

SECTION **AV**

AUDIO, VISUAL & NAVIGATION SYSTEM

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PRECAUTION

PRECAUTIONS

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

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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.

Cautions in Removing Battery Terminal, Display Control Unit, and AV Control Unit

INFOID:000000009240038

CAUTION:

Remove battery terminal, display control unit, 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 display control unit, and the AV control unit continues operating for approximately 30 seconds.

Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:000000009240039

AV COMMUNICATION SYSTEM

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

Precaution for Harness Repair

INFOID:000000009240040

AV COMMUNICATION SYSTEM

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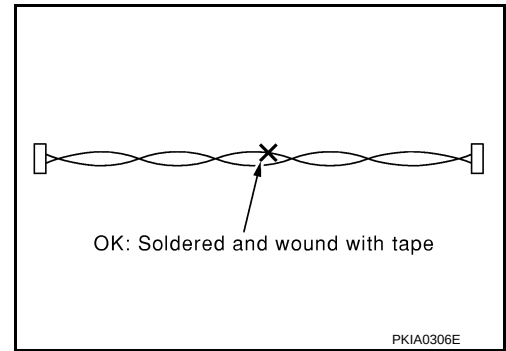
P

PRECAUTIONS

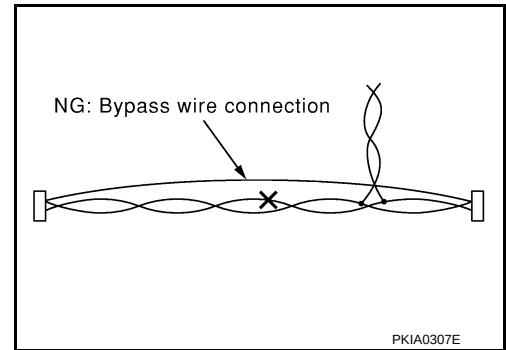
[INFINITI INTOUCH]

< PRECAUTION >

- 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.)

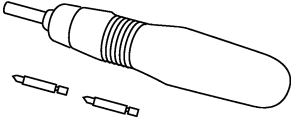


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000009240041

Tool	Description
Power tool  PBIC0191E	Loosening screws

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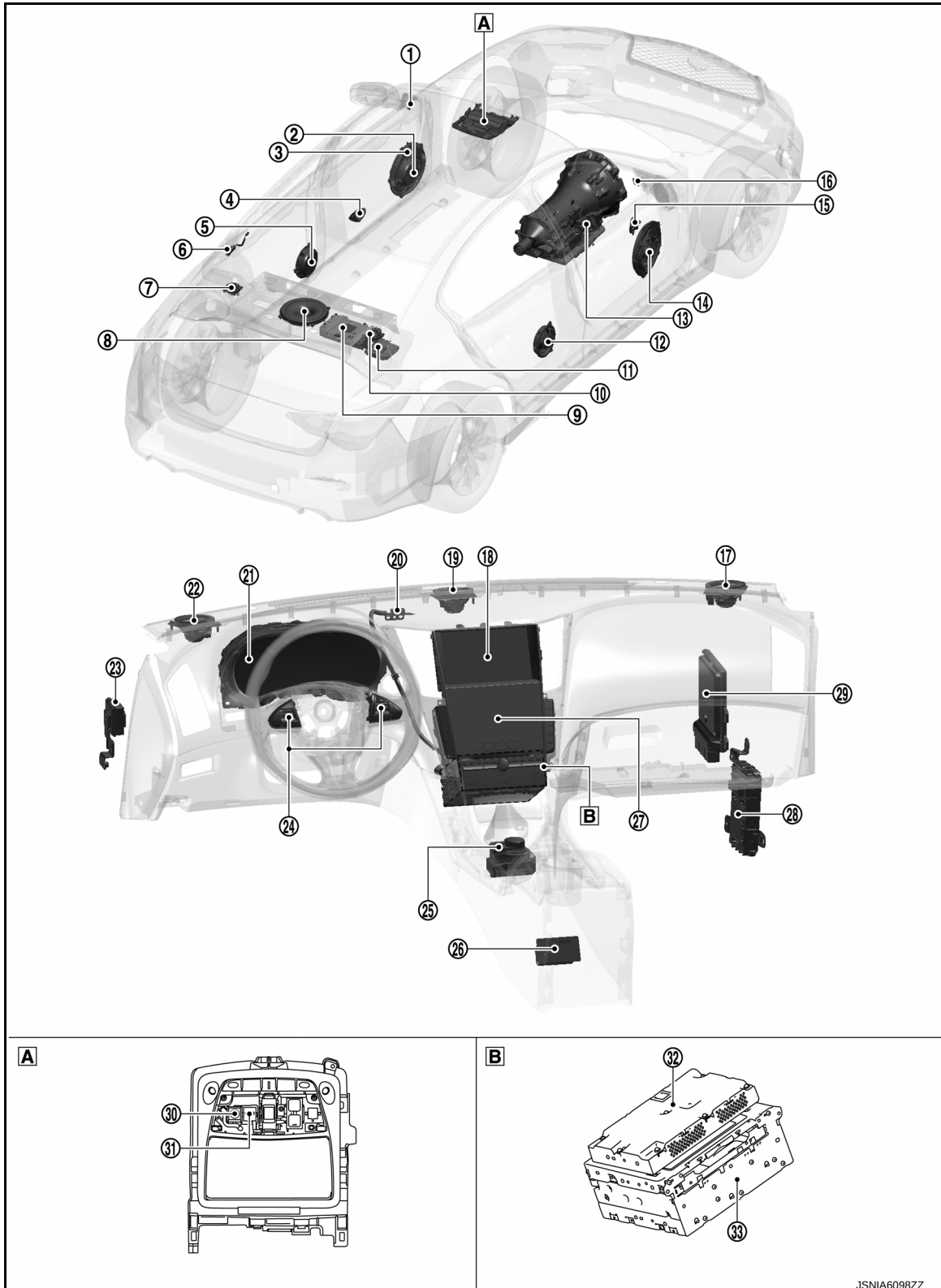
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000009586980

WITH BOSE SYSTEM



JSNIA6098ZZ

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

A Map lamp

B Back of integral switch

No.	Component	Function
①	Tweeter LH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
②	Front door woofer LH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
③	Front door squawker LH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
④	Satellite antenna	Refer to AV-25, "Antenna and Antenna Feeder" .
⑤	Rear door speaker LH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑥	Antenna amp.	Refer to AV-25, "Antenna and Antenna Feeder" .
⑦	Satellite speaker LH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑧	Rear woofer	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑨	BOSE amp.	Refer to AV-21, "WITH BOSE SYSTEM : BOSE Amp." .
⑩	Satellite speaker RH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑪	Around view monitor control unit	Refer to AV-304, "Around View Monitor Control Unit" .
⑫	Rear door speaker RH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑬	TCM	Transmits the following signals to the display control unit via CAN communication. • Shift position signal Refer to TM-12, "A/T CONTROL SYSTEM : Component Parts Location" , for detailed installation location.
⑭	Front door woofer RH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑮	Front door squawker RH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑯	Tweeter RH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑰	Front squawker RH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑱	Display control unit	Refer to AV-18, "Display Control Unit" .
⑲	Center squawker	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
⑳	GPS antenna	Refer to AV-25, "Antenna and Antenna Feeder" .
㉑	Combination meter	Transmits the following signals to the display control unit via CAN communication. • Vehicle speed signal • Distance to empty signal • Fuel level low warning signal • Vehicle speed signal Refer to MWI-7, "METER SYSTEM : Component Parts Location" , for detailed installation location.
㉒	Front squawker LH	Refer to AV-22, "WITH BOSE SYSTEM : Speaker" .
㉓	Chassis control module	Transmits the following signals to the display control unit via CAN communication. • Mode signal Refer to DAS-393, "Component Parts Location" , for detailed installation location.
㉔	Steering switch	Refer to AV-25, "Steering Switch" .
㉕	Multifunction switch	Refer to AV-21, "Multifunction Switch" .
㉖	External data input box	Refer to AV-21, "External Data Input Box" .
㉗	Integral switch	Refer to AV-20, "Integral Switch" .

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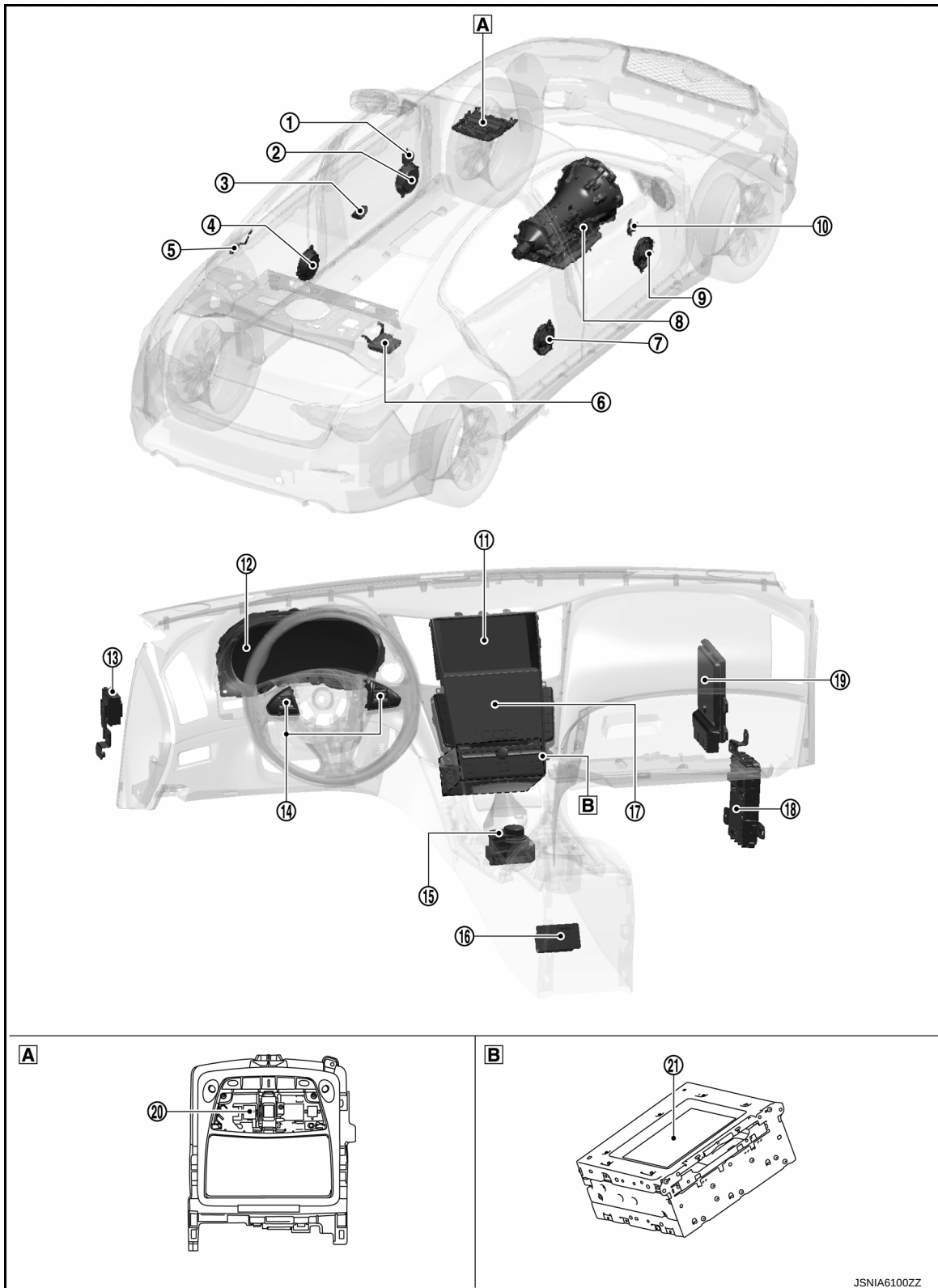
COMPONENT PARTS

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

No.	Component	Function
②⑧	BCM	Transmits the following signals to the display control unit. • Dimmer signal Transmits the following signals to the display control unit via CAN communication. • Vehicle setting signal Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location", for detailed installation location.
②⑨	ECM	Transmits the following signals to the display control unit. • Engine status signal • Fuel consumption monitor signal Refer to EC-16, "ENGINE CONTROL SYSTEM : Component Parts Location".
③⑩	Front microphone	Refer to AV-28, "Front Microphone (AudioPilot)" .
③①	Microphone	Refer to AV-24, "Microphone (for Hands-free Phone/Voice Recognition)" .
③②	NAVI control unit	Refer to AV-19, "NAVI Control Unit" .
③③	AV control unit	Refer to AV-19, "AV Control Unit" .

WITHOUT BOSE SYSTEM



A Map lamp

B Back of integral switch

No.	Component	Function
①	Front door squawker LH	Refer to AV-23, "WITHOUT BOSE SYSTEM : Speaker" .
②	Front door speaker LH	Refer to AV-23, "WITHOUT BOSE SYSTEM : Speaker" .

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

No.	Component	Function
③	Satellite radio antenna	Refer to AV-25, "Antenna and Antenna Feeder" .
④	Rear door speaker LH	Refer to AV-23, "WITHOUT BOSE SYSTEM : Speaker" .
⑤	Antenna amp.	Refer to AV-25, "Antenna and Antenna Feeder" .
⑥	Around view monitor control unit	Refer to AV-304, "Around View Monitor Control Unit" .
⑦	Rear door speaker RH	Refer to AV-23, "WITHOUT BOSE SYSTEM : Speaker" .
⑧	TCM	Transmits the following signals to the display control unit via CAN communication. • Shift position signal Refer to TM-12, "A/T CONTROL SYSTEM : Component Parts Location" , for detailed installation location.
⑨	Front door speaker RH	Refer to AV-23, "WITHOUT BOSE SYSTEM : Speaker" .
⑩	Front door squawker RH	Refer to AV-23, "WITHOUT BOSE SYSTEM : Speaker" .
⑪	Display control unit	Refer to AV-18, "Display Control Unit" .
⑫	Combination meter	Transmits the following signals to the display control unit via CAN communication. • Vehicle speed signal • Distance to empty signal • Fuel level low warning signal • Vehicle speed signal Refer to MWI-7, "METER SYSTEM : Component Parts Location" , for detailed installation location.
⑬	Chassis control module	Transmits the following signals to the display control unit via CAN communication. • Mode signal Refer to DAS-393, "Component Parts Location" , for detailed installation location.
⑭	Steering switch	Refer to AV-25, "Steering Switch" .
⑮	Multifunction switch	Refer to AV-21, "Multifunction Switch" .
⑯	External data input box	Refer to AV-21, "External Data Input Box" .
⑰	Integral switch	Refer to AV-20, "Integral Switch" .
⑱	BCM	Transmits the following signals to the display control unit. • Dimmer signal Transmits the following signals to the display control unit via CAN communication. • Vehicle setting signal Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location" , for detailed installation location.
⑲	ECM	Transmits the following signals to the display control unit via CAN communication. • Engine status signal • Fuel consumption monitor signal Refer to EC-16, "ENGINE CONTROL SYSTEM : Component Parts Location" .
⑳	Microphone	Refer to AV-24, "Microphone (for Hands-free Phone/Voice Recognition)" .
㉑	AV control unit	Refer to AV-19, "AV Control Unit" .

Display Control Unit

INFOID:000000009586981

DESCRIPTION

COMPONENT PARTS

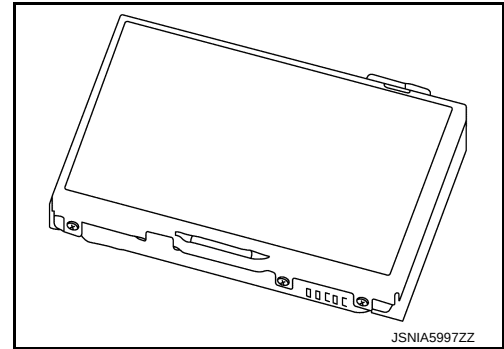
< SYSTEM DESCRIPTION >

[INFINITI IN TOUCH]

- Display control unit is located in the center of the instrument panel assembly.
- Display control unit controls the Infiniti InTouch using the master unit that integrates the following functions.

Unit equipped
Display
Bluetooth® module

- Display control unit can store applications in the built-in memory by connecting a cell phone via Bluetooth® communication or USB communication (through external data input box).



SPECIFICATION

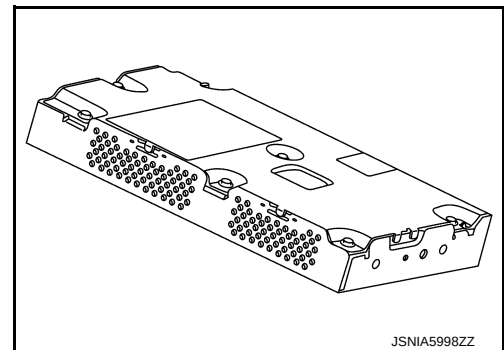
Display	Screen size		8-inch wide VGA (175.2 × 105.12)
	Number of pixels		800 × 480 pixels
	Drive type		TFT active matrix method
	Touch panel detection		Firm/glass capacitive
Capacity (for application software)			512 MB
Bluetooth® module	Compliant communication type	Wireless connection	Bluetooth® communication
	Compliant profile	Bluetooth® audio	A2DP 1.2
			AVRCP 1.4
		Hands-free phone	HFP 1.0, 1.5
			DUN 1.1
			OPP 1.2
Other functions			Voice recognition function

NAVI Control Unit

INFOID:000000009586982

DESCRIPTION

- NAVI control unit is located on the back of integral switch.
- NAVI control unit controls the navigation system of Infiniti InTouch.
- It integrates a gyro sensor and acceleration sensor and calculates the vehicle position by combining the vehicle speed signal, reverse signal, and location information received from GPS antenna.
- Map data is obtained from the SD card that is inserted in external data input box.



AV Control Unit

INFOID:000000009586983

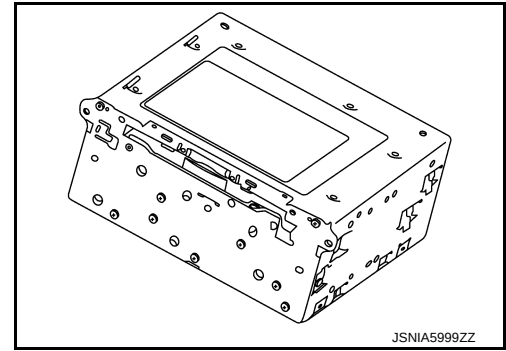
DESCRIPTION

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

- AV control unit is located on the back of integral switch.
- AV control unit controls the audio system of Infiniti InTouch.



SPECIFICATION

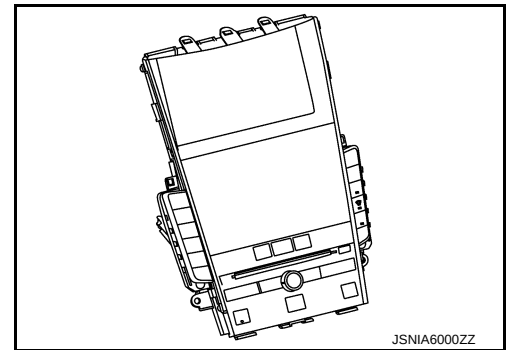
Amplifier output (models without BOSE)			40 W × 4ch	
CD drive	Playable disc	CD-ROM (CD-DA)		
		CD-R		
		CD-RW		
	Playable format	MP3		
		WMA		
		AAC		
	Text display function	ID3/WMA/AAC tag	Artist name	
			Album title	
			Song title	

Integral Switch

INFOID:0000000009586984

DESCRIPTION

- Integral switch is located in the center of the instrument panel assembly.
- Infiniti InTouch operation can be performed by touching the display (touch panel) and by pressing the hard switch.



SPECIFICATION

Display	Screen size	7-inch wide VGA
	LCD active area	152.44 × 91.44 mm (6 × 3.6 in)
	Number of pixