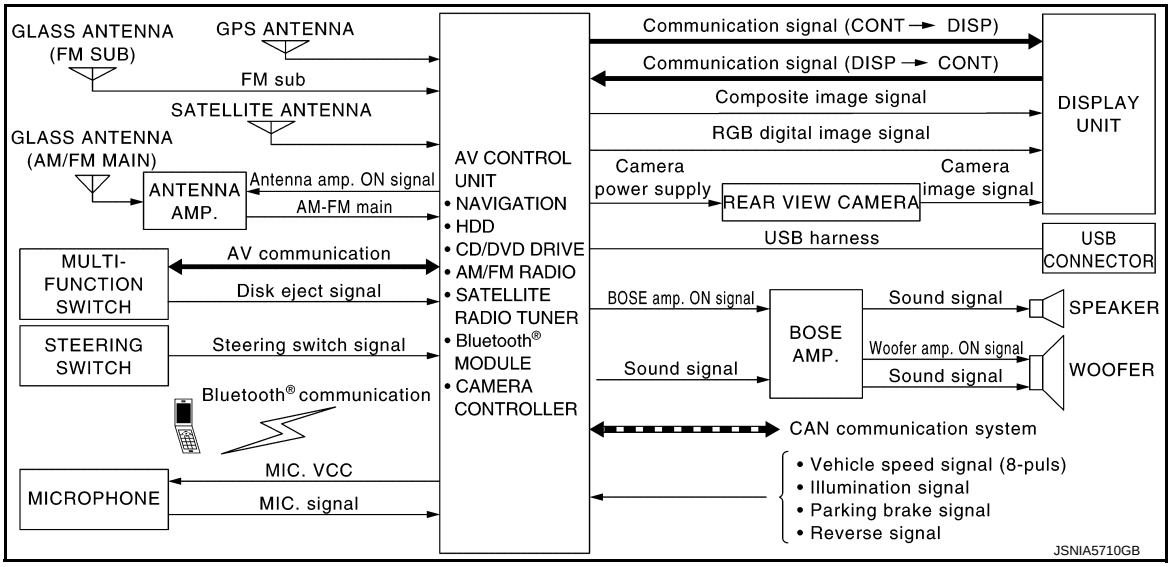
Part name	Description
Tweeter	• Outputs audio signal from BOSE amp. • Outputs high range sound.
Center speaker	• Outputs audio signal from BOSE amp. • Outputs mid range sounds.
Woofer	• Outputs audio signal from BOSE amp. • Outputs low range sound.
Front microphone (For active noise control system)	• Used for active noise control system • Detects interior engine booming noise and transmits a sound signal to the BOSE amp.
Rear microphone (For active noise control system)	• Used for active noise control system • Detects interior engine booming noise and transmits a sound signal to the BOSE amp.
Multifunction switch	• It can operate the multifunction meter, etc. • It is connected to the preset switch with hardwire. The operation signal is transmitted to the AV control unit through the preset switch via AV communication.
Disk eject switch	It is connected to the preset switch with hardwire. The operation signal is transmitted to the AV control unit through the preset switch.
Preset switch	• It is equipped with the switch where audio and air conditioner operations are integrated. • It is connected with the AV control unit via AV communication. The operation signal is transmitted to the AV control unit via AV communication. • The disk ejection operating signal is performed by hardwire.
Steering switch	• Operations for audio, hands-free phone and voice control, etc. are possible. • Steering switch signal (operation signal) is output to AV control unit.
Microphone	• Used for hands-free phone operation and voice recognition. • Microphone signal is transmitted to AV control unit. • Power (Mic. VCC) is supplied from AV control unit.
GPS antenna	GPS signal is received and transmitted to AV control unit.
Antenna amp.	• The radio signal received by glass antenna is amplified and sent to AV control unit. • The power (antenna amp. ON signal) is supplied from the AV control unit.
USB connector	Image signal* and audio signal of USB input is transmitted to AV control unit.
Satellite radio antenna	Satellite radio signal is received and transmitted to AV control unit.
Rear view camera	• Camera power supply is input from AV control unit. • The image of vehicle rear view is transmitted to display unit.

*: Image signal can not be getting from iPod®.

System Diagram

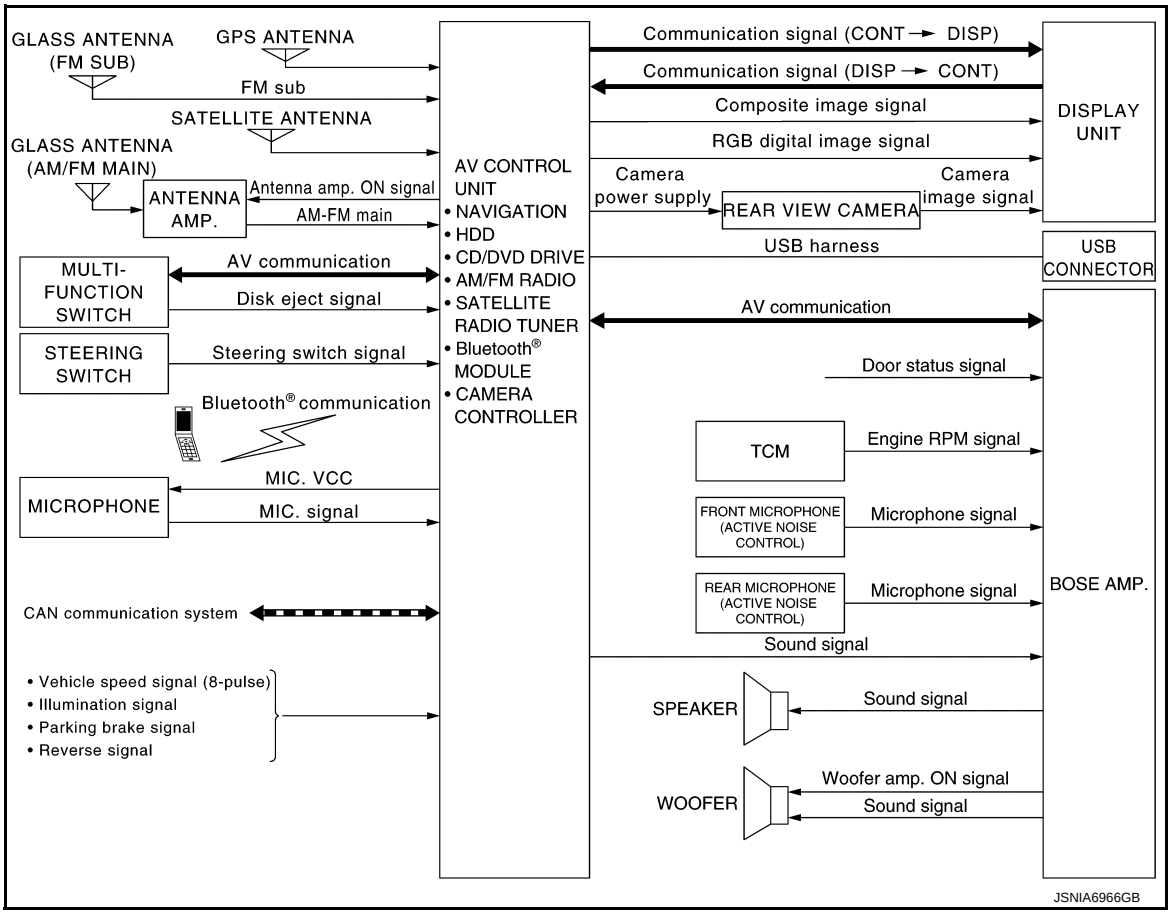
INFOID:0000000011490641

WITHOUT ACTIVE NOISE CONTROL SYSTEM



NOTE:
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH, DISK EJECT SWITCH and MULTIFUNCTION SWITCH virtually.

WITH ACTIVE NOISE CONTROL SYSTEM



NOTE:
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH, DISK EJECT SWITCH and MULTIFUNCTION SWITCH virtually.

System Description

INFOID:0000000011490642

Multi AV system means that the following systems are integrated.

FUNCTION NAME
Navigation system function
Audio function
Active noise control system function
Hands-free phone function
Voice recognition function
Touch panel function
Rear view monitor function
Vehicle information function
USB connection function
DVD play function
Multifunction meter system function

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.
- The AV control unit is connected with CAN communication line and receives data signals from the ECM, combination meter, TCM, AWD control unit, A/C auto amp., ABS actuator and electric unit (control unit), steering angle sensor and low tire pressure warning control unit. Using the obtained information, it computes values for the display items relating to the fuel consumption information, multifunction meter, and tire pressure information and displays them.
- AV control unit is connected with display and serial communication, and it transmits the required signal of display and display control and receives the response signal from display.
- The AV control unit, which has the vehicle setting function, transmits and receives data on vehicle setting condition via CAN communication with the BCM.

NAVIGATION SYSTEM FUNCTION

Description

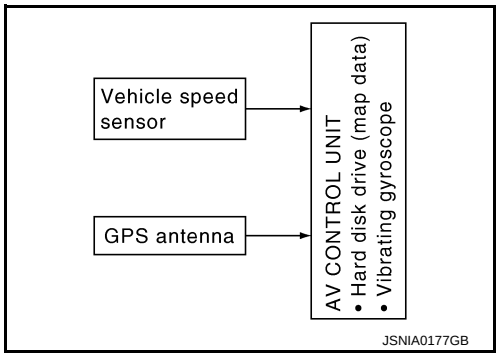
- The AV control unit controls navigation function while GPS tuner has built-in map data, GYRO (angle speed sensor), on the HDD (Hard Disk Drive).
- The AV control unit inputs operation signal with communication signal, through display (touch panel) and multifunction switch and steering switch.
- Guide 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 digital image signal) 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)

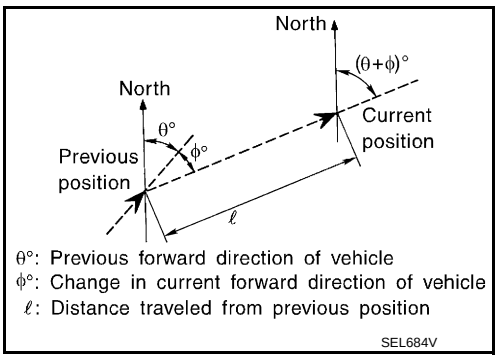
The current position of the vehicle is then identified by comparing the calculated vehicle position with map data, which is stored in the HDD (Hard Disk Drive) (map-matching), and indicated on the screen with



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.

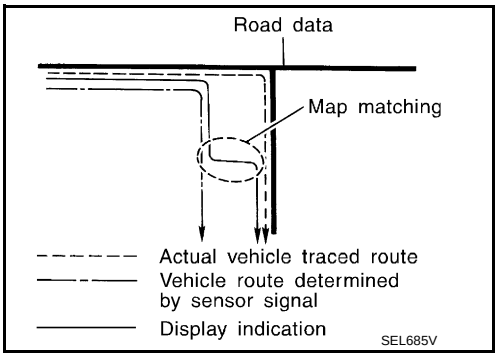


Type	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	The turning angle is precisely detected.	Errors are accumulated when driving a long distance without stopping.
GPS antenna (GPS information)	The travel direction (North/South/East/West) is detected.	The travel direction is not precisely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

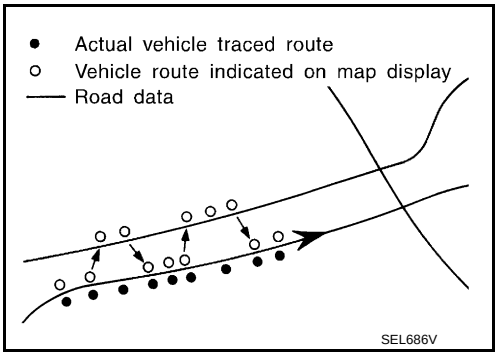
Map-matching

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).

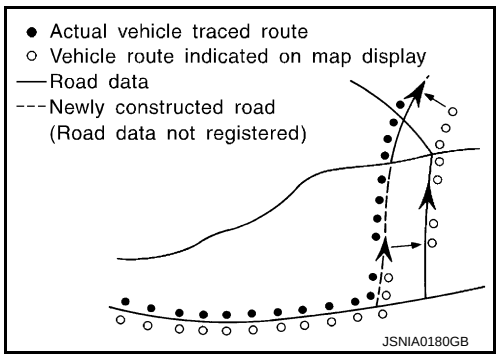


There is a possibility that the vehicle position may not be corrected in the following case, and when vehicle is driven over a certain distance or time in which GPS information is hard to receive. Correct manually the current location mark on the screen.

- 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.

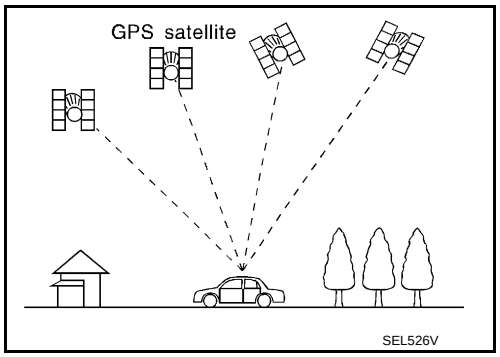


- Map-matching does not function correctly when road on which the vehicle is driving is new, etc. and not recorded in the map data. Also, map-matching does not function correctly when road pattern stored in the map data and the actual road pattern are different due to repair, etc.
  Therefore, the map-matching 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
Active noise control system

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 display unit and AV control unit.

AM/FM Radio Mode

- AM/FM radio tuner is built into AV control unit.
- Audio signal is received by glass antenna, next it is amplified by antenna amp., and finally it is input to AV control unit. Audio signal is input to BOSE amp., and BOSE amp. outputs to woofer and each speakers.

Satellite Radio Mode

- Satellite radio tuner is built into AV control unit.
- Audio wave (satellite radio) is received by satellite radio antenna, and it is input to AV control unit. AV control unit outputs audio signal to BOSE amp. The signal is also outputted from BOSE amp. to woofer and 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 woofer and each speakers when CD is inserted to AV control unit.

Bluetooth® Audio

- Bluetooth® audio function is built into AV control unit.
- When the Bluetooth® audio is connected to the portable audio equipped with the Bluetooth® communication compliant profile via Bluetooth® communication, it can be play the music data in the portable audio.
- A maximum of five Bluetooth® devices including the audio devices and cellular phones can be registered in the AV control unit.

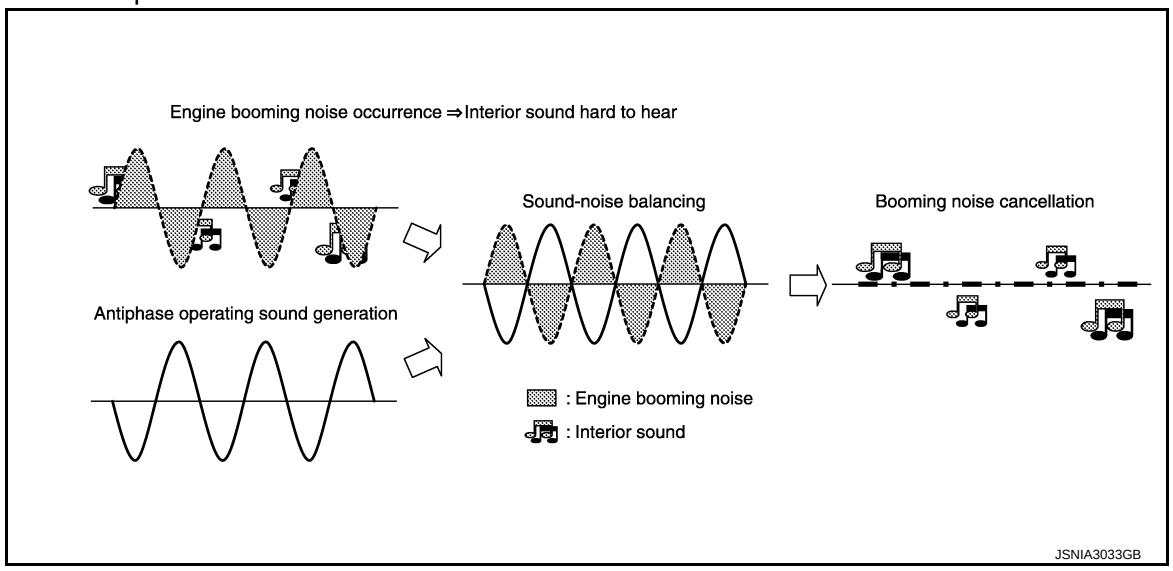
Active Noise Control System

- The active noise control system incorporates the BOSE Engine Harmonic Cancellation (EHC) technology.
- The active noise control system outputs an antiphase sound from the speakers (front door speaker, rear speaker and rear woofer) against unpleasant engine booming noise (2nd and/or 3rd engine rev at 700 - 5,000 rpm) and reduces sound pressure level by the interference with engine booming noise.
- The BOSE amp. receives an engine speed signal from TCM and receives microphone signals from the front and rear microphone.
- The BOSE amp. receives a door state signal. The active noise control system does not operate with any door open.
- Based on signals detected by the front and rear microphones, the BOSE amp. generates an antiphase sound (microphone signal) weakening interior engine booming noise in real time according to a unique algorithm*1 by a DSP*2 built in the BOSE amp. Then, the BOSE amp. mixes the antiphase sound with a sound signal received from the AV control unit to transmit the mixed sound signal to each speaker.

  NOTE:

  *1: Algorithm means a fixed procedure to solve a question.

*2: DSP stands for Digital Signal Processor and enables digital processing of sound signals. DSP features precise signal processing and calculation with the digital technology on a small scale that analog methods find it difficult to process and calculate.



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 multifunction 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 door speaker.

When A Call Is Originated

Spoken voice sound output from the microphone (Mic. 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 front door speaker, and the signal is input to BOSE amp. via AV control unit by establishing Bluetooth® communication from cellular phone.

VOICE RECOGNITION FUNCTION

- Each operation of multi AV system can be performed by inputting sound to microphone.
- Start of voice recognition system can be performed by steering switch.

TOUCH PANEL SYSTEM

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

REAR VIEW MONITOR FUNCTION

- The AV control unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits camera images to the display unit when power is supplied from the AV control unit.
- The AV control unit transmits a warning message, fixed guide lines, and predictive course lines to the display unit by RGB digital image signal. Rear view monitor images are displayed by combining the RGB digital image signal and the camera image signals from the rear view camera.
- Predictive course lines are controlled by a steering angle sensor signal received the AV control unit via CAN communication.

VEHICLE INFORMATION FUNCTION

- Status of audio, climate control system, fuel economy, tire pressure and maintenance is displayed.
- AV control unit displays the fuel consumption status while receiving data signal through CAN communication from ECM, combination meter.
- AV control unit displays the tire pressure status while receiving data signal through CAN communication from low tire pressure warning control unit.

USB CONNECTION FUNCTION

- iPod or music files and video data* of USB memory can be played.
- iPod audio signals are transmitted from USB connector to the AV control unit and to each speaker via BOSE amp.
- Video signals are transmitted from USB connector to the display unit via the AV control unit.
- iPod® is recharged when connected to USB connector.

*: Image signal can not be getting from iPod®.

iPod® is a trademark of Apple inc., registered in the U.S. and other countries.

NOTE:

Use the enclosed USB harness when connecting iPod® to USB connector.

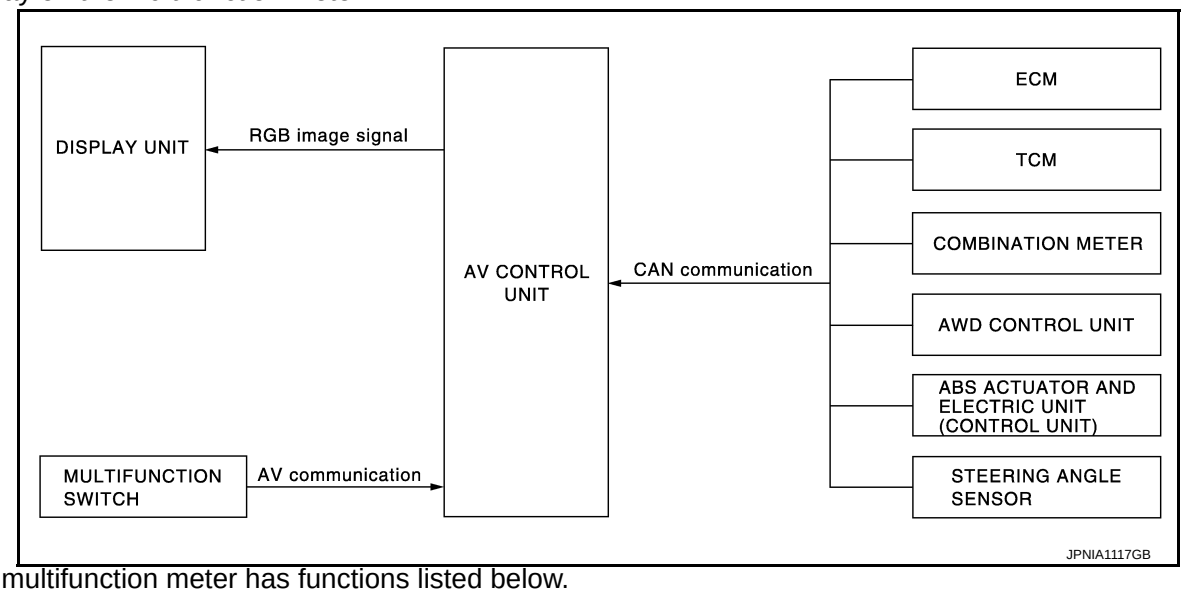
DVD PLAY FUNCTION

- DVD is played by inserting DVD into the AV control unit.
- DVD image signals are transmitted to the display unit and DVD audio signals are transmitted to each speaker via BOSE amp.

MULTIFUNCTION METER SYSTEM

Multi function meter system can be performed with multi function switch.

- To inform the user of the most suitable usage of the high-performance vehicle, the mechanical information display function and driving history information display function are adopted.
- The necessary information is transmitted from each unit to the AV control unit via CAN communication to display on the multifunction meter.



- The multifunction meter has functions listed below.

Function	Description	Display
Vehicle information mode	Displays mechanical information to use the vehicle in good condition.	CUSTOM VIEW 1 CUSTOM VIEW 2 CUSTOM VIEW 3 CUSTOM VIEW 4 CUSTOM VIEW 5
Driving history information display mode	Displays the measured TIME results.	STOP WATCH

NOTE:

For further information about the procedure for handling and setting each function, refer to the Operation Manual.

Vehicle Information Mode

To continue to use the vehicle in good condition, it can display the mechanical information if necessary.

AVA1300

Display	Display Item	Description	Signal route	Display form	Display range	Unit
CUSTOM VIEW 1 CUSTOM VIEW 2 CUSTOM VIEW 3 CUSTOM VIEW 4 CUSTOM VIEW 5	COOLANT TEMP	Engine coolant temperature	Coolant temperature sensor → ECM → Combination meter → AV control unit	Gauge	50 - 130	°C
				Value	(–40) - (200)	
				Gauge	120 - 270	°F
				Value	(–40) - (390)	
	ENGINE OIL TEMP	Engine oil temperature	Fluid temperature sensor → ECM → Combination meter → AV control unit	Gauge	70 - 150	°C
				Value	(–50) - (200)	
				Gauge	150 - 300	°F
				Value	(–50) - (390)	
	ENGINE OIL PRES	Engine oil pressure	Oil pressure sensor → Combination meter → AV control unit	Gauge	0 - 8	x100 kPa
						PSI
	TRANS OIL TEMP	Transmission oil temperature	Transmission oil sensor → TCM → Combination meter → AV control unit	Gauge	40 - 160	°C
				Value	(–40) - (200)	
				Gauge	120 - 320	°F
				Value	(–40) - (390)	
	TRANS OIL PRESSURE	Transmission oil pressure	Transmission oil pressure sensor → TCM → Combination meter → AV control unit	Gauge	Lo - Hi	—
	BOOST	Boost pressure	Boost sensor → ECM → Combination meter → AV control unit	Gauge	(–1.0) - (1.5)	x100 kPa
						PSI
	SPEED	Vehicle speed (small display only)	Wheel sensor → ABS actuator and electric unit (control unit) → Combination meter → AV control unit	Value	0 - 340	km/h
					0 - 215	MPH
	FUEL/RANGE	Fuel level and possible driving distance	Combination meter → AV control unit	Gauge	E - F	—
				Value	0 - 999	km
						mile
	FUEL FLOW	Fuel Flow	ECM → AV control unit	Gauge	—	—

Display	Display Item	Description	Signal route	Display form	Display range	Unit
CUSTOM VIEW 1 CUSTOM VIEW 2 CUSTOM VIEW 3 CUSTOM VIEW 4 CUSTOM VIEW 5	FUEL ECON	Interval fuel consumption Small display: Latest fuel consumption during the past minute Large display: Displays the history of an average ECO level per minute (20 minutes data)	ECM/Combination meter → AV control unit	Value	0 - 30	l/100 km
				Graph	0 - 30	
				Value	0 - 60	MPG
				Graph	0 - 30	
	TORQUE SPLIT	Front torque distribution (small display only)	AWD control unit → Combination meter → AV control unit	Gauge	RWD - AWD	—
	ACCEL G	History display of accelerator G (for 20 seconds)	Yaw rate/side G/longitudinal G sensor → ABS actuator and electric unit (control unit) → AV control unit	Gauge	0 - 1.5	—
				Graph		
	BRAKING G	History display of brake G (for 20 seconds)	Yaw rate/side G/longitudinal G sensor → ABS actuator and electric unit (control unit) → AV control unit	Gauge	0 - 1.5	—
				Graph		
	ACCEL BRAKING G	Longitudinal G (Accelerator pedal/brake G) Small display: Real time display Large display: History display (for 20 seconds)	Yaw rate/side G/longitudinal G sensor → ABS actuator and electric unit (control unit) → AV control unit	Gauge	(–1.5) - (1.5)	—
				Graph	Auto scale	—
	CORNERING G	Transverse G (Cornering G) Small display: Real time display Large display: History display (for 20 seconds)	Yaw rate/side G/longitudinal G sensor → ABS actuator and electric unit (control unit) → AV control unit	Gauge	(–1.5) - (1.5)	—
				Graph	Auto scale	—
	TOTAL G	Synthetic G (Absolute G generated on the vehicle synthesized from longitudinal G and transverse G) Small display: Real time display Large display: History display (for 20 seconds)	Yaw rate/side G/longitudinal G sensor → ABS actuator and electric unit (control unit) → AV control unit	Gauge	0 - 1.5	—
				Graph		
	CLOCK	Clock	GPS antenna → AV control unit	Value	12/24	Time
	ACCEL PEDAL	Accelerator pedal position (small display only)	ECM → AV control unit	Gauge	0 - 100	%
	BRAKE PEDAL	Braking pressure (small display only)	Pressure sensor → ABS actuator and electric unit (control unit) → AV control unit	Gauge	0 - 100	%
	STEERING	Steering angle (small display only)	Steering angle sensor → AV control unit	Gauge	Auto scale	—

Driving History Information Display Mode

Displays the sub-functions (required time history) indicating the driving history.

AVA1301

Display	Description	Display form
STOP WATCH	Displays the measured TIME results.	Special display

Fail-Safe

INFOID:0000000011490643

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 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:0000000011490644

- 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 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

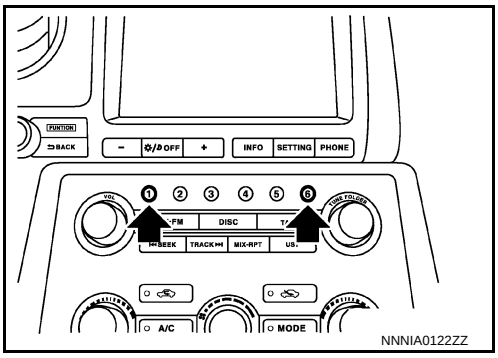
INFOID:0000000011490645

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 both the preset switches “1” and “6” simultaneously within 10 seconds after turning the ignition switch from OFF to ACC and hold them for 3 seconds or more. Then release the switches. The buzzer sounds, all indicators of the centralized and preset switches 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.



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Finishing Self-diagnosis Mode

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

ON BOARD DIAGNOSIS ITEM

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).

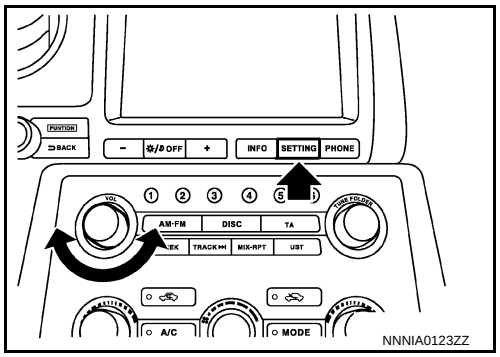
On Board Diagnosis Item

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

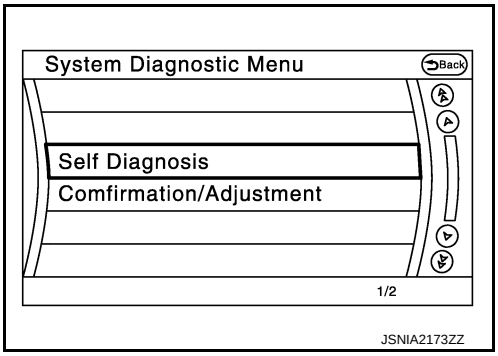
Mode			Description
Confirmation/ Adjustment	Display Diagnosis		The following check functions are available: color tone check by color bar display, light and shade check by gray scale display, touch panel calibration, touch panel response check and color tone check by white display.
	Vehicle Signals		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.
		XM SAT Subscription Status	The XM NavTraffic subscription status can be checked.
	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.
	Hands-free Phone		The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.
	Camera Cont.		The four functions of “Correct Draw Line of Rear view Camera”, “Alter/ Confirm Configuration”, “Reset Configuration” and “Camera Syst Type” are available.
	XM	XM Navi Trffic	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	Not used.
	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. Turn the “VOL” dial either clockwise or counterclockwise for 40 clicks or more while pressing the “SETTING” button. (Beep sounds when starting the self-diagnosis mode.) Press the “BACK” switch and the initial system screen will be shown.



4. The trouble diagnosis initial screen is displayed, and then the items of “Self Diagnosis” and “Confirmation/Adjustment” can be selected.



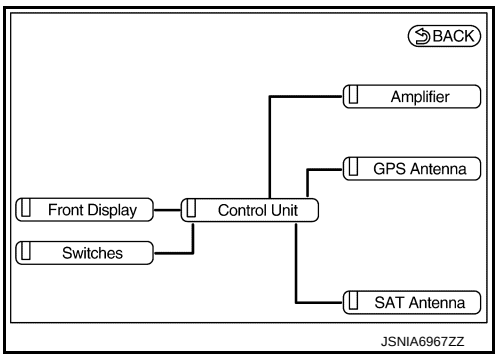
SELF-DIAGNOSIS MODE

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

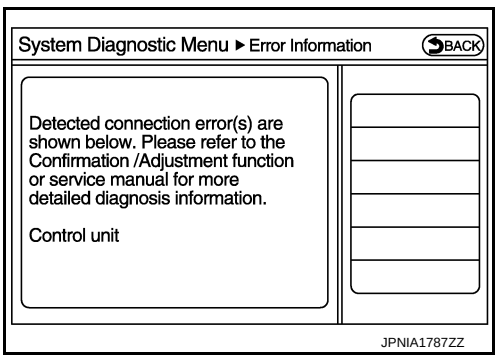


NOTE:

- Only the 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-166, "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.



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.
Amplifier*	When either one of the following items are detected: • Audio signal circuits between BOSE amp. and each speaker are malfunctioning. • Audio signal circuits between BOSE amp. and each either front or rear microphone is malfunctioning. • BOSE amp. malfunction is detected.	• Malfunctioning speaker circuits • Malfunctioning front or rear microphone circuits • Replace BOSE amp. Refer to AV-175, "Removal and Installation".

*: With active noise control system

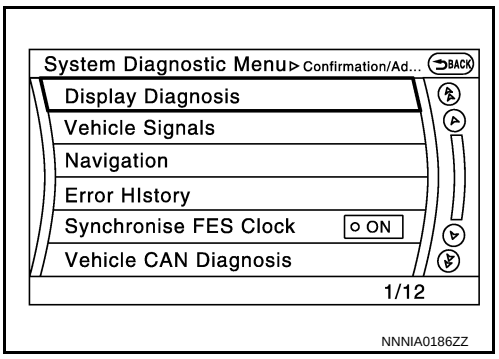
A Connecting Cable Between Units Is Displayed In Yellow.

Area with yellow connection lines	Description	Possible malfunction location / Action to take
Control unit ⇔ Front Display	Malfunction is detected in serial communication circuits between AV control unit and display unit.	Serial communication circuits between AV control unit and display unit.
Control unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	GPS antenna
Control unit ⇔ SAT Antenna	Satellite radio antenna connection malfunctions detected.	Satellite radio antenna
Control unit ⇔ Amplifier*	When either one of the following items are detected: • BOSE amp. power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and BOSE amp. are malfunctioning.	• BOSE amp. power supply and ground circuits. Refer to AV-138, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between AV control unit and BOSE amp.

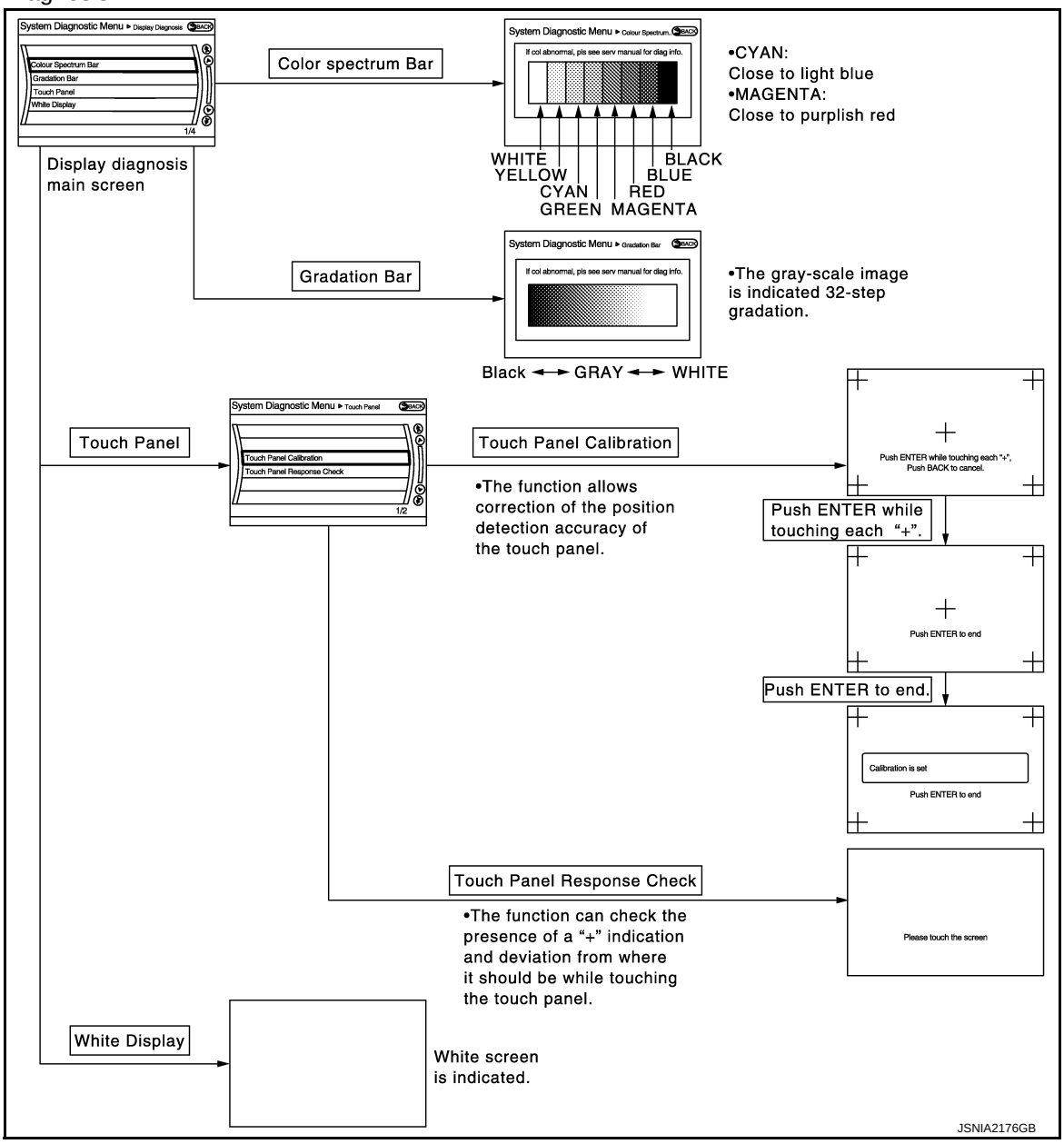
*: With active noise control system

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.

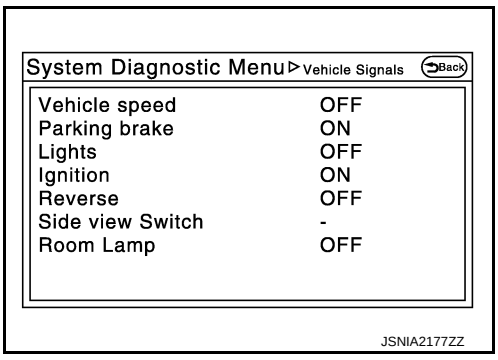


Display Diagnosis



Vehicle Signals

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

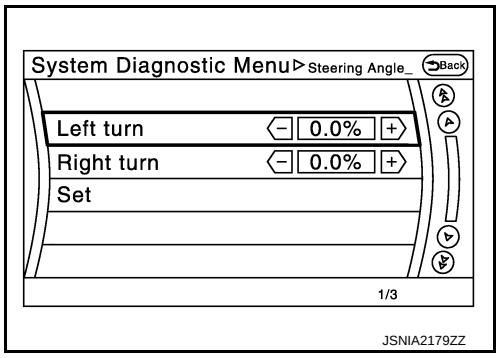


Diagnosis item	Display	Vehicle status	Remarks
Vehicle speed	ON	Vehicle speed > 0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed = 0 km/h (0 MPH)	
Parking brake	ON	Parking brake is applied	
	OFF	Parking brake is released	
Lights	ON	Light switch ON	—
	OFF	Light switch OFF	
Ignition	ON	Ignition switch ON	—
	OFF	Ignition switch in ACC position	
Reverse	ON	Shift the selector lever to “R” position	Changes in indication may be delayed. This is normal.
	OFF	Shift the selector lever other than “R” position	
SIDE VIEW SW	—	—	This item is displayed, but cannot be monitored.
ROOM LAMP	OFF	—	This item is displayed, but not used.

Navigation

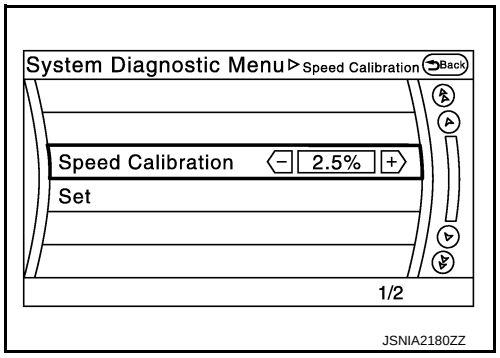
STEERING ANGLE ADJUSTMENT

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



SPEED CALIBRATION

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



XM SAT SUBSCRIPTION STATUS

The XM NavTraffic subscription status can be checked.

Error History

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

However, the diagnosis results are judged normal if an error has occurred before the ignition 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.

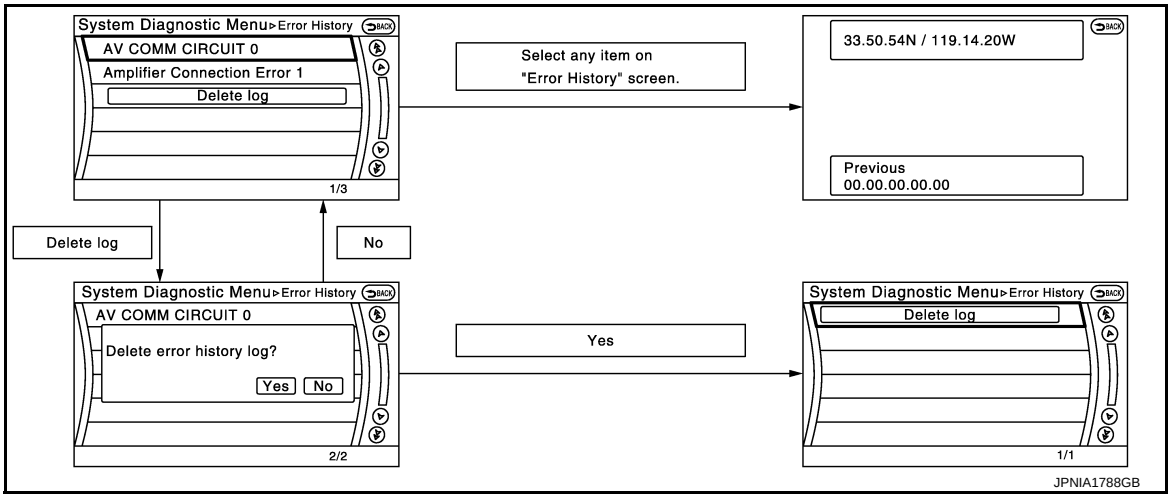
Count up method A

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

Count up method B

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

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



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-34, "CONSULT Function (MULTI AV)".

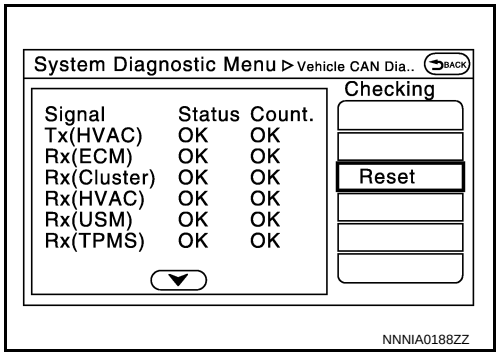
Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error 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		
iPod authentification chip 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.
DSP Communication Error		
HDD Connection Error	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
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.
GPS ROM Error		
GPS RAM Error		
GPS RTC Error		
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT.
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DVD Mechanism Communication Error	AV control unit malfunction is detected.	• If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
Front Display Connection Error	• Display unit power supply and ground circuits malfunction is detected. • Malfunction is detected in communication circuits between AV control unit and display unit.	• Display unit power supply and ground circuits. • Communication circuits between AV control unit and display unit.
Amplifier Temperature Error	BOSE amp. malfunction is detected.	Replace the BOSE amp.
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 feeder. • Satellite radio antenna.
USB electric current Error	Detection of over current in USB connector.	Check USB harness between the AV control unit and USB connector.
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		

Error item	Description	Possible malfunction factor/Action to take
FL-DOOR WOOFER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and front door speaker LH.	Sound signal circuits between BOSE amp. and front door speaker LH.
FL-DOOR WOOFER OUT: short		
FL-DOOR WOOFER OUT: short to ground		
FL-DOOR WOOFER OUT: short to battery		
FL-DOOR SQUAWKER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and front door squawker LH or tweeter LH.	Sound signal circuits between BOSE amp. and front door squawker LH or tweeter LH.
FL-DOOR SQUAWKER OUT: short		
FL-DOOR SQUAWKER OUT: short to ground		
FL-DOOR SQUAWKER OUT: short to battery		
FR-DOOR WOOFER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and front door speaker RH.	Sound signal circuits between BOSE amp. and front door speaker RH.
FR-DOOR WOOFER OUT: short		
FR-DOOR WOOFER OUT: short to ground		
FR-DOOR WOOFER OUT: short to battery		
FR-DOOR SQUAWKER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and front door squawker RH or tweeter RH.	Sound signal circuits between BOSE amp. and front door squawker RH or tweeter RH.
FR-DOOR SQUAWKER OUT: short		
FR-DOOR SQUAWKER OUT: short to ground		
FR-DOOR SQUAWKER OUT: short to battery		
FC-INST SQUAWKER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and center speaker.	Sound signal circuits between BOSE amp. and center speaker.
FC-INST SQUAWKER OUT: short		
FC-INST SQUAWKER OUT: short to ground		
FC-INST SQUAWKER OUT: short to battery		
RL-DOOR SPEAKER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and rear speaker LH.	Sound signal circuits between BOSE amp. and rear speaker LH.
RL-DOOR SPEAKER OUT: short		
RL-DOOR SPEAKER OUT: short to ground		
RL-DOOR SPEAKER OUT: short to battery		
RR-DOOR SPEAKER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and rear speaker RH.	Sound signal circuits between BOSE amp. and rear speaker RH.
RR-DOOR SPEAKER OUT: short		
RR-DOOR SPEAKER OUT: short to ground		
RR-DOOR SPEAKER OUT: short to battery		
RC-PSHELF WOOFER OUT: open	Malfunction is detected sound signal circuits between BOSE amp. and woofer.	Sound signal circuits between BOSE amp. and woofer.
RC-PSHELF WOOFER OUT: short		
RC-PSHELF WOOFER OUT: short to ground		
RC-PSHELF WOOFER OUT: short to battery		
Compensat.mic IN: open	Malfunction is detected in sound signal circuits between BOSE amp. and either front or rear microphone.	Sound signal circuits between BOSE amp. and front or rear microphone.
Compensat.mic IN: short		
Compensat.mic IN: short to ground		
Compensat.mic IN: short to battery		

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 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 • Amplifier Connection Error	• BOSE amp. power supply and ground circuits malfunction is detected. • Malfunction is detected in AV communication circuit between AV control unit and BOSE amp.	• BOSE amp. power supply and ground circuits. • AV communication circuit between AV control unit and BOSE amp.

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.

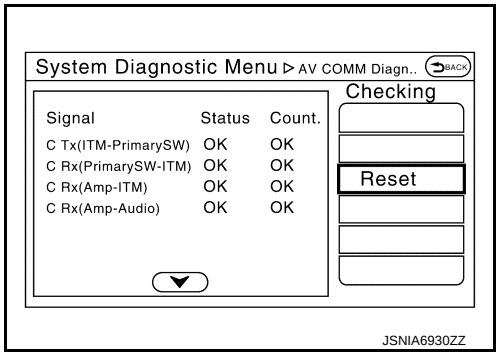


Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx (TPMS)	OK / ???	OK / 0 - 39
Rx (VDC)	OK / ???	OK / 0 - 39

NOTE:
“???” indicates UNKWN

AV COMM Diagnosis

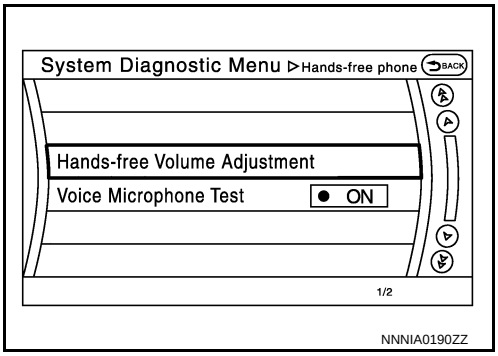
- Displays the communication status between AV control unit (master unit) and each unit.
- The error counter displays “OK” if any malfunction was not detected in the past and displays “0” if a malfunction is detected. It increases by 1 if the condition is normal at the next ignition switch ON cycle.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

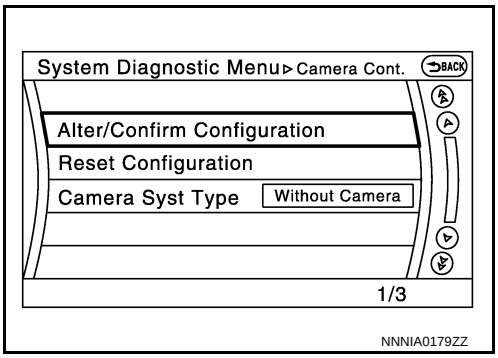
Hands-Free Phone

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



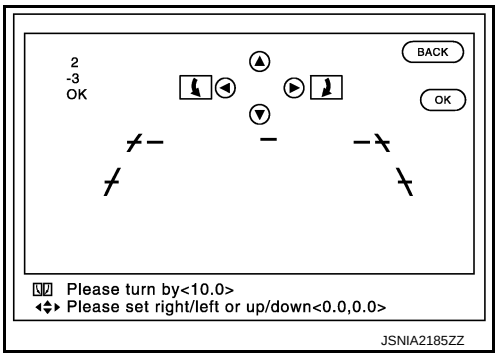
Camera Cont.

The four functions of “Correct Draw Line of Rear view Camera”, “Alter/Confirm Configuration”, “Reset Configuration” and “Camera Syst Type” are available.



Correct Draw Line of Rear view Camera

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



Alter/Confirm Configuration

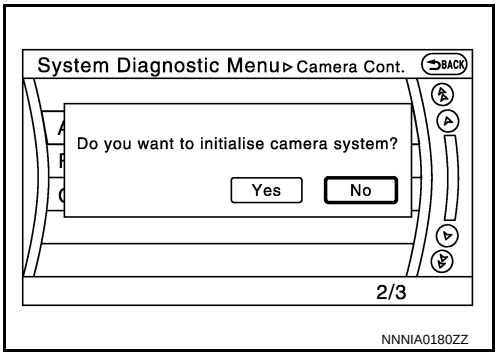
- Configuration stored in the AV control unit can be checked and modified.

Configuration list

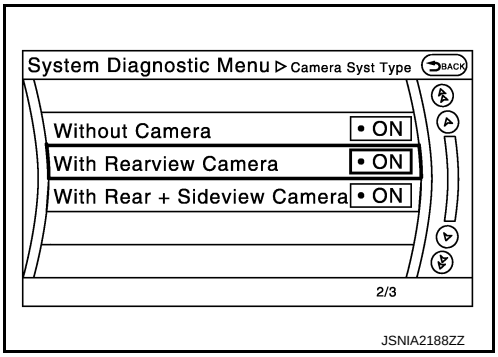
Setting item	Setting	Setting item	Setting
Predi. Course Lines	With	Wheelbase	2.7800000
Rear Coeff. K	–133446.7	Total Length	0.0000000
Rear Coeff. F	0.0016960	Steering Gear Ratio	14.368316
Rear Coeff. P1	0.0000046	Side Coeff. K	0.0000000
Rear Coeff. P2	0.0000056	Side Coeff. F	0.0000000
Rear Coeff. C1	823.00000	Side Coeff. P1	0.0000000
Rear Coeff. C2	480.00000	Side Coeff. P2	0.0000000
Rear Coeff. D1	800.00000	Side Coeff. C1	0.0000000
Rear Coeff. D2	494.00000	Side Coeff. C2	0.0000000
Car Width	1.8950000	Side Coeff. D1	0.0000000
Rear Offset	–0.207930	Side Coeff. D2	0.0000000
Rear Height	0.6846400	Side Offset	0.0000000

Setting item	Setting	Setting item	Setting
Rear L/R Angle	0.0000000	Overall Height	0.0000000
Rear Up/Dn Angle	49.409999	Side L/R Angle	0.0000000
Rear Roll Angle	0.0000000	Side Up/Dn Angle	0.0000000
Bumper Rear Dist.	0.0383800	Side Roll Angle	0.0000000
Bumper Rear Ax Dist	0.9710000	Side Front End Dist	0.0000000
Steer. Max Angle	443.83728	Total Width	0.0000000
Min. Turning Red.	5.7049999	—	—

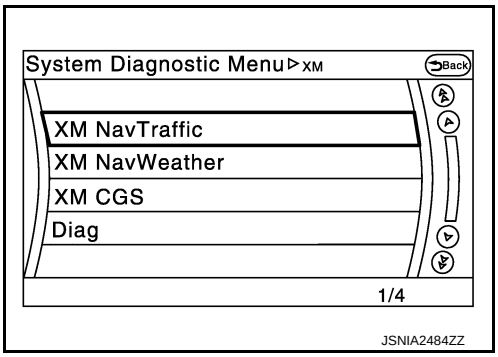
Reset Configuration
- Configuration stored in the AV control unit can be initialized.



Camera Syst Type
- Type of camera system is selectable.

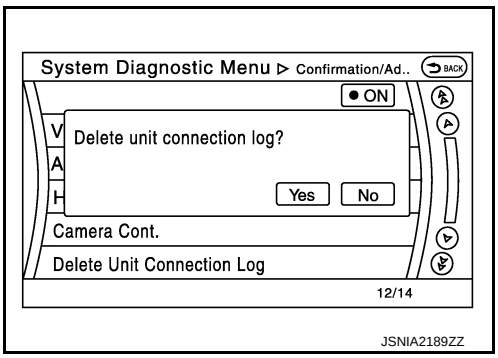


XM
- Change Channel
- Any necessary channels required to receive traffic information from the satellite radio system can be set.
- Change Application ID
- Any application ID'-s required to receive traffic information from the satellite radio system can be set.



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.)



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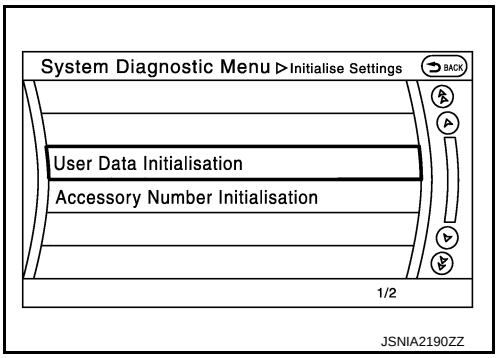
Initialize Settings

"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-93, "CONFIGURATION (AV CONTROL UNIT) : Description".**



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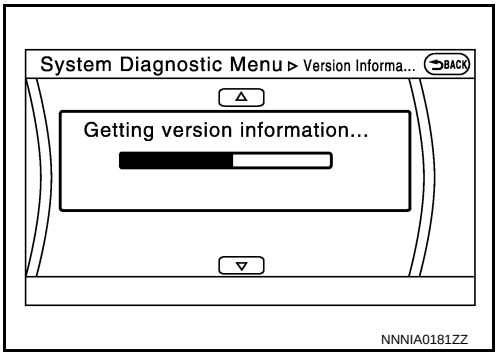
Version Information

Version information of the AV control unit is displayed.



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CONSULT Function (MULTI AV)

INFOID:0000000011490646

APPLICATION ITEMS

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

Self-diagnosis Results Display Item

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-96, "Diagnosis Procedure"
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
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.	Replace the AV control unit if the malfunction occurs constantly.
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.
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.
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.
DSP COMM [U121E]		
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.
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT.
AMP TEMP [U1231]	BOSE amp. malfunction is detected.	Replace the BOSE amp.

Error item	Description	Possible malfunction factor/Action to take
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.
FRONT DISP CONN [U1243]	When either one of the following items are detected: • display unit power supply and ground circuits malfunction is detected. • communication circuits between AV control unit and display unit.	• Display unit power supply and ground circuits. • Communication circuits between AV control unit and AV display unit.
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	• Satellite radio antenna feeder. • Satellite radio antenna.
USB OVERCURRENT [U1263]	Detection of over current in USB connecter.	Check USB harness between the AV control unit and USB connector.
ANTENNA AMP TERMINAL [U1264]	Radio antenna amp. ON signal circuit malfunction is detected.	Radio antenna amp. ON signal circuit between AV control unit and radio antenna amp.
FL-DOOR WOOFER [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1601]	Malfunction is detected audio signal circuits between BOSE amp. and front door speaker LH.	Audio signal circuits between BOSE amp. and front door speaker LH.
FL-DOOR SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1602]	Malfunction is detected audio signal circuits between BOSE amp. and front door squawker LH or tweeter LH.	Audio signal circuits between BOSE amp. and front door squawker LH or tweeter LH.
FR-DOOR WOOFER [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1609]	Malfunction is detected audio signal circuits between BOSE amp. and front door speaker RH.	Audio signal circuits between BOSE amp. and front door speaker RH.
FR-DOOR SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U160A]	Malfunction is detected audio signal circuits between BOSE amp. and front door squawker RH or tweeter RH.	Audio signal circuits between BOSE amp. and front door squawker RH or tweeter RH.
F-INST C-SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U162A]	Malfunction is detected audio signal circuits between BOSE amp. and center speaker.	Audio signal circuits between BOSE amp. and center speaker.
R-PSHELF L-SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1722]	Malfunction is detected audio signal circuits between BOSE amp. and rear speaker LH.	Audio signal circuits between BOSE amp. and rear speaker LH.
R-PSHELF R-SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U172A]	Malfunction is detected audio signal circuits between BOSE amp. and rear speaker RH.	Audio signal circuits between BOSE amp. and rear speaker RH.
R-PSHELF C-WOOFER [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1725]	Malfunction is detected audio signal circuits between BOSE amp. and woofer.	Audio signal circuits between BOSE amp. and woofer.
CORRECT MICROPHONE [U190C]	Malfunction is detected in audio signal circuits between BOSE amp. and either front or rear microphone.	Audio signal circuits between BOSE amp. and front or rear microphone.

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] • AMP CONN [U124E]	• BOSE amp. power supply and ground circuits malfunction is detected. • Malfunction is detected in AV communication circuit between AV control unit and BOSE amp.	• BOSE amp. power supply and ground circuits. • AV communication circuit between AV control unit and BOSE amp.

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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 >0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	Off	Vehicle speed =0 km/h (0 MPH)	
PKB SIG	On	Parking brake is applied.	
	Off	Parking brake is released.	
ILLUM SIG	On	Block the light beam from the auto light optical sensor when the light SW is ON.	—
	Off	Expose the auto light optical sensor to light when the light SW is OFF or ON.	
IGN SIG	On	Ignition switch ON	
	Off	Ignition switch in ACC position	
REV SIG	On	Selector lever in R position	Changes in indication may be delayed. This is normal.
	Off	Selector lever in any position other than R	
SIDE VIEW SW	Off	This item is displayed, but cannot be monitored.	—
ROOM LAMP	Off	This item is displayed, but not used.	

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	

CONFIGURATION

Configuration includes functions as follows.

Function		Description
Read/Write Configuration	Before Replace ECU	Allows the reading of vehicle specification written in AV control unit to store the specification in CONSULT.
	After Replace ECU	Allows the writing of the vehicle information stored in CONSULT into the AV control unit.
Manual Configuration		Allows the writing of the vehicle specification into the AV control unit by hand.

DIAGNOSIS SYSTEM [BOSE AMP.(ACTIVE NOISE CONTROL SYSTEM)]

On Board Diagnosis Function

INFOID:0000000011490647

ON BOARD DIAGNOSIS ITEM

Starting with the operation of the door switch, the Self-diagnosis function allows the diagnoses of the active noise control unit internal circuit, the input state of each signal, and a microphone connection state. The diagnosis results are indicated by a sound.

METHOD OF STARTING

Perform Self-diagnosis, according to the following steps:

Self-diagnosis Procedure

Step	Check item	Operation	Judgment	Output sound pattern (■: MAX, ▒: MAX-10dB, No sound: □: 1 cycle) (Sec.) 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5	Next Step	Remarks (The item within the parentheses shows the number of cycles of diagnosis sound output pattern)
-	Preparation	Turn on the radio to check that the speakers are normal.	–		1	After confirming that the sound is output by the driver's seat speaker, proceed to the next step.
1	Self-diagnosis mode startup	Within 5 seconds after starting the engine with all doors except the one on the driver seat side closed, press the door switch 6 times or more during a time interval of 4 seconds.	–		2	• Sometimes, when it becomes dark during the option switch to ACC, the system starts automatically. In such a case, the system returns to ACC. • Self-diagnosis mode starts during the engine is running. If the system starts by ACC without starting the engine in this case, the alignment performed at Step 2 becomes NG because noise cannot be detected.
2	Diagnoses of engine speed signal and the microphone for active noise control system	Identify a sound heard after the notification sound (Step 1).	OK	OK: After the end of the last beep of the triple short beeps heard in Step 1, silence follows for approx. 1 second and a sound is heard according to a check result (Step 3) of the number of cylinders.	3	
			NG	Nothing or by fewer than 11 beeps (1 second of silence)	7	• If NG, a beep is heard for 30 seconds after 10-second silence.
3	Checking the judgment result of the number of cylinders	Identify a sound (Step 2).	GASOLINE	MAX 64 cycles	4	A beep sounds for 60 seconds at maximum in either case.
4	(Interruption of cylinder judge result notification sound)	Press the door switch 6 times or more during a time interval of 4 seconds.	–	1 cycle only	5	The same sound is heard after a lapse of 60 seconds without pressing the door switch. (1 cycle only)
5	Sample sound for the active noise control system	Identify a sound heard after the notification sound (Step 3).	–	x MAX 5 cycles	6	A sample sound (heard for 20 seconds at maximum) that an ON/OFF effect of the active noise control system is imitated. (1 cycle for approx. 4 seconds 5 cycles)
6	End of self-diagnosis	Press the door switch 6 times or more during a time interval of 4 seconds while a prolonged sound is ringing.... Wait for 20 seconds until the sound stops.	–	1 cycle only	End of diagnosis	After the completion of self-diagnosis, the active noise control system starts normal operation. (1 cycle only)
7	Select of the next step ①Distinction of the abnormality ②ON/OFF reshuffling of the ANC function ③End of self-diagnosis	① Within 30 seconds while the prolonged sound is ringing (Step 2), press the door switch 6 times or more during a time interval of 4 seconds.	–	1 cycle only	8	
		② Within 10 seconds while the silence (Step2), press the door switch 6 times or more during a time interval of 4 seconds.	–	1 cycle only	12	After the completion of self-diagnosis, the active noise control system starts normal operation.
		③ Wait for 30 seconds until the prolonged sound stops.	–	1 cycle only	End of diagnosis	
8	Active noise control system microphone check	Identify the sound pattern.	Front microphone: OK Rear microphone: OK	x MAX 12 cycles	9	A beep sounds for 42 seconds at maximum in either case. (1 cycle for approx. 3.5 sec. x 12 cycles)
			Front microphone: NG Rear microphone: OK	x MAX 12 cycles		
			Front microphone: OK Rear microphone: NG	x MAX 12 cycles		
			Front microphone: NG Rear microphone: NG	x MAX 12 cycles		
9	Start of self-diagnosis for engine speed signal (1) or end of self-diagnosis (2)	(1) Within 60 seconds while the prolonged sound is ringing, press the door switch 6 times or more during a time intervals of 4 seconds.	–	1 cycle only	10	After the completion of self-diagnosis, the active noise control system starts normal operation. (1 cycle only)
		(2) Wait for 60 seconds until the prolonged sound stops.	–	1 cycle only	End of diagnosis	
10	Engine speed signal check	Identify the sound pattern.	OK	x MAX 60 cycles	11	A beep sounds for 60 seconds at maximum in either case. (1 cycle for approx. 0.75 sec. x 80 cycles)
			NG	Operation by the first beep (1/2 step time: 0.5 seconds) of silence		A beep is heard for 60 seconds after 10-second silence.
11	End of self-diagnosis	Press the door switch 6 times or more during a time interval of 4 seconds. Wait for 60 seconds until the prolonged sound stops.	–	1 cycle only	End of diagnosis	After the completion of self-diagnosis, the active noise control system starts normal operation. (1 cycle only)
12	Confirmation of the ANC control status	Identify the sound pattern.	ANC : ON	x MAX 5 cycles	13	A beep sounds for 15 seconds at maximum in either case.
			ANC : OFF	x MAX 5 cycles		
13	Select of the next step ①ANC setting ②End of self-diagnosis	①Within 15 seconds while the sound is ringing (Step 12), press the door switch 6 times or more during a time interval of 4 seconds.	–	1 cycle only	12	Operating conditions of ANC are replaced after this operation as follows. (Before)→(After) - (ANC ON)→(ANC OFF) - (ANC OFF)→(ANC ON)
		②Wait for 15 seconds until the sound stops.	–	1 cycle only	End of diagnosis	After the completion of self-diagnosis, the active noise control system starts normal operation.

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- When a sound is not outputted from the speakers as a result of the preparation, check the AV control unit, BOSE amp., connector connections, or speakers.
- When Self-diagnosis mode does not start at Step 1, check the door state signal circuit.
- When a malfunction is detected in the microphone at Step 8, check the signal circuit of each microphone.
- When the actual number of cylinders is different from the diagnosis sound of the cylinder identification, check the cylinder identification signal circuit.

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

Reference Value

INFOID:0000000011490648

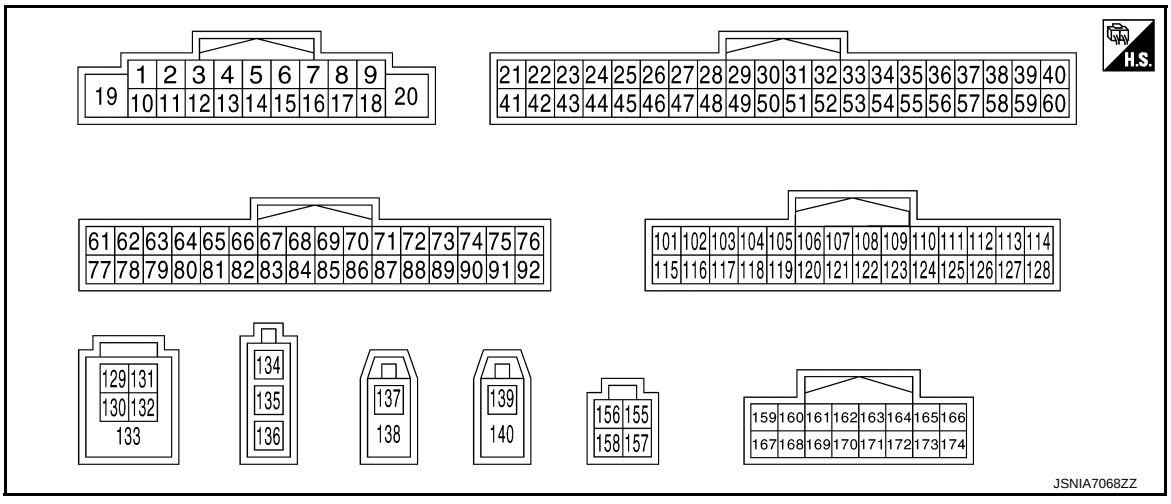
VALUES ON THE DIAGNOSIS TOOL

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

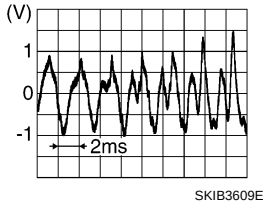
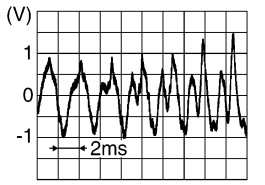
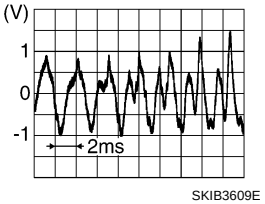
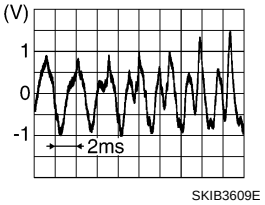
CONSULT MONITOR ITEM

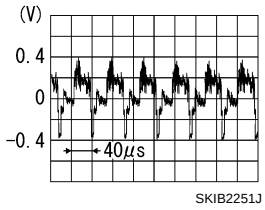
Monitor Item	Condition		Value/Status
VHCL SPD SIG	Ignition switch ON	Vehicle speed > 0 km/h (0 MPH)	On
		Vehicle speed = 0 km/h (0 MPH)	Off
PKB SIG	Ignition switch ON	Parking brake is applied.	On
		Parking brake is released.	Off
ILLUM SIG	Ignition switch ON	Light switch ON	On
		Light switch OFF	Off
IGN SIG	Ignition switch ON	—	On
	Ignition switch ACC	—	Off
REV SIG	Ignition switch ON	Selector lever in 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 not used.	Off

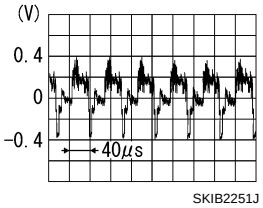
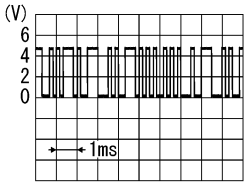
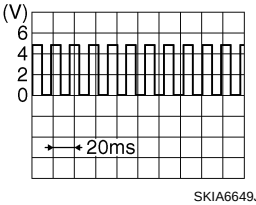
TERMINAL LAYOUT

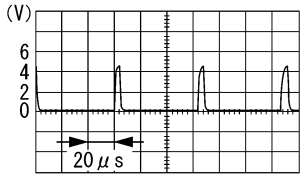
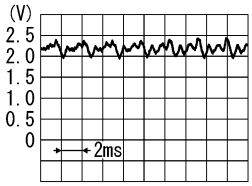
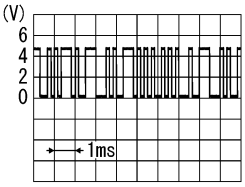
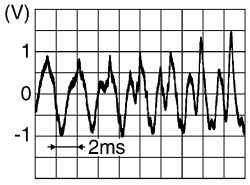
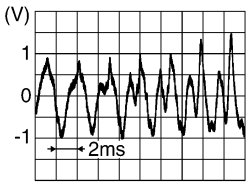


PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1* (V)	Ground	BOSE amp. ON signal	Output	Ignition switch ON	—	11.0 V
2 (L)	3 (P)	Audio signal front LH	Output	Ignition switch ON	Sound output	 SKIB3609E
4* (V)	5* (LG)	Audio signal rear LH	Output	Ignition switch ON	Sound output	 SKIB3609E
6 (V)	15 (GR)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch.	0 V
					Keep pressing SEEK switch to △.	1.0 V
					Keep pressing SEEK switch to ▽.	2.0 V
					Keep pressing switch.	3.0 V
					Keep pressing START / STOP switch.	4.0 V
					Except for above.	5.0 V
7 (V)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
10 (B)	—	Shield	—	—	—	—
11 (R)	12 (G)	Audio signal front RH	Output	Ignition switch ON	Sound output	 SKIB3609E
13* (BR)	14* (Y)	Audio signal rear RH	Output	Ignition switch ON	Sound output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
16 (SB)	15 (GR)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL switch to -.	0 V
					Keep pressing VOL switch to +.	1.0 V
					Keep pressing switch.	2.0 V
					Keep pressing MRK switch.	3.0 V
					Except for above.	5.0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
22 (G)	Ground	Camera power supply	Output	Ignition switch ON	At rear view camera image is displayed.	6.0 V
					Except for above.	0 V
26 (G)	Ground	AUX image signal	Input	Ignition switch ON	At AUX image is displayed.	 SKIB2251J
29 (SB)	Ground	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.	0 V
					Except for above.	5.0 V
42 (R)	Ground	Camera ground	—	Ignition switch ON	—	0 V
46 (R)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
47	—	Shield	—	—	—	—
49 (BR)	Ground	Switch ground	—	Ignition switch ON	—	0 V
52 (W)	Ground	View camera signal	—	Ignition switch ON	—	—
65 (R)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is ON.	4.5 V
					Parking brake is OFF.	0 V
67 (W)	Ground	Composite image 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
71	Ground	Microphone ground	—	Ignition switch ON	—	0 V
72 (L)	Ground	Microphone VCC	Output	Ignition switch ON	—	5.0 V
73 (V)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
74 (P)	—	CAN–L	Input/ Output	—	—	—
75 (R)	—	AV communication signal (L)	Input/ Output	—	—	—
76 (R)	—	AV communication signal (L)	Input/ Output	—	—	—
79 (R)	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0 V
					Lighting switch is ON.	12.0 V
80 (W)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
81 (BG)	Ground	Reverse signal	Input	Ignition switch ON	R position	12.0 V
					Other than R position	0 V
82 (V)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** Maximum voltage may be 12.0 V due to specifications (connected units).  SKIA6649J
83	—	Shield	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
84 (B)	Ground	Composite synchronizing signal	Output	Ignition switch ON	—	 SKIA0187E
87 (P)	71	Microphone signal	Input	Ignition switch ON	Give a voice	 PKIB5037J
88	—	Shield	—	—	—	—
89 (SB)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
90 (L)	—	CAN–H	Input/ Output	—	—	—
91 (G)	—	AV communication signal (H)	Input/ Output	—	—	—
92 (G)	—	AV communication signal (H)	Input/ Output	—	—	—
104 (W)	119 (B)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is selected.	 SKIB3609E
117	—	Shield	—	—	—	—
118 (R)	119 (B)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected.	 SKIB3609E
129 (G)	—	USB ground	—	—	—	—
130 (R)	—	USB D–	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
131 (W)	—	V BUS signal	—	—	—	—
132 (L)	—	USB D+	—	—	—	—
133	—	Shield	—	—	—	—
134	Ground	Antenna amp. ON signal	Output	Ignition switch ON	—	12.0 V
135	—	AM–FM main	Input	—	—	—
136	—	FM sub	Input	—	—	—
137	Ground	GPS antenna signal	Input	Ignition switch ON	Not connected to GPS antenna connector	5.0 V
138	—	Shield	—	—	—	—
139	Ground	Satellite antenna signal	Input	Ignition switch ON	Not connected to satellite radio antenna connector.	5.0 V
140	—	Shield	—	—	—	—
157	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	3.3 V
158	Ground	RGB digital image signal (–)	Output	Ignition switch ON	Not connected connector.	3.3 V
159	—	—	—	—	—	—
160 (G)	161 (R)	Voice guidance signal	—	—	—	—
169	—	Shield	—	—	—	—

*: Without active noise control system

Fail-Safe

INFOID:0000000011490649

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 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:0000000011490650

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-96, "DTC Logic"
U1010	CONTROL UNIT (CAN) [1010]	AV-97, "DTC Logic"
U1200	Cont Unit [U1200]	AV-98, "DTC Logic"
U1201	GYRO NO CONN [U1201]	AV-99, "DTC Logic"
U1202	G-SENSOR NO CONN [U1202]	AV-100, "DTC Logic"
U1204	GPS COMM [U1204]	AV-101, "DTC Logic"
U1205	GPS ROM [U1205]	AV-102, "DTC Logic"
U1206	GPS RAM [U1206]	AV-103, "DTC Logic"
U1207	GPS RTC [U1207]	AV-104, "DTC Logic"
U1216	CAN CONT [U1216]	AV-105, "DTC Logic"
U1217	BLUETOOTH MODULE [U1217]	AV-106, "DTC Logic"
U1218	HDD CONN [U1218]	AV-107, "DTC Logic"
U1219	HDD READ [U1219]	AV-108, "DTC Logic"
U121A	HDD WRITE [U121A]	AV-109, "DTC Logic"
U121B	HDD COMM [U121B]	AV-110, "DTC Logic"
U121C	HDD ACCESS [U121C]	AV-111, "DTC Logic"
U121D	DSP CONN [U121D]	AV-112, "DTC Logic"
U121E	DSP COMM [U121E]	AV-113, "DTC Logic"
U1225	USB CONTROLLER [U1225]	AV-114, "DTC Logic"
U1227	DVD COMM [U1227]	AV-115, "DTC Logic"
U1228	SUB CPU CONN [U1228]	AV-116, "DTC Logic"

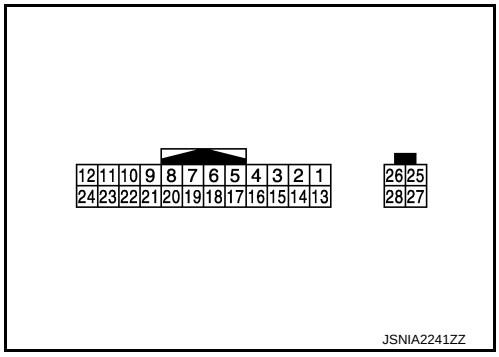
DTC	Display item	Refer to
U1229	iPod CERTIFICATION [U1229]	AV-117, "DTC Logic"
U122A	CONFIG UNFINISH [U122A]	AV-118, "DTC Logic"
U122E	Built-in AUDIO CONN [U122E]	AV-119, "DTC Logic"
U1231	AMP TEMP [U1231]	AV-120, "DTC Logic"
U1232	ST ANGLE SEN CALIB [1232]	AV-120, "DTC Logic"
U1243	FRONT DISP CONN [U1243]	AV-122, "DTC Logic"
U1244	GPS ANTENNA CONN [U1244]	AV-124, "DTC Logic"
U1258	XM ANTENNA CONN [U1258]	AV-125, "DTC Logic"
U1263	USB OVERCURRENT [U1263]	AV-126, "DTC Logic"
U1264	ANTENNA AMP TERMINAL [U1264]	AV-127, "DTC Logic"
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	AV-128, "Description"
U1300 U124E	• AV COMM CIRCUIT [U1300] • AMP CONN [U124E]	AV-128, "Description"
U1310	CONTROL UNIT (AV) [U1310]	AV-129, "DTC Logic"
U1601	FL-DOOR WOOFER [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1601]	AV-130, "DTC Logic"
U1602	FL-DOOR SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1602]	AV-131, "DTC Logic"
U1609	FR-DOOR WOOFER [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1609]	AV-130, "DTC Logic"
U160A	FR-DOOR SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U160A]	AV-131, "DTC Logic"
U162A	F-INST C-SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U162A]	AV-132, "DTC Logic"
U1722	R-PSHELF L-SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1722]	AV-133, "DTC Logic"
U172A	R-PSHELF R-SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHORT] [U172A]	AV-133, "DTC Logic"
U1725	R-PSHELF C-WOOFER [OPEN, SHORT, GND-SHORT or VB-SHORT] [U1725]	AV-134, "DTC Logic"
U190C	CORRECT MICROPHONE [U190C]	AV-135, "DTC Logic"

DISPLAY UNIT

Reference Value

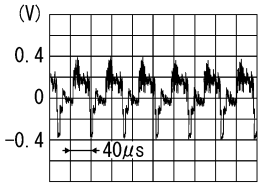
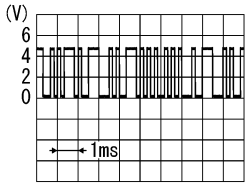
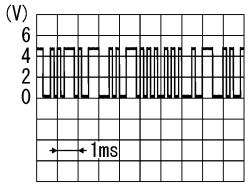
INFOID:0000000011490651

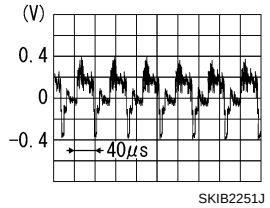
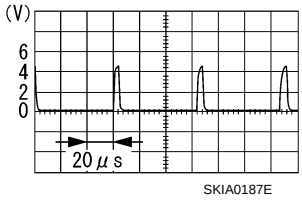
TERMINAL LAYOUT



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 rear view camera image is displayed.	 SKIB2251J
9 (SB)	Ground	Communication signal (DISP→CONT)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
10 (V)	Ground	Communication signal (CONT→DISP)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (R)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
19 (W)	Ground	Composite image ground	—	Ignition switch ON	—	0 V
20 (B)	Ground	Composite synchronizing signal	Input	Ignition switch ON	—	 SKIA0187E
22	—	Shield	—	—	—	—
23 (P)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
27	—	RGB digital image signal (+)	Input	—	—	—
28	—	RGB digital image signal (–)	Input	—	—	—
29	—	—	—	—	—	—

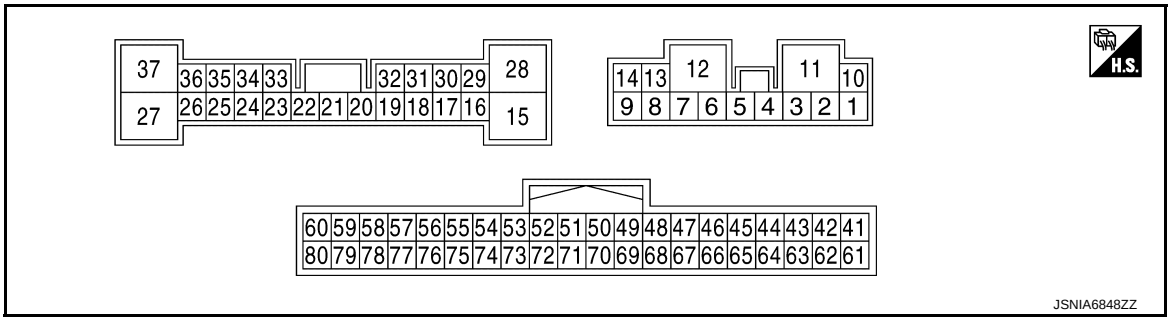
BOSE AMP.

WITH ACTIVE NOISE CONTROL SYSTEM

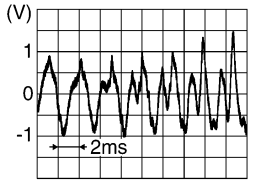
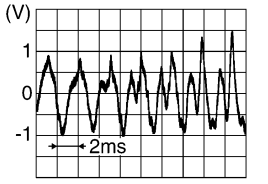
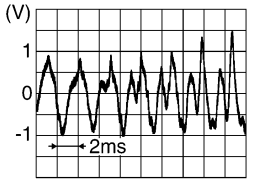
WITH ACTIVE NOISE CONTROL SYSTEM : Reference Value

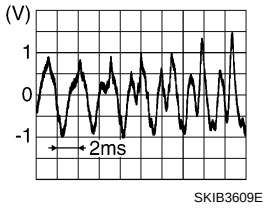
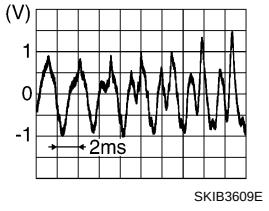
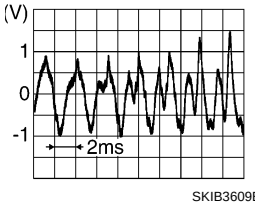
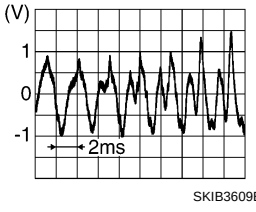
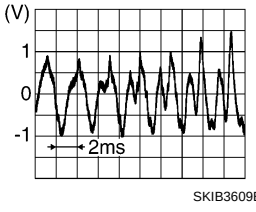
INFOID:0000000011490652

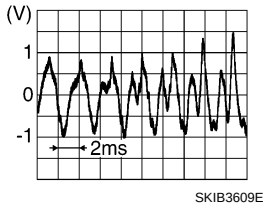
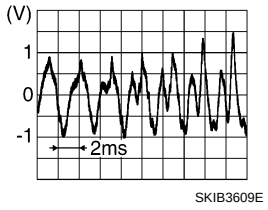
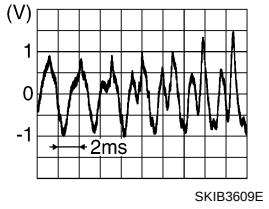
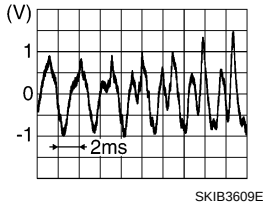
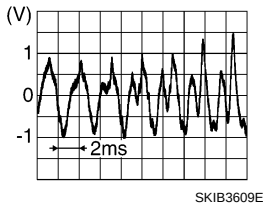
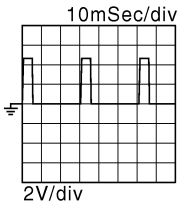
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (Y)	2 (LG)	Audio signal front door speaker RH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
3 (SB)	4 (BR)	Audio signal front door squawker RH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
5 (R)	6 (G)	Audio signal front door speaker LH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
13 (BG)	8 (GR)	Audio signal front door squawker LH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
15 (W)	Ground	Woofer amp. ON signal	Output	Ignition switch ON	—	12.0 V
16 (V)	29 (LG)	Audio signal rear speaker LH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
17 (V)	18 (W)	Audio signal center speaker	Output	Ignition switch ON	Audio signal output	 SKIB3609E
24 (P)	35 (SB)	Audio signal woofer	Output	Ignition switch ON	Audio signal output	 SKIB3609E
31 (LG)	30 (BG)	Audio signal rear speaker RH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
54 (R)	—	AV communication signal (L)	Input/ Output	—	—	—
56 (V)	Ground	ACC power supply	Input	Ignition switch ON	—	12.0 V

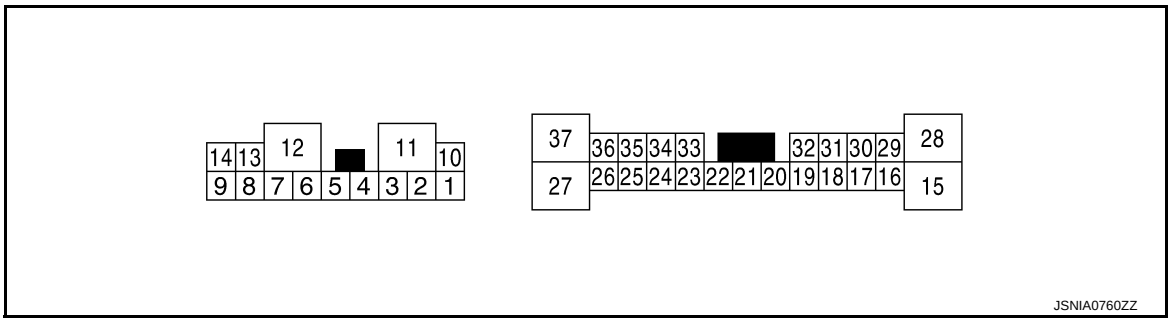
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
63 (R)	43 (B)	Rear microphone signal	Input	Ignition switch ON	When inputting interior sound	 SKIB3609E
64 (G)	44 (R)	Voice guidance signal	Input	Ignition switch ON	Sound output	 SKIB3609E
65 (L)	45 (P)	Audio signal LH	Input	Ignition switch ON	Audio signal output	 SKIB3609E
66 (R)	46 (G)	Audio signal RH	Input	Ignition switch ON	Audio signal output	 SKIB3609E
72 (SB)	52 (B)	Front microphone signal	Input	Ignition switch ON	When inputting interior sound	 SKIB3609E
74 (W)	—	AV communication signal (H)	Input/ Output	—	—	—
76 (W)	Ground	Step lamp signal	Input	Ignition switch ON	When opened any doors	0 V
					When closed all doors	12.0 V
78 (G)	Ground	Engine speed signal	Input	Ignition switch ON	Idle speed	 JMBIA0076GB
79	—	Shield	—	—	—	—

WITHOUT ACTIVE NOISE CONTROL SYSTEM

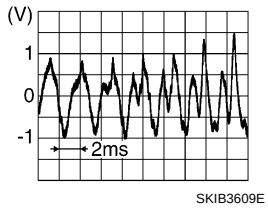
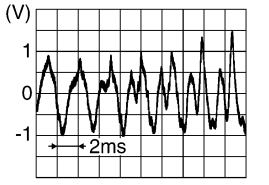
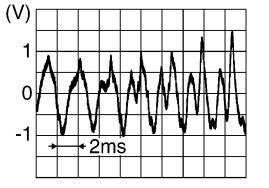
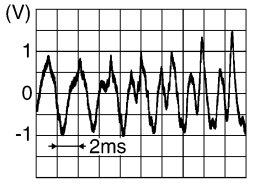
WITHOUT ACTIVE NOISE CONTROL SYSTEM : Reference Value

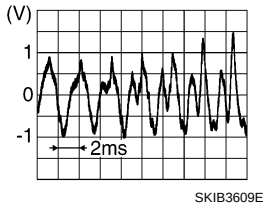
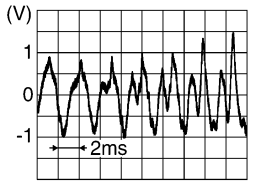
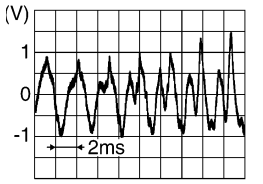
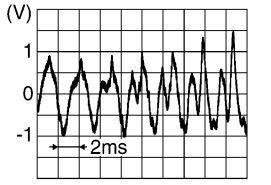
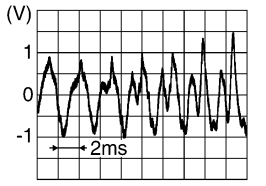
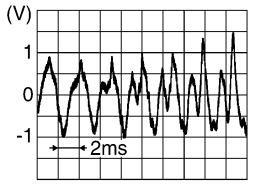
INFOID:0000000011490653

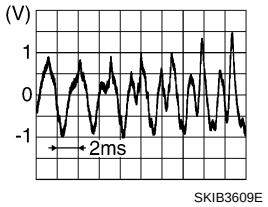
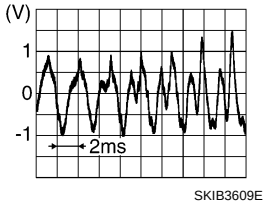
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (R)	10 (G)	Audio signal front door speaker LH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
2 (Y)	3 (LG)	Audio signal front door speaker RH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
4 (BG)	5 (GR)	Audio signal front door squawker LH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
6 (V)	7 (LG)	Audio signal rear speaker LH	Output	Ignition switch ON	Audio signal output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
8 (SB)	13 (BR)	Audio signal front door squawker RH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
9 (P)	14 (SB)	Audio signal woofer	Output	Ignition switch ON	Audio signal output	 SKIB3609E
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
15 (V)	28 (W)	Audio signal center speaker	Output	Ignition switch ON	Audio signal output	 SKIB3609E
18 (L)	32 (P)	Audio signal front LH	Input	Ignition switch ON	Audio signal output	 SKIB3609E
19 (R)	20 (G)	Audio signal front RH	Input	Ignition switch ON	Audio signal output	 SKIB3609E
21 (V)	22 (SB)	Audio signal rear LH	Input	Ignition switch ON	Audio signal output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
23 (BR)	33 (Y)	Audio signal rear RH	Input	Ignition switch ON	Audio signal output	 SKIB3609E
25 (W)	Ground	Woofer amp. ON signal	Output	Ignition switch ON	—	12.0 V
31 (V)	Ground	BOSE amp. ON signal	Input	Ignition switch ON	—	11.0 V
37 (LG)	27 (BG)	Audio signal rear speaker RH	Output	Ignition switch ON	Audio signal output	 SKIB3609E

WIRING DIAGRAM

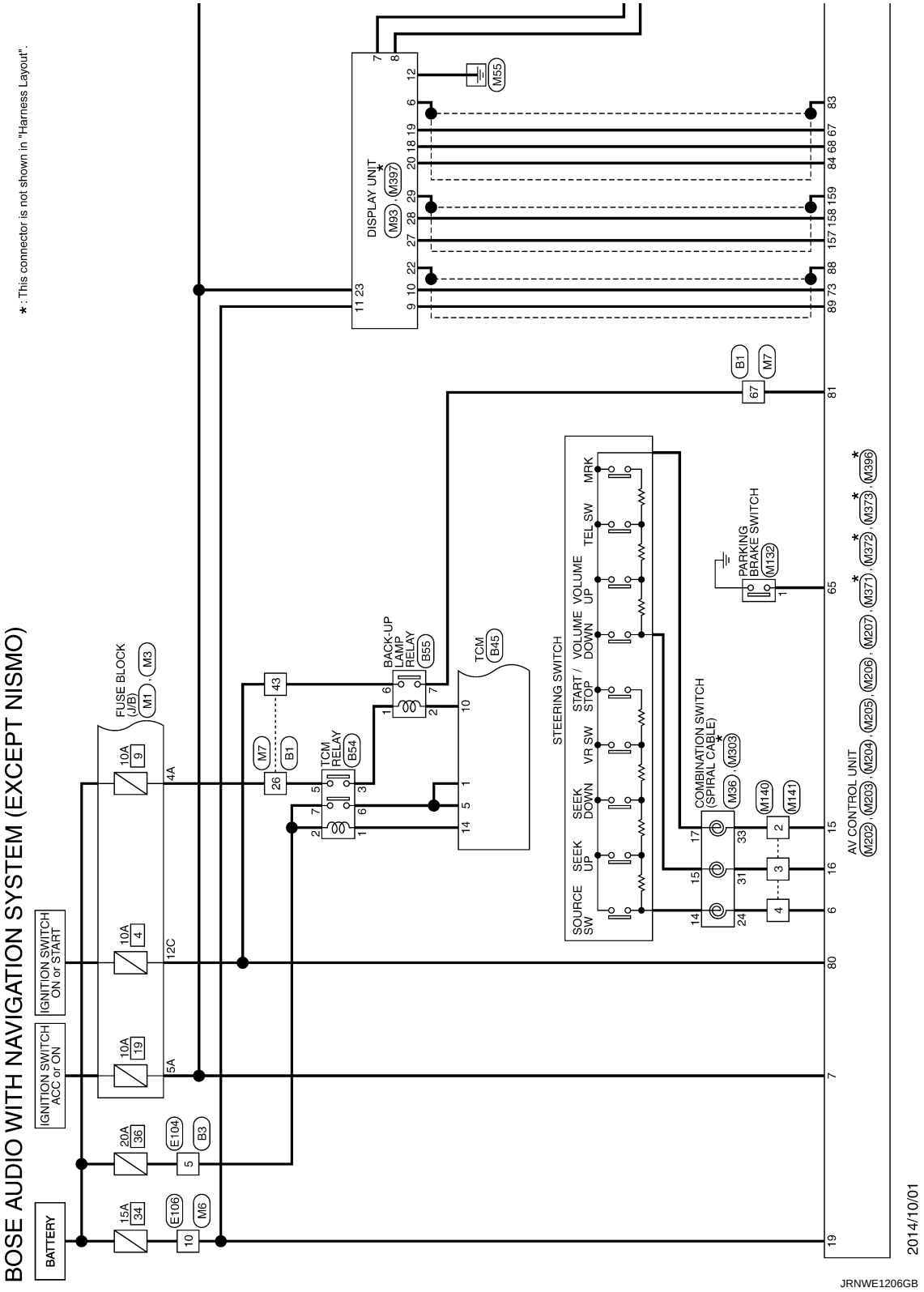
BOSE AUDIO AND NAVIGATION SYSTEM

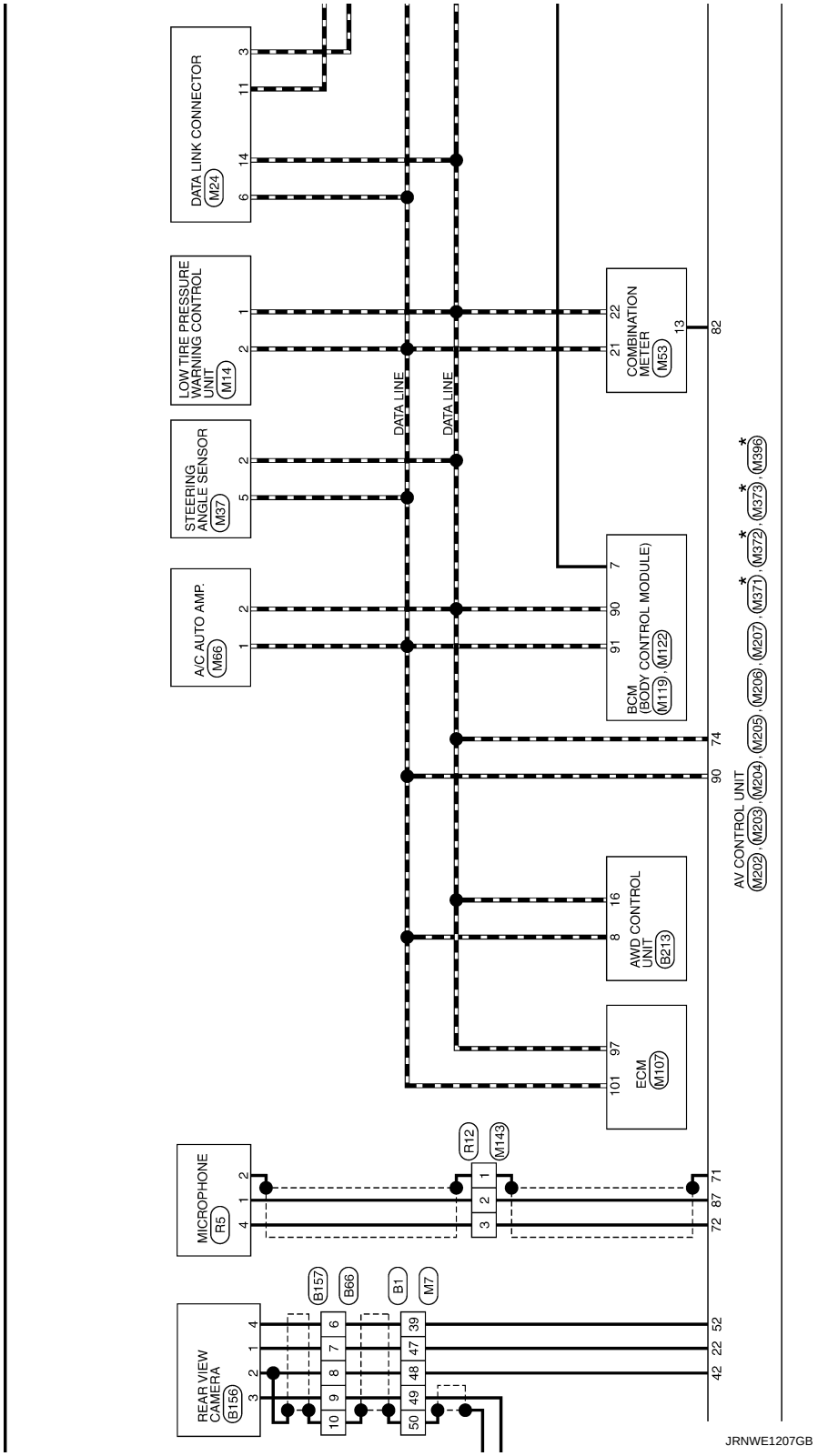
Wiring Diagram

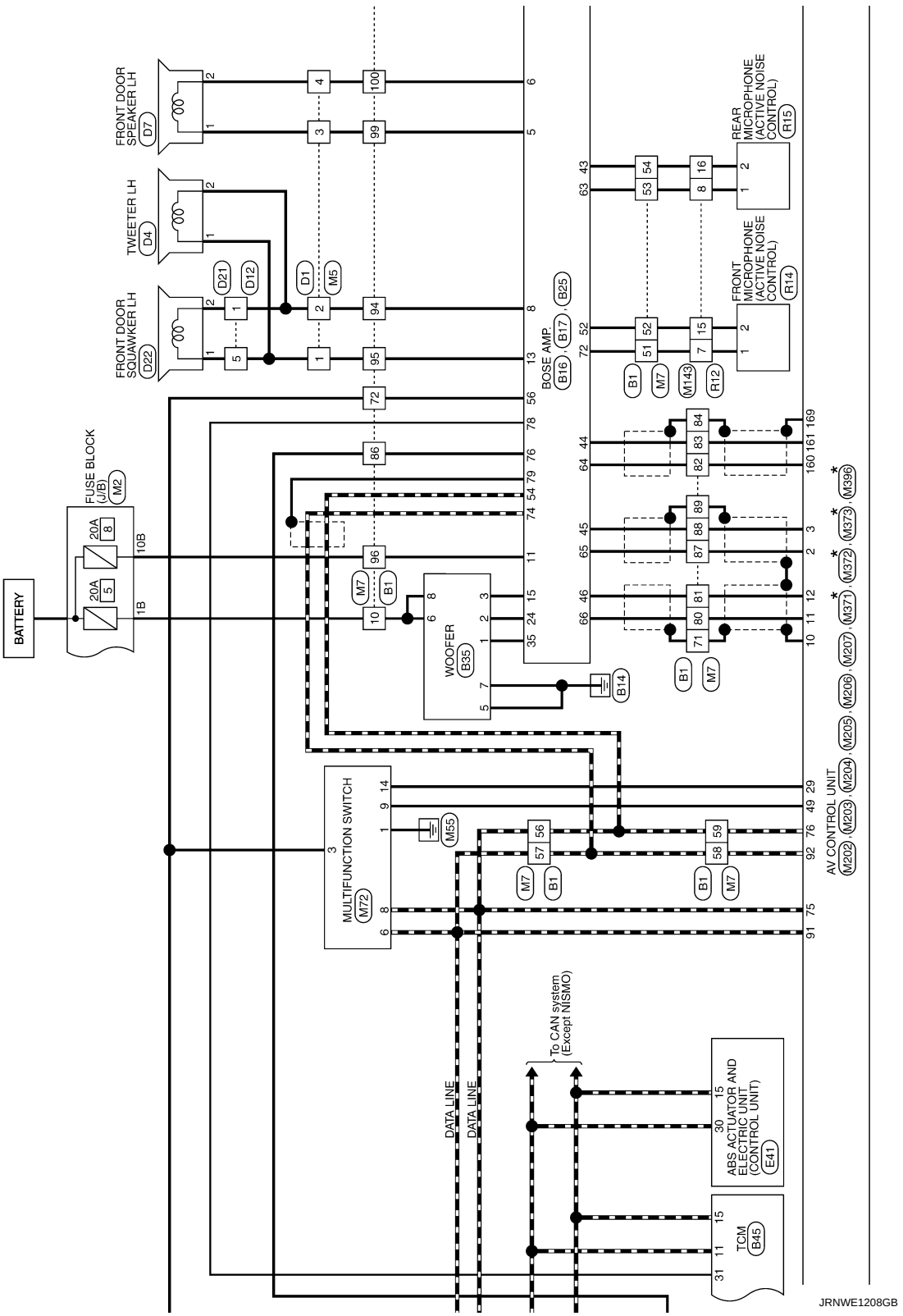
INFOID:0000000011490654

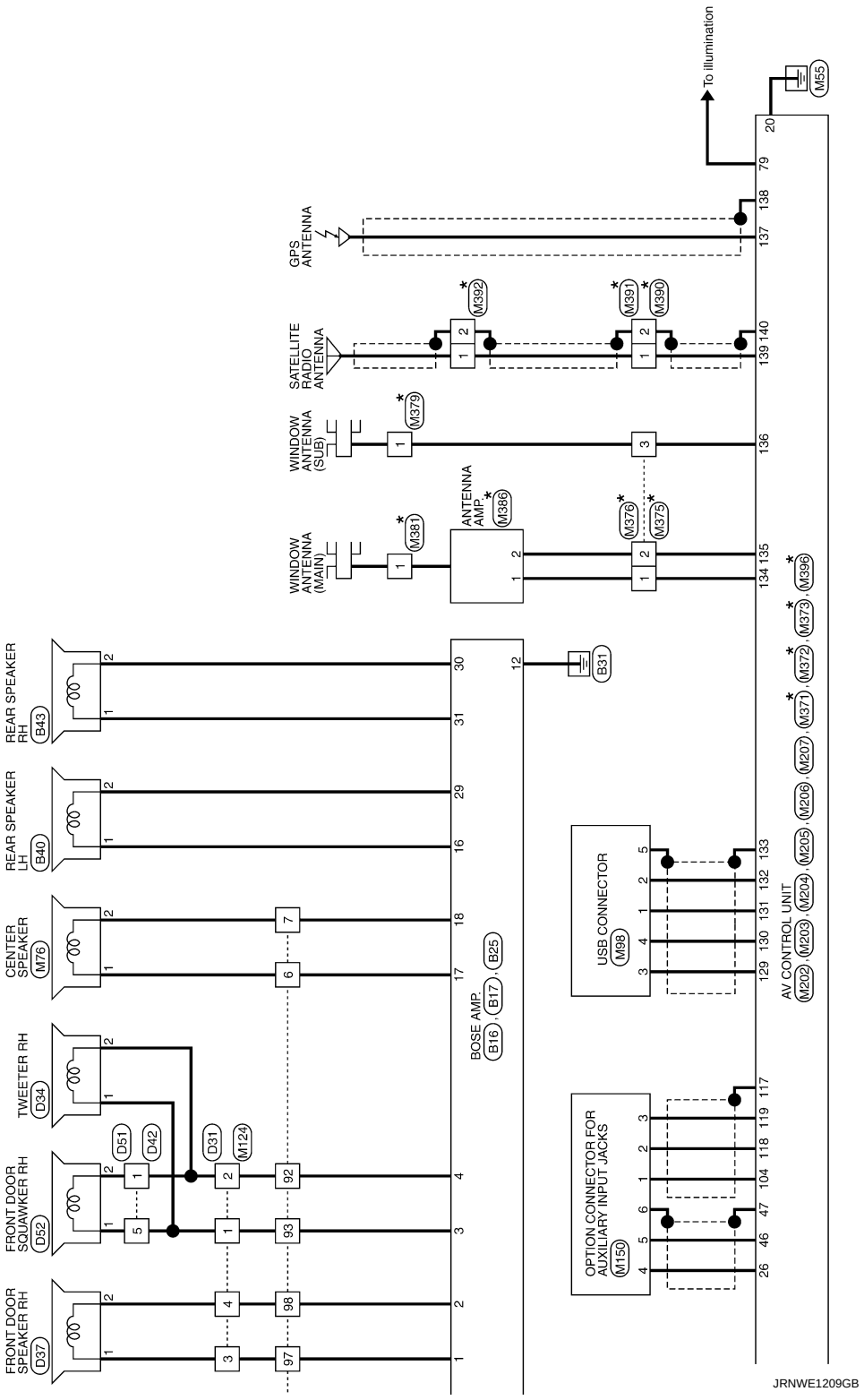
NOTE:
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.

Except NISMO




DATA LINK CONNECTOR M24
LOW TIRE PRESSURE WARNING CONTROL UNIT M14
STEERING ANGLE SENSOR M37
A/C AUTO AMP. M66
DATA LINE
DATA LINE
COMBINATION METER M53
BCM (BODY CONTROL MODULE) M119, M122
AWD CONTROL UNIT B213
ECM M107
AV CONTROL UNIT M202, M203, M204, M205, M206, M207, M371, M372, M373, M396
MICROPHONE R5
R12
M143
REAR VIEW CAMERA B156
B157
B66
B1
M7
JRNWE1207GB


FRONT DOOR SPEAKER LH D7
TWEETER LH D4
FRONT DOOR SQUAWKER LH D22
FUSE BLOCK (J/B) M2
BATTERY
WOOFER B35
MULTIFUNCTION SWITCH M72
BOSE AMP. B16, B17, B25
REAR MICROPHONE (ACTIVE NOISE CONTROL) R15
FRONT MICROPHONE (ACTIVE NOISE CONTROL) R14
AV CONTROL UNIT M202, M203, M204, M205, M206, M207, M371, M372, M373, M396
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E41
TCM B45
DATA LINE
DATA LINE
To CAN system (Except NISMO)
JRNWE1208GB


To illumination
M55
20
79
GPS ANTENNA
138
137
SATELLITE RADIO ANTENNA
M392
M391
M390
139 140
WINDOW ANTENNA (SUB)
M379
136
WINDOW ANTENNA (MAIN)
M381
ANTENNA AMP.
M386
M376
M375
134 135
M396
M379
M372
M371
M207
M206
M205
M204
M203
M202
AV CONTROL UNIT
129 130 131 132 133
USB CONNECTOR
M98
OPTION CONNECTOR FOR AUXILIARY INPUT JACKS
M150
26 46 47 104 118 119 117
B31
12
BOSE AMP.
B16
B17
B25
30 31 29 16 18 17 4 3 2 1
REAR SPEAKER RH
B43
REAR SPEAKER LH
B40
CENTER SPEAKER
M76
TWEETER RH
D34
FRONT DOOR SQUAWKER RH
D52
FRONT DOOR SPEAKER RH
D37
D51
D42
D31
M124
7
6
92
93
98
97
JRNWE1209GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	-
3	P	-
6	V	-
7	W	-
8	Y	-
9	Y	-
10	R	-
11	Y	-
12	GR	-
13	BG	-
14	Y	-
15	BR	-
16	R	-
17	W	-
18	BR	-
20	GR	-
21	SB	-
22	W	-
23	G	-
24	BG	-
25	L	-
26	P	-
27	GR	-
28	BG	-
31	GR	-
32	L	-
33	V	-
34	BG	-
39	G	-
40	LG	-
41	Y	-
42	SB	-
43	P	-
47	R	-
48	B	-
49	W	-
50	SHIELD	-
51	SB	-
52	B	-
53	R	-
54	B	-
56	R	-
57	G	-
58	G	-
59	R	-
60	BR	-
61	Y	-
62	SHIELD	-
63	LG	-
64	R	-
65	G	-
66	BR	-
67	BG	-
69	P	-
70	L	-
71	SHIELD	-
72	SHIELD	- [Without active noise control unit] - [With active noise control unit]
72	V	
73	SB	-
76	R	-
77	SB	-
78	G	-
79	Y	-
80	R	-
81	G	-
82	BR	- [Without active noise control unit] - [With active noise control unit]
82	G	
83	R	- [With active noise control unit]
83	Y	- [Without active noise control unit]
84	SHIELD	-
85	V	-
86	SB	- [Without active noise control unit]
86	W	- [With active noise control unit]
87	L	-
88	P	-
89	SHIELD	-
90	V	-
92	BR	-
93	SB	-
94	GR	-
95	BG	-
96	Y	-
97	Y	-
98	LG	-
99	R	-
100	G	-

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	BG	-
3	BR	-
4	Y	-
5	R	-
6	P	-
7	W	-
8	SB	-
9	LG	-
10	V	-
11	GR	-
12	G	-

Connector No.	B16
Connector Name	BOSE AMP.
Connector Type	SGA12FBR-SJA2

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	AUDIO SIGNAL FRONT DOOR SPEAKER RH
2	LG	AUDIO SIGNAL FRONT DOOR SPEAKER RH (-)
3	SB	AUDIO SIGNAL FRONT DOOR SQUAWKER RH
4	BR	AUDIO SIGNAL FRONT DOOR SQUAWKER RH (-)
5	R	AUDIO SIGNAL FRONT DOOR SPEAKER LH
6	G	AUDIO SIGNAL FRONT DOOR SPEAKER LH (-)
8	GR	AUDIO SIGNAL FRONT DOOR SQUAWKER LH (-)
11	Y	BATTERY POWER SUPPLY
12	B	GROUND
13	BG	AUDIO SIGNAL FRONT DOOR SQUAWKER LH

Connector No.	B17
Connector Name	BOSE AMP.
Connector Type	SCA19FBR-SGA4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
15	W	WOOFER AMP. ON SIGNAL
16	V	AUDIO SIGNAL REAR SPEAKER LH
17	V	AUDIO SIGNAL CENTER SPEAKER
18	W	AUDIO SIGNAL CENTER SPEAKER (-)
24	P	AUDIO SIGNAL WOOFER
29	LG	AUDIO SIGNAL REAR SPEAKER LH (-)
30	BG	AUDIO SIGNAL REAR SPEAKER RH (-)
31	LG	AUDIO SIGNAL REAR SPEAKER RH
35	SB	AUDIO SIGNAL WOOFER (-)

Connector No.	B25
Connector Name	BOSE AMP.
Connector Type	TH40FW-NH

H.S.

JRNWE1210GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Terminal No.	Color Of Wire	Signal Name [Specification]
43	B	REAR MICROPHONE SIGNAL GROUND
44	R	VOICE GUIDANCE SIGNAL (-)
45	P	AUDIO SIGNAL LH (-)
46	G	AUDIO SIGNAL RH (-)
52	B	FRONT MICROPHONE SIGNAL GROUND
54	R	AV COMMUNICATION SIGNAL (L)
56	V	ACC POWER SUPPLY
63	R	REAR MICROPHONE SIGNAL
64	G	VOICE GUIDANCE SIGNAL (+)
65	L	AUDIO SIGNAL LH
66	R	AUDIO SIGNAL RH
72	SB	FRONT MICROPHONE SIGNAL
74	W	AV COMMUNICATION SIGNAL (H)
76	W	STEP LAMP SIGNAL
78	G	ENGINE SPEED SIGNAL
79	SHIELD	SHIELD

Connector No.	B35
Connector Name	WOOFER
Connector Type	NS08FBR-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	SOUND SIGNAL WOOFER (-)
2	P	SOUND SIGNAL WOOFER (+)
3	W	WOOFER AMP. ON SIGNAL
5	B	GND
6	R	BATTERY
7	B	GND
8	R	BATTERY

Connector No.	B40
Connector Name	REAR SPEAKER LH
Connector Type	TK02FBR

H.S.

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

Connector No.	B43
Connector Name	REAR SPEAKER RH
Connector Type	TK02FBR

H.S.

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

Connector No.	B45
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-LH-Z

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	POWER SUPPLY (MEMORY BACK-UP)-2
3	B	GROUND
4	B	GROUND
5	W	POWER SUPPLY (MEMORY BACK-UP)-3
7	B	GROUND
8	B	GROUND
9	P	POWER SUPPLY (MEMORY BACK-UP)-1
10	LG	BACK-UP LAMP SIGNAL
11	L	CAN-H
14	V	POWER OFF
15	P	CAN-L
16	W	STOP LAMP SWITCH SIGNAL
17	Y	IGNITION SWITCH SIGNAL
19	GR	STARTER RELAY SIGNAL
23	BR	AUTO/MANUAL RANGE CHANGE SWITCH 1 SIGNAL
25	L	RANGE SENSOR POWER SOURCE 1
26	LG	RANGE SENSOR POWER SOURCE 2
27	G	RANGE SENSOR NO. - SIGNAL
28	V	AUTO/MANUAL RANGE CHANGE SWITCH 2 SIGNAL
31	SB	ENGINE SPEED SIGNAL
33	V	RANGE SENSOR NO.1 SIGNAL
34	BG	SAVE MODE SWITCH SIGNAL
35	G	RANGE SENSOR NO.3 SIGNAL
37	GR	R MODE SWITCH SIGNAL
38	R	RANGE SENSOR NO.2 SIGNAL
39	W	PADDLE SHIFTER (SHIFT-UP SWITCH) SIGNAL
42	L	PADDLE SHIFTER (SHIFT-DOWN SWITCH) SIGNAL
43	P	RANGE SENSOR NO.4 SIGNAL
44	GR	RANGE SENSOR NO.5 SIGNAL
45	BG	R MODE LAMP SIGNAL
46	W	SHIFT LOCK SOLENOID CONTROL SIGNAL
47	G	SAVE MODE LAMP SIGNAL

Connector No.	B54
Connector Name	TCM RELAY
Connector Type	M06FBR-R-LC

H.S.

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

Connector No.	B55
Connector Name	BACK-UP LAMP RELAY
Connector Type	M06FBR-R-LC

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	LG	-
6	P	-
7	Y	-

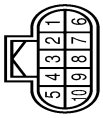
JRNWE1211GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Connector No.	B66
Connector Name	WIRE TO WIRE
Connector Type	RH10MB

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

Connector No.	B157
Connector Name	WIRE TO WIRE
Connector Type	RH10FB

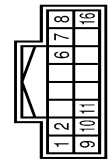


Terminal No.	Color Of Wire	Signal Name [Specification]
2	R	-
3	B	-
4	W	-
5	B	-
6	G	-
7	R	-
8	B	-
9	W	-
10	SHIELD	-

Connector No.	B156
Connector Name	REAR VIEW CAMERA
Connector Type	RH04MB

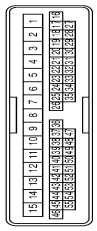
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	CAMERA POWER SUPPLY
2	B	CAMERA GROUND
3	W	CAMERA+
4	G	CAMERA IMAGE SIGNAL

Connector No.	B213
Connector Name	AWD CONTROL UNIT
Connector Type	TH16FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	SOL+
2	G	SOL-
6	V	-
7	W	IGN
8	L	CAN-H
9	Y	SOLVB
10	B	GROUND
11	B	GROUND
16	P	CAN-L

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



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	G	-
3	L	-
4	W	-
6	Y	-
7	G	-
8	V	-
9	R	-
10	W	-
11	V	-
12	O	-
13	LG	-
14	SB	-
15	B	-
16	G	-
17	R	-
27	SHIELD	-
36	O	-
38	W	-
40	GR	-
41	GR	-
42	BR	-
43	SB	-
44	L	-
45	Y	-
46	R	-
47	V	-
48	LG	-
50	R	-
54	W	-
55	G	-

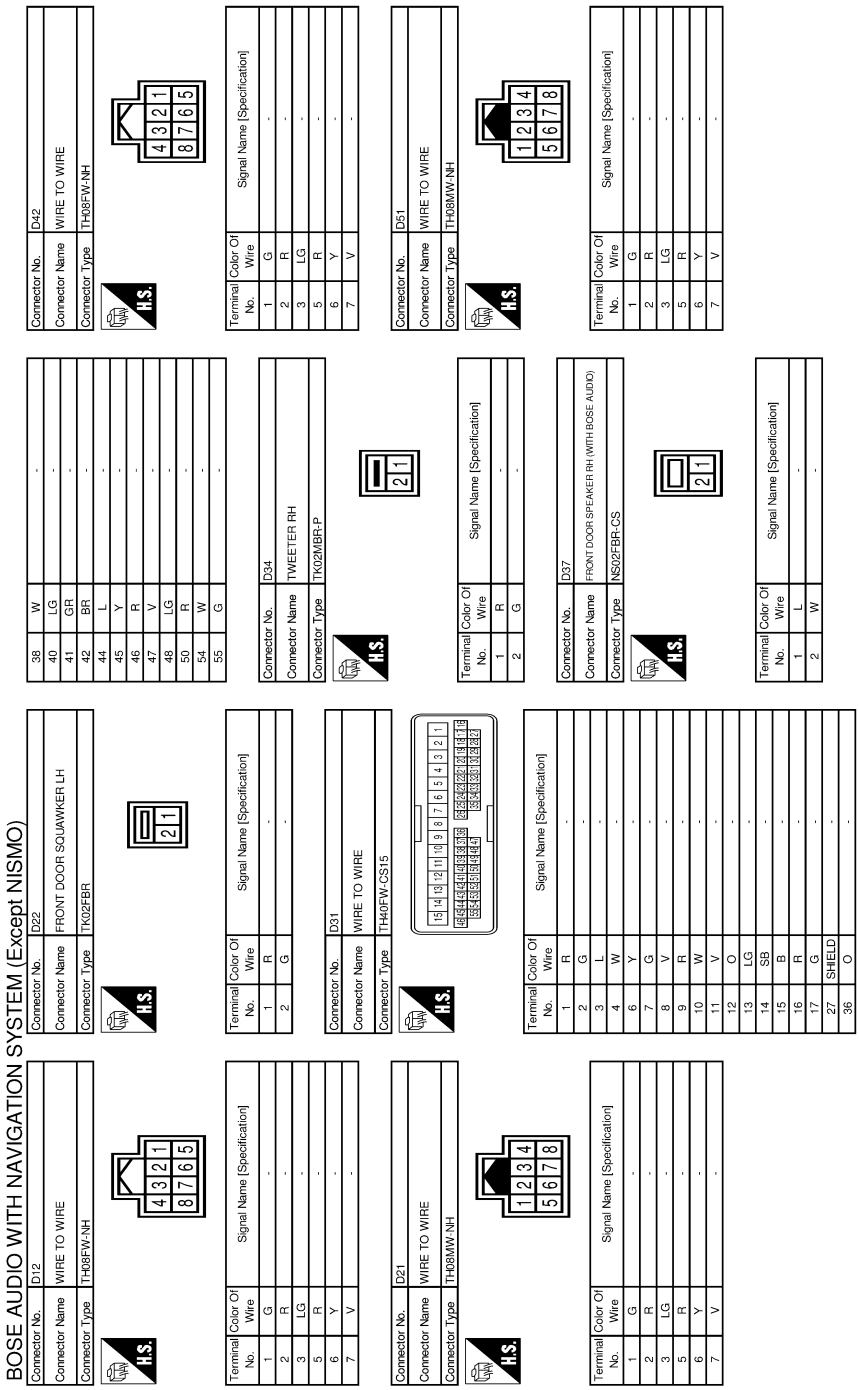
Connector No.	D4
Connector Name	TWEETER LH
Connector Type	TK02MBR-P

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

Connector No.	D7
Connector Name	FRONT DOOR SPEAKER LH (WITH BOSE AUDIO)
Connector Type	NS02FBR-CS

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

JRNWE1212GB



JRNWE1213GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Connector No.	D52
Connector Name	FRONT DOOR SQUAWKER RH
Connector Type	TK02FBR

H.S.

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

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	AE243FB-AJZ4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	UBMR
2	V	DIAG-K
3	GR	VDC OFF SW
4	W	BLS
6	G	VDC UP SW
11	Y	CAN-H
15	P	CAN-L
16	B	GROUND
26	W	CAN-L
27	BR	G SENSOR GROUND
29	BG	UZ
30	L	CAN-H
32	BG	UBVR
33	W	DS FR
34	BG	DP FR
35	Y	VDC TOP POSITION LED
36	L	DP RL
37	R	DS RL

38	V	BRAKE FLUID LEVEL SW
39	G	G SENSOR POWER
42	V	DS RR
43	LG	DP RR
44	SB	VDC TOP POSITION LED
45	W	DP FL
46	R	DS FL
47	B	GROUND

Connector No.	E104
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

H.S.

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

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

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

38	SB	-
39	GR	-
40	G	-
41	V	-
42	V	-
43	L	-
44	BR	-
45	G	-
46	SB	-
48	BG	-
49	L	-
50	R	-
51	SHIELD	-
60	P	-
61	L	-
71	LG	-
72	SB	-
74	P	-
75	BR	-
76	LG	-
77	V	-
78	BR	-
79	W	-
80	Y	-
81	GR	-
82	BG	-
84	P	-
85	P	-
86	GR	-
87	R	-
88	L	-
89	BG	-
90	G	-
91	GR	-
92	R	-
93	R	-
94	LG	-
95	G	-
96	GR	-
97	L	-
98	LG	-
99	BG	-
100	L	-

JRNWE1214GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

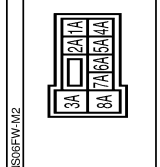
Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1A	V	-
2A	G	-
3A	L	-
4A	LG	-
5A	SB	-
6A	Y	-
7A	R	-
8A	L	-

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

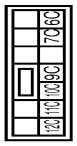
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
10B	Y	-
1B	R	-
3B	P	-
4B	G	-
5B	BG	-
6B	Y	-
7B	R	-
8B	R	-
9B	SB	-

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

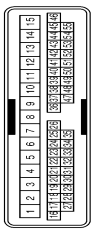
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	L	-
11C	R	-
12C	W	-
6C	R	-
7C	B	-
9C	BR	-

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

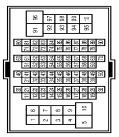
H.S.



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

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.



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

16	BR	-
17	Y	-
27	SHIELD	-
36	L	-
38	V	-
40	GR	-
41	P	-
42	BR	-
43	SB	-
44	L	-
45	Y	-
46	BG	-
47	V	-
48	LG	-
50	R	-
54	W	-
55	G	-

19	P	-
20	B	-
21	W	-
22	GR	-
23	L	-
24	V	-
25	BR	-
26	G	-
27	SHIELD	-
28	G	-
29	R	-
30	W	-
31	V	-
32	G	-
33	GR	-
34	LG	-
35	P	-
36	L	-
37	W	-
38	Y	-
39	GR	-
40	BG	-
41	W	-
42	R	-
43	Y	-
44	BR	-
45	G	-
46	LG	-
48	W	-
49	L	-
50	R	-
51	SHIELD	-
60	SB	-
61	V	-
71	W	-
72	LG	-
74	R	-
75	BR	-
76	LG	-
77	R	-
78	BR	-
79	W	-
80	Y	-
81	BG	-
82	SB	-
84	Y	-
85	P	-
86	GR	-
87	R	-
88	L	-

JRNWE1215GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

89	G	-
90	P	-
91	W	-
92	R	-
93	LG	-
94	W	-
95	SB	-
96	L	-
97	L	-
98	Y	-
99	BG	-
100	L	-

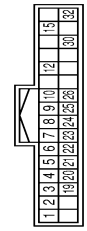
27	W	-
28	R	-
31	GR	-
32	L	-
33	V	-
34	BG	-
39	W	-
40	BG	-
41	R	-
42	V	-
43	W	-
47	G	-
48	R	-
49	W	-
50	SHIELD	-
51	SB	-
52	B	-
53	R	-
54	B	-
56	R	-
57	G	-
58	G	-
59	R	-
60	BR	-
61	Y	-
62	SHIELD	-
63	GR	-
64	R	-
65	G	-
66	BR	-
67	BG	-
69	P	-
70	L	-
71	SHIELD	-
72	SHIELD	- [Without active noise control unit]
72	V	- [With active noise control unit]
73	LG	-
76	R	-
77	SB	-
78	G	-
79	Y	-
80	R	-
81	G	-
82	BR	- [Without active noise control unit]
82	G	- [With active noise control unit]
83	R	- [With active noise control unit]
83	Y	- [Without active noise control unit]
84	SHIELD	-
85	V	-
86	LG	- [Without active noise control unit]

86	W	- [With active noise control unit]
87	L	-
88	P	-
89	SHIELD	-
90	V	-
92	LG	-
93	Y	-
94	G	-
95	R	-
96	Y	-
97	R	-
98	G	-
99	L	-
100	W	-

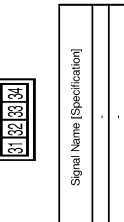
30	G	FLASHER SIG
32	B	GROUND

Connector No. M7
Connector Name WIRE TO WIRE
Connector Type TH80MW-CS16-TM4

Connector No. M14
Connector Name LOW TIRE PRESSURE WARNING CONTROL UNIT
Connector Type TH32FW-NH



Connector No. M24
Connector Name DATA LINK CONNECTOR
Connector Type BD16FW



Connector No. M36
Connector Name COMBINATION SWITCH (SPIRAL CABLE)
Connector Type TK08FGY-1V

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	CAN-L
2	L	CAN-H
3	BG	RR TUNER (SIG)
4	L	RL TUNER (SIG)
5	R	FR TUNER (SIG)
6	W	FL TUNER (SIG)
7	SB	RR TUNER (PWR)
8	GR	RL TUNER (PWR)
9	R	FR TUNER (PWR)
10	LG	FL TUNER (PWR)
12	W	SW SIG
15	G	IGN
19	R	RR TUNER (RSSI)
20	BG	RL TUNER (RSSI)
21	P	FR TUNER (RSSI)
22	G	FL TUNER (RSSI)
23	GR	RR TUNER (GND)
24	V	RL TUNER (GND)
25	L	FR TUNER (GND)
26	BR	FL TUNER (GND)

Terminal No.	Color Of Wire	Signal Name [Specification]
3	R	-
4	B	-
5	B	-
6	L	-
7	V	-
8	G	-
11	G	-
14	P	-
16	Y	-

Terminal No.	Color Of Wire	Signal Name [Specification]
24	V	-
25	G	-
26	Y	-
31	SB	-
32	R	-
33	GR	-
34	W	-

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BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Connector No.	M37
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	P	CAN-L
4	BG	IGN
5	L	CAN-H

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	BATTERY POWER SUPPLY
2	W	IGNITION POWER SUPPLY
3	B	GROUND
4	B	ILLUMINATION GROUND
5	B	GROUND
6	W	METER CONTROL SWITCH GROUND
7	Y	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
8	SB	AMBIENT SENSOR GROUND
9	P	AMBIENT SENSOR SIGNAL
12	L	VEHICLE SPEED SIGNAL (2-PULSE)
13	V	VEHICLE SPEED SIGNAL (8-PULSE)
14	B	OIL PRESSURE SENSOR GROUND
15	R	AIR BAG SIGNAL
16	R	LED HEAD LAMP (RH) WARNING SIGNAL
18	L	FUEL LEVEL SENSOR GROUND
19	R	OIL LEVEL SENSOR GROUND

Terminal No.	Color Of Wire	Signal Name [Specification]
20	W	OIL LEVEL SENSOR SIGNAL
21	L	CAN-H
22	P	CAN-L
23	LG	ILLUMINATION CONTROL SWITCH SIGNAL (-)
24	BR	ILLUMINATION CONTROL SWITCH SIGNAL (+)
25	G	TRIP A/B RESET SWITCH SIGNAL
26	BG	ENTER SWITCH SIGNAL
27	SB	SELECT SWITCH SIGNAL
28	BR	ALTERNATOR
29	G	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)
30	LG	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
31	V	PARKING BRAKE SWITCH SIGNAL
32	V	BRAKE FLUID LEVEL SWITCH SIGNAL
33	L	WASHER LEVEL SWITCH SIGNAL
34	GR	OIL PRESSURE SWITCH SIGNAL
35	W	OIL PRESSURE SENSOR SIGNAL
38	BG	FUEL LEVEL SENSOR SIGNAL
39	Y	LED HEAD LAMP (LH) WARNING SIGNAL
40	V	ILLUMINATION CONTROL

Connector No.	M66
Connector Name	A/C AUTO AMP.
Connector Type	SAB40FW

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
10	L	A/C LAN SIGNAL
11	R	EACH DOOR MOTOR POWER SUPPLY
15	BG	SUNLOAD SENSOR SIGNAL
16	R	INTAKE SENSOR SIGNAL
17	SB	ACC POWER SUPPLY
19	B	GROUND
20	G	IGNITION POWER SUPPLY
24	BG	ECV SIGNAL
32	L	BLOWER MOTOR CONTROL SIGNAL
34	Y	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
35	P	AMBIENT SENSOR SIGNAL
36	LG	IN-VEHICLE SENSOR SIGNAL
37	BG	SENSOR GROUND

39	B	GROUND
40	Y	BATTERY POWER SUPPLY

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

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
3	V	ACC
4	P	ILL
5	P	ILL CONT
6	G	AV COMM (H)
8	R	AV COMM (L)
9	BR	SW GND
14	SB	DISK EJECT SIGNAL

Connector No.	M76
Connector Name	CENTER SPEAKER
Connector Type	TK02FBR

H.S.

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

Connector No.	M93
Connector Name	DISPLAY UNIT
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
6	SHIELD	SHIELD
7	SHIELD	SHIELD
8	W	CAMERA IMAGE SIGNAL
9	SB	COMM (DISP-CONT)
10	V	COMM (CONT-DISP)
11	Y	BATTERY
12	B	GROUND
18	R	COMPOSITE IMAGE SIGNAL
19	W	COMPOSITE IMAGE GND
20	B	COMPOSITE SYNCHRONIZING SIGNAL
22	SHIELD	SHIELD
23	P	ACC

Connector No.	M98
Connector Name	USB CONNECTER
Connector Type	HAA04FG

H.S.

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

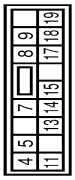
JRNWE1217GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-RZ8-R-LH-Z

Terminal No.	Color Of Wire	Signal Name [Specification]
97	P	CAN COMMUNICATION LINE
99	SB	SENSOR POWER SUPPLY
100	BR	SENSOR POWER SUPPLY
101	L	CAN COMMUNICATION LINE
102	G	ASCD STEERING SWITCH
103	GR	SENSOR GROUND
104	P	ACCELERATOR PEDAL POSITION SENSOR 1
105	W	ECM RELAY (SELF SHUT-OFF)
106	LG	IGNITION SWITCH
107	BG	SENSOR GROUND
108	L	ACCELERATOR PEDAL POSITION SENSOR 2
109	L	SAVALVERLY
110	P	STOP LAMP SWITCH
111	GR	PNP SIGNAL
113	SB	ENGINE SPEED OUTPUT SIGNAL
114	V	DATA LINK CONNECTOR
117	R	ASCD BRAKE SWITCH
118	W	POWER SUPPLY FOR ECM (BACK-UP)
120	BR	SAPM/PRLY
121	P	POWER SUPPLY FOR ECM
122	V	POWER SUPPLY FOR ECM
124	B	ECM GROUND
126	L	FUEL PUMP RELAY
127	G	THROTTLE CONTROL MOTOR RELAY
128	B	ECM GROUND

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS

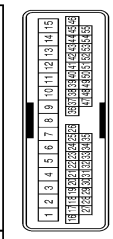


Terminal No.	Color Of Wire	Signal Name [Specification]
4	R	INTERIOR ROOM LAMP POWER SUPPLY
5	G	PASSENGER DOOR UNLOCK OUTPUT
7	Y	STEP LAMP
8	V	ALL DOOR, FUEL LID LOCK OUTPUT
9	G	DRIVER DOOR, FUEL LID UNLOCK OUTPUT
11	R	BAT (FUSE)
13	B	GND
14	P	PUSH-BUTTON IGNITION SW ILL GND
15	Y	ACC IND
17	W	TURN SIGNAL RH (FRONT) OUTPUT
18	BG	TURN SIGNAL LH (FRONT) OUTPUT
19	V	ROOM LAMP TIMER CONTROL

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
72	R	ROOM ANT2-
73	G	ROOM ANT2+
74	SB	PASSENGER DOOR ANT-
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT1-
79	BR	ROOM ANT1+
80	GR	IMMOBI ANTENNA CONTROL
81	L	IMMOBI ANTENNA SIGNAL
82	R	IGN RELAY (F/B) CONT
83	Y	KEYLESS ENTRY RECEIVER COMM
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL OUTPUT
93	V	ON IND
95	BG	ACC RELAY CONT
96	SB	A/T SHIFT SELECTOR POWER SUPPLY
97	L	S/L CONDITION 1
98	R	S/L CONDITION 2
99	G	SHIFT P
100	W	PASSENGER DOOR REQUEST SW
101	V	DRIVER DOOR REQUEST SW
102	BG	BLOWER FAN MOTOR RELAY CONT
103	LG	KEYLESS ENTRY RECEIVER POWER SUPPLY
106	P	S/L UNIT POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW
111	Y	S/L UNIT COMM

Connector No.	M124
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	LG	-
3	R	-
4	G	-
6	Y	-
7	G	-
8	V	-
9	R	-
10	W	-
11	V	-
12	W	-
13	LG	-
14	SB	-
15	B	-
16	R	-
17	G	-
27	SHIELD	-
36	BR	-
38	W	-
40	LG	-
41	P	-
42	BR	-
44	L	-
45	Y	-
46	BG	-
47	SB	-
48	BR	-
50	R	-
54	W	-
55	G	-

Connector No.	M132
Connector Name	PARKING BRAKE SWITCH
Connector Type	P01FB-A

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

JRNWE1218GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Connector No.	M140
Connector Name	WIRE TO WIRE
Connector Type	TH04FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	-
3	SB	-
4	V	-

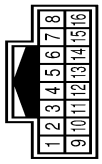
Connector No.	M141
Connector Name	WIRE TO WIRE
Connector Type	THD4MW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	-
3	SB	-
4	V	-

Connector No.	M143
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	-
2	P	-
3	L	-
4	V	-
5	Y	-
6	R	-
7	SB	-
8	R	-
13	B	-
14	GR	-
15	B	-
16	B	-

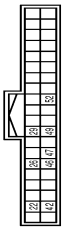
Connector No.	M150
Connector Name	OPTION CONNECTOR FOR AUXILIARY INPUT JACKS
Connector Type	TH08MW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	AUX SOUND SIGNAL LH (+)
2	R	AUX SOUND SIGNAL RH (+)
3	B	AUX SOUND SIGNAL GND
4	G	AUX IMAGE SIGNAL
5	R	AUX IMAGE GND
6	SHIELD	SHIELD

Connector No.	M202
Connector Name	AV CONTROL UNIT
Connector Type	TH40FW-NH

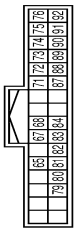
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
22	G	CAMERA POWER SUPPLY
26	G	AUX IMAGE SIGNAL
29	SB	DISK EJECT SIGNAL
42	R	CAMERA GND
46	R	AUX IMAGE GND
47	SHIELD	SHIELD
49	BR	SWITCH GROUND
52	W	RESEVE_03

Connector No.	M203
Connector Name	AV CONTROL UNIT
Connector Type	TH32FW-NH

H.S.

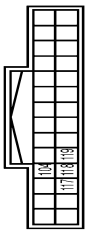


Terminal No.	Color Of Wire	Signal Name [Specification]
65	R	PARKING BRAKE
67	W	COMPOSITE IMAGE GND
68	R	COMPOSITE IMAGE SIGNAL
71	SHIELD	MICROPHONE GND
72	L	MICROPHONE VCC
73	V	COMM (CONT-DISP)
74	P	CAN-L
75	R	AV COMM (L)
76	R	AV COMM (L)
79	R	ILLUMINATION
80	W	IGNITION
81	BG	REVERSE

82	V	VEHICLE SPEED (8-PULSE)
83	SHIELD	SHIELD
84	B	COMPOSITE SYNCHRONIZING SIGNAL
87	P	MICROPHONE SIGNAL
88	SHIELD	SHIELD
89	SB	COMM (DISP-CONT)
90	L	CAN-H
91	G	AV COMM (H)
92	G	AV COMM (H)

Connector No.	M204
Connector Name	AV CONTROL UNIT
Connector Type	TH28FW

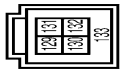
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
104	W	AUX SOUND SIGNAL LH (+)
117	SHIELD	SHIELD
118	R	AUX SOUND SIGNAL RH (+)
119	B	AUX SOUND SIGNAL GND

Connector No.	M205
Connector Name	AV CONTROL UNIT
Connector Type	HAA04FL

H.S.



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

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BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Connector No.	M206
Connector Name	AV CONTROL UNIT
Connector Type	NH18FW-CS2

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	AUDIO AMP. ON SIGNAL
2	L	AUDIO SIGNAL FRONT LH (+)
3	P	AUDIO SIGNAL FRONT LH (-)
4	V	AUDIO SIGNAL REAR LH (+)
5	LG	AUDIO SIGNAL REAR LH (-)
6	V	STRG SW A
7	V	ACC POWER SUPPLY
10	B	SHIELD
11	R	AUDIO SIGNAL FRONT RH (+)
12	G	AUDIO SIGNAL FRONT RH (-)
13	BR	AUDIO SIGNAL REAR RH (+)
14	Y	AUDIO SIGNAL REAR RH (-)
15	GR	STRG SW GND
16	SB	STRG SW B
19	Y	BATTERY
20	B	GROUND

Connector No.	M207
Connector Name	AV CONTROL UNIT
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
160	G	GUIDE+
161	R	GUIDE-
169	SHIELD	SHIELD

Connector No.	M303
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY

H.S.

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

Connector No.	M371
Connector Name	AV CONTROL UNIT
Connector Type	GT13SH-2_1S-HU

H.S.

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

Connector No.	M372
Connector Name	AV CONTROL UNIT
Connector Type	GT5-1S-HU

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
137	-	GPS ANTENNA SIGNAL
138	SHIELD	SHIELD

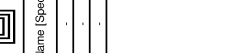
Connector No.	M373
Connector Name	AV CONTROL UNIT
Connector Type	FAKRA JACK

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
139	-	SATELLITE ANTENNA SIGNAL
140	SHIELD	SHIELD

Connector No.	M375
Connector Name	WIRE TO WIRE
Connector Type	GT13SCN-2_1PP-HU

H.S.



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

Connector No.	M376
Connector Name	WIRE TO WIRE
Connector Type	GT13SC-2_1S-HU

H.S.

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

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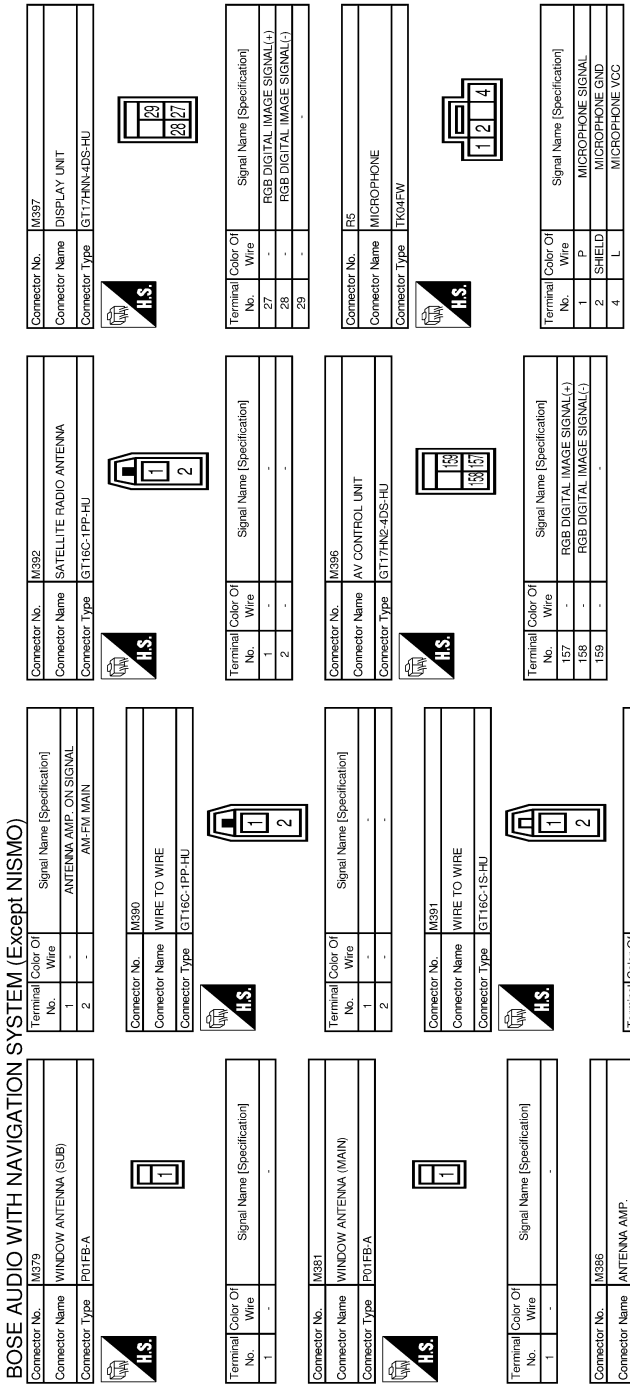

JRNWE1221GB

BOSE AUDIO WITH NAVIGATION SYSTEM (Except NISMO)

Connector No.	R12
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	SHIELD	-
2	P	-
3	L	-
4	V	-
5	Y	-
6	R	-
7	SB	-
8	R	-
13	B	-
14	GR	-
15	B	-
16	B	-

Connector No.	R15
Connector Name	REAR MICRO PHONE (ACTIVE NOISE CONTROL)
Connector Type	TK02FBR

H.S.

2 1

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

Connector No.	R14
Connector Name	FRONT MICRO PHONE (ACTIVE NOISE CONTROL)
Connector Type	TK02FBR

H.S.

2 1

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

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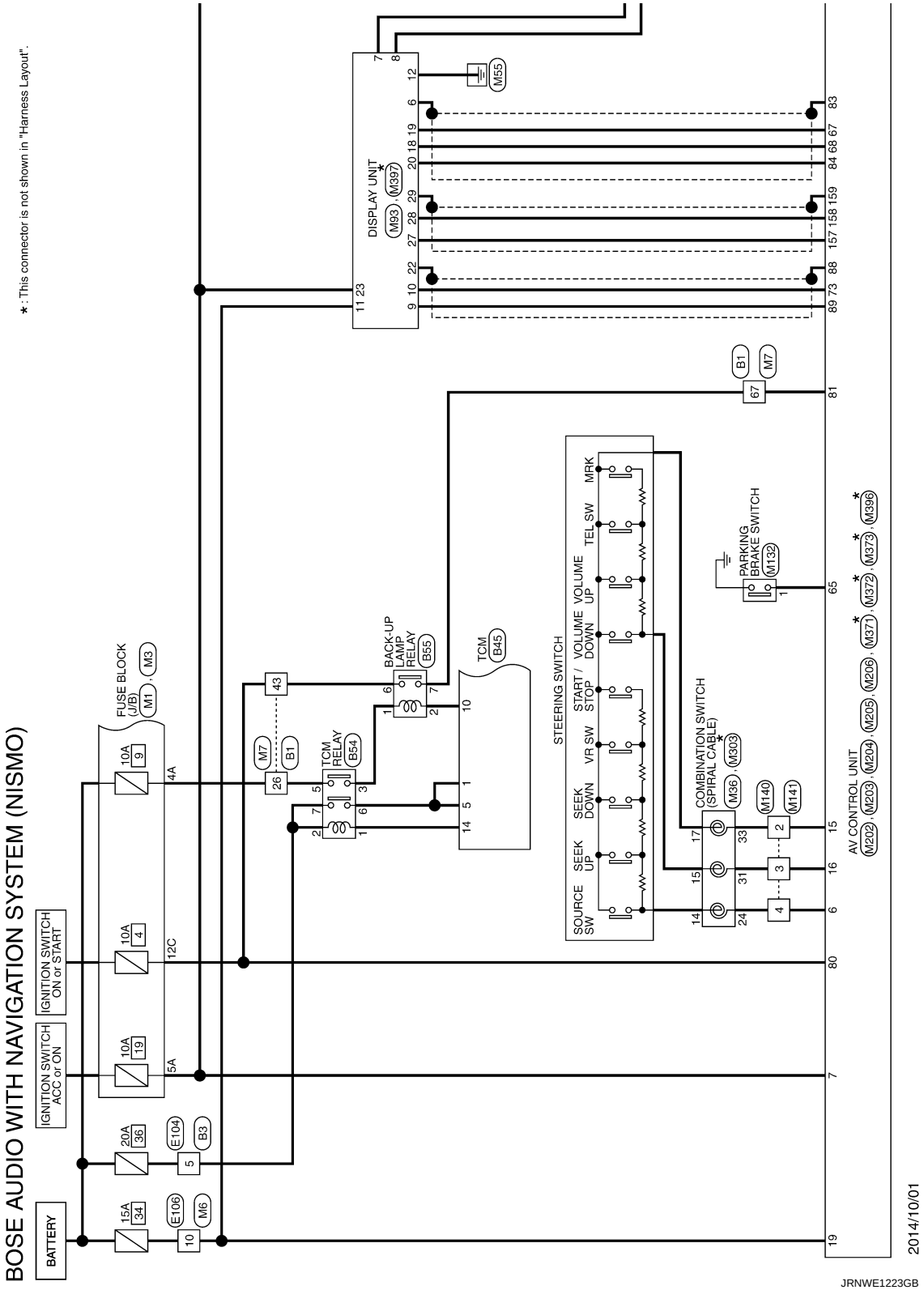
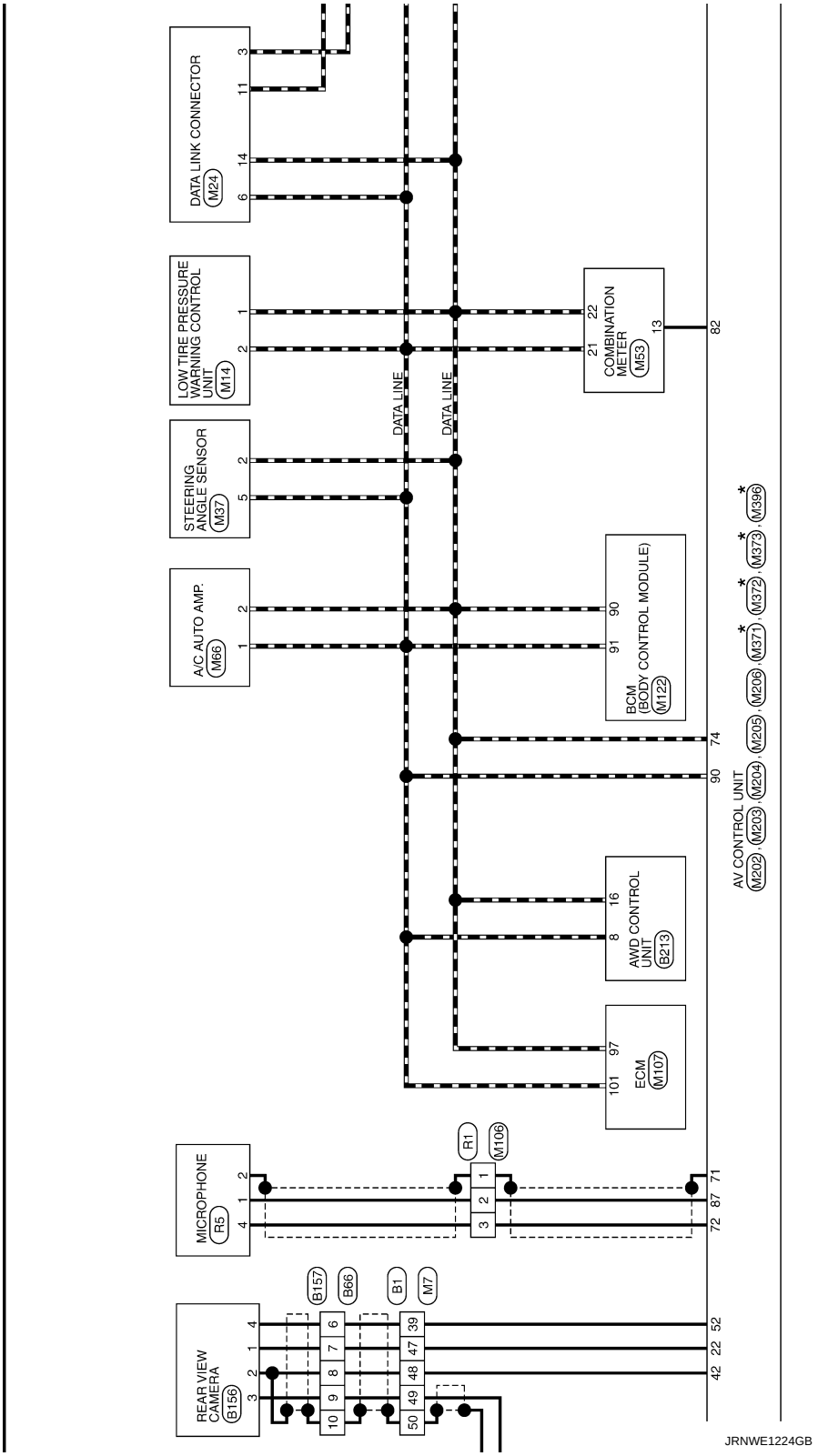
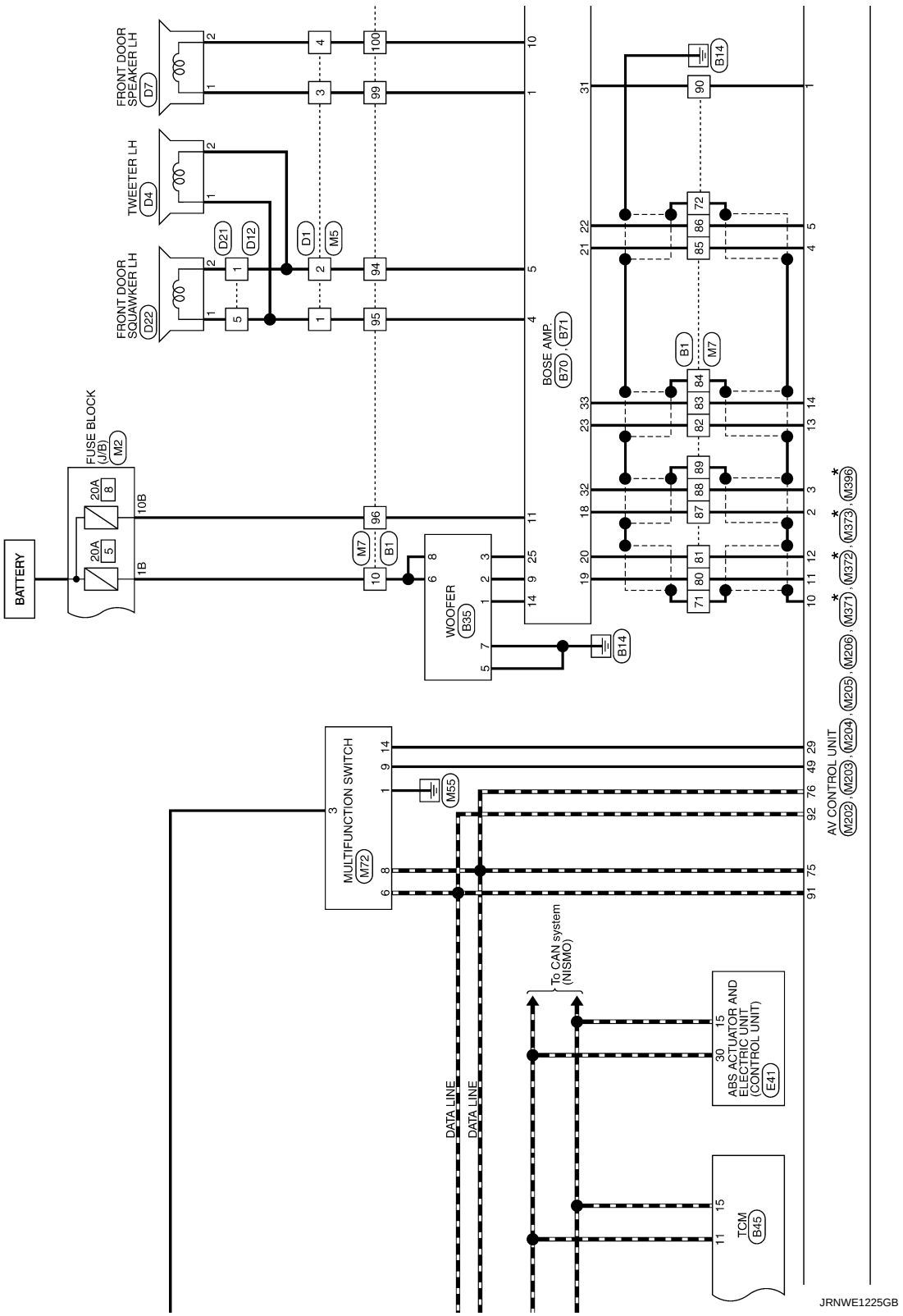
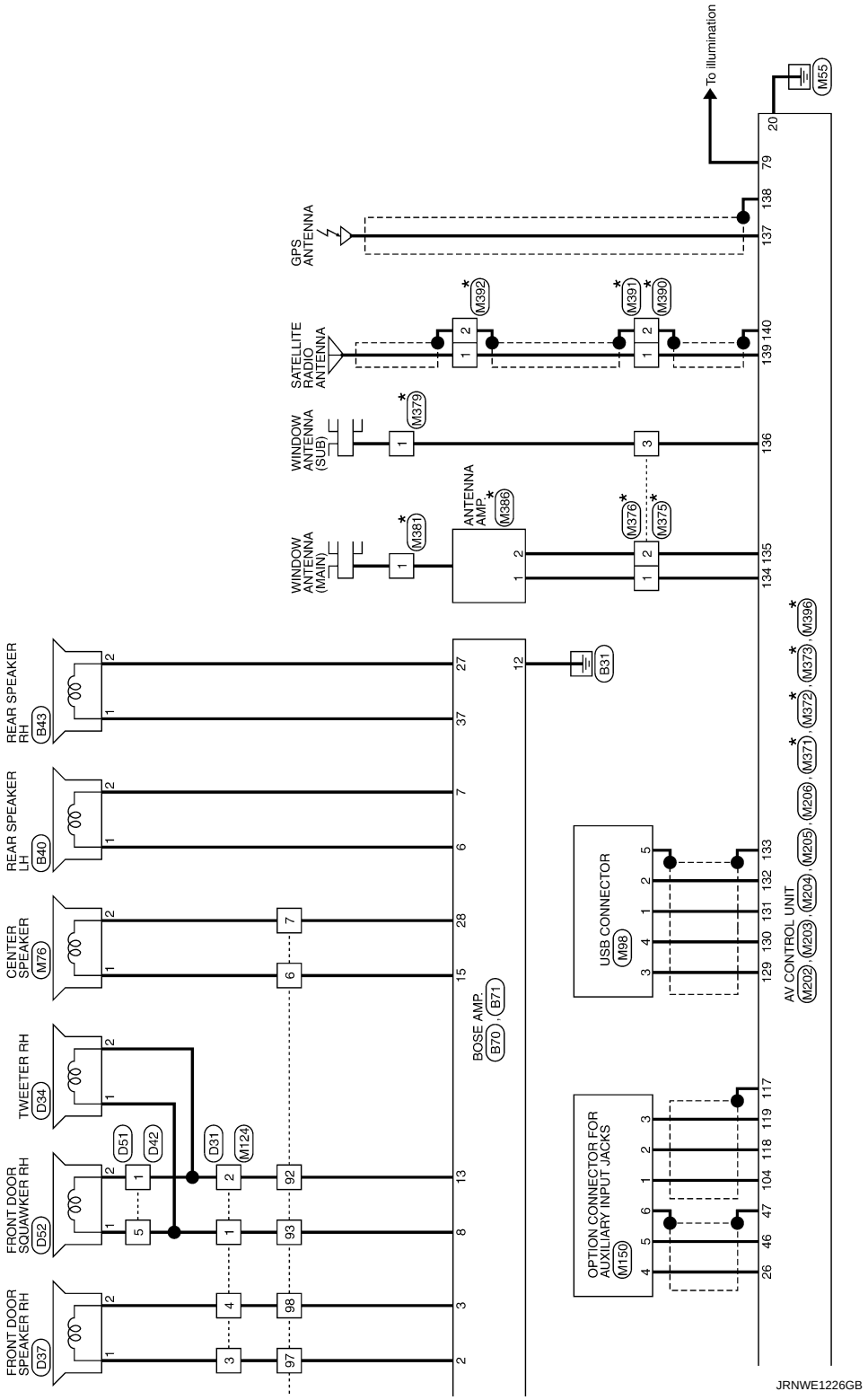
NISMO

BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)




DATA LINK CONNECTOR M24
LOW TIRE PRESSURE WARNING CONTROL UNIT M14
STEERING ANGLE SENSOR M37
A/C AUTO AMP. M66
DATA LINE
DATA LINE
COMBINATION METER M53
BCM (BODY CONTROL MODULE) M122
AWD CONTROL UNIT B213
ECM M107
AV CONTROL UNIT M202, M203, M204, M205, M206, M371, M372, M373, M396
MICROPHONE R5
R1 M106
REAR VIEW CAMERA B156
B157
B66
B1
M7
JRNWE1224GB

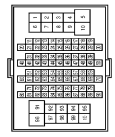

FRONT DOOR SPEAKER LH D7
TWEETER LH D4
FRONT DOOR SQUAWKER LH D22
D21
D12
D1
M5
FUSE BLOCK (J/B) M2
20A 8
20A 5
10B
1B
BATTERY
M7
B1
WOOFER B35
BOSE AMP. B70 B71
B14
M55
MULTIFUNCTION SWITCH M72
AV CONTROL UNIT M202 M203 M204 M205 M206 M371 M372 M373 M396
To CAN system (NISMO)
DATA LINE
DATA LINE
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E41
TCM B45
JRNWE1225GB


To illumination
M55
GPS ANTENNA
SATELLITE RADIO ANTENNA
M392
M391
M390
WINDOW ANTENNA (SUB)
M379
WINDOW ANTENNA (MAIN)
M381
ANTENNA AMP.
M386
M376
M375
REAR SPEAKER RH
B43
REAR SPEAKER LH
B40
CENTER SPEAKER
M76
TWEETER RH
D34
FRONT DOOR SQUAWKER RH
D52
FRONT DOOR SPEAKER RH
D37
D51
D42
D31
M124
BOSE AMP.
B70
B71
B31
USB CONNECTOR
M98
OPTION CONNECTOR FOR AUXILIARY INPUT JACKS
M150
AV CONTROL UNIT
M209
M203
M204
M205
M206
M371
M372
M373
M396
JRNWE1226GB

BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

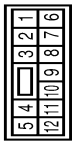


Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	-
3	P	-
6	V	-
7	W	-
8	Y	-
9	R	-
11	Y	-
12	GR	-
13	BG	-
14	Y	-
15	BR	-
16	R	-
17	W	-
18	BR	-
20	GR	-
21	SB	-
22	W	-
23	G	-
24	BG	-
25	L	-
26	P	-
27	GR	-
28	BG	-
31	GR	-
32	L	-
33	V	-
34	BG	-
39	G	-
40	LG	-
41	Y	-
42	SB	-
43	P	-
47	R	-
48	B	-
49	W	-
50	SHIELD	-
51	SB	-
52	B	-
53	R	-
54	B	-
56	R	-
57	G	-
58	G	-
59	R	-
60	BR	-
61	Y	-
62	SHIELD	-
63	LG	-
64	R	-
65	G	-
66	BR	-
67	BG	-
69	P	-
70	L	-
71	SHIELD	-
72	SHIELD	- [Without active noise control unit]
72	V	- [With active noise control unit]
73	SB	-
76	R	-
77	SB	-
78	G	-
79	Y	-
80	R	-
81	G	-
82	BR	- [Without active noise control unit]
82	G	- [With active noise control unit]
83	R	- [With active noise control unit]
83	Y	- [Without active noise control unit]
84	SHIELD	-
85	V	-
86	SB	- [Without active noise control unit]
86	W	- [With active noise control unit]
87	L	-
88	P	-
89	SHIELD	-
90	V	-
92	BR	-
93	SB	-
94	GR	-
95	BG	-
96	Y	-
97	Y	-
98	LG	-

99	R	-
100	G	-

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

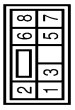
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	BG	-
3	BR	-
4	Y	-
5	R	-
6	P	-
7	W	-
8	SB	-
9	LG	-
10	V	-
11	GR	-
12	G	-

Connector No.	B35
Connector Name	WOOFER
Connector Type	NS08FBR-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	SOUND SIGNAL WOOFER (-)
2	P	SOUND SIGNAL WOOFER (+)
3	W	WOOFER AMP. ON SIGNAL

5	B	GND
6	R	BATTERY
7	B	GND
8	R	BATTERY

Connector No.	B40
Connector Name	REAR SPEAKER LH
Connector Type	TK02FBR

H.S.

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

Connector No.	B43
Connector Name	REAR SPEAKER RH
Connector Type	TK02FBR

H.S.

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

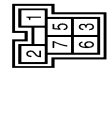
JRNWE1227GB

BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

Connector No.	B45
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-LH-Z

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	POWER SUPPLY (MEMORY BACK-UP)-2
3	B	GROUND
4	B	GROUND
5	W	POWER SUPPLY (MEMORY BACK-UP)-3
7	B	GROUND
8	B	GROUND
9	P	POWER SUPPLY (MEMORY BACK-UP)-1
10	LG	BACK-UP LAMP SIGNAL
11	L	CAN-H
14	V	POWER OFF
15	P	CAN-L
16	W	STOP LAMP SWITCH SIGNAL
17	Y	IGNITION SWITCH SIGNAL
19	GR	STARTER RELAY SIGNAL
23	BR	AUTO/MANUAL RANGE CHANGE SWITCH-1 SIGNAL
25	L	RANGE SENSOR POWER SOURCE 1
26	LG	RANGE SENSOR POWER SOURCE 2
27	G	RANGE SENSOR NO.- SIGNAL
28	V	AUTO/MANUAL RANGE CHANGE SWITCH-2 SIGNAL
31	SB	ENGINE SPEED SIGNAL
33	V	RANGE SENSOR NO.1 SIGNAL
34	BG	SAVE MODE SWITCH SIGNAL
35	G	RANGE SENSOR NO.3 SIGNAL
37	GR	R MODE SWITCH SIGNAL
38	R	RANGE SENSOR NO.2 SIGNAL
39	W	PADDLE SHIFTER (SHIFT-UP SWITCH) SIGNAL
42	L	PADDLE SHIFTER (SHIFT-DOWN SWITCH) SIGNAL
43	P	RANGE SENSOR NO.4 SIGNAL
44	GR	RANGE SENSOR NO.5 SIGNAL
45	BG	R MODE LAMP SIGNAL
46	W	SHIFT LOCK SOLENOID CONTROL SIGNAL
47	G	SAVE MODE LAMP SIGNAL

Connector No.	B54
Connector Name	TCM RELAY
Connector Type	M06FBR-R-LC



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

Connector No.	B55
Connector Name	BACK-UP LAMP RELAY
Connector Type	M06FBR-R-LC

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	LG	-
6	P	-
7	Y	-

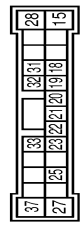
Connector No.	B66
Connector Name	WIRE TO WIRE
Connector Type	RH10MB

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

Connector No.	B70
Connector Name	BOSE AMP.
Connector Type	SGA12FBR-SJA2

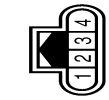
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	AUDIO SIGNAL FRONT DOOR SPEAKER LH
2	Y	AUDIO SIGNAL FRONT DOOR SPEAKER RH
3	LG	AUDIO SIGNAL FRONT DOOR SPEAKER RH (-)
4	BG	AUDIO SIGNAL FRONT DOOR SQUAWKER LH
5	GR	AUDIO SIGNAL FRONT DOOR SQUAWKER LH (-)
6	V	AUDIO SIGNAL REAR SPEAKER LH
7	LG	AUDIO SIGNAL REAR SPEAKER LH (-)
8	SB	AUDIO SIGNAL FRONT DOOR SQUAWKER RH
9	P	AUDIO SIGNAL WOOFER
10	G	AUDIO SIGNAL FRONT DOOR SPEAKER LH (-)
11	Y	BATTERY POWER SUPPLY
12	B	GROUND
13	BR	AUDIO SIGNAL FRONT DOOR SQUAWKER RH (-)
14	SB	AUDIO SIGNAL WOOFER (-)

Connector No.	B71
Connector Name	BOSE AMP.
Connector Type	SCA19FBR-SGA4



Terminal No.	Color Of Wire	Signal Name [Specification]
15	V	AUDIO SIGNAL CENTER SPEAKER
18	L	AUDIO SIGNAL FRONT LH
19	R	AUDIO SIGNAL FRONT RH
20	G	AUDIO SIGNAL FRONT RH (-)
21	V	AUDIO SIGNAL REAR LH
22	SB	AUDIO SIGNAL REAR LH (-)
23	BR	AUDIO SIGNAL REAR RH
25	W	WOOFER AMP. ON SIGNAL
27	BG	AUDIO SIGNAL REAR SPEAKER RH (-)
28	W	AUDIO SIGNAL CENTER SPEAKER (-)
31	V	BOSE AMP. ON SIGNAL
32	P	AUDIO SIGNAL FRONT LH (-)
33	Y	AUDIO SIGNAL REAR RH (-)
37	LG	AUDIO SIGNAL REAR SPEAKER RH

Connector No.	B156
Connector Name	REAR VIEW CAMERA
Connector Type	RH04MB



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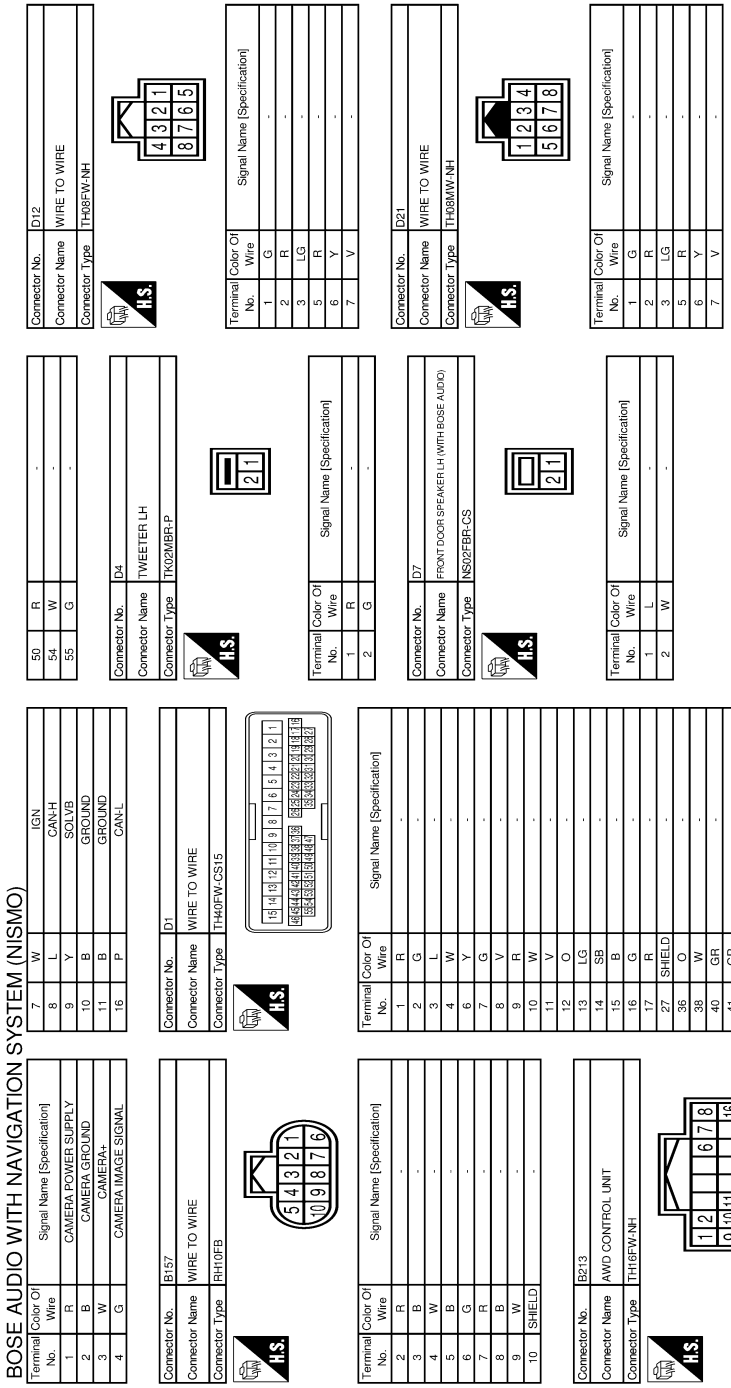

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BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

Connector No.	D22
Connector Name	FRONT DOOR SQUAWKER LH
Connector Type	TK02FBR

H.S.

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

Connector No.	D31
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	G	-
3	L	-
4	W	-
6	Y	-
7	G	-
8	V	-
9	R	-
10	W	-
11	V	-
12	O	-
13	LG	-
14	SB	-
15	B	-
16	R	-
17	G	-
27	SHIELD	-
36	O	-

38	W	-
40	LG	-
41	GR	-
42	BR	-
44	L	-
45	Y	-
46	R	-
47	V	-
48	LG	-
50	R	-
54	W	-
55	G	-

Connector No.	D34
Connector Name	TWEETER RH
Connector Type	TK02MBR-P

H.S.

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

Connector No.	D37
Connector Name	FRONT DOOR SPEAKER RH (WITH BOSE AUDIO)
Connector Type	NS02FBR-CS

H.S.

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

Connector No.	D42
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-NH

H.S.

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

Connector No.	D51
Connector Name	WIRE TO WIRE
Connector Type	TH08MW-NH

H.S.

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

Connector No.	D52
Connector Name	FRONT DOOR SQUAWKER RH
Connector Type	TK02FBR

H.S.

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

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	AEZ43FB-AJZ4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	UBMR
2	V	DIAG-K
3	GR	VDC OFF SW
4	W	BLS
6	G	VDC UP SW
11	Y	CAN-H
15	P	CAN-L
16	B	GROUND
26	W	CAN-L
27	BR	G SENSOR GROUND
29	BG	UZ
30	L	CAN-H
32	BG	UBVR
33	W	DS FR
34	BG	DP FR
35	Y	VDC TOP POSITION LED
36	L	DP RL
37	R	DS RL

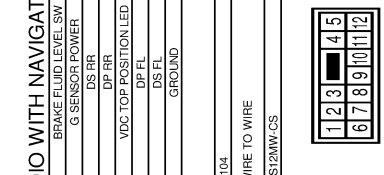
JRNWE1230GB

BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

38	V	BRAKE FLUID LEVEL SW
39	G	G SENSOR POWER
42	V	DS RR
43	LG	DP RR
44	SB	VDC TOP POSITION LED
45	W	DP FL
46	R	DS FL
47	B	GROUND

Connector No.	E104
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

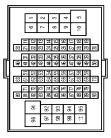
H.S.



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

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.



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

38	SB	-
39	GR	-
40	G	-
41	V	-
42	V	-
43	L	-
44	BR	-
45	G	-
46	SB	-
48	BG	-
49	L	-
50	R	-
51	SHIELD	-
60	P	-
61	L	-
71	LG	-
72	SB	-
74	P	-
75	BR	-
76	LG	-
77	V	-
78	BR	-
79	W	-
80	Y	-
81	GR	-
82	BG	-
84	P	-
85	P	-
86	GR	-
87	R	-
88	L	-
89	BG	-
90	G	-
91	GR	-
92	R	-
93	R	-
94	LG	-
95	G	-
96	GR	-
97	L	-
98	LG	-
99	BG	-
100	L	-

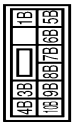
Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1A	V	-
2A	G	-
3A	L	-
4A	LG	-
5A	SB	-
6A	Y	-
7A	R	-
8A	L	-

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

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
10B	Y	-
1B	R	-
3B	P	-
4B	G	-
5B	BG	-
6B	Y	-
7B	R	-
8B	R	-
9B	SB	-

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BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

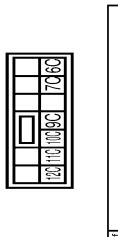
Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
10C	L	-
11C	R	-
12C	W	-
6C	R	-
7C	B	-
9C	BR	-

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

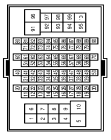
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	G	-
3	L	-
4	W	-
6	Y	-
7	G	-
8	V	-
9	R	-
10	W	-
11	V	-
12	W	-
13	LG	-
14	SB	-
15	B	-
16	BR	-
17	Y	-
27	SHIELD	-
36	L	-
38	V	-
40	GR	-
41	P	-
42	BR	-
43	SB	-
44	L	-
45	Y	-
46	BG	-
47	V	-
48	LG	-
50	R	-
54	W	-
55	G	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

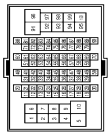
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
3	R	-
4	G	-
5	Y	-
6	P	-
7	W	-
8	V	-
9	L	-
10	Y	-
11	G	-
12	BG	-
13	R	-
14	L	-
15	BR	-
16	R	-
17	SHIELD	-
18	L	-
19	P	-
20	B	-
21	W	-
22	GR	-
23	L	-
24	V	-
25	BR	-
26	G	-
27	SHIELD	-
28	G	-
29	R	-
30	W	-
31	V	-
32	G	-
33	GR	-
34	LG	-
35	P	-
36	L	-
37	W	-
38	Y	-
39	GR	-
40	BG	-
41	W	-
42	R	-
43	Y	-
44	BR	-
45	G	-
46	LG	-
48	W	-
49	L	-
50	R	-
51	SHIELD	-
60	SB	-
61	V	-
71	W	-
72	LG	-
74	R	-
75	BR	-
76	LG	-
77	R	-
78	BR	-
79	W	-
80	Y	-
81	BG	-
82	SB	-
84	Y	-
85	P	-
86	GR	-
87	R	-
88	L	-
89	G	-
90	P	-
91	W	-
92	R	-
93	LG	-
94	W	-
95	SB	-
96	L	-
97	L	-
98	Y	-
99	BG	-
100	L	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	-
3	P	-
6	L	-
7	W	-
8	W	-
9	G	-
10	R	-
11	W	-
12	SB	-
13	G	-
14	W	-
15	BR	-
16	R	-
17	BG	-
18	SB	-
20	GR	-
21	L	-
22	R	-
23	G	-
24	BR	-
25	L	-
26	LG	-

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BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

27	W	-	[With active noise control unit]
28	R	-	
31	GR	-	
32	L	-	
33	V	-	
34	BG	-	
39	W	-	
40	BG	-	
41	R	-	
42	V	-	
43	W	-	
47	G	-	
48	R	-	
49	W	-	
50	SHIELD	-	
51	SB	-	
52	B	-	
53	R	-	
54	B	-	
56	R	-	
57	G	-	
58	G	-	
59	R	-	
60	BR	-	
61	Y	-	
62	SHIELD	-	
63	GR	-	
64	R	-	
65	G	-	
66	BR	-	
67	BG	-	
69	P	-	
70	L	-	
71	SHIELD	-	
72	SHIELD	-	[Without active noise control unit]
72	V	-	[With active noise control unit]
73	LG	-	
76	R	-	
77	SB	-	
78	G	-	
79	Y	-	
80	R	-	
81	G	-	
82	BR	-	[Without active noise control unit]
82	G	-	[With active noise control unit]
83	R	-	[With active noise control unit]
83	Y	-	[Without active noise control unit]
84	SHIELD	-	
85	V	-	
86	LG	-	[Without active noise control unit]
86	W	-	[With active noise control unit]
87	L	-	
88	P	-	
89	SHIELD	-	
90	V	-	
92	LG	-	
93	Y	-	
94	G	-	
95	R	-	
96	Y	-	
97	R	-	
98	G	-	
99	L	-	
100	W	-	

Connector No. M14
Connector Name LOW TIRE PRESSURE WARNING CONTROL UNIT
Connector Type TH32FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10		12		15
		19	20	21	22	23	24	25	26			31	32

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	CAN-L
2	L	CAN-H
3	BG	RR TUNER (SIG)
4	L	RL TUNER (SIG)
5	R	FR TUNER (SIG)
6	W	FL TUNER (SIG)
7	SB	RR TUNER (PWR)
8	GR	RL TUNER (PWR)
9	R	FR TUNER (PWR)
10	LG	FL TUNER (PWR)
12	W	SW SIG
15	G	IGN
19	R	RR TUNER (RSSI)
20	BG	RL TUNER (RSSI)
21	P	FR TUNER (RSSI)
22	G	FL TUNER (RSSI)
23	GR	RR TUNER (GND)
24	V	RL TUNER (GND)
25	L	FR TUNER (GND)
26	BR	FL TUNER (GND)

30	G	FLASHER SIG
32	B	GROUND

Connector No. M24
Connector Name DATA LINK CONNECTOR
Connector Type BD16FW

H.S.

			11			14		16
		3	4	5	6	7	8	

Terminal No.	Color Of Wire	Signal Name [Specification]
3	R	-
4	B	-
5	B	-
6	L	-
7	V	-
8	G	-
11	G	-
14	P	-
16	Y	-

Connector No. M36
Connector Name COMBINATION SWITCH (SPIRAL CABLE)
Connector Type TK08FGY-1V

H.S.

		24	25	26
		31	32	33	34

Terminal No.	Color Of Wire	Signal Name [Specification]
24	V	-
25	G	-
26	Y	-
31	SB	-
32	R	-
33	GR	-
34	W	-

Connector No. M37
Connector Name STEERING ANGLE SENSOR
Connector Type TH08FW-NH

H.S.

			4
1	2		
5			

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	P	CAN-L
4	BG	IGN
5	L	CAN-H

Connector No. M53
Connector Name COMBINATION METER
Connector Type SAB40FW

H.S.

1	2	3	4	5	6	7	8	9	10		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		38	39	40

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	BATTERY POWER SUPPLY
2	W	IGNITION POWER SUPPLY
3	B	GROUND
4	B	ILLUMINATION GROUND
5	B	GROUND
6	W	METER CONTROL SWITCH GROUND
7	Y	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
8	SB	AMBIENT SENSOR GROUND
9	P	AMBIENT SENSOR SIGNAL
12	L	VEHICLE SPEED SIGNAL (2-PULSE)
13	V	VEHICLE SPEED SIGNAL (8-PULSE)
14	B	OIL PRESSURE SENSOR GROUND
15	R	AIR BAG SIGNAL
16	R	LED HEAD LAMP (RH) WARNING SIGNAL
18	L	FUEL LEVEL SENSOR GROUND
19	R	OIL LEVEL SENSOR GROUND

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BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

39	B	GROUND
40	Y	BATTERY POWER SUPPLY

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

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
3	V	ACC
4	P	ILL
5	P	ILL CONT
6	G	AV COMM (H)
8	R	AV COMM (L)
9	BR	SW GND
14	SB	DISK EJECT SIGNAL

Connector No.	M76
Connector Name	CENTER SPEAKER
Connector Type	TK02FBR

H.S.

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

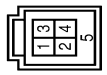
Connector No.	M93
Connector Name	DISPLAY UNIT
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
6	SHIELD	SHIELD
7	SHIELD	SHIELD
8	W	CAMERA IMAGE SIGNAL
9	SB	COMM (DISP-CONT)
10	V	COMM (CONT-DISP)
11	Y	BATTERY
12	B	GROUND
18	R	COMPOSITE IMAGE SIGNAL
19	W	COMPOSITE IMAGE GND
20	B	COMPOSITE SYNCHRONIZING SIGNAL
22	SHIELD	SHIELD
23	P	ACC

Connector No.	M98
Connector Name	USB CONNECTER
Connector Type	HAA04FG

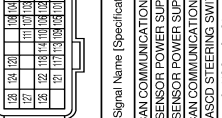
H.S.



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

Connector No.	M106
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH

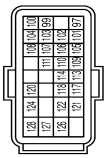
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	-
2	P	-
3	L	-
4	V	-
5	Y	-
6	R	-
11	B	-
12	GR	-

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-RZ8-R-LH-Z

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
97	P	CAN COMMUNICATION LINE
99	SB	SENSOR POWER SUPPLY
100	BR	SENSOR POWER SUPPLY
101	L	CAN COMMUNICATION LINE
102	G	ASCD STEERING SWITCH
103	GR	SENSOR GROUND
104	P	ACCELERATOR PEDAL POSITION SENSOR 1
105	W	ECM RELAY (SELF SHUT-OFF)
106	LG	IGNITION SWITCH
107	BG	SENSOR GROUND
108	L	ACCELERATOR PEDAL POSITION SENSOR 2
109	L	SAVALVERLY

20	W	OIL LEVEL SENSOR SIGNAL
21	L	CAN-H
22	P	CAN-L
23	LG	ILLUMINATION CONTROL SWITCH SIGNAL (-)
24	BR	ILLUMINATION CONTROL SWITCH SIGNAL (+)
25	G	TRIP A/B RESET SWITCH SIGNAL
26	BG	ENTER SWITCH SIGNAL
27	SB	SELECT SWITCH SIGNAL
28	BR	ALTERNATOR
29	G	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)
30	LG	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
31	V	PARKING BRAKE SWITCH SIGNAL
32	V	BRAKE FLUID LEVEL SWITCH SIGNAL
33	L	WASHER LEVEL SWITCH SIGNAL
34	GR	OIL PRESSURE SENSOR POWER
35	W	OIL PRESSURE SENSOR SIGNAL
38	BG	FUEL LEVEL SENSOR SIGNAL
39	Y	LED HEAD LAMP (LH) WARNING SIGNAL
40	V	ILLUMINATION CONTROL

Connector No.	M66
Connector Name	A/C AUTO AMP.
Connector Type	SAB40FW

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
10	L	A/C LAN SIGNAL
11	R	EACH DOOR MOTOR POWER SUPPLY
15	BG	SUNLOAD SENSOR SIGNAL
16	R	INTAKE SENSOR SIGNAL
17	SB	ACC POWER SUPPLY
19	B	GROUND
20	G	IGNITION POWER SUPPLY
24	BG	ECV SIGNAL
32	L	BLOWER MOTOR CONTROL SIGNAL
34	Y	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
35	P	AMBIENT SENSOR SIGNAL
36	LG	IN-VEHICLE SENSOR SIGNAL
37	BG	SENSOR GROUND

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110	P	STOP LAMP SWITCH
111	GR	PNP SIGNAL
113	SB	ENGINE SPEED OUTPUT SIGNAL
114	V	DATA LINK CONNECTOR
117	R	ASCD BRAKE SWITCH
118	W	POWER SUPPLY FOR ECM (BACK-UP)
120	BR	SAPM/PRLY
121	P	POWER SUPPLY FOR ECM
122	V	POWER SUPPLY FOR ECM
124	B	ECM GROUND
126	L	FUEL PUMP RELAY
127	G	THROTTLE CONTROL MOTOR RELAY
128	B	ECM GROUND

97	L	S/L CONDITION 1
98	R	S/L CONDITION 2
99	G	SHIFT P
100	W	PASSENGER DOOR REQUEST SW
101	V	DRIVER DOOR REQUEST SW
102	BG	BLOWER FAN MOTOR RELAY CONT
103	LG	KEYLESS ENTRY RECEIVER POWER SUPPLY
106	P	S/L UNIT POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW
111	Y	S/L UNIT COMM

42	BR	-
44	L	-
45	Y	-
46	BG	-
47	SB	-
48	BR	-
50	R	-
54	W	-
55	G	-

Connector No. M122
Connector Name BCM (BODY CONTROL MODULE)
Connector Type TH40FB-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
72	R	ROOM ANT2-
73	G	ROOM ANT2+
74	SB	PASSENGER DOOR ANT-
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT1-
79	BR	ROOM ANT1+
80	GR	IMMOBI ANTENNA CONTROL
81	L	IMMOBI ANTENNA SIGNAL
82	R	IGN RELAY (F/B) CONT
83	Y	KEYLESS ENTRY RECEIVER COMM
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL OUTPUT
93	V	ON IND
95	BG	ACC RELAY CONT
96	SB	A/T SHIFT SELECTOR POWER SUPPLY

Connector No. M124
Connector Name WIRE TO WIRE
Connector Type TH40MW-CS15

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	LG	-
3	R	-
4	G	-
6	Y	-
7	G	-
8	V	-
9	R	-
10	W	-
11	V	-
12	W	-
13	LG	-
14	SB	-
15	B	-
16	R	-
17	G	-
27	SHIELD	-
36	BR	-
38	W	-
40	LG	-
41	P	-

Connector No. M132
Connector Name PARKING BRAKE SWITCH
Connector Type P01FB-A

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

Connector No. M140
Connector Name WIRE TO WIRE
Connector Type TH04FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	-
3	SB	-
4	V	-

Connector No. M141
Connector Name WIRE TO WIRE
Connector Type TH04MW-NH

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

Connector No. M150
Connector Name OPTION CONNECTOR FOR AUXILIARY INPUT JACKS
Connector Type TH08MW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	AUX SOUND SIGNAL LH (+)
2	R	AUX SOUND SIGNAL RH (+)
3	B	AUX SOUND SIGNAL GND
4	G	AUX IMAGE SIGNAL
5	R	AUX IMAGE GND
6	SHIELD	SHIELD

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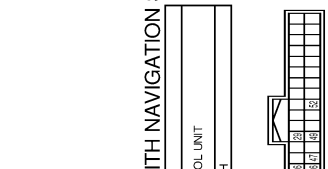
BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

Connector No.	M202
Connector Name	AV CONTROL UNIT
Connector Type	TH40FW-NH

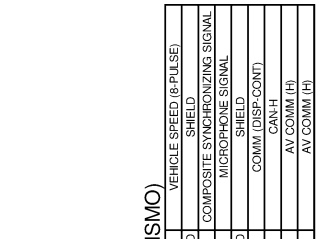


Terminal No.	Color Of Wire	Signal Name [Specification]
22	G	CAMERA POWER SUPPLY
26	G	AUX IMAGE SIGNAL
29	SB	DISK EJECT SIGNAL
42	R	CAMERA GND
46	R	AUX IMAGE GND
47	SHIELD	SHIELD
49	BR	SWITCH GROUND
52	W	RESEVE_03

Connector No.	M203
Connector Name	AV CONTROL UNIT
Connector Type	TH32FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
65	R	PARKING BRAKE
67	W	COMPOSITE IMAGE GND
68	R	COMPOSITE IMAGE SIGNAL
71	SHIELD	MICROPHONE GND
72	L	MICROPHONE VCC
73	V	COMM (CONT-DISP)
74	P	CAN-L
75	R	AV COMM (L)
76	R	AV COMM (L)
79	R	ILLUMINATION
80	W	IGNITION
81	BG	REVERSE

Connector No.	M204
Connector Name	AV CONTROL UNIT
Connector Type	TH28FW



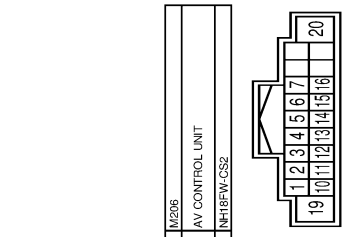
Terminal No.	Color Of Wire	Signal Name [Specification]
82	V	VEHICLE SPEED (8-PULSE)
83	SHIELD	SHIELD
84	B	COMPOSITE SYNCHRONIZING SIGNAL
87	P	MICROPHONE SIGNAL
88	SHIELD	SHIELD
89	SB	COMM (DISP-CONT)
90	L	CAN-H
91	G	AV COMM (H)
92	G	AV COMM (H)

Terminal No.	Color Of Wire	Signal Name [Specification]
104	W	AUX SOUND SIGNAL LH (+)
117	SHIELD	SHIELD
118	R	AUX SOUND SIGNAL RH (+)
119	B	AUX SOUND SIGNAL GND

Connector No.	M205
Connector Name	AV CONTROL UNIT
Connector Type	HAA04FL

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

Connector No.	M206
Connector Name	AV CONTROL UNIT
Connector Type	NH18FW-CS2

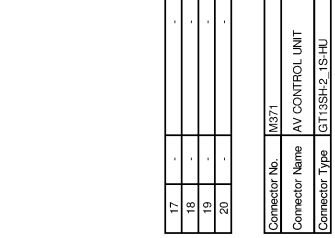


Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	AUDIO AMP. ON SIGNAL
2	L	AUDIO SIGNAL FRONT LH (+)
3	P	AUDIO SIGNAL FRONT LH (-)
4	V	AUDIO SIGNAL REAR LH (+)
5	LG	AUDIO SIGNAL REAR LH (-)
6	V	STRG SW A
7	V	ACC POWER SUPPLY
10	B	SHIELD
11	R	AUDIO SIGNAL FRONT RH (+)
12	G	AUDIO SIGNAL FRONT RH (-)
13	BR	AUDIO SIGNAL REAR RH (+)
14	Y	AUDIO SIGNAL REAR RH (-)
15	GR	STRG SW GND
16	SB	STRG SW B
19	Y	BATTERY
20	B	GROUND

Connector No.	M303
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	-	-

Connector No.	M371
Connector Name	AV CONTROL UNIT
Connector Type	GT13SH-2_1S-HU



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

Connector No.	M372
Connector Name	AV CONTROL UNIT
Connector Type	GT5-1S-HU

Terminal No.	Color Of Wire	Signal Name [Specification]
137	-	GPS ANTENNA SIGNAL
138	SHIELD	SHIELD

JRNWE1236GB

BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

Connector No.	M373
Connector Name	AV CONTROL UNIT
Connector Type	FAKRA JACK

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
139	-	SATELLITE ANTENNA SIGNAL
140	SHIELD	SHIELD

Connector No.	M375
Connector Name	WIRE TO WIRE
Connector Type	GT13SCN-2_1PP-HU

H.S.

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

Connector No.	M376
Connector Name	WIRE TO WIRE
Connector Type	GT13SC-2_1S-HU

H.S.

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

Connector No.	M379
Connector Name	WINDOW ANTENNA (SUB)
Connector Type	P01FB-A

H.S.

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

Connector No.	M381
Connector Name	WINDOW ANTENNA (MAIN)
Connector Type	P01FB-A

H.S.

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

Connector No.	M386
Connector Name	ANTENNA AMP.
Connector Type	GT13SC-1_1S-HU

H.S.

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

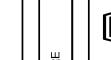
Connector No.	M390
Connector Name	WIRE TO WIRE
Connector Type	GT16C-1PP-HU

H.S.

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

Connector No.	M391
Connector Name	WIRE TO WIRE
Connector Type	GT16C-1S-HU

H.S.



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

Connector No.	M392
Connector Name	SATELLITE RADIO ANTENNA
Connector Type	GT16C-1PP-HU

H.S.

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

JRNWE1237GB

BOSE AUDIO WITH NAVIGATION SYSTEM (NISMO)

Connector No.	M396
Connector Name	AV CONTROL UNIT
Connector Type	GT17HM2-4DS-HU

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
157	-	RGB DIGITAL IMAGE SIGNAL(+)
158	-	RGB DIGITAL IMAGE SIGNAL(-)
159	-	-

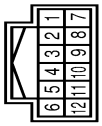
Connector No.	M397
Connector Name	DISPLAY UNIT
Connector Type	GT17HNN-4DS-HU

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
27	-	RGB DIGITAL IMAGE SIGNAL(+)
28	-	RGB DIGITAL IMAGE SIGNAL(-)
29	-	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	-
2	P	-
3	L	-
4	V	-
5	Y	-
6	R	-
11	B	-
12	GR	-

Connector No.	R5
Connector Name	MICROPHONE
Connector Type	TK04FW

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	MICROPHONE SIGNAL
2	SHIELD	MICROPHONE GND
4	L	MICROPHONE VCC

JRNWE1238GB

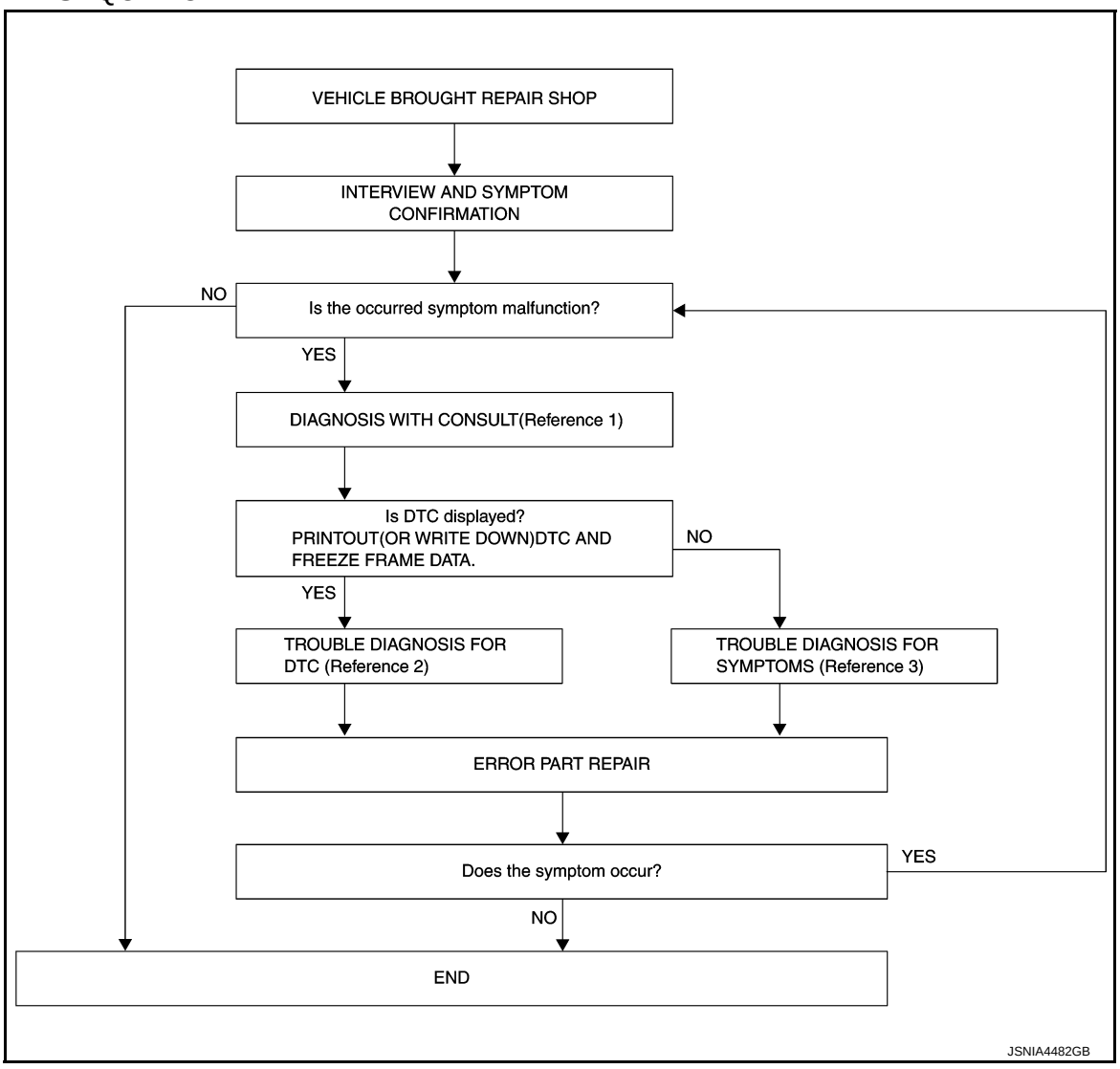
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000011490655

OVERALL SEQUENCE



- Reference 1··· Refer to AV-34, "CONSULT Function (MULTI AV)".
- Reference 2··· Refer to AV-47, "DTC Index".
- Reference 3··· Refer to AV-153, "Symptom Table".

DETAILS OF TROUBLE DIAGNOSIS FLOWCHART

1. QUESTIONNAIRE & CHECK SYMPTOM

Check the malfunction symptoms when the customer brings the vehicle in by performing the following items.
- Interview the customer to obtain the malfunction information. (When, Where, What, How, How often, What happened, etc.)
- Check the symptom.

Is the symptom judged as a malfunction?

YES >> GO TO 2.
NO >> Symptom by normal operation. Refer to AV-153, "Symptom Table".

2. SELF-DIAGNOSIS (CONSULT)

1. Connect CONSULT and perform a self-diagnosis for “MULTI AV”. Refer to AV-34, "CONSULT Function (MULTI AV)".
   NOTE:
   If “MULTI AV” is not displayed, check AV control unit power supply and ground circuit. Refer to AV-137, "AV CONTROL UNIT : Diagnosis Procedure".
2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Is DTC displayed?

YES >> Perform the relevant diagnosis referring to the DTC order list, and then GO TO 3. Refer to AV-47, "DTC Index".
NO >> Perform the relevant symptom diagnosis referring to the Diagnosis Chart by Symptom, and then GO TO 3. Refer to AV-153, "Symptom Table".

3. REPAIR OR REPLACE MALFUNCTIONING PARTS

1. Repair or replace the identified malfunctioning parts.
2. Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC is indicated in the self-diagnosis results.

After finishing work>>GO TO 4.

4. FINAL CHECK

Description of check

- Check that the symptom is resolved.
- Check if any other malfunctions are present.

Are check results normal?

YES >> INSPECTION END
NO >> GO TO 2.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000011490656

BEFORE REPLACEMENT

When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement. Refer to AV-93, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

AFTER REPLACEMENT

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000011490657

1.SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “Before Replace ECU” to save or print current vehicle specification. Refer to AV-93, "CONFIGURATION (AV CONTROL UNIT) : Description".

NOTE:

If “Before Replace ECU” can not be used, use the “Manual Configuration”.

>> GO TO 2.

2.REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to AV-166, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “After Replace ECU” or “Manual Configuration” to write vehicle specification. Refer to AV-94, "CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement".

>> GO TO 4.

4.OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT)

CONFIGURATION (AV CONTROL UNIT) : Description

INFOID:0000000011490658

- Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT. Refer to AV-94, "CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement".
- The AV control unit configuration includes functions as follows.

Function		Description
Read/Write Configuration	Before Replace ECU	Allows the reading of vehicle specification written in AV control unit to store the specification in CONSULT.
	After Replace ECU	Allows the writing of the vehicle information stored in CONSULT into the AV control unit.
Manual Configuration		Allows the writing of the vehicle specification into the AV control unit by hand.

CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement

INFOID:0000000011490659

1.WRITE VEHICLE SPECIFICATION

CONSULT Configuration
Write vehicle specification into AV control unit.

To write vehicle specification stored in CONSULT into the AV control unit>>GO TO 2.
To write vehicle specification into the AV control unit by hand>>GO TO 3.

2.WRITE STORED DATA

CONSULT Configuration
Select “After Replace ECU” in “Read/Write Configuration”. Write data stored in CONSULT with the “Before Replace ECU” function into the AV control unit.

>> GO TO 4.

3.MANUALLY WRITE VEHICLE SPECIFICATION

CONSULT Configuration
Perform “Manual Configuration”. Refer to AV-94, "CONFIGURATION (AV CONTROL UNIT) : Configuration List".
NOTE:
If selection items are not displayed on the CONSULT screen, touch “NEXT”.

>> GO TO 4.

4.OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT) : Configuration List

INFOID:0000000011490660

CAUTION:
Grasp vehicle specifications precisely. The control of ECU may not function normally if the specifications are misread.
NOTE:
- The items shown in this list depend on vehicle specifications.
- The config list may not be displayed depending on vehicle specifications. This is not a malfunction.

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

MANUAL SETTING ITEM	
Items	Setting value
D-OP CAMERA	With
	Without
ANC	With
	Without

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000011490661

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-24, "CAN System Specification Chart".

DTC Logic

INFOID:0000000011490662

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	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:0000000011490663

1. PERFORM SELF-DIAGNOSTIC

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

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to “LAN system”. Refer to LAN-15, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI section. Refer to GI-39, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000011490664

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	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.

U1200 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490665

DTC	Display contents of CONSULT	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.

U1201 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490666

DTC	Display contents of CONSULT	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.

U1202 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490667

DTC	Display contents of CONSULT	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.

U1204 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490668

DTC	Display contents of CONSULT	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.

Diagnosis Procedure

INFOID:0000000011490669

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.
NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1205 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490670

DTC	Display contents of CONSULT	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.

Diagnosis Procedure

INFOID:0000000011490671

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.
NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1206 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490672

DTC	Display contents of CONSULT	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.

Diagnosis Procedure

INFOID:0000000011490673

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.
NO >> An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs.

U1207 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490674

DTC	Display contents of CONSULT	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.

Diagnosis Procedure

INFOID:0000000011490675

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.
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:0000000011490676

DTC	Display contents of CONSULT	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.

U1217 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490677

DTC	Display contents of CONSULT	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.

U1218 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490678

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1219 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490679

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U121A AV CONTROL UNIT

DTC Logic

INFOID:0000000011490680

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U121B AV CONTROL UNIT

DTC Logic

INFOID:0000000011490681

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U121C AV CONTROL UNIT

DTC Logic

INFOID:0000000011490682

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U121D AV CONTROL UNIT

DTC Logic

INFOID:0000000011490683

DTC	Display contents of CONSULT	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.

Diagnosis Procedure

INFOID:0000000011490684

1.CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit.

U121E AV CONTROL UNIT

DTC Logic

INFOID:0000000011490685

DTC	Display contents of CONSULT	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.

Diagnosis Procedure

INFOID:0000000011490686

1.CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit.

U1225 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490687

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	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:0000000011490688

DTC	Display contents of CONSULT	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.

Diagnosis Procedure

INFOID:0000000011490689

1.CHECK PLAYBACK OF A DISK (DVD)

Can a disc (DVD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit.

U1228 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490690

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	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.

U1229 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490691

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	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.

U122A AV CONTROL UNIT

DTC Logic

INFOID:0000000011490692

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

Diagnosis Procedure

INFOID:0000000011490693

1.PERFORM THE SELF-DIAGNOSIS

When U122A is detected, write configuration data with CONSULT.

>> Write configuration data with CONSULT. Refer to AV-94, "CONFIGURATION (AV CONTROL UNIT) : Special Repair Requirement".

U122E AV CONTROL UNIT

DTC Logic

INFOID:0000000011490694

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	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.

U1231 BOSE AMP.

DTC Logic

INFOID:0000000011490695

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1231	AMP TEMP [U1231]	BOSE amp. malfunction is detected.	Replace the BOSE amp. if the malfunction occurs constantly. Refer to AV-175, "Removal and Installation".

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000011490696

DTC	Display contents of CONSULT	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:0000000011490697

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.

>> Adjust the predictive course line center position of the steering angle sensor. Refer to BRC-9, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement (GT-R certified NISSAN dealer)".

U1243 DISPLAY UNIT

DTC Logic

INFOID:0000000011490698

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1243	FRONT DISP CONN [U1243]	When either one of the following items are detected: • display unit power supply and ground circuit malfunction is detected. • communication circuit between AV control unit and display unit.	• Display unit power supply and ground circuit. • Communication circuit between AV control unit and display unit.

Diagnosis Procedure

INFOID:0000000011490699

1.CHECK DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check display unit power supply and ground circuit. Refer to AV-137, "DISPLAY UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK CONTINUITY COMMUNICATION CIRCUIT

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

Display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M93	9	M203	89	Existed
	10		73	

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

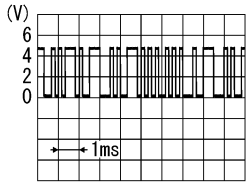
Display unit		Ground	Continuity
Connector	Terminals		
M93	9		Not existed
	10		

Is the inspection result normal?

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

3.CHECK COMMUNICATION SIGNAL

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

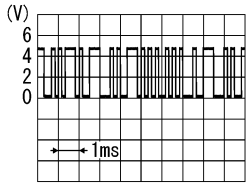
(+)		(–)	Condition	Reference value
Display unit				
Connector	Terminal			
M93	9	Ground	When adjusting display brightness.	 PKIB5039J

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit.

4. CHECK COMMUNICATION SIGNAL

Check signal between display unit harness connector and ground.

(+)		(–)	Condition	Reference value
Display unit				
Connector	Terminal			
M93	10	Ground	When adjusting display brightness.	 PKIB5039J

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace display unit.

U1244 GPS ANTENNA

DTC Logic

INFOID:0000000011490700

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1244	GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.

Diagnosis Procedure

INFOID:0000000011490701

1.GPS ANTENNA CHECK

Visually check GPS 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 GPS antenna connector.
2. Turn ignition switch ON.
3. Check voltage between AV control unit and ground.

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace AV control unit.

U1258 SATELLITE RADIO ANTENNA

DTC Logic

INFOID:0000000011490702

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

Diagnosis Procedure

INFOID:0000000011490703

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 terminal and ground.

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace AV control unit. Refer to AV-166, "Removal and Installation".

U1263 USB

DTC Logic

INFOID:0000000011490704

DTC	Display contents of CONSULT	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:0000000011490705

1.CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

YES >> Replace AV control unit.
NO >> Replace USB harness.

U1264 ANTENNA AMP.

DTC Logic

INFOID:0000000011490706

DTC	Display contents of CONSULT	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. (coupe models) • Check antenna amp. ON signal circuit between the AV control unit and antenna base. (roadster models)

Diagnosis Procedure

INFOID:0000000011490707

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	
M371	134	M386	1	Existed

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

AV control unit		Ground	Continuity
Connector	Terminals		
M371	134		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		
M371	134	Ground	12.0 V

Is the inspection result normal?

YES >> Replace Antenna amp. Refer to AV-178, "Removal and Installation" .
NO >> Replace AV control unit. Refer to AV-166, "Removal and Installation".

U1300 AV COMM CIRCUIT

Description

INFOID:0000000011490708

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

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT	DTC detection condition	Possible 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 U124E	• AV COMM CIRCUIT [U1300] • AMP CONN [U124E]	When either one of the following items are detected: • BOSE amp. power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and BOSE amp. are malfunctioning.	• BOSE amp. power supply and ground circuits. • AV communication circuits between AV control unit and BOSE amp.

U1310 AV CONTROL UNIT

DTC Logic

INFOID:0000000011490709

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1310	CONTROL UNIT (AV) [U1310]	An initial diagnosis error is detected in AV communication circuit.	Replace AV control unit.

U1601, U1609 FRONT DOOR SPEAKER

DTC Logic

INFOID:0000000011490710

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1601	FL-DOOR WOOFER [OPEN, SHORT, GND-SHORT or VB-SHOR] [U1601]	Malfunction is detected sound signal circuits between BOSE amp. and front door speaker LH.	Sound signal circuits between BOSE amp. and front door speaker LH.
U1609	FR-DOOR WOOFER [OPEN, SHORT, GND-SHORT or VB-SHOR] [U1609]	Malfunction is detected sound signal circuits between BOSE amp. and front door speaker RH.	Sound signal circuits between BOSE amp. and front door speaker RH.

Diagnosis Procedure

INFOID:0000000011490711

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the “self-diagnosis” results of “MULTI AV”. 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–1 >> U1601 Check harnesses between BOSE amp. and front door speaker LH.
YES–2 >> U1609 Check harnesses between BOSE amp. and front door speaker RH.
NO >> Refer to GI-39, "Intermittent Incident".

U1602, U160A FRONT DOOR SQUAWKER/TWEETER

DTC Logic

INFOID:0000000011490712

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1602	FL-DOOR SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHOR] [U1602]	When either one of the following items are detected: • sound signal circuits between BOSE amp. and front door squawker LH are malfunctioning. • sound signal circuits between BOSE amp. and tweeter LH are malfunctioning.	• Sound signal circuits between BOSE amp. and front door squawker LH. • Sound signal circuits between BOSE amp. and tweeter LH.
U160A	FR-DOOR SQUAWK [OPEN, SHORT, GND-SHORT or VB-SHOR] [U160A]	When either one of the following items are detected: • sound signal circuits between BOSE amp. and front door squawker RH are malfunctioning. • sound signal circuits between BOSE amp. and tweeter RH are malfunctioning.	• Sound signal circuits between BOSE amp. and front door squawker RH. • Sound signal circuits between BOSE amp. and tweeter RH.

Diagnosis Procedure

INFOID:0000000011490713

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the “self-diagnosis” results of “MULTI AV”. 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–1 >> U1602: Check harnesses between BOSE amp. and front door squawker LH or between BOSE amp. and tweeter LH.
YES–2 >> U160A: Check harnesses between BOSE amp. and front door squawker RH or between BOSE amp. and tweeter RH.
NO >> Refer to GI-39, "Intermittent Incident".

U162A CENTER SPEAKER

DTC Logic

INFOID:0000000011490714

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U162A	F-INST C-SQUAWK [OPEN, SHORT, GND-SHORT, or VB-SHORT] [U162A]	Malfunction is detected sound signal circuits between BOSE amp. and center speaker.	Sound signal circuits between BOSE amp. and center speaker.

Diagnosis Procedure

INFOID:0000000011490715

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the “self-diagnosis” results of “MULTI AV”. 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 >> Check harnesses between BOSE amp. and center speaker.
NO >> Refer to GI-39, "Intermittent Incident"

U1722, U172A REAR SPEAKER

DTC Logic

INFOID:0000000011490716

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1722	RL-DOOR SPEAKER [OPEN, SHORT, GND-SHORT or VB-SHOR] [U1722]	Malfunction is detected sound signal circuits between BOSE amp. and rear speaker LH.	Sound signal circuits between BOSE amp. and rear speaker LH.
U172A	RR-DOOR SPEAKER [OPEN, SHORT, GND-SHORT or VB-SHOR] [U172A]	Malfunction is detected sound signal circuits between BOSE amp. and rear speaker RH.	Sound signal circuits between BOSE amp. and rear speaker RH.

Diagnosis Procedure

INFOID:0000000011490717

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the “self-diagnosis” results of “MULTI AV”. 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–1 >> U1722 Check harnesses between BOSE amp. and rear speaker LH.
YES–2 >> U172A Check harnesses between BOSE amp. and rear speaker RH.
NO >> Refer to GI-39, "Intermittent Incident".

U1725 REAR WOOFER

DTC Logic

INFOID:0000000011490718

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1725	R-PSHELF C- WOOF-ER [OPEN, SHORT, GND-SHORT or VB-SHOR] [U1725]	Malfunction is detected sound signal circuits between BOSE amp. and woofer.	Sound signal circuits between BOSE amp. and woofer.

Diagnosis Procedure

INFOID:0000000011490719

1.PERFORM THE SELF-DIAGNOSIS

1. Delete the “self-diagnosis” results of “MULTI AV”. 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 >> Check harnesses between BOSE amp. and woofer.
NO >> Refer to GI-39, "Intermittent Incident".

U190C FRONT/REAR MICROPHONE

DTC Logic

INFOID:0000000011490720

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U190C	CORRECT MICRO-PHONE [OPEN, SHORT, GND-SHORT or VB-SHOR] [U190C]	Malfunction is detected sound signal circuits between BOSE amp. and front, rear or both microphone.	Sound signal circuits between BOSE amp. and front, rear or both micro-phone.

Diagnosis Procedure

INFOID:0000000011490721

1.CHECK ON BOARD SELF-DIAGNOSIS

Perform on board self-diagnosis. Refer to AV-39, "On Board Diagnosis Function".

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 2.

2.CHECK CONTINUITY BETWEEN BOSE AMP. AND FRONT/REAR MICROPHONE CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. connector and front/rear microphone connector.
3. Check continuity between BOSE amp. harness connector and front/rear microphone harness connector.

BOSE amp.		Front microphone		Continuity
Connector	Terminals	Connector	Terminals	
B25	72	R14	1	Existed
	52		2	

BOSE amp.		Rear microphone		Continuity
Connector	Terminals	Connector	Terminals	
B25	63	R15	1	Existed
	43		2	

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

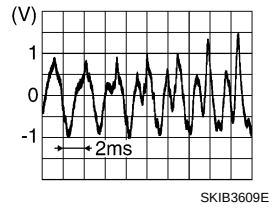
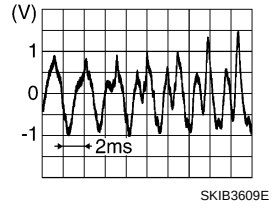
BOSE amp.			Continuity
Connector	Terminals		
B25	72	Ground	Not existed
	52		
	63		
	43		

Is the inspection result normal?

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

3.CHECK MICROPHONE SIGNAL

1. Connect BOSE amp. connector and front/rear microphone connector.
2. Check signal between BOSE amp. harness connector.

(+)		(–)		Condition	Reference value
BOSE amp.		BOSE amp.			
Connector	Terminal	Connector	Terminal		
B25	72	B25	52	When inputting interior sound.	 SKIB3609E
	63		43	When inputting interior sound.	 SKIB3609E

Is the inspection result normal?

YES >> Replace BOSE amp. Refer to AV-175, "Removal and Installation".
NO >> Replace front/rear microphone. Refer to AV-176, "Removal and Installation" (front microphone), AV-177, "Removal and Installation" (rear microphone).

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000011490722

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
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 No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M206	19	OFF	Battery voltage
ACC power supply		7	ACC	

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 No.	Terminal No.	Ignition switch position	Continuity
Ground	M206	20	OFF	Existed

Is the inspection result normal?

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

DISPLAY UNIT

DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000011490723

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
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 display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M93	11	OFF	Battery voltage
ACC power supply		23	ACC	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M93	12	OFF	Existed

Is the inspection result normal?

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

BOSE AMP.

BOSE AMP. : Diagnosis Procedure

INFOID:0000000011490724

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
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 No.	Terminal No.	Ignition switch position	Voltage (Approx.)
Battery power supply	B16*1 B70*2	11	OFF	Battery voltage

*1: With active noise control system
*2: Without active noise control system

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 No.	Terminal No.	Ignition switch position	Continuity
Ground	B16*1 B70*2	12	OFF	Existed

*1: With active noise control system
*2: Without active noise control system

Is the inspection result normal?

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

RGB DIGITAL IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000011490725

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

Diagnosis Procedure

INFOID:0000000011490726

1.CHECK CONTINUITY RGB DIGITAL IMAGE SIGNAL CIRCUIT

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

Display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M397	27	M396	157	Existed
	28		158	

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

Display unit		Ground	Continuity
Connector	Terminals		
M397	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 display unit harness connector and ground.

(+)		(–)	Condition	Voltage (Approx.)
Display unit				
Connector	Terminal			
M397	27	Ground	—	3.3 V
	28			

Is the inspection result normal?

YES >> Replace display unit.
NO >> Replace AV control unit.

COMPOSITE IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000011490727

AV control unit transmits the playback DVD image signal to the display unit.

Diagnosis Procedure

INFOID:0000000011490728

1.CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

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

AV control unit		Display unit		Continuity
Connector	Terminal	Connector	Terminal	
M203	68	M93	18	Existed

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

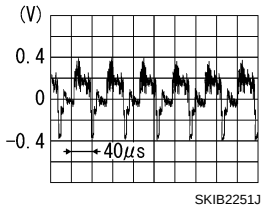
AV control unit		Ground	Continuity
Connector	Terminal		
M203	68		Not existed

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

(+) AV control unit		(–)	Condition	Reference value
Connector	Terminal			
M203	68	Ground	At DVD image is displayed.	

SKIB2251J

Is the inspection result normal?

YES >> Replace display unit.
NO >> Replace AV control unit.

DISK EJECT SIGNAL CIRCUIT

Description

INFOID:0000000011490729

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

Diagnosis Procedure

INFOID:0000000011490730

1.CHECK CONTINUITY CD 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	M202	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			
M202	29	Ground	Pressing the eject switch	0 V
			Except for above	5.0 V

Is the inspection result normal?

YES >> Replace preset switch.
NO >> Replace AV control unit.

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000011490731

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

Diagnosis Procedure

INFOID:0000000011490732

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	
M203	71	R5	2	Existed
	72		4	
	87		1	

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

AV control unit		Ground	Continuity
Connector	Terminals		
M203	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.

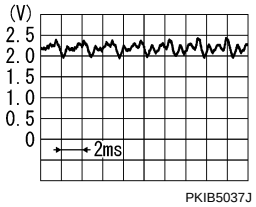
(+)		(–)		Voltage (Approx.)
AV control unit		AV control unit		
Connector	Terminal	Connector	Terminal	
M203	72	M203	71	5.0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace AV control unit.

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		
M203	87	M203	71	Give a voice.	

PKIB5037J

Is the inspection result normal?

YES >> Replace AV control unit.
NO >> Replace microphone.

CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000011490733

- The AV control unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits camera images to the display unit when power is supplied from the AV control unit.

Diagnosis Procedure

INFOID:0000000011490734

1.CHECK CONTINUITY CAMERA POWER SUPPLY CIRCUIT

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

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M202	22	B156	1	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M202	22		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE CAMERA POWER SUPPLY

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

(+)		(–)	Condition	Voltage (Approx.)
AV control unit				
Connector	Terminal			
M202	22	Ground	Shift position is “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace AV control unit. Refer to AV-166, "Removal and Installation".

3.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

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

Display unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M93	8	B156	3	Existed

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

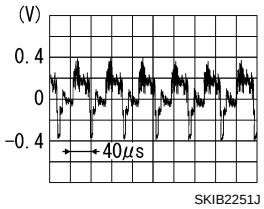
Display unit		Ground	Continuity
Connector	Terminal		
M93	8		Not existed

Is inspection result normal?

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

4. CHECK CAMERA IMAGE SIGNAL

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

(+)		(–)	Condition	Reference value
Display unit				
Connector	Terminal			
M93	8	Ground	At rear view camera image is displayed.	

SKIB2251J

Is inspection result normal?

YES >> Replace display unit. Refer to AV-168, "Removal and Installation".
NO >> Replace rear view camera. Refer to AV-188, "Removal and Installation".

STEERING SWITCH SIGNAL A CIRCUIT

Description

INFOID:0000000011490735

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000011490736

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	
M206	6	M36	24	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M206	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.

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	
M206	6	M206	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit.

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-148, "Component Inspection".

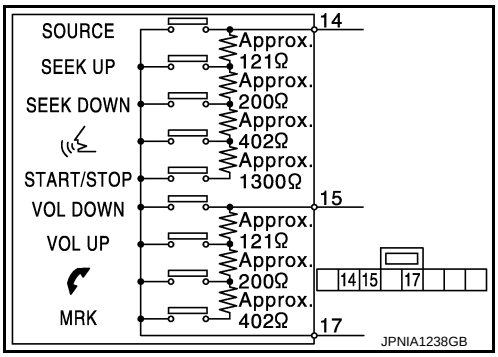
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch.

Component Inspection

INFOID:0000000011490737

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



Standard

Steering switch			Condition	Resistance Ω
Connector	Terminals			
M303	14	17	START / STOP switch ON	1982 – 2063
			switch ON	708 – 737
			SEEK DOWN switch ON	314 – 327
			SEEK UP switch ON	118 – 123
			SOURCE switch ON	1Ω or less
	15		MRK switch ON	708 – 737
			switch ON	314 – 327
			VOL UP switch ON	118 – 123
			VOL DOWN switch ON	1Ω or less

STEERING SWITCH SIGNAL B CIRCUIT

Description

INFOID:0000000011490738

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000011490739

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	
M206	16	M36	31	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M206	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.

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	
M206	16	M206	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit.

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-150, "Component Inspection".

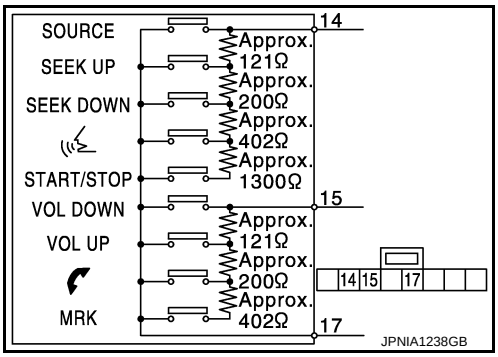
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch.

Component Inspection

INFOID:0000000011490740

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



Standard

Steering switch			Condition	Resistance Ω
Connector	Terminals			
M303	14	17	START / STOP switch ON	1982 – 2063
			switch ON	708 – 737
			SEEK DOWN switch ON	314 – 327
			SEEK UP switch ON	118 – 123
			SOURCE switch ON	1Ω or less
	15		MRK switch ON	708 – 737
			switch ON	314 – 327
			VOL UP switch ON	118 – 123
			VOL DOWN switch ON	1Ω or less

STEERING SWITCH GROUND CIRCUIT

Description

INFOID:0000000011490741

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000011490742

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	
M206	15	M36	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.

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		
M206	15		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit.

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-152, "Component Inspection".

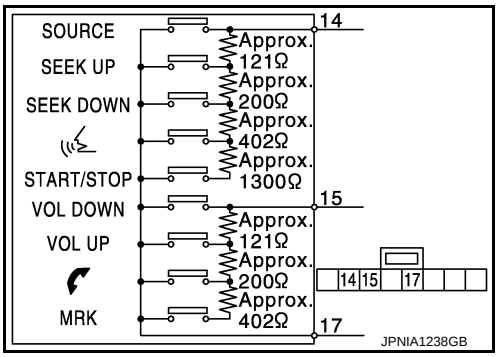
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch.

Component Inspection

INFOID:0000000011490743

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



Standard

Steering switch			Condition	Resistance Ω
Connector	Terminals			
M303	14	17	START / STOP switch ON	1982 – 2063
			switch ON	708 – 737
			SEEK DOWN switch ON	314 – 327
			SEEK UP switch ON	118 – 123
			SOURCE switch ON	1Ω or less
	15		MRK switch ON	708 – 737
			switch ON	314 – 327
			VOL UP switch ON	118 – 123
			VOL DOWN switch ON	1Ω or less

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000011490744

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 is started.	• Multifunction switch power supply and ground circuit. • AV communication circuit between AV control unit and multifunction switch. Perform CONSULT self-diagnosis. Refer to AV-34, "CONSULT Function (MULTI AV)".
	• All switches cannot be operated. • “MULTI AV” is not displayed on system selection screen when the CONSULT is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-137, "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-22, "On Board Diagnosis Function".
Fuel economy display, vehicle setting operation is abnormal.	There is malfunction in the CONSULT self-diagnosis result.	Perform detected DTC self-diagnosis. Refer to AV-34, "CONSULT Function (MULTI AV)".
	There is no malfunction in the self-diagnosis results.	Ignition signal circuit malfunction. Refer to AV-137, "AV CONTROL UNIT : Diagnosis Procedure".
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-166, "Removal and Installation".

RELATED TO HANDS-FREE PHONE

- Before performing diagnosis, confirm that the cellular phone being used by the customer is compatible with the vehicle.
- It is possible that a malfunction is occurring due to a version change of the phone even though the phone is a compatible type. This can be confirmed by changing the cellular phone to another compatible type, and checking that it operates normally. It is important to determine whether the cause of the malfunction is the vehicle or the cellular phone.

Check Compatibility

1. Make sure the customer's Bluetooth® related concern is understood.
2. Verify the customer's concern.
   NOTE:
   The customer's phone may be required, depending upon their concern.
3. Write down the customer's phone brand, model, and service provider.
   NOTE:
   It is necessary to know the service provider. On occasion, a given phone may be on the approved list with one provider, but may not be on the approved list with other providers.
4. Go to “www.nissanusa.com/bluetooth/”.

a. Using the website's search engine, find out if the customer's phone is on the approved list.

b. If the customer's phone is NOT on the approved list:
   Stop diagnosis here. The customer needs to obtain a Bluetooth® phone that is on the approved list before any further action.

c. If the feature related to the customer's concern shows as “N” (not compatible):
   Stop diagnosis here. If the customer still wants the feature to function, they will need to get an approved phone showing the feature as “Y” (compatible) in the “Basic Features” list.

d. If the feature related to the customer's concern shows as “Y” (compatible):
   Perform diagnosis as per the following table.

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction. Replace AV control unit. Refer to AV-166, "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.	AV control unit malfunction. Replace AV control unit. Refer to AV-166, "Removal and Installation".
The other party's voice cannot be heard by hands-free phone.	Check the “microphone speaker” in Inspection & Adjustment Mode if sound is heard.	AV control unit malfunction. Replace AV control unit. Refer to AV-166, "Removal and Installation".
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	AV control unit malfunction. Replace AV control unit. Refer to AV-166, "Removal and Installation".
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-143, "Diagnosis Procedure".
The system cannot be operated.	• The retractable hard top is fully closed. • The voice recognition can be controlled. • Steering switch's “MRK”, “VOL UP”, “VOL DOWN” switches works, but “ ” it does not work.	Steering switch malfunction.
	• The retractable hard top is fully closed. • The voice recognition can be controlled. • Steering switch's “MRK”, “VOL UP”, “VOL DOWN”, “ ” switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-149, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-151, "Diagnosis Procedure".

RELATED TO RGB IMAGE

Symptoms	Check items	Probable malfunction location
RGB image is not shown.	—	RGB digital image signal circuit malfunction. Refer to AV-140, "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-166, "Removal and Installation".
	Voice does not sound at “Voice Microphone Test” of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-143, "Diagnosis Procedure".
The voice cannot be controlled (Voice control screen is not displayed).	Steering switch's “SOURCE”, “SEEK UP”, “SEEK DOWN”, “ ”, “START / STOP”switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-147, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-151, "Diagnosis Procedure".

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	—	Disk eject signal circuit malfunction. Refer to AV-142, "Diagnosis Procedure".
No sound comes out or the level of the sound is low.	No sound from all speakers.	BOSE amp. power supply and ground circuits malfunction. Refer to AV-137, "AV CONTROL UNIT : Diagnosis Procedure".
	Sound is not heard from woofer.	• Woofer power supply and ground circuit malfunction. • Sound signal (woofer) circuit malfunction. • Woofer amp. ON signal circuit malfunction.
	Only a certain speaker (front right, front left, rear right, or rear left, etc.) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and BOSE amp. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Malfunction in AV control unit. • Malfunction in BOSE amp.
Noise is mixed with audio.	Noise comes out from all speakers.	• Malfunction in AV control unit. • Malfunction in BOSE amp.
	Noise comes out only from a certain speaker (front right, front left, rear right, or rear left, etc.).	• Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and BOSE amp. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Poor installation of speaker (e.g. backlash and looseness) • Malfunction in AV control unit. • Malfunction in BOSE amp.
	Noise is mixed with radio only (when the car hits a bump or while driving over bad roads).	Poor connector connection of antenna or antenna feeder.
Radio is not received or poor reception.	• Other audio sounds are normal. • Any radio cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	• Antenna amp. ON signal circuit malfunction. • Poor connector connection of antenna or antenna feeder.
Satellite radio is not received.	There is malfunction in the CONSULT self-diagnosis result. Refer to AV-34, "CONSULT Function (MULTI AV)".	• Malfunction in antenna, antenna feeder, or AV control unit. Perform DTC diagnosis. Refer to AV-47, "DTC Index". • Poor continuity in antenna feeder. • Poor connector connection of antenna or antenna feeder.
	There is no malfunction in the CONSULT self-diagnosis result. Refer to AV-34, "CONSULT Function (MULTI AV)".	• Poor continuity in antenna feeder. • Poor connector connection of antenna or antenna feeder. • Loose satellite radio antenna mounting nut. **NOTE:** Tightening torque: 6.5 N·m (0.66 kg-m, 58 in-lb)

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-142, "Diagnosis Procedure".
DVD image is not displayed.	—	Perform CONSULT self-diagnosis. Refer to AV-34, "CONSULT Function (MULTI AV)". When detecting no malfunction in those components, the following items are a possible cause. • Composite image signal circuits malfunction. Refer to AV-141, "Diagnosis Procedure".
DVD sound is not heard.	No sound from all speakers.	BOSE amp. power supply and ground circuit. Refer to AV-138, "BOSE AMP. : Diagnosis Procedure".
	Sound is heard only from specific places (RH front, RH rear, LH front and LH rear).	Audio signal circuit of suspect system.

RELATED TO CAMERA

Symptoms	Check items	Probable malfunction location
Camera image is not shown. (Vehicle width and predictive course line are displayed.)	—	• Camera image signal circuit. • Camera power supply and ground circuits. Refer to AV-145, "Diagnosis Procedure".
Camera image does not switch.	Select “Camera Cont.” of Confirmation/ Adjustment mode, Reverse Sensor is not turned ON at “Connection Confirmation”.	Reverse signal circuit malfunction.
	Select “Camera Cont.” of Confirmation/ Adjustment mode, Reverse Sensor is turned ON at “Connection Confirmation”.	AV control unit malfunction. Replace AV control unit. Refer to AV-166, "Removal and Installation".

RELATED TO STEERING SWITCH

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch ground circuit malfunction. Refer to AV-151, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch malfunction.
Steering switch's “SOURCE”, “SEEK UP”, “SEEK DOWN”, “”, “START / STOP” switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-147, "Diagnosis Procedure".
Steering switch's “MRK”, “VOL UP”, “VOL DOWN”, “” switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-149, "Diagnosis Procedure".

RELATED TO MULTIFUNCTION METER

Symptoms	Check items		Possible malfunction location / Action to take
The multifunction meter cannot be displayed	There is a malfunction in the CONSULT self-diagnosis result		Perform detected DTC self-diagnosis
	There is no malfunction in the self-diagnosis results		AV control unit power supply and ground circuit (IGN) Refer to AV-137, "AV CONTROL UNIT : Diagnosis Procedure".
	Only a particular item cannot be displayed	"COOLANT TEMP" display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Engine coolant temperature sensor signal circuit
		"ENGINE OIL TEMP" display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Oil pressure sensor signal circuit

Symptoms	Check items		Possible malfunction location / Action to take
The multifunction meter cannot be displayed	Only a particular item cannot be displayed	“ENGINE OIL PRESSURE” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Oil pressure sensor signal circuit
		“TRANS OIL TEMP” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Transmission fluid temperature sensor signal circuit
		“TRANS OIL PRESSURE” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Transmission oil pressure sensor signal circuit
		“BOOST” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Boost sensor signal circuit
		“SPEED” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Vehicle speed sensor signal circuit
		“FUEL / RANGE” display is malfunctioning	• Perform self-diagnosis of CONSULT Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Combination meter signal circuit
		“FUEL FLOW” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Fuel injection signal circuit
		“FUEL ECON.” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - ECM, combination meter signal circuit
		“TORQUE SPLIT” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Torque allocation signal circuit
		“ACCEL G” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Signal circuit of Yaw rate sensor, lateral G sensor, and longitudinal G sensor
		“BRAKE G” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Signal circuit of Yaw rate sensor, lateral G sensor, and longitudinal G sensor

Symptoms	Check items		Possible malfunction location / Action to take
The multifunction meter cannot be displayed	Only a particular item cannot be displayed	“ACCEL BRAKING G” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Signal circuit of Yaw rate sensor, lateral G sensor, and longitudinal G sensor
		“CORNERING G” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Signal circuit of Yaw rate sensor, lateral G sensor, and longitudinal G sensor
		“TOTAL G” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Signal circuit of Yaw rate sensor, lateral G sensor, and longitudinal G sensor
		“CLOCK” display is malfunctioning	GPS antenna circuit
		“ACCEL PEDAL” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Accelerator pedal position sensor signal circuit
		“BRAKE PEDAL” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Brake fluid pressure sensor signal circuit
		“STEERING” display is malfunctioning	• Perform self-diagnosis of CONSULT. Refer to AV-34, "CONSULT Function (MULTI AV)". • When there is no malfunction in the CONSULT self-diagnosis result - Steering angle sensor signal circuit
		“STOP WATCH” display is malfunctioning	AV control unit.

NORMAL OPERATING CONDITION

Description

INFOID:0000000011490745

NOTE:
For Navigation system operation information, refer to Navigation system Owner's Manual.

BASIC OPERATIONS

Symptom	Possible cause	Possible solution
No image is displayed.	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.
	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.
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.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the navigation system.

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 commands can be recognized more easily.
The system cannot be operated.	The retractable hard top is open.	• Close the retractable hard top. • Open and close the retractable hard top before operating the system.

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”.
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/cassette, 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) 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 files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than “.MP3”, “.WMA”, “.AAC”, “.mp3”, “.wma”, or “.aac” 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 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 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 file has been given an extension of “.MP3”, “.WMA”, “.AAC” “.mp3”, “.wma”, or “.aac” 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.
Poor reception only from a certain radio broadcast station.	Check incoming radio wave signal strength of applicable broadcast station.
Buzz/rattle sound from speaker	The majority of rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the rattle.

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.

Symptom	Possible cause	Possible solution
DVD can not be played	Check that the DVD is inserted in the right place.	Upturn the DVD (facing the title upward).
	Check if there is condensation inside the player.	wait until the condensation is gone (about 1 hour) before using the player.
	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.
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.
Low sound quality		Wipe and clean the dirt on the disc.
Distortion in picture	In the process of fast-forward or fast-reverse.	This is not a malfunction.
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.
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.
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.
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.
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.

Symptom	Possible cause	Possible solution
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.
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.

Symptom	Possible cause	Possible solution
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 HANDS-FREE PHONE

Symptom	Cause and Counter measure
Does not recognize cellular phone connection. (No connection is displayed on the display at the guide.)	Some Bluetooth® enabled cellular phones may not be recognized by the in-vehicle phone module. Refer to “RELATED TO HANDS-FREE PHONE (Check Compatibility)” of MULTI AV SYSTEM SYMPTOM.
Cannot use hands-free phone	Customer will not be able to use a hands-free phone under the following conditions. • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. **NOTE:** While a cellular phone is connected through the Bluetooth® wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth® Hands-Free Phone System cannot charge cellular phones.
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality	Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.

REMOVAL AND INSTALLATION

AV CONTROL UNIT

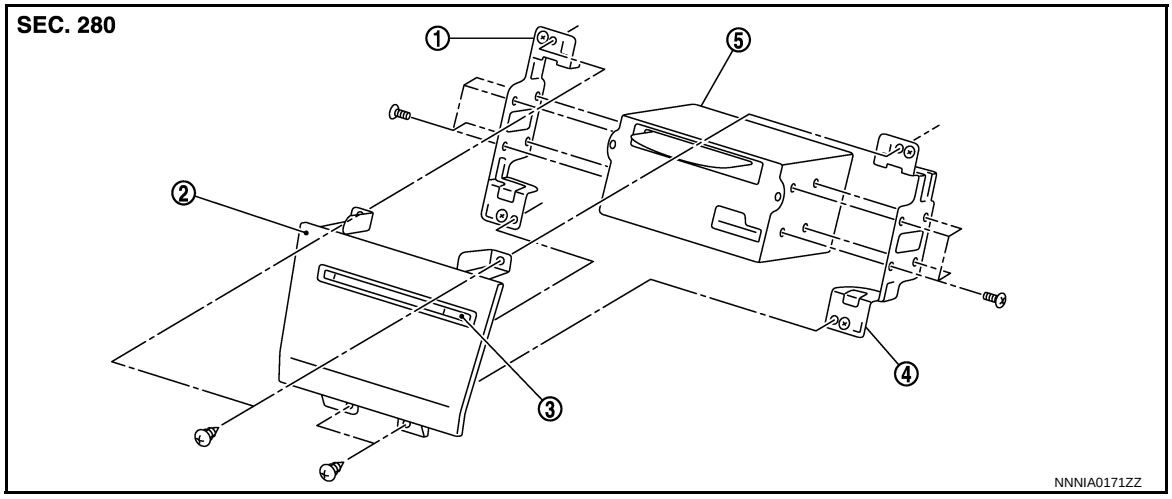
Exploded View

INFOID:0000000011490746

CAUTION:
Remove battery terminal and AV control unit after a lapse of 30 seconds or more after turning the ignition switch OFF.
NOTE:
After the ignition switch is turned OFF, the AV control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

REMOVAL
Refer to IP-12, "Exploded View".

DISASSEMBLY



1. Bracket LH
2. Cluster lid C (lower)
3. Disk eject switch
4. Bracket RH
5. AV control unit

Removal and Installation

INFOID:0000000011490747

CAUTION:
Be careful of the following items at removal and installation of A/T shift selector. Refer to TM-375, "Removal and Installation" for details.
- **For electro-medical apparatus user, keep the range sensor away from the device.**
- **Keep the range sensor away from magnetic objects during work.**
- **Remove battery terminal and AV control unit after a lapse of 30 seconds or more after turning the ignition switch OFF.**

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

REMOVAL
NOTE:
When replacing AV control unit, save or print current vehicle specification with CONSULT configuration before replacement. Refer to AV-93, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

1. Remove the cluster lid C (lower). Refer to IP-13, "Removal and Installation".
2. Disconnect the connector, and then remove the AV control unit together with the bracket from the vehicle.
3. Remove the bracket from the AV control unit.

INSTALLATION
Install in the reverse order of removal.

CAUTION:

When replacing AV control unit, you must perform “Read/Write Configuration” with CONSULT. Refer to AV-93, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

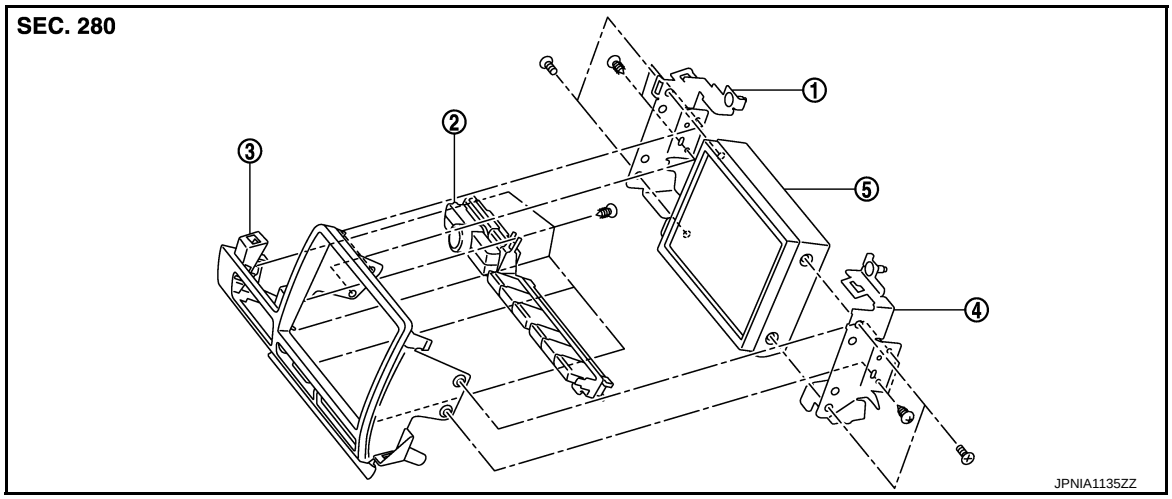
DISPLAY UNIT

Exploded View

INFOID:0000000011490748

REMOVAL
Refer to IP-12, "Exploded View".

DISASSEMBLY



1. Bracket (LH)
2. Multifunction switch
3 Cluster lid C (upper)
4. Bracket (RH)
5. Display unit

Removal and Installation

INFOID:0000000011490749

REMOVAL

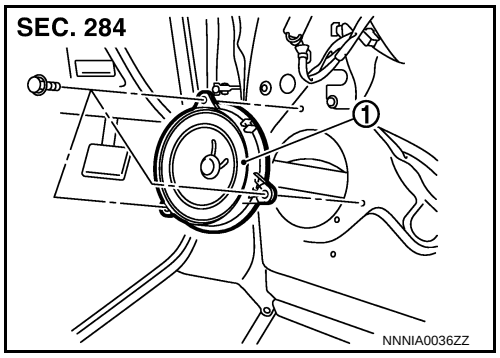
1. Remove the instrument panel pad A. Refer to IP-13, "Removal and Installation".
2. Disconnect the connector, and then remove the display together with the bracket and the cluster lid C (upper).
3. Remove the display together with the bracket from the cluster lid C (upper).
4. Remove the bracket from the display.

INSTALLATION
Install in the reverse order of removal.

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000011490750



1. Front door speaker

Removal and Installation

INFOID:0000000011490751

REMOVAL

1. Remove the front door finisher. Refer to INT-12, "Exploded View".
2. Disconnect the connector and remove the screws, and remove the front door speaker.

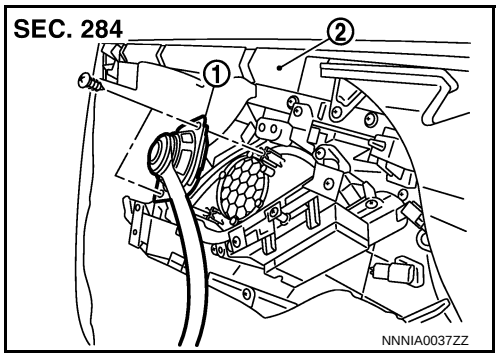
INSTALLATION

Install in the reverse order of removal.

FRONT DOOR SQUAWKER

Exploded View

INFOID:0000000011490752



1. Front door squawker
2. Front door finisher

Removal and Installation

INFOID:0000000011490753

REMOVAL

1. Remove the front door finisher. Refer to INT-12, "Exploded View".
2. Remove the screws, and then remove the front door squawker from the front door finisher.

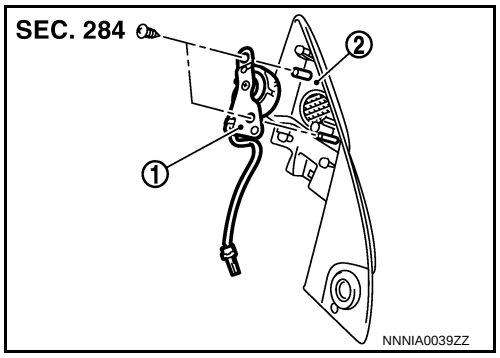
INSTALLATION

Install in the reverse order of removal.

TWEETER

Exploded View

INFOID:0000000011490754



1. Tweeter
2. Door corner cover

Removal and Installation

INFOID:0000000011490755

REMOVAL

1. Remove the door corner cover. Refer to MIR-19, "DOOR MIRROR ASSEMBLY : Exploded View".
2. Remove the screws, and remove the tweeter from the door corner cover.

INSTALLATION

Install in the reverse order of removal.

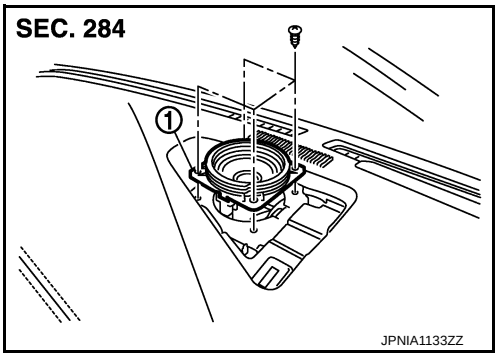
CENTER SPEAKER

Exploded View

INFOID:0000000011490756

REMOVAL

Refer to IP-12, "Exploded View".



1. Center speaker

Removal and Installation

INFOID:0000000011490757

REMOVAL

1. Remove the center speaker grille. Refer to IP-13, "Removal and Installation".
2. Remove the screws and disconnect the connector, and then remove the center speaker.

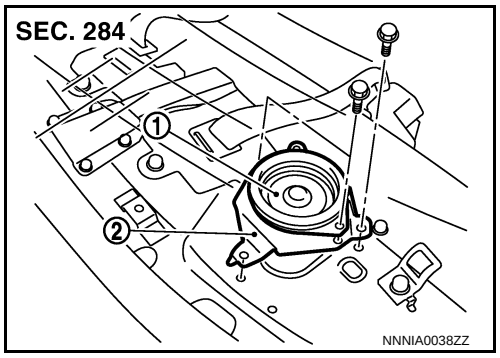
INSTALLATION

Installation is the reverse order of removal.

REAR SPEAKER

Exploded View

INFOID:0000000011490758



1. Rear speaker
2. Speaker bracket

Removal and Installation

INFOID:0000000011490759

REMOVAL

1. Remove the rear parcel shelf finisher. Refer to INT-19, "Exploded View".
2. Remove the rear speaker bracket mounting screws and disconnect the connector, and then remove the rear speaker together with the speaker bracket.
3. Remove the speaker from the speaker bracket.

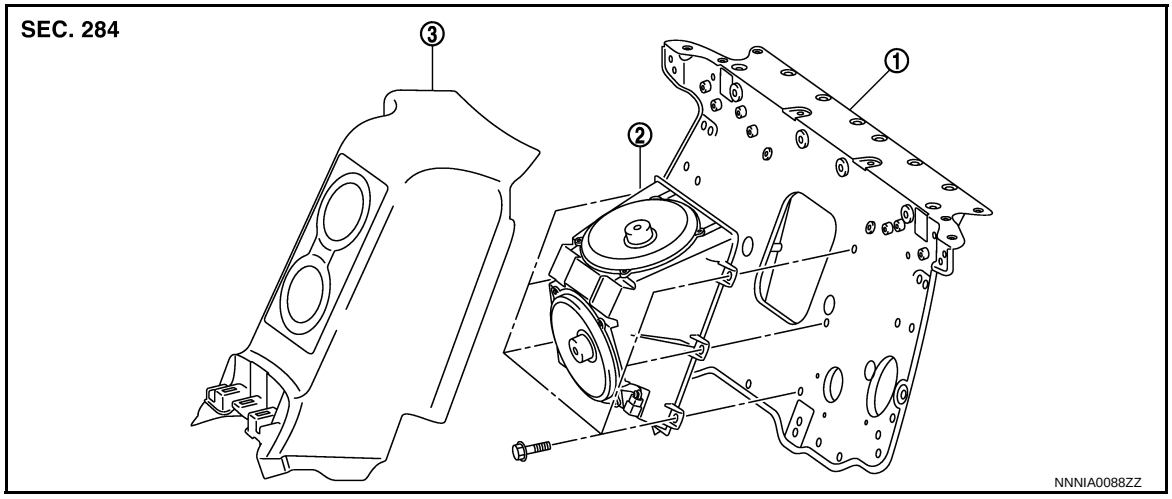
INSTALLATION

Install in the reverse order of removal.

WOOFER

Exploded View

INFOID:0000000011490760



1. Rear seatback support
2. Woofer
3. Rear seat center finisher

Removal and Installation

INFOID:0000000011490761

REMOVAL

1. Remove the rear seat center finisher. Refer to INT-19, "Exploded View".
2. Remove the mounting screws and disconnect the connector, and then remove the woofer.

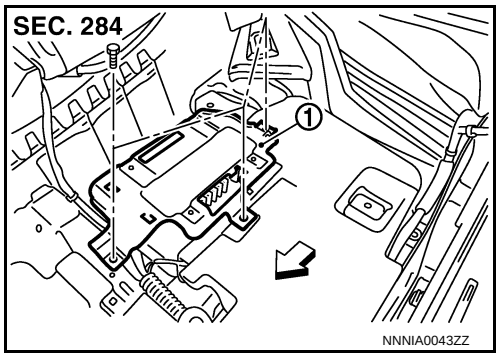
INSTALLATION

Install in the reverse order of removal.

BOSE AMP.

Exploded View

INFOID:0000000011490762



1. BOSE amp.

⇦: Front of vehicle

Removal and Installation

INFOID:0000000011490763

REMOVAL

1. Remove the driver seat. Refer to SE-61, "Removal and Installation".
2. Turn over the floor carpet (refer to INT-22, "Exploded View"), remove the screws and disconnect the connector, and then remove the BOSE amp.

INSTALLATION

Installation is the reverse order of removal.

FRONT MICROPHONE (ACTIVE NOISE CONTROL)

Removal and Installation

INFOID:0000000011490764

REMOVAL

1. Remove the headlining. Refer to INT-24, "Removal and Installation".
2. Remove the front microphone from the headlining.

INSTALLATION

Install in the reverse order of removal.

NOTE:

Check the front microphone for looseness after the installation.

REAR MICROPHONE (ACTIVE NOISE CONTROL SYSTEM)

Removal and Installation

INFOID:0000000011490765

REMOVAL

1. Remove the headlining. Refer to INT-24, "Removal and Installation".
2. Remove the rear microphone from the headlining.

INSTALLATION

Install in the reverse order of removal.

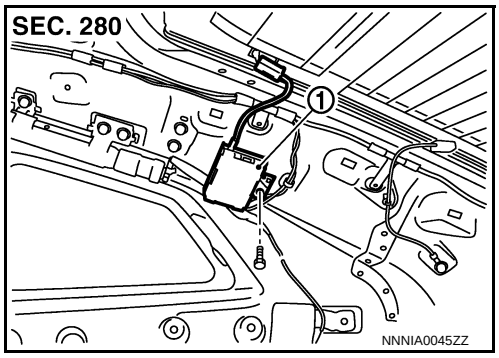
NOTE:

Check the rear microphone for looseness after the installation.

ANTENNA AMP.

Exploded View

INFOID:0000000011490766



1. Antenna amp.

Removal and Installation

INFOID:0000000011490767

REMOVAL

1. Remove the rear pillar finisher (RH). Refer to INT-15, "Exploded View".
2. Remove the screw and disconnect the connector, and then remove the radio antenna amplifier from the vehicle.

INSTALLATION

Install in the reverse order of removal.

MULTIFUNCTION SWITCH

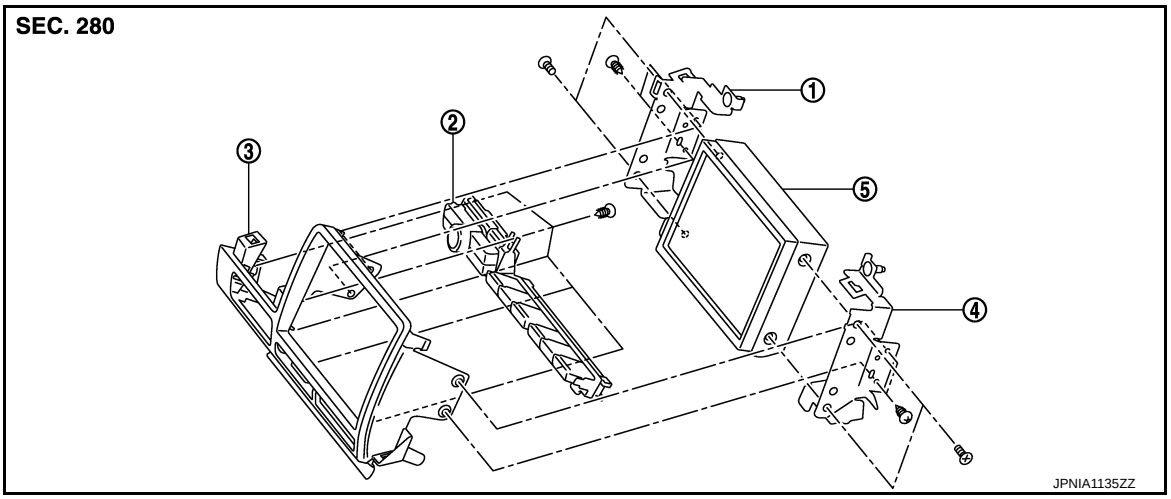
Exploded View

INFOID:0000000011490768

REMOVAL

Refer to IP-12, "Exploded View".

DISASSEMBLY



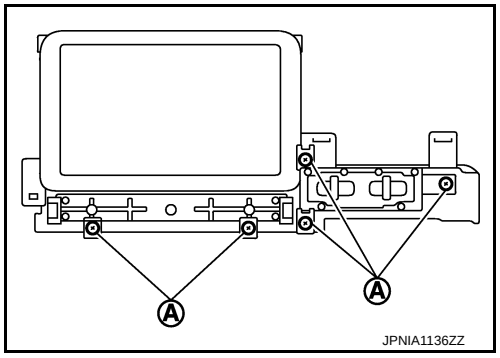
1. Bracket (LH)
2. Multifunction switch
3. Cluster lid C (upper)
4. Bracket (RH)
5. Display unit

Removal and Installation

INFOID:0000000011490769

REMOVAL

1. Remove the cluster lid C. Refer to IP-13, "Removal and Installation".
2. Remove the screws (A), and then remove the multifunction switch from the cluster lid C (upper).



INSTALLATION

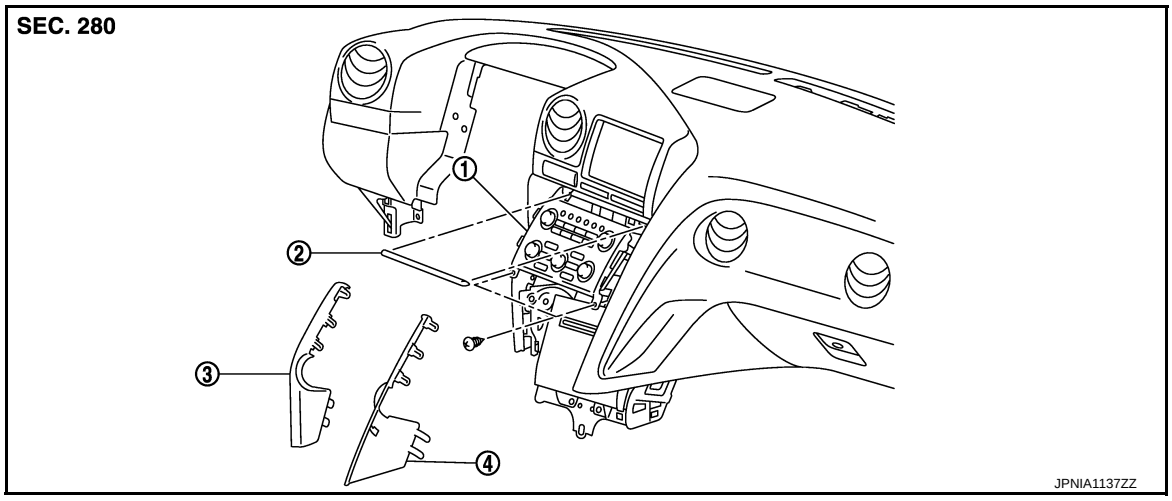
Installation is the reverse order of removal.

PRESET SWITCH

Exploded View

INFOID:0000000011490770

REMOVAL
Refer to IP-12, "Exploded View".



1. Preset switch
2. Instrument panel garnish (upper)
3. Instrument panel garnish LH
4. Instrument panel garnish RH

Removal and Installation

INFOID:0000000011490771

REMOVAL

1. Remove the instrument panel garnish (upper) and the instrument panel garnish LH/RH. Refer to IP-13, "Removal and Installation".
2. Remove the screws and disconnect the connector, and then remove the preset switch.

INSTALLATION
Install in the reverse order of removal.

DISK EJECT SWITCH

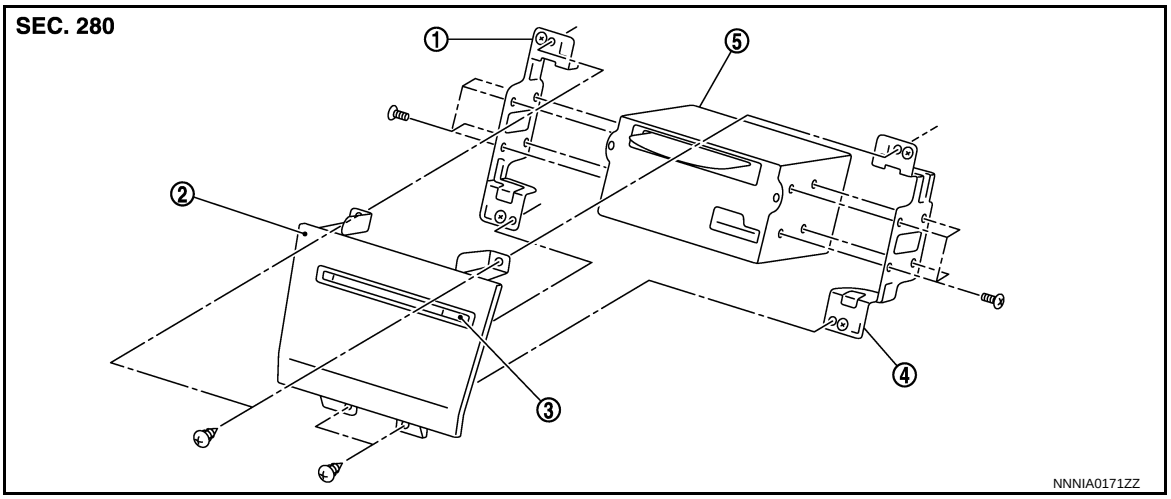
Exploded View

INFOID:0000000011490772

REMOVAL

Refer to IP-12, "Exploded View".

DISASSEMBLY



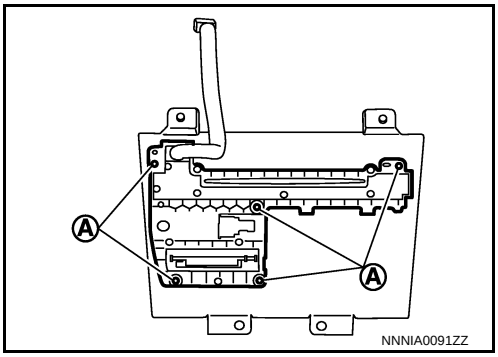
1. Bracket LH
2. Cluster lid C (lower)
3. Disk eject switch
4. Bracket RH
5. AV control unit

Removal and Installation

INFOID:0000000011490773

REMOVAL

1. Remove the cluster lid C (lower). Refer to IP-13, "Removal and Installation".
2. Remove the screws (A), and then remove the disk eject switch.



INSTALLATION

Install in the reverse order of removal.

NOTE:

When installing disk eject switch, do not allow the hard wire that connects disk eject switch and preset switch to get caught in between AV control unit and disk eject switch.

STEERING SWITCH

Exploded View

INFOID:0000000011490774

Refer to ST-14, "Exploded View".

Removal and Installation

INFOID:0000000011490775

REMOVAL

Refer to ST-14, "Removal and Installation".

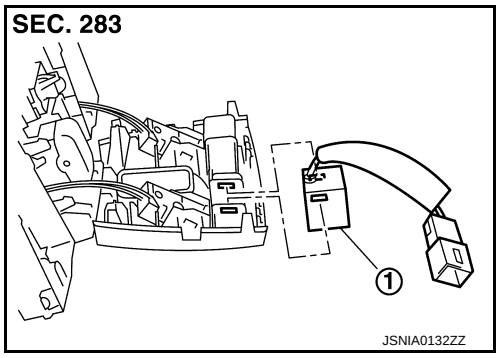
INSTALLATION

Install in the reverse order of removal.

MICROPHONE

Exploded View

INFOID:0000000011490776



1. Microphone

Removal and Installation

INFOID:0000000011490777

REMOVAL

1. Remove map lamp. Refer to INL-119, "Exploded View".
2. Remove the microphone from the map lamp.

INSTALLATION

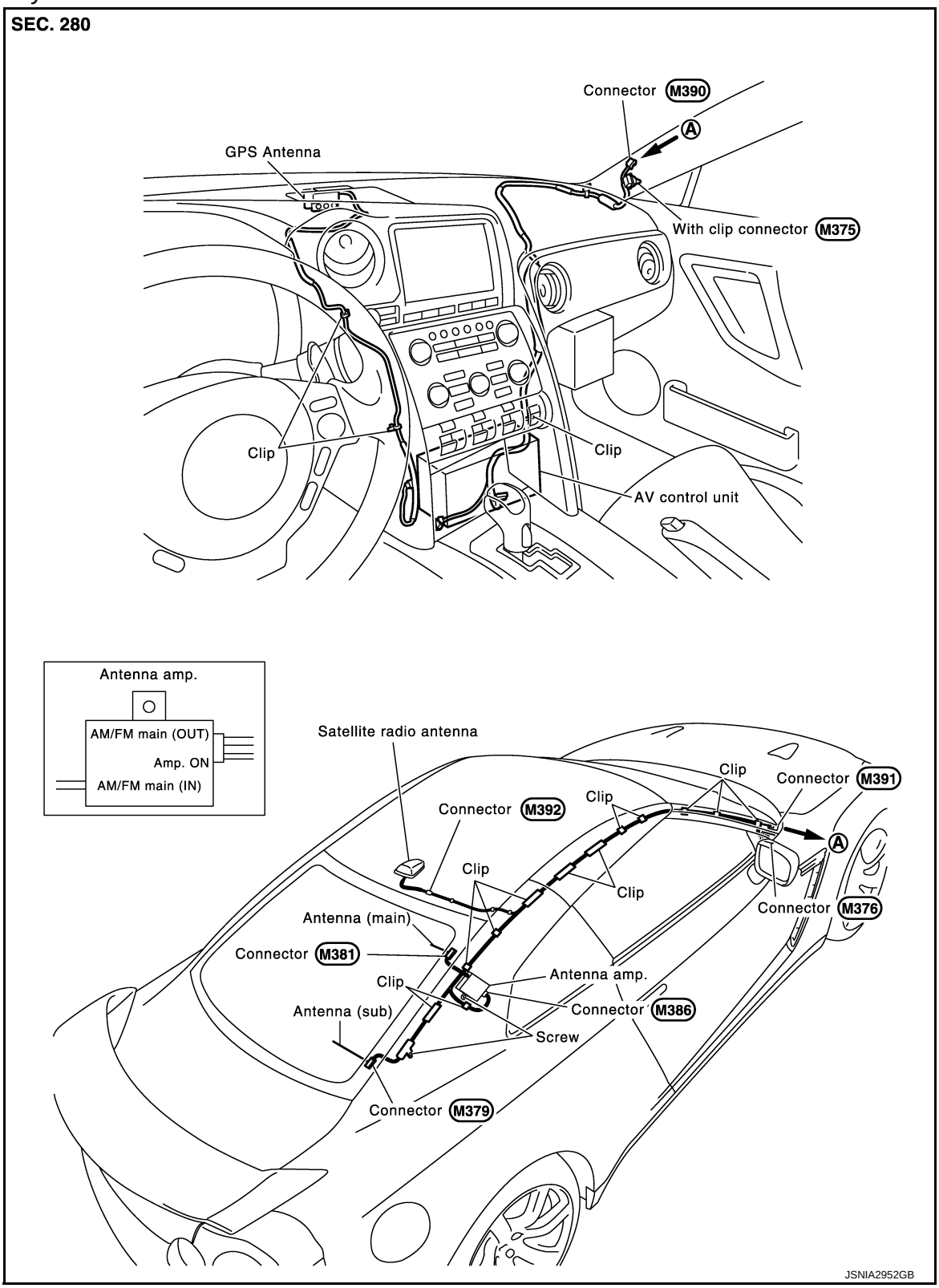
Install in the reverse order of removal.

GPS ANTENNA

Exploded View

INFOID:0000000011490778

Feeder layout

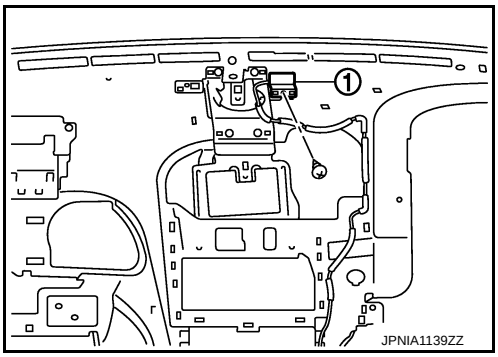


Removal and Installation

INFOID:0000000011490779

REMOVAL

1. Remove the instrument panel assembly. Refer to IP-13, "Removal and Installation".
2. Remove the screws, and then remove GPS antenna (1) from the instrument panel assembly.



INSTALLATION

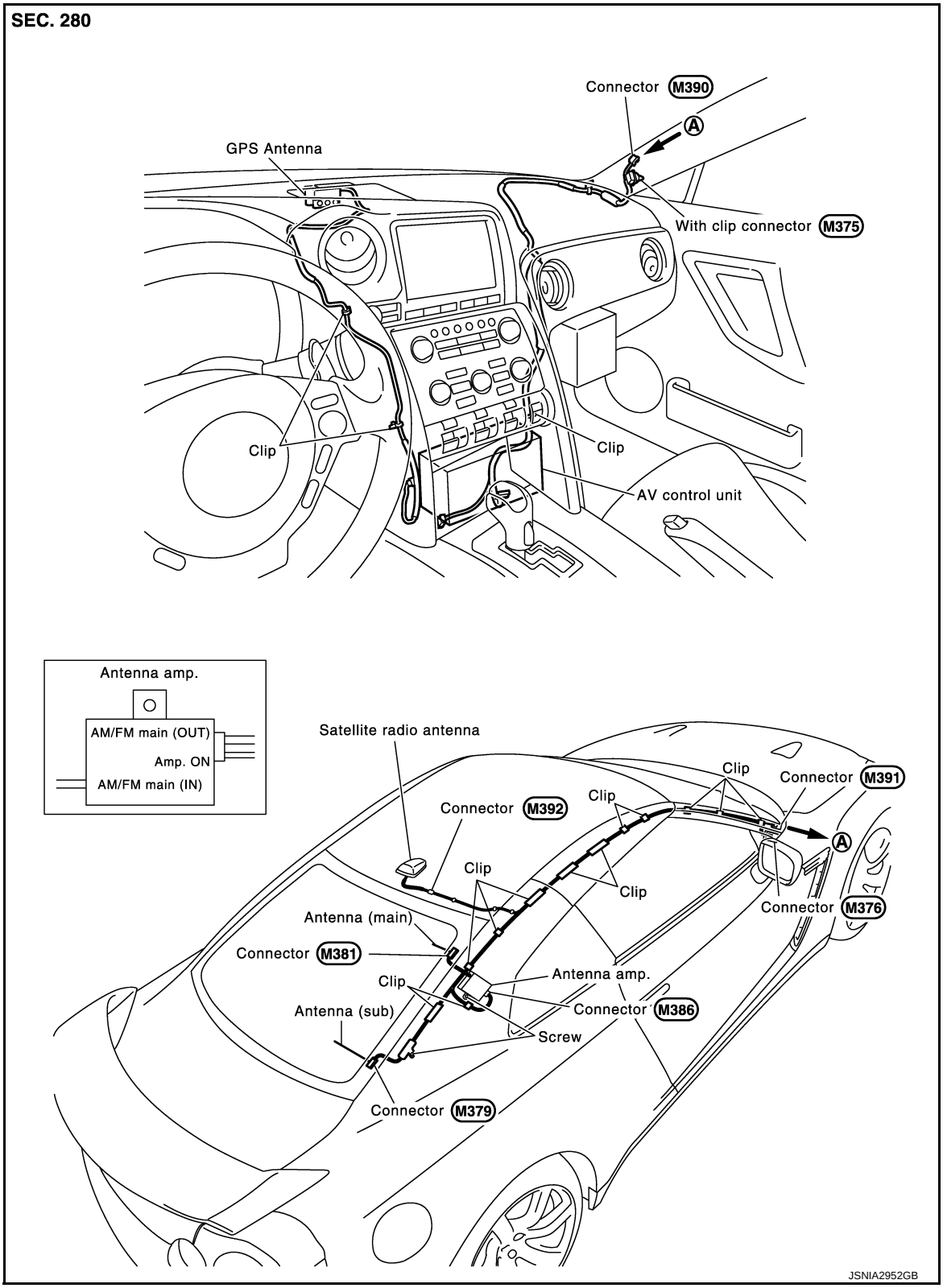
Install in the reverse order of removal.

ANTENNA FEEDER

Feeder layout

INFOID:0000000011490780

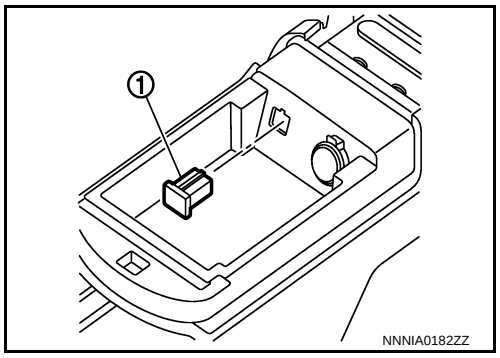
SEC. 280



USB CONNECTOR

Exploded View

INFOID:0000000011490781



1. USB connector

Removal and Installation

INFOID:0000000011490782

REMOVAL

1. Remove center console. Refer to IP-23, "Exploded View".
2. Push the pawl from the back of center console to remove USB connector.

INSTALLATION

Install in the reverse order of removal.

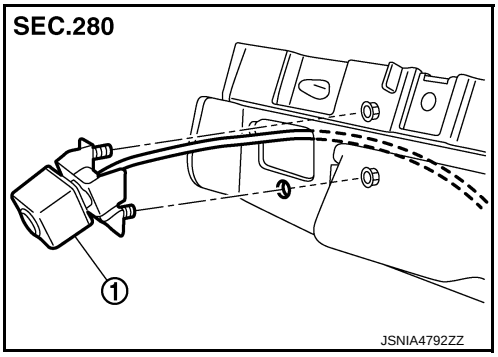
REAR VIEW CAMERA

Exploded View

INFOID:0000000011490783

REMOVAL
Refer to EXT-21, "Exploded View".

DISASSEMBLY



1. Rear view camera

Removal and Installation

INFOID:0000000011490784

REMOVAL

1. Remove license lamp bracket. Refer to EXT-22, "Removal and Installation".
2. Remove the mounting nuts of rear view camera.
3. Remove rear view camera from license lamp bracket.

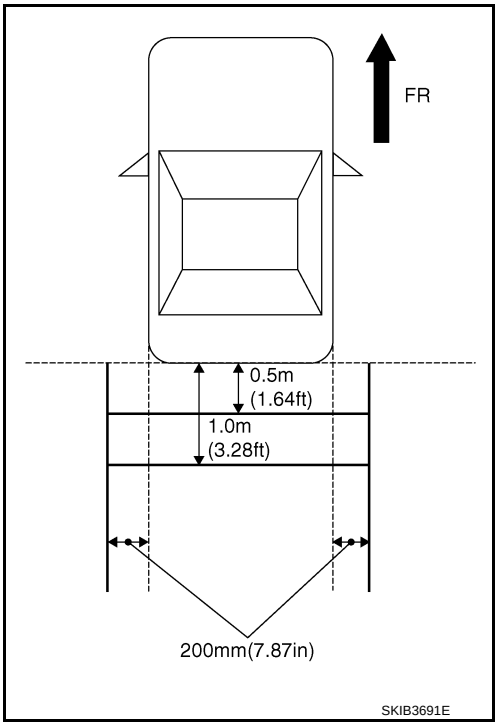
INSTALLATION
Install in the reverse order of removal.
NOTE:
Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to AV-188, "Adjustment".

Adjustment

INFOID:0000000011490785

Adjust the guide line position if the guide line position is shifted after installing the rear view camera.

1. Draw lines on rearward area of the vehicle passing through the following points: 200 mm (7.87 in) from both sides of the vehicle, and 0.5 m (1.64 ft), 1.0 m (3.28 ft) from the rear end of the bumper.
2. Set into “Adjust offset of rear view camera” mode of Confirmation / Adjustment mode.

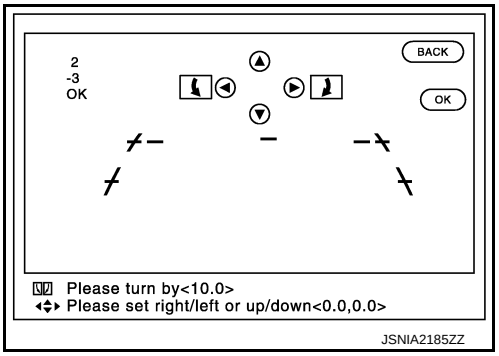


3. Rotate the center dial, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

Selected pattern	: –10° to 10°

4. Make fine adjustment to the correction line of the rear of the vehicle with up/down/left/right switches so that its position is aligned with the guiding line. Press “OK” switch and record the adjusted guiding line position to the camera control unit.

Up/Down adjustment range	: –10° to 10°
Left/Right adjustment range	: –10° to 10°



CAUTION:
Never operate other function such as pressing BACK while writing index data.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000011490786

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:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:

Always observe the following items for preventing accidental activation.

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

Precaution for Battery Service

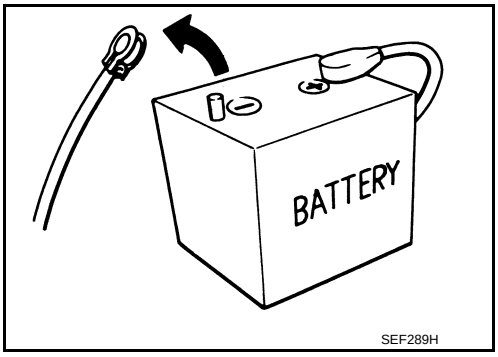
INFOID:0000000011490787

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Precautions for Removing Battery Terminal

INFOID:0000000011490788

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



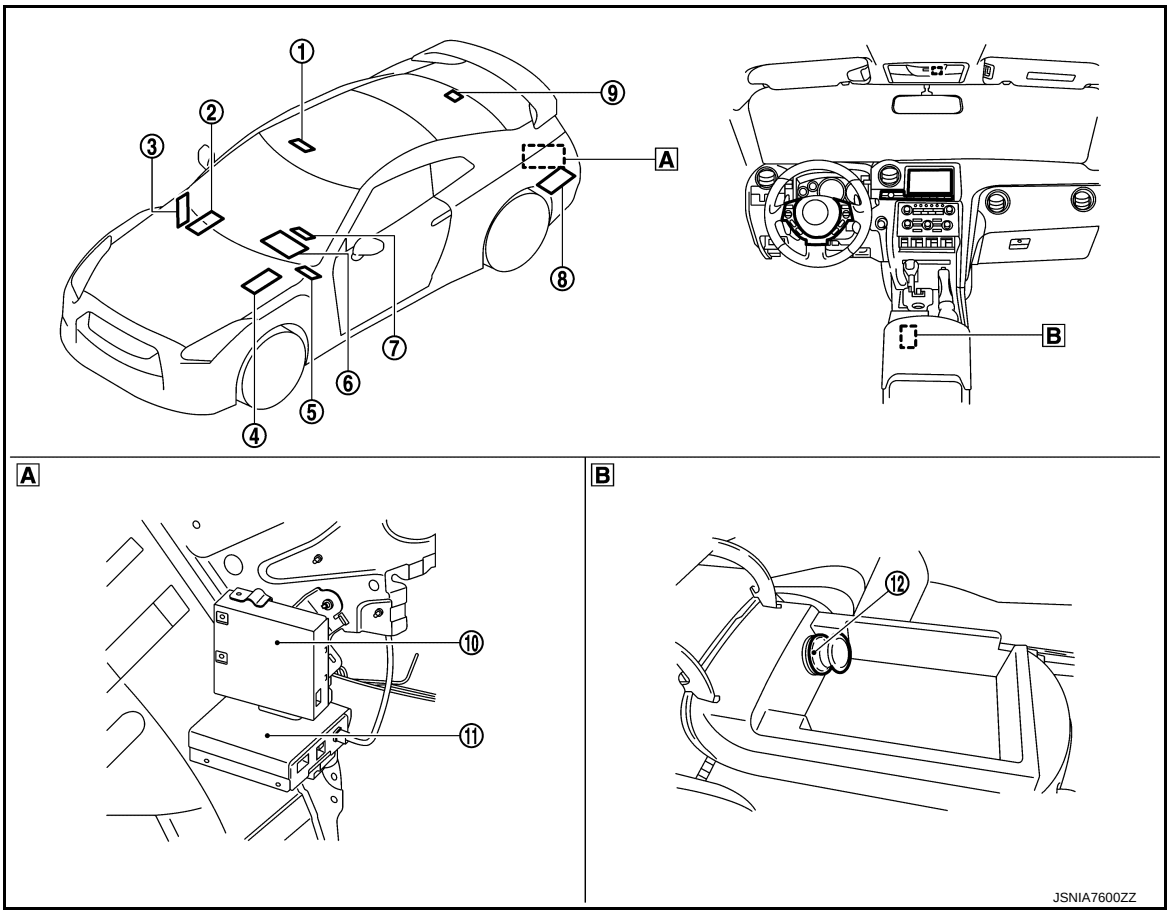
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011490789



A Trunk side finisher inner side LH B Console box inner

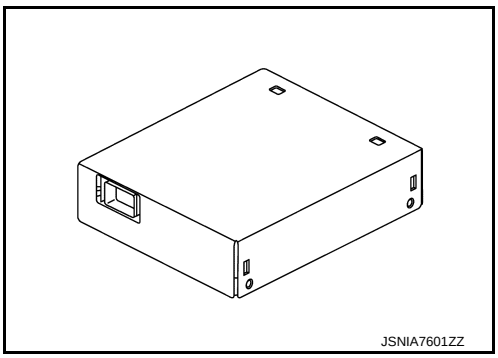
No	Part name	Function description
①	AWD control unit	Transmits the vehicle condition signal via CAN communication. For details of installation position, refer to DLN-8, "Component Parts Location (GT-R certified NISSAN dealer)".
②	ECM	Transmits the vehicle condition signal via CAN communication. For details of installation position, refer to EC-42, "Component Parts Location (GT-R certified NISSAN dealer)".
③	BCM	Transmits the vehicle condition signal via CAN communication. For details of installation position, refer to BCS-8, "Component Parts Location".
④	ABS actuator and electric unit (control unit)	Transmits the vehicle condition signal via CAN communication. For details of installation position, refer to BRC-15, "Component Parts Location (GT-R certified NISSAN dealer)".
⑤	Low tire pressure warning control unit	Transmits the vehicle condition signal via CAN communication. For details of installation position, refer to WT-10, "Component Parts Location (GT-R certified NISSAN dealer)".
⑥	Combination meter	Transmits the vehicle condition signal via CAN communication. For details of installation position, refer to MWI-13, "METER SYSTEM : Component Parts Location".

No	Part name	Function description
⑦	Steering angle sensor	Transmits the vehicle condition signal via CAN communication. For details of installation position, refer to BRC-17, "Component Description (GT-R certified NISSAN dealer)".
⑧	TCM	Transmits the vehicle condition signal via CAN communication. For details of installation position, refer to TM-40, "Component Parts Location (GT-R certified NISSAN dealer)".
⑨	GPS antenna	AV-192, "GPS Antenna"
⑩	Vehicle data transmitter	AV-192, "Vehicle Data Transmitter"
⑪	Data logger control module	AV-192, "Data Logger Control Module"
⑫	USB connector (data logger switch)	AV-193, "USB Connector"

Vehicle Data Transmitter

INFOID:0000000011490790

- Equipped to the trunk inner LH side finisher inner side.
- It uses CAN communication to collect/analyze the vehicle status (driving data) according to the signals from each control unit.
- Integrates the Bluetooth® function, which makes it possible to connect a Bluetooth® communication equipped smartphone, and other portable devices.
- It transmits the vehicle status (driving data) to the data logger control module via IT communication.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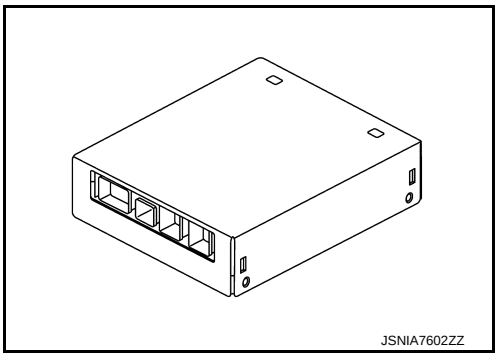
Bluetooth® module specifications

Supported communication type	Support profile
Bluetooth® communication	SPP

Data Logger Control Module

INFOID:0000000011490791

- Equipped to the trunk inner side LH finisher inner side, this writes vehicle status (driving data) received from the vehicle data transmitter via IT communication to a USB memory.
- A GPS antenna is connected, which receives GPS signal. The acquired vehicle location information is transmitted to the vehicle data transmitter.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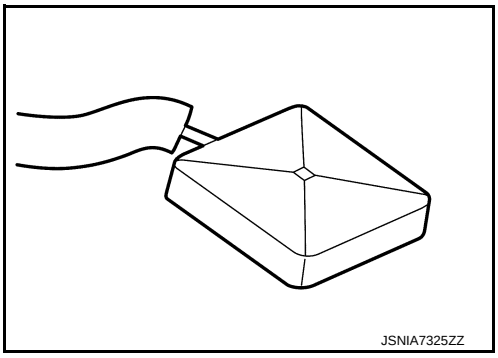
GPS Antenna

INFOID:0000000011490792

Equipped to the rear parcel shelf center, it is supplied with a power source from the data logger control module, amplifies radio waves received from GPS satellites, and transmits them to the data logger control module as the GPS signal.

NOTE:

An object placed on the rear parcel shelf may cause the reception sensitivity to be lowered.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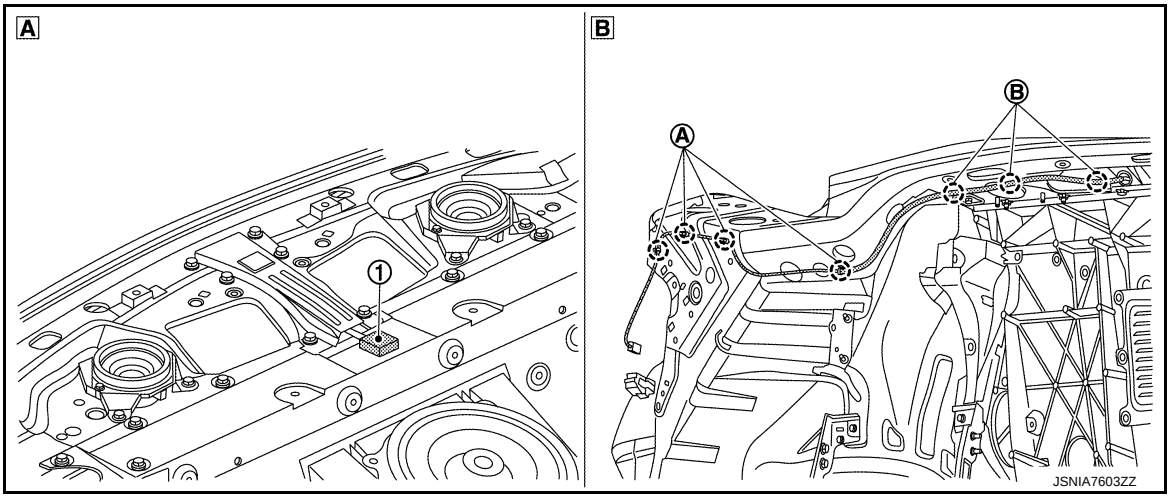
ANTENNA HARNESS

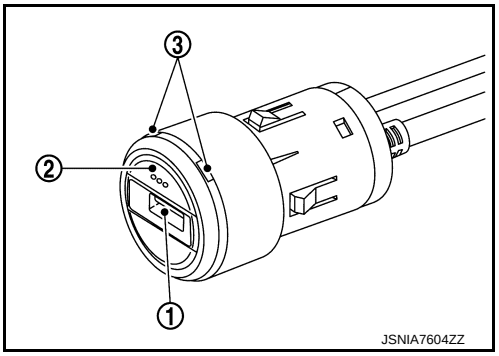


① GPS antenna
Ⓐ Harness clip
Ⓑ Harness band
A Under the rear parcel shelf finisher
B In trunk room

USB Connector

INFOID:0000000011490793

Installed to the center console box inner, it is equipped with a port for USB connection ①, data logger switch ②, and two LEDs ③.



PORT FOR USB CONNECTION

A USB memory can be connected.

Supported USB memory	Hi-speed communication standard
USB memory	USB 2.0 Hi-speed standard or higher

DATA LOGGER SWITCH

- The writing of driving data to a USB memory is started by operating the data logger switch.
- The connection status of the USB memory and the GPS signal reception status can be confirmed with the two LEDs.

LED illumination patterns

Condition	Logging (red)	GPS (green)
Writing is possible (standby status)	Blinking	—
USB cannot be recognized	Blinks 2 times and then turns OFF	—
USB memory storage space is insufficient.	Blinks 3 times and then turns OFF	—
Executing writing	ON	ON

Condition	Logging (red)	GPS (green)
GPS positioning signal acquired	—	ON
GPS positioning signal not acquired	—	Blinking

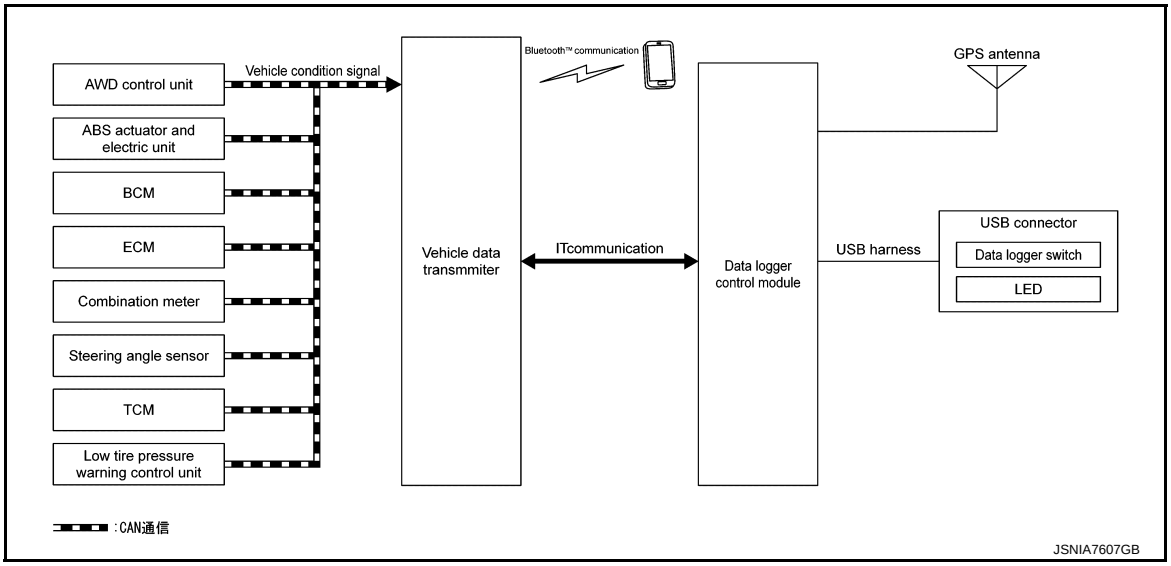
SYSTEM

NissanConnect Nismo Plus

NissanConnect Nismo Plus : System Description

INFOID:0000000011490794

SYSTEM DIAGRAM



SYSTEM DESCRIPTION

NissanConnect Nismo Plus consists of the vehicle data transmitter, which collects vehicle information (driving data), the data logger control module, which writes the collected vehicle status (driving data) to a USB memory, the exclusive GPS antenna, which acquires positioning information, and the USB connector to which a USB memory connects. The vehicle data transmitter receives the vehicle status from each control unit via CAN communication and analyzes the vehicle status. The analyzed vehicle status (driving data) can be displayed and checked by using the exclusive application with a smartphone or other portable device connected via Bluetooth® function. Furthermore, by using a USB memory the vehicle information (driving information) can be displayed by using a personal computer, or the actual drive can be recreated in a video game.

Vehicle Information (Driving Information) Collection

- The vehicle data transmitter receives vehicle condition signals via CAN communication from the following units.

Vehicle data transmitter received signal (CAN communication)

Transmit unit	Signal
AWD control unit	Vehicle condition signal
Steering angle sensor	
Combination meter	
Low tire pressure warning control unit	
ABS actuator and electric unit (control unit)	
ECM	
TCM	
BCM	

- The data logger control module acquires location information from the GPS antenna (GPS information). The acquired location information is transmitted to the data transmitter via IT communication.
- The vehicle data transmitter, which receives signals from each control unit, analyzes the vehicle status based on the information of each signal.

Data Logger Function

The collected vehicle status (driving data) can be displayed using the exclusive application by connecting a smartphone or other portable device via the Bluetooth® function of the vehicle data transmitter. Alternatively, a USB memory can be connected to the USB connector for writing the collected vehicle status (driving data) to the USB memory by data logger switch operation* via the data logger function.
*: A smartphone and other devices can also be used to start writing operation using the exclusive application.

HANDLING PRECAUTION

NissanConnect Nismo Plus

INFOID:0000000011490795

GPS RELATED

- Vehicle position supplementation with GPS may take a certain amount of time.
- The vehicle location accuracy may deteriorate according to the reception status of GPS satellites.

USB MEMORY RELATED

- Be sure to use a USB 2.0 Hi-speed standard USB memory. (When a low-speed USB memory is used, vehicle information cannot be collected.)
- When the storage space of a USB memory is full, vehicle information cannot be collected.
- When a USB memory malfunctions, vehicle information cannot be collected.
- Be sure to use a USB memory formatted in FAT32 format. Formats other than this cannot be used for collecting vehicle information.
- The USB port for collecting vehicle information cannot be used to charge a mobile device.
- If recording continues for a long period of time (approximately 20 hours or more), the collection of vehicle information stops automatically. (When the data file size reaches 2GB, the process stops automatically.)
- When a USB hub or USB extension cable is used to connect a USB memory, the USB memory is not recognized.

BLUETOOTH® RELATED

- A maximum of up to four smartphones can be paired.
- When a fifth device is registered, the first registered smartphone is removed from the system and the four most recently paired devices remain registered.

DIAGNOSIS SYSTEM (VEHICLE DATA TRANSMITTER)

CONSULT Function

INFOID:0000000011490796

APPLICABLE ITEM

CONSULT performs the following functions items by communication with vehicle data transmitter.

Diagnosis mode	Description
ECU identification	The part number of the vehicle transmitter. It can be used to check various ID numbers.
Self-diagnosis Result	Performs the diagnosis of vehicle data transmitter and displays the current and past malfunctions collectively.
Data monitor	Can perform the diagnosis of vehicle signal that is received by vehicle data transmitter.
Work support	Performs various vehicle data transmitter settings and reads/writes the VIN.

ECU IDENTIFICATION

Can be used to display the part number of the vehicle data transmitter and various ID numbers.

SELF-DIAGNOSIS RESULT

- In the CONSULT self-diagnosis, the self-diagnosis results and error history are displayed collectively.
- Refer to AV-199, "DTC Index".

Freeze frame data (FFD)

The following vehicle status is recorded when DTC is detected and is displayed on CONSULT.

Display item	Display	Display content
ODO/TRIP METER	Km	Displays the driving distance (odometer value) upon DTC detection.

DATA MONITOR

NOTE:

The following table also includes Information (items) not applicable to this vehicle. For information (items) applicable to this vehicle, check the CONSULT display content.

Display item	Display	Description
Bluetooth FUNCTION	ON/OFF	Displays whether the Bluetooth® function is ON/OFF.

WORK SUPPORT

Performs various vehicle data transmitter settings and reads/writes the VIN.

Item name	Description
Bluetooth FUNCTION	Sets the Bluetooth® function to ON/OFF.
GPS DATA LOGGER CONNECTION SETTING	Sets the data logger control module to ON/OFF
CHANGE Bluetooth NAME	Allows the Bluetooth® name to be changed. **NOTE:** Because the same default name is registered when several vehicles are used, the name can be changed for distinguishing these.
Bluetooth PAIRING ERASE	Allows the pairing information registered to the vehicle data transmitter to be deleted.
VEHICLE DATA TRANSMITTER SETTING INITIALIZE	Allows the setting information registered to the vehicle data transmitter to be deleted.
SAVE VIN DATA	Reads the VIN saved to the vehicle data transmitter to CONSULT.
WRITE VIN (SAVED DATA)	Writes the VIN saved to CONSULT to the vehicle data transmitter.
WRITE VIN (MANUAL INPUT)	Writes the VIN to the vehicle data transmitter.

ECU DIAGNOSIS INFORMATION

VEHICLE DATA TRANSMITTER

Reference Value

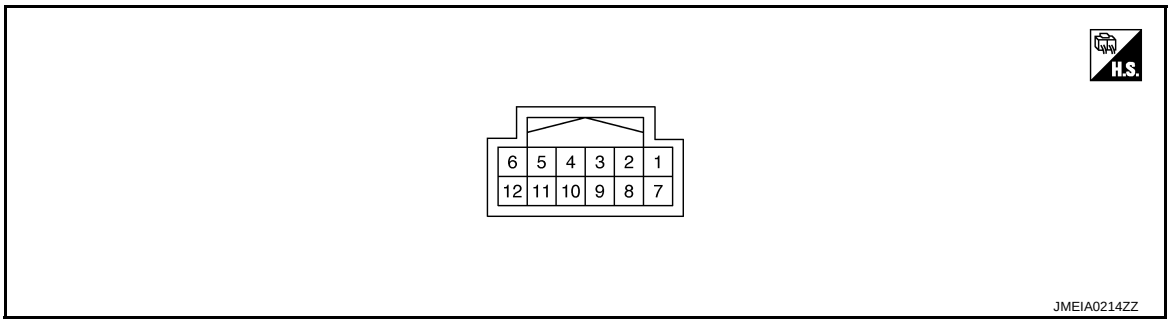
INFOID:0000000011490797

VALUES ON THE DIAGNOSIS TOOL

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition		Value/Status
Bluetooth FUNCTION	Ignition switch ON	Bluetooth function: ON	ON
		Bluetooth function: OFF	OFF

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Standard value	Reference value (Approx.)
+	–	signal name	Input/ Output			
1 (Y)	12 (B)	Battery power supply	Input	[Ignition switch OFF]	9.0 - 16.0 V	Battery voltage
3 (L)	—	IT communication (H)	Input/ Output	—	—	—
4 (P)	—	IT communication (L)	Input/ Output	—	—	—
5 (L)	—	CAN-H	Input/ Output	—	—	—
6 (P)	—	CAN-L	Input/ Output	—	—	—
7 (G)	12 (B)	IGN signal	Input	[Ignition switch ON]	9.0 - 16.0 V	Battery voltage
8 (SB)	12 (B)	ACC power supply	Input	[Ignition switch ACC]	9.0 - 16.0 V	Battery voltage
12 (B)	—	Ground	—	[Ignition switch OFF]	—	0 V

DTC Index

INFOID:0000000011490798

DTC	CONSULT display	Reference
U1000	CAN COMM CIRCUIT	AV-212, "DTC Logic"
U1010	CONTROL UNIT (CAN)	AV-213, "DTC Logic"

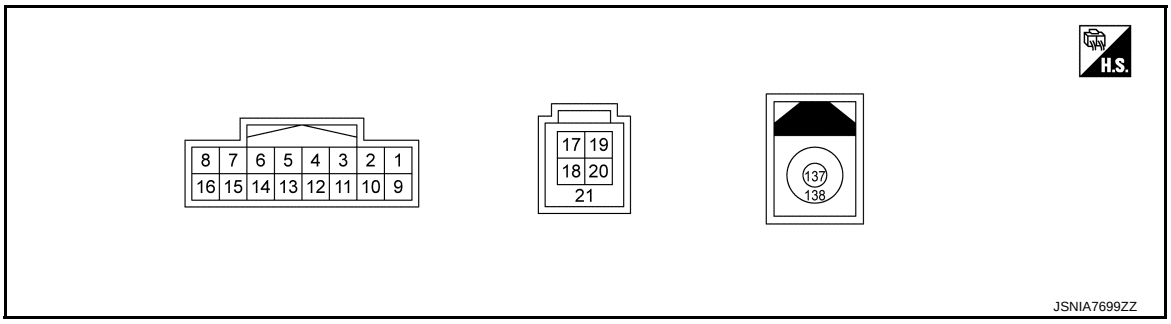
DTC	CONSULT display	Reference
U1420	CONTROL UNIT (CAN)	AV-214, "DTC Logic"
U1421	CONTROL UNIT (DLG)	AV-215, "DTC Logic"
U1422	VEHICLE DATA TRANSMITTER	AV-216, "DTC Logic"
U1423	USB MEMORY	AV-217, "DTC Logic"
U1424	IT COMM	AV-218, "DTC Logic"
U1425	GPS ANTENNA	AV-219, "DTC Logic"
U1426	LOGGER SWITCH	AV-220, "DTC Logic"
U1427	VIN NOT REG	AV-221, "DTC Logic"
U1428	DATA LOGGER CONTROL MODULE	AV-222, "DTC Logic"
U1429	IT COMM	AV-223, "DTC Logic"

DATA LOGGER CONTROL MODULE

Reference Value

INFOID:0000000011490799

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Standard value	Reference value (Approx.)
+	–	signal name	Input/ Output			
1 (Y)	16 (B)	Battery power supply	Input	[Ignition switch OFF]	9.0 - 16.0 V	Battery voltage
4 (R)	16 (B)	Data logger led (red)	Output	[Ignition switch ON] LED (Red): OFF	Less than 0 V	0 V
				[Ignition switch ON] LED (Red): ON	4.25 - 5.25 V	5.0 V
5 (Y)	16 (B)	Data logger led (green)	Output	[Ignition switch ON] LED (Green): OFF	Less than 0 V	0 V
				[Ignition switch ON] LED (Green): ON	4.25 - 5.25 V	5.0 V
7 (L)	—	IT communication (H)	Input/ Output	—	—	—
8 (P)	—	IT communication (L)	Input/ Output	—	—	—
9 (G)	16 (B)	IGN signal	Input	[Ignition switch ON]	9.0 - 16.0 V	Battery voltage
10 (SB)	16 (B)	ACC power supply	Input	[Ignition switch ACC]	9.0 - 16.0 V	Battery voltage
12 (L)	16 (B)	Data logger switch	Output	[Ignition switch ON] Data logger switch: ON	Less than 0 V	0 V
				[Ignition switch ON] Data logger switch: OFF	4.25 - 5.25 V	5.0 V
16 (B)	—	Ground	—	[Ignition switch ON]	—	0 V
17 (W)	—	USB V BUS signal	—	—	—	—
18 (L)	—	USB D– signal	—	—	—	—
19 (G)	—	USB D+ signal	—	—	—	—
20 (R)	—	USB ground	—	—	—	—
21 (—)	—	Shield	—	—	—	—

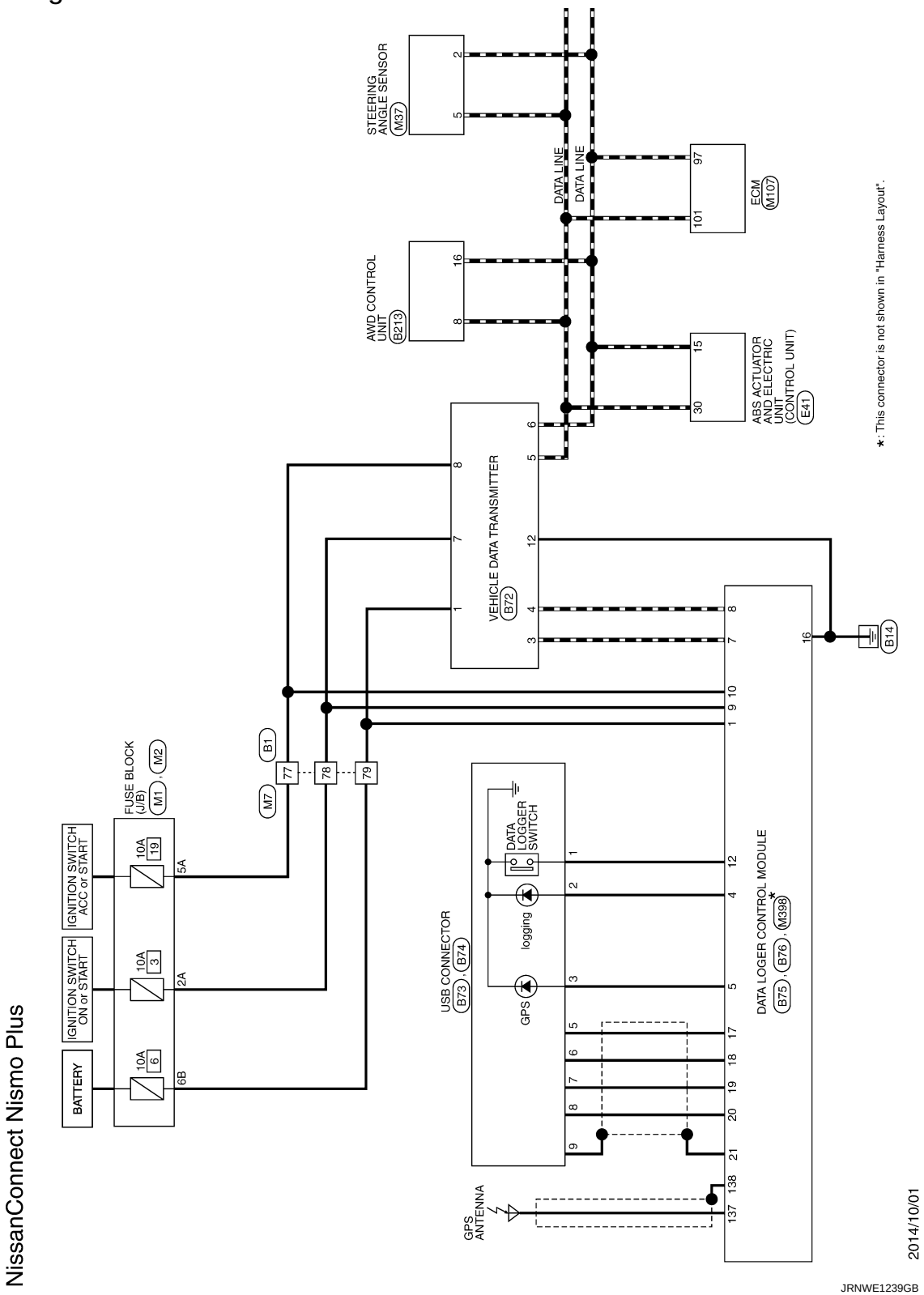
Terminal (Wire color)		Description		Condition	Standard value	Reference value (Approx.)
+	–	signal name	Input/ Output			
137 (—)	Ground	GPS antenna signal	Input	[Ignition switch ON] Not connected GPS antenna connector	4.25 - 5.25 V	5.0 V
138 (—)	—	GPS antenna signal ground	—	—	—	—

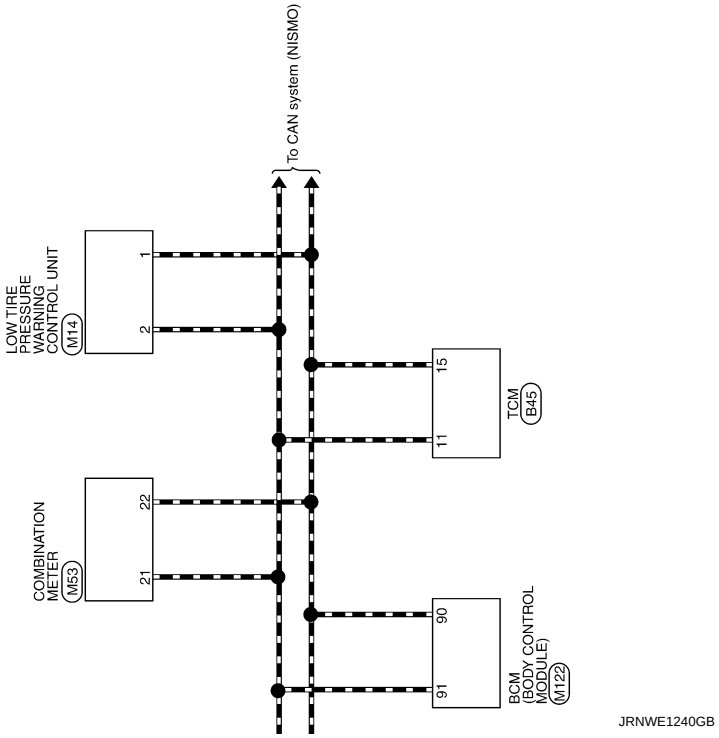
WIRING DIAGRAM

NISSANCONNECT NISMO PLUS

Wiring Diagram

INFOID:0000000011490800




To CAN system (NISMO)
LOW TIRE PRESSURE WARNING CONTROL UNIT (M14)
1
2
COMBINATION METER (M53)
22
21
TCM (B45)
15
11
BCM (BODY CONTROL MODULE) (M122)
90
91
JRNWE1240GB

NissanConnect Nismo Plus

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	-
3	P	-
6	V	-
7	W	-
8	W	-
9	Y	-
10	R	-
11	Y	-
12	GR	-
13	BG	-
14	Y	-
15	BR	-
16	R	-
17	W	-
18	BR	-
20	GR	-
21	SB	-
22	W	-
23	G	-
24	BG	-
25	L	-
26	P	-
27	GR	-
28	BG	-
31	GR	-
32	L	-
33	V	-
34	BG	-
39	G	-
40	LG	-
41	Y	-
42	SB	-
43	P	-
47	R	-
48	B	-
49	W	-
50	SHIELD	-
51	SB	-
52	B	-
53	R	-
54	B	-
56	R	-
57	G	-
58	G	-
59	R	-
60	BR	-
61	Y	-
62	SHIELD	-
63	LG	-
64	R	-
65	G	-
66	BR	-
67	BG	-
69	P	-
70	L	-
71	SHIELD	-
72	SHIELD	- [Without active noise control unit]
72	V	- [With active noise control unit]
73	SB	-
76	R	-
77	SB	-
78	G	-
79	Y	-
80	R	-
81	G	-
82	BR	- [Without active noise control unit]
82	G	- [With active noise control unit]
83	R	- [With active noise control unit]
83	Y	- [Without active noise control unit]
84	SHIELD	-
85	V	-
86	SB	- [Without active noise control unit]
86	W	- [With active noise control unit]
87	L	-
88	P	-
89	SHIELD	-
90	V	-
92	BR	-
93	SB	-
94	GR	-
95	BG	-
96	Y	-
97	Y	-
98	LG	-
99	R	-
100	G	-

Connector No.	B45
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-LH-Z

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	POWER SUPPLY (MEMORY BACK-UP)-2
3	B	GROUND
4	B	GROUND
5	W	POWER SUPPLY (MEMORY BACK-UP)-3
7	B	GROUND
8	B	GROUND
9	P	POWER SUPPLY (MEMORY BACK-UP)-1
10	LG	BACK-UP LAMP SIGNAL
11	L	CAN-H
14	V	POWER OFF
15	P	CAN-L
16	W	STOP LAMP SWITCH SIGNAL
17	Y	IGNITION SWITCH SIGNAL
19	GR	STARTER RELAY SIGNAL
23	BR	AUTO MANUAL RANGE CHANGE SWITCH 1 SIGNAL
25	L	RANGE SENSOR POWER SOURCE 1
26	LG	RANGE SENSOR POWER SOURCE 2
27	G	RANGE SENSOR NO. - SIGNAL
28	V	AUTO MANUAL RANGE CHANGE SWITCH 2 SIGNAL
31	SB	ENGINE SPEED SIGNAL
33	V	RANGE SENSOR NO.1 SIGNAL
34	BG	SAVE MODE SWITCH SIGNAL
35	G	RANGE SENSOR NO.3 SIGNAL
37	GR	R MODE SWITCH SIGNAL
38	R	RANGE SENSOR NO.2 SIGNAL
39	W	PADDLE SHIFTER (SHIFT-UP SWITCH) SIGNAL
42	L	PADDLE SHIFTER (SHIFT-DOWN SWITCH) SIGNAL
43	P	RANGE SENSOR NO.4 SIGNAL
44	GR	RANGE SENSOR NO.5 SIGNAL
45	BG	R MODE LAMP SIGNAL
46	W	SHIFT LOCK SOLENOID CONTROL SIGNAL
47	G	SAVE MODE LAMP SIGNAL

Connector No.	B72
Connector Name	VEHICLE DATA TRANSMITTER
Connector Type	TH12FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	BATTERY
3	L	IT COMMUNICATION (H)
4	P	IT COMMUNICATION (L)
5	L	CAN-H
6	P	CAN-L
7	G	IGN SIGNAL
8	SB	ACC POWER SUPPLY
12	B	GROUND

Connector No.	B73
Connector Name	USB CONNECTOR
Connector Type	TH04MW-NH

H.S.

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

JRNWE1241GB

NissanConnect Nismo Plus

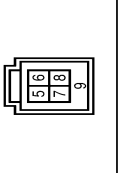
Connector No.	B74
Connector Name	USB CONNECTOR
Connector Type	MOLEX_111014-9001

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
5	W	-
6	L	-
7	G	-
8	R	-
9	SHIELD	-

Connector No.	B75
Connector Name	DATA LOGER CONTROL MODULE
Connector Type	TH16FW-NH

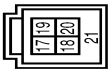
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	BATTERY
4	R	LOGGING (LED-RED)
5	Y	GPS (LED-GREEN)
7	L	IT COMMUNICATION SIGNAL (H)
8	P	IT COMMUNICATION SIGNAL (L)
9	G	IGN SIGNAL
10	SB	ACC POWER SUPPLY
12	L	DATA LOGGER SWITCH
16	B	GROUND

Connector No.	B76
Connector Name	DATA LOGER CONTROL MODULE
Connector Type	MOLEX_111014-9000

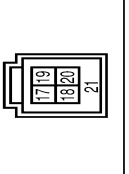
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
17	W	USB V BUS SIGNAL
18	L	USB D-SIGNAL
19	G	USB D+SIGNAL
20	R	USB GROUND
21	SHIELD	SHIELD

Connector No.	B213
Connector Name	AWD CONTROL UNIT
Connector Type	TH16FW-NH

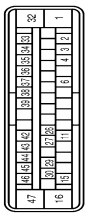
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	SOL+
2	G	SOL-
6	V	-
7	W	IGN
8	L	CAN-H
9	Y	SOLVB
10	B	GROUND
11	B	GROUND
16	P	CAN-L

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	AEZ43FB-AJZ4

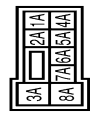
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	UBMR
2	V	DIAG-K
3	GR	VDC OFF SW
4	W	BLS
6	G	VDC UP SW
11	Y	CAN-H
15	P	CAN-L
16	B	GROUND
26	W	CAN-L
27	BR	G SENSOR GROUND
29	BG	UZ
30	L	CAN-H
32	BG	UBVR
33	W	DS FR
34	BG	DP FR
35	Y	VDC TOP POSITION LED
36	L	DP RL
37	R	DS RL
38	V	BRAKE FLUID LEVEL SW
39	G	G SENSOR POWER
42	V	DS RR
43	LG	DP RR
44	SB	VDC TOP POSITION LED
45	W	DP FL
46	R	DS FL
47	B	GROUND

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

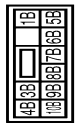
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1A	V	-
2A	G	-
3A	L	-
4A	LG	-
5A	SB	-
6A	Y	-
7A	R	-
8A	L	-

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

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
10B	Y	-
1B	R	-
3B	P	-
4B	G	-
5B	BG	-
6B	Y	-
7B	R	-
8B	R	-
9B	SB	-

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NissanConnect Nismo Plus

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	-
3	P	-
6	L	-
7	W	-
8	W	-
9	G	-
10	R	-
11	W	-
12	SB	-
13	G	-
14	W	-
15	BR	-
16	R	-
17	BG	-
18	SB	-
20	GR	-
21	L	-
22	R	-
23	G	-
24	BR	-
25	L	-
26	LG	- [Without active noise control unit]
27	W	- [With active noise control unit]
28	R	-
31	GR	-
32	L	-
33	V	-
34	BG	-
39	W	-
40	BG	-
41	R	-
42	V	-
43	W	-
47	G	-
48	R	-
49	W	-
50	SHIELD	-
51	SB	-
52	B	-
53	R	-
54	B	-
56	R	-
57	G	-
58	G	-
59	R	-
60	BR	-
61	Y	-
62	SHIELD	-
63	GR	-
64	R	-
65	G	-
66	BR	-
67	BG	-
69	P	-
70	L	-
71	SHIELD	-
72	SHIELD	- [Without active noise control unit]
72	V	- [With active noise control unit]
73	LG	-
76	R	-
77	SB	-
78	G	-
79	Y	-
80	R	-
81	G	-
82	BR	- [Without active noise control unit]
82	G	- [With active noise control unit]
83	R	- [With active noise control unit]
83	Y	- [Without active noise control unit]
84	SHIELD	-
85	V	-
86	LG	- [Without active noise control unit]
86	W	- [With active noise control unit]
87	L	-
88	P	-
89	SHIELD	-
90	V	-
92	LG	-
93	Y	-
94	G	-
95	R	-
96	Y	-
97	R	-
98	G	-
99	L	-
100	W	-

Connector No.	M14
Connector Name	LOW TIRE PRESSURE WARNING CONTROL UNIT
Connector Type	TH32FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	CAN-L
2	L	CAN-H
3	BG	RR TUNER (SIG)
4	L	RL TUNER (SIG)
5	R	FR TUNER (SIG)
6	W	FL TUNER (SIG)
7	SB	RR TUNER (PWR)
8	GR	RL TUNER (PWR)
9	R	FR TUNER (PWR)
10	LG	FL TUNER (PWR)
12	W	SW SIG
15	G	IGN
19	R	RR TUNER (RSSI)
20	BG	RL TUNER (RSSI)
21	P	FR TUNER (RSSI)
22	G	FL TUNER (RSSI)
23	GR	RR TUNER (GND)
24	V	RL TUNER (GND)
25	L	FR TUNER (GND)
26	BR	FL TUNER (GND)
30	G	FLASHER SIG
32	B	GROUND

Connector No.	M37
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	P	CAN-L
4	BG	IGN
5	L	CAN-H

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	BATTERY POWER SUPPLY
2	W	IGNITION POWER SUPPLY
3	B	GROUND
4	B	ILLUMINATION GROUND
5	B	GROUND
6	W	METER CONTROL SWITCH GROUND
7	Y	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
8	SB	AMBIENT SENSOR GROUND
9	P	AMBIENT SENSOR SIGNAL
12	L	VEHICLE SPEED SIGNAL (2-PULSE)
13	V	VEHICLE SPEED SIGNAL (8-PULSE)
14	B	OIL PRESSURE SENSOR GROUND
15	R	AIR BAG SIGNAL
16	R	LED HEAD LAMP (RH) WARNING SIGNAL
18	L	FUEL LEVEL SENSOR GROUND
19	R	OIL LEVEL SENSOR GROUND

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NissanConnect Nismo Plus

20	W	OIL LEVEL SENSOR SIGNAL
21	L	CAN-H
22	P	CAN-L
23	LG	ILLUMINATION CONTROL SWITCH SIGNAL (-)
24	BR	ILLUMINATION CONTROL SWITCH SIGNAL (+)
25	G	TRIP A/B RESET SWITCH SIGNAL
26	BG	ENTER SWITCH SIGNAL
27	SB	SELECT SWITCH SIGNAL
28	BR	ALTERNATOR
29	G	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)
30	LG	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
31	V	PARKING BRAKE SWITCH SIGNAL
32	V	BRAKE FLUID LEVEL SWITCH SIGNAL
33	L	WASHER LEVEL SWITCH SIGNAL
34	GR	OIL PRESSURE SENSOR POWER
35	W	OIL PRESSURE SENSOR SIGNAL
38	BG	FUEL LEVEL SENSOR SIGNAL
39	Y	LED HEAD LAMP (LH) WARNING SIGNAL
40	V	ILLUMINATION CONTROL

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-RZ8-R-LH-Z

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
97	P	CAN COMMUNICATION LINE
99	SB	SENSOR POWER SUPPLY
100	BR	SENSOR POWER SUPPLY
101	L	CAN COMMUNICATION LINE
102	G	ASCD STEERING SWITCH
103	GR	SENSOR GROUND
104	P	ACCELERATOR PEDAL POSITION SENSOR 1
105	W	ECM RELAY (SELF SHUT-OFF)
106	LG	IGNITION SWITCH
107	BG	SENSOR GROUND
108	L	ACCELERATOR PEDAL POSITION SENSOR 2
109	L	SAVALVERLY
110	P	STOP LAMP SWITCH
111	GR	PNP SIGNAL
113	SB	ENGINE SPEED OUTPUT SIGNAL
114	V	DATA LINK CONNECTOR
117	R	ASCD BRAKE SWITCH
118	W	POWER SUPPLY FOR ECM (BACK-UP)
120	BR	SAPM/PRLY
121	P	POWER SUPPLY FOR ECM
122	V	POWER SUPPLY FOR ECM
124	B	ECM GROUND
126	L	FUEL PUMP RELAY
127	G	THROTTLE CONTROL MOTOR RELAY
128	B	ECM GROUND

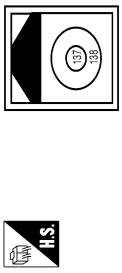
Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
72	R	ROOM ANT2-
73	G	ROOM ANT2+
74	SB	PASSENGER DOOR ANT-
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT1-
79	BR	ROOM ANT1+
80	GR	IMMOBI ANTENNA CONTROL
81	L	IMMOBI ANTENNA SIGNAL
82	R	IGN RELAY (F/B) CONT
83	Y	KEYLESS ENTRY RECEIVER COMM
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL OUTPUT
93	V	ON IND
95	BG	ACC RELAY CONT
96	SB	A/T SHIFT SELECTOR POWER SUPPLY
97	L	S/L CONDITION 1
98	R	S/L CONDITION 2
99	G	SHIFT P
100	W	PASSENGER DOOR REQUEST SW
101	V	DRIVER DOOR REQUEST SW
102	BG	BLOWER FAN MOTOR RELAY CONT
103	LG	KEYLESS ENTRY RECEIVER POWER SUPPLY
106	P	S/L UNIT POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW
111	Y	S/L UNIT COMM

Connector No.	M398
Connector Name	DATA LOGER CONTROL MODULE
Connector Type	GT5-1P-DS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
137	-	GPS ANTENNA SIGNAL
138	-	GPS ANTENNA SIGNAL GROUND

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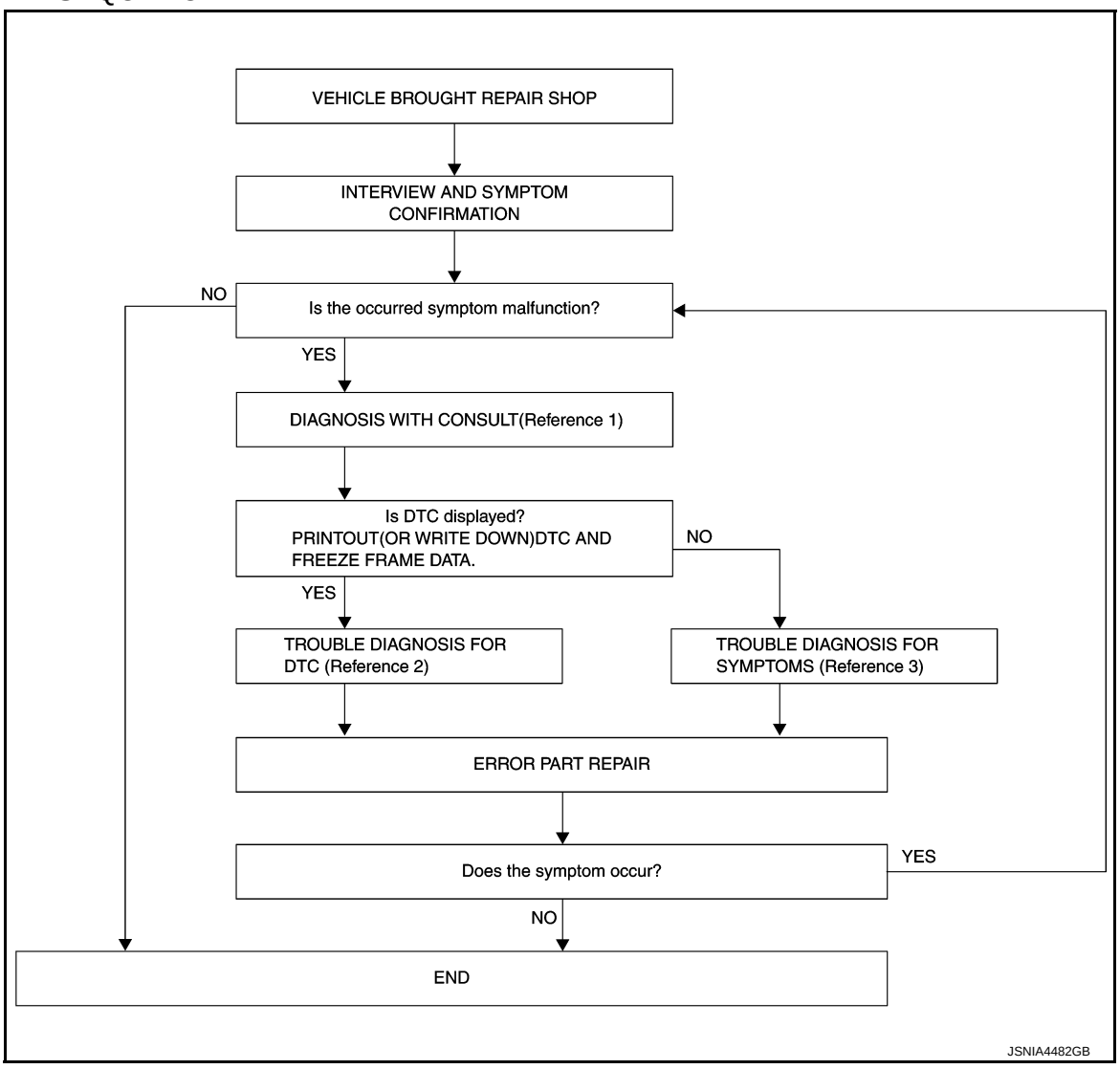
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000011490801

OVERALL SEQUENCE



- Reference 1··· Refer to AV-198, "CONSULT Function".
- Reference 2··· Refer to AV-199, "DTC Index".
- Reference 3··· Refer to AV-227, "Description".

DETAILED FLOW

1. INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.
- Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred).
- Check the symptom.

Is the occurred symptom malfunction?

YES >> GO TO 2.
NO >> INSPECTION END

2. DIAGNOSIS WITH CONSULT

1. Connect CONSULT and perform a self-diagnosis for “TELEMATICS”. Refer to AV-198, "CONSULT Function".
2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Is DTC displayed?

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

3. TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC Index. Refer to AV-199, "DTC Index".

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-227, "Description".

>> GO TO 5.

5. ERROR PART REPAIR

1. Repair or replace the identified malfunctioning parts.
2. Perform a self-diagnosis for “TELEMATICS” with CONSULT.
3. Check that the symptom does not occur.

Does the symptom occur?

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

ADDITIONAL SERVICE WHEN REPLACING VEHICLE DATA TRANSMITTER

Description

INFOID:0000000011490802

When a vehicle data transmitter is replaced, the VIN number writing to a vehicle data transmitter is performed. Refer to AV-211, "Work Procedure".

Work Procedure

INFOID:0000000011490803

1.READING OF VIN DATA

CONSULT work support
Select “SAVE VIN DATA”, “START SAVE VIN DATA” then “YES” on START SAVE VIN DATA screen to save the VIN data stored in replaced vehicle data transmitter in CONSULT. If it cannot be saved, writing operation must be performed manually.

>> GO TO 2.

2.REPLACE VEHICLE DATA TRANSMITTER

Replace vehicle data transmitter. Refer to AV-229, "Removal and Installation".

Can ID data be saved to CONSULT at 1st step?

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

3.AUTOMATIC WRITING OF VIN DATA TO VEHICLE DATA TRANSMITTER

CONSULT work support
1. Select “WRITE VIN (SAVED DATA)”, “WRITE SAVED VIN DATA” then “YES” at WRITE SAVED VIN DATA screen to write the VIN data saved in CONSULT into new vehicle data transmitter.
2. Turn ignition switch OFF and wait for 30 seconds or more.
   CAUTION:
   After turn ignition switch OFF, never move a vehicle.
3. Turn ignition switch ON.

>> END.

4.MANUAL WRITING OF VIN DATA TO VEHICLE DATA TRANSMITTER

CONSULT work support
1. Select “WRITE VIN (MANUAL INPUT)”, “WRITE VIN DATA” then “START” on changing screen to write the VIN data saved into new vehicle data transmitter.
2. Turn ignition switch OFF and wait for 30 seconds or more.
   CAUTION:
   After turn ignition switch OFF, never move a vehicle.
3. Turn ignition switch ON.

>> END

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000011490804

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on board multiplex communication line with high data communication speed and excellent error detection ability. A modern vehicle is equipped with many ECMs, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, 2 control units are connected with 2 communication lines (CAN H-line and CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
Refer to LAN-24, "CAN Communication Signal Chart" for details of the communication signal.

DTC Logic

INFOID:0000000011490805

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1000	CAN COMM CIRCUIT	When the vehicle data transmitter cannot communicate for 2 seconds or more.	CAN communication system

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1000” detected?

YES >> Proceed to AV-212, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490806

1. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

With CONSULT
1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to AV-212, "DTC Logic".

Is DTC “U1000” detected again?

YES >> Perform the trouble diagnosis for CAN communication system. Refer to LAN-15, "Trouble Diagnosis Flow Chart".
NO >> INSPECTION END

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000011490807

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on board multiplex communication line with high data communication speed and excellent error detection ability. A modern vehicle is equipped with many ECMs, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, 2 control units are connected with 2 communication lines (CAN H-line and CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
Refer to LAN-24, "CAN Communication Signal Chart" for details of the communication signal.

DTC Logic

INFOID:0000000011490808

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1010	CONTROL UNIT (CAN)	CAN initial diagnosis internal malfunction is detected.	Vehicle data transmitter

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1010” detected?

YES >> Proceed to AV-213, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490809

1. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

With CONSULT
1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to AV-213, "DTC Logic".

Is DTC “U1010” detected again?

YES >> Replace vehicle date transmitter. Refer to AV-229, "Removal and Installation".
NO >> INSPECTION END

U1420 VEHICLE DATA TRANSMITTER

DTC Logic

INFOID:0000000011490810

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1420	CONTROL UNIT (CAN)	Vehicle data transmitter internal malfunction.	Vehicle data transmitter

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1420” detected?

YES >> Proceed to AV-214, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490811

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

With CONSULT
1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to AV-214, "DTC Logic".

Is DTC “U1420” detected again?

YES >> Replace vehicle date transmitter. Refer to AV-229, "Removal and Installation".
NO >> INSPECTION END

U1421 DATA LOGGER CONTROL MODULE

DTC Logic

INFOID:0000000011490812

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1421	CONTROL UNIT (DLG)	Data logger control module internal malfunction.	Data logger control module

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1421” detected?

YES >> Proceed to AV-215, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490813

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

With CONSULT
1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to AV-215, "DTC Logic".

Is DTC “U1421” detected again?

YES >> Replace date logger control module. Refer to AV-230, "Removal and Installation".
NO >> INSPECTION END

U1422 VEHICLE DATA TRANSMITTER

DTC Logic

INFOID:0000000011490814

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1422	VEHICLE DATA TRANSMITTER	The power supply of the vehicle data transmitter detected below 9.0 V.	• Vehicle data transmitter power supply circuit • Vehicle data transmitter • Battery

NOTE:
DTC may be detected when it becomes below 9.0 V momentarily by degradation of a battery during engine start.

DTC CONFIRMATION PROCEDURE

1.COMPONENT FUNCTION CHECK (1)

Check the battery. Refer to PG-3, "How to Handle Battery".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace battery. Refer to PG-91, "Removal and Installation".

2.COMPONENT FUNCTION CHECK (2)

Check the voltage between vehicle data transmitter harness connector and ground.

Vehicle data transmitter			Standard value	Voltage (Approx.)
Connector	Terminals			
	(+)	(–)		
	Terminal			
B72	1	12	9.0 - 16.0 V	Battery voltage

Is the inspection result normal?

YES >> INSPECTION END
NO >> Proceed to AV-216, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011490815

1.CHECK VEHICLE DATA TRANSMITTER POWER SUPPLY AND GROUND CIRCUIT

Check the vehicle data transmitter power supply and ground circuit. Refer to AV-224, "VEHICLE DATA TRANSMITTER : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace vehicle data transmitter. Refer to AV-229, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

U1423 USB MEMORY

DTC Logic

INFOID:0000000011490816

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1423	USB MEMORY	Data cannot be written in a USB memory.	USB memory

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. USB memory is connected to a USB connector and data is written in.
3. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
4. Check DTC.

Is DTC “U1423” detected?

YES >> Proceed to AV-217, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490817

1.CHECK USB MEMORY

Connect the USB memory which detected abnormality in CONSULT and write data.

Is the writing of data complete normally?

YES >> Perform intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Replace USB memory.

U1424 IT COMMUNICATION

DTC Logic

INFOID:0000000011490818

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1424	IT COMM	The vehicle data transmitter detected malfunction of IT communication signal from data logger control module.	• IT communication system • Data logger control module

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1424” detected?

YES >> Proceed to AV-218, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490819

1.CHECK IT COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect vehicle data transmitter harness connector and data logger control module.
3. Check the continuity between vehicle data transmitter harness connector and data logger control module harness connector.

Vehicle data transmitter		Data logger control module		Continuity
Connector	Terminal	Connector	Terminal	
B72	3	B75	7	Existed
	4		8	

Is the inspection result normal?

YES >> Replace data logger control module. Refer to AV-230, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

U1425 GPS ANTENNA

DTC Logic

INFOID:0000000011490820

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1425	GPS ANTENNA	Malfunction on the GPS receiver circuit in data logger control module is detected.	• Data logger control module • GPS antenna

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1425” detected?

YES >> Proceed to AV-219, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490821

1.CHECK GPS ANTENNA HARNESS CONNECTOR

Check GPS antenna harness connector connection.

Is the inspection result normal?

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

2.CHECK GPS ANTENNA HARNESS

Visually check GPS antenna.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace GPS antenna. Refer to AV-231, "Removal and Installation".

3.CHECK VOLTAGE DATA LOGGER CONTROL MODULE

1. Turn ignition switch OFF.
2. Disconnect GPS antenna harness connector.
3. Turn ignition switch ON.
4. Check the voltage between data logger control module and ground.

Terminals		Standard value	Voltage (Approx.)
(+) Data logger control module Terminal	(–)		
137	Ground	4.25 - 5.25 V	5.0 V

Is the inspection result normal?

YES >> Replace GPS antenna. Refer to AV-231, "Removal and Installation"
NO >> Replace data logger control module. Refer to AV-230, "Removal and Installation".

U1426 DATA LOGGER SWITCH

DTC Logic

INFOID:0000000011490822

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1426	LOGGER SWITCH	Data logger control module detects the data logger switch is stuck ON for 5 minutes or more.	• USB connector (Date logger switch) • Data logger control module

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1426” detected?

YES >> Proceed to AV-220, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490823

1.CHECK DATA LOGGER SWITCH

Check the data logger switch. Refer to AV-220, "Component Inspection".

Is the inspection result normal?

YES >> Replace data logger control module. Refer to AV-230, "Removal and Installation".
NO >> Replace USB connector. Refer to AV-232, "Removal and Installation".

Component Inspection

INFOID:0000000011490824

1.CHECK DATA LOGGER SWITCH

1. Turn ignition switch OFF.
2. Disconnect USB connector harness connector.
3. Check the continuity between USB connector terminal and ground.

CAUTION:
Check the USB connector in a vehicle installation condition.

USB connector		Condition		Continuity
Terminal	Ground	Data logger switch	Press	Existed
1			Except for above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace USB connector. Refer to AV-232, "Removal and Installation".

U1427 VIN NOT REG

DTC Logic

INFOID:0000000011490825

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1427	VIN NOT REG	No write of VIN number is detected.	VIN not reg

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1427” detected?

YES >> Proceed to AV-221, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490826

1.PERFORM WRITING VIN DATA TO VEHICLE DATA TRANSMITTER

With CONSULT
Perform writing VIN data to vehicle data transmitter. Refer to AV-211, "Work Procedure".

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

With CONSULT
1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to AV-221, "DTC Logic".

Is DTC “U1427” detected again?

YES >> Replace vehicle data transmitter. Refer to AV-229, "Removal and Installation".
NO >> INSPECTION END

U1428 DATA LOGGER CONTROL MODULE

DTC Logic

INFOID:0000000011490827

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1428	DATA LOGGER CONTROL MODULE	The power supply of the data logger control module detected below 9.0 V.	• Data logger control module power supply circuit • Data logger control module • Battery

NOTE:
DTC may be detected when it becomes below 9.0 V momentarily by degradation of a battery during engine start.

DTC CONFIRMATION PROCEDURE

1.COMPONENT FUNCTION CHECK (1)

Check battery. Refer to PG-3, "How to Handle Battery".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace battery. Refer to PG-91, "Removal and Installation".

2.COMPONENT FUNCTION CHECK (2)

Check the voltage between data logger control module harness connector and ground.

Data logger control module			Standard voltage	Voltage (Approx.)
Connector	Terminals			
	(+)	(–)		
	Terminal			
B75	1	16	9.0 - 16.0 V	Battery voltage

Is the inspection result normal?

YES >> INSPECTION END
NO >> Proceed to AV-222, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011490828

1.CHECK DATA LOGGER CONTROL MODULE POWER SUPPLY AND GROUND CIRCUIT

Check the data logger control module power supply and ground circuit. Refer to AV-225, "DATA LOGGER CONTROL MODULE : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace data logger control module. Refer to AV-230, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

U1429 IT COMMUNICATION

DTC Logic

INFOID:0000000011490829

DTC DETECTION LOGIC

DTC	CONSULT display	Detecting condition	Possible cause
U1429	IT COMM	The data logger control module detected malfunction of IT communication signal from vehicle data transmitter.	• IT communication system • Vehicle data transmitter

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 1 second or more.
3. Turn ignition switch ON and wait at least 5 seconds or more.
4. Select “Self Diagnostic Result” mode of “TELEMATICS” using CONSULT.
5. Check DTC.

Is DTC “U1429” detected?

YES >> Proceed to AV-223, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011490830

1.CHECK IT COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect vehicle data transmitter harness connector and data logger control module harness connector.
3. Check the continuity between vehicle data transmitter harness connector and data logger control module harness connector.

Vehicle data transmitter		Data logger control module		Continuity
Connector	Terminal	Connector	Terminal	
B72	3	B75	7	Existed
	4		8	

Is the inspection result normal?

YES >> Replace vehicle data transmitter. Refer to AV-229, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

POWER SUPPLY AND GROUND CIRCUIT
VEHICLE DATA TRANSMITTER

VEHICLE DATA TRANSMITTER : Diagnosis Procedure

INFOID:0000000011490831

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.	Capacity
Battery	#6	10 A
Ignition power supply	#3	10 A
ACC power supply	#19	10 A

Is the inspection result normal?

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

2.CHECK BATTERY POWER SUPPLY

1. Turn ignition switch OFF.
2. Check the voltage between vehicle data transmitter harness connector and ground.

Terminals			Standard value	Voltage (Approx.)
(+)		(–)		
Vehicle data transmitter				
Connector	Terminal			
B72	1	Ground	9.0 - 16.0 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check battery power supply circuit.

3.CHECK IGNITION POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between vehicle data transmitter harness connector and ground.

Terminals			Standard value	Voltage (Approx.)
(+)		(–)		
Vehicle data transmitter				
Connector	Terminal			
B72	7	Ground	9.0 - 16.0 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.
NO >> Check ignition power supply circuit.

4.CHECK ACC POWER SUPPLY

Check the voltage between vehicle data transmitter harness connector and ground.

Terminals			Standard value	Voltage (Approx.)
(+)		(–)		
Vehicle data transmitter				
Connector	Terminal			
B72	8	Ground	9.0 - 16.0 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.
NO >> Check ACC power supply circuit.

5.CHECK GROUND

1. Turn ignition switch OFF
2. Disconnect vehicle data transmitter harness connector.
3. Check the continuity between vehicle data transmitter harness connector and ground.

Vehicle data transmitter		Ground	Continuity
Connector	Terminal		
B72	12		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace malfunctioning parts.

DATA LOGGER CONTROL MODULE

DATA LOGGER CONTROL MODULE : Diagnosis Procedure

INFOID:0000000011490832

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.	Capacity
Battery	#6	10 A
Ignition power supply	#3	10 A
ACC power supply	#19	10 A

Is the inspection result normal?

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

2.CHECK BATTERY POWER SUPPLY

1. Turn ignition switch OFF.
2. Check the voltage between data logger control module harness connector and ground.

Terminals			Standard value	Voltage (Approx.)
(+)		(–)		
Data logger control module				
Connector	Terminal			
B75	1	Ground	9.0 - 16.0 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check battery power supply circuit.

3.CHECK IGNITION POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between data logger control module harness connector and ground.

Terminals			Standard value	Voltage (Approx.)
(+)		(–)		
Data logger control module				
Connector	Terminal			
B75	9	Ground	9.0 - 16.0 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.
NO >> Check ignition power supply circuit.

4.CHECK ACC POWER SUPPLY

Check the voltage between data logger control module harness connector and ground.

Terminals			Standard value	Voltage (Approx.)
(+)		(–)		
Data logger control module				
Connector	Terminal			
B75	10	Ground	9.0 - 16.0 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.
NO >> Check ACC power supply circuit.

5.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect data logger control module harness connector.
3. Check the voltage between data logger control module harness connector and ground.

Data logger control module		Ground	Continuity
Connector	Terminal		
B75	16		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace malfunctioning parts.

SYMPTOM DIAGNOSIS

THE USB MEMORY IS NOT RECOGNIZED OR DATA WRITING DOES NOT START

Description

INFOID:0000000011490833

The USB memory is not recognized when connected or data writing does not start.

Diagnosis Procedure

INFOID:0000000011490834

1.CHECK DATA LOGGER LED

1. Turn ignition switch ON.
2. Connect USB memory to USB connector.
3. Check the status of data logger LED (red). Refer to AV-193, "USB Connector".

What is the status of data logger LED (red)?

Blinking>> GO TO 2.
OFF >> GO TO 3.
Blinks two times and then turns off>>USB memory cannot be recognized. Replace USB memory.
Blinks three times and then turns off>>USB memory storage space is insufficient. Format USB memory.

2.CHECK DATA LOGGER SWITCH

Check the data logger switch. Refer to AV-220, "Component Inspection".

Is the inspection result normal?

YES >> Perform intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Replace USB connector. Refer to AV-232, "Removal and Installation".

3.CHECK USB HARNESS

1. Turn ignition switch OFF.
2. Disconnect the USB harness between the USB connector and the data logger control module.
3. Check the continuity between the USB connector harness and data logger control module harness connector.

USB connector		Data logger control module		Continuity
Connector	Terminal	Connector	Terminal	
B74	5	B76	17	Existed
	6		18	
	7		19	
	8		20	
	9		21	

Is the inspection result normal?

YES >> Replace the data logger control module. Refer to AV-230, "Removal and Installation".
NO >> Replace USB harness. Refer to AV-232, "Removal and Installation".

NORMAL OPERATING CONDITION

Description

INFOID:0000000011490835

Symptom	Cause	Action to take
GPS signal cannot be received.	GPS signal is obstructed due to the vehicle being inside a building, in the shadow of numerous tall buildings, etc.	Move the vehicle to an open space.
	There is an object placed on the GPS antenna.	Do not place objects on the GPS antenna.
	A sufficient number of GPS satellites are not available.	Wait for the satellites to change locations.
Bluetooth® connection is not possible.	The device being used is not supported.	Check that the device supports connectivity.
USB memory is not recognized, or it is not possible to write to USB memory.	A USB extension cable or USB hub is being used.	Do not use a USB extension cable or a USB hub.
	There is no empty storage space on the USB memory.	Perform formatting (of USB memory) to increase empty storage space. **NOTE:** Formatting USB memory may cause loss of data. To prevent this from occurring, copy data to another media before formatting.
	The USB memory used is of a standard lower than the supported standard.	Use a USB memory of USB 2.0 Hi-speed standard or higher.
	A USB memory formatted in a format other that FAT32 is being used.	Use a USB memory formatted in FAT32 format.
Writing stops in mid process.	Recording is performed continuously for an extended period of time (approximately 20 hours or more). (Data file size reaches 2GB.)	Format or replace the USB memory.

REMOVAL AND INSTALLATION

VEHICLE DATA TRANSMITTER

Removal and Installation

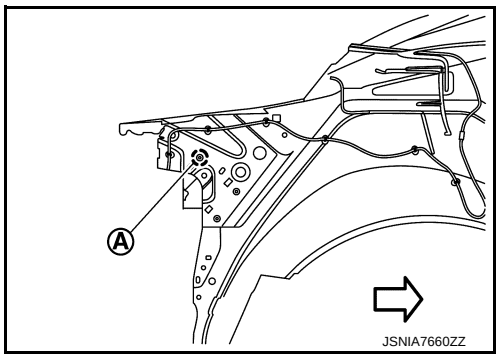
INFOID:0000000011490836

CAUTION:
Before replacing vehicle data transmitter, perform “SAVE VIN DATA” to save or print current vehicle specification. Refer to AV-211, "Description".

REMOVAL

1. Remove the trunk side finisher (LH). Refer to INT-27, "Exploded View".
2. Remove the data logger control module. Refer to AV-230, "Removal and Installation".
3. Disconnect the vehicle data transmitter harness connector.
4. Remove the vehicle data transmitter bracket mounting bolt Ⓐ.

⇦ : Vehicle front



5. Remove the vehicle data transmitter from the vehicle and than, remove the bracket.

INSTALLATION

Install in the reverse order of removal.

CAUTION:
When replacing vehicle data transmitter, you must perform “WRITE VIN DATA” with CONSULT. Refer to AV-211, "Description".

DATA LOGGER CONTROL MODULE

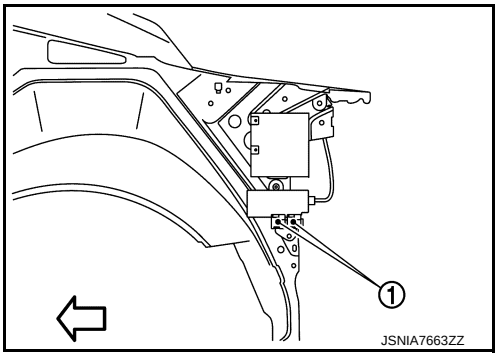
Removal and Installation

INFOID:0000000011490837

REMOVAL

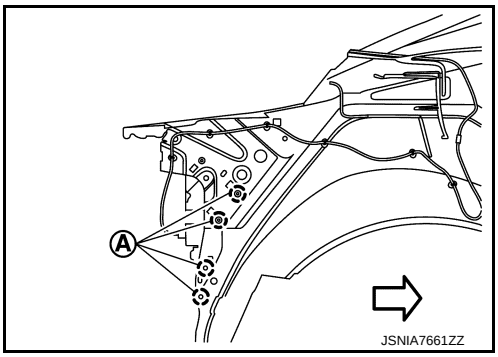
1. Remove the trunk side finisher (LH). Refer to INT-27, "Exploded View".
2. Remove the relays ① from the data logger control module bracket.

⇦ : Vehicle front



3. Disconnect the data logger control module harness connector and GPS antenna harness connector.
4. Remove the data logger control module bracket mounting bolts Ⓐ.

⇦ : Vehicle front



5. Remove the data logger control module from the vehicle and than, remove the bracket.

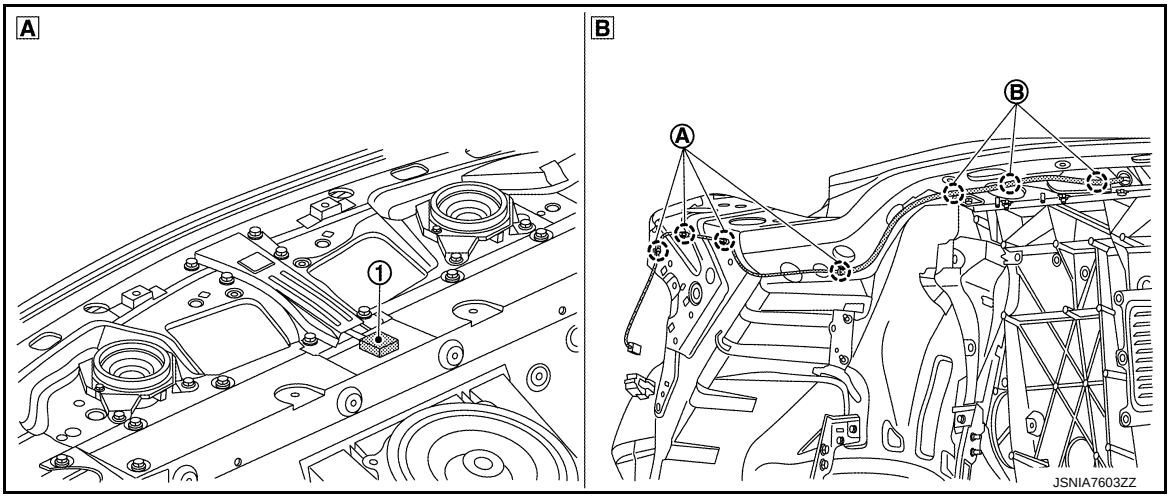
INSTALLATION

Install in the reverse order of removal.

GPS ANTENNA

Feeder Layout

INFOID:0000000011490838



① GPS antenna
Ⓐ Harness clip
Ⓑ Harness band
A Under the rear parcel shelf finisher
B In trunk room

Removal and Installation

INFOID:0000000011490839

REMOVAL

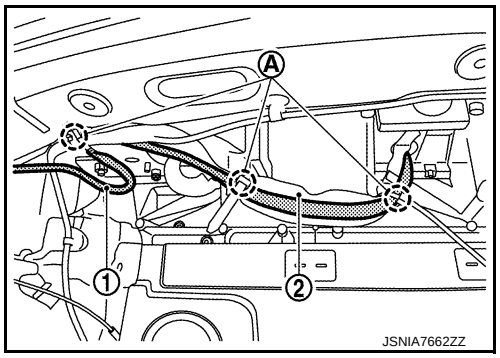
1. Remove the trunk side finisher (LH) and trunk rear finisher. Refer to INT-27, "Exploded View".
2. Remove the rear parcel shelf finisher. Refer to INT-19, "Removal and Installation".
3. Disconnect the GPS antenna harness connector, harness clips and harness bands. Refer to AV-231, "Feeder Layout".
4. Remove the GPS antenna from the vehicle.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Fix GPS antenna harness ① to the vehicle harness ② with a harness bands ③.



USB CONNECTOR

Removal and Installation

INFOID:0000000011490840

REMOVAL

1. Remove the center console assembly. Refer to IP-23, "Removal and Installation".
2. Remove the USB connector from the center console assembly.

INSTALLATION

Install in the reverse order of removal.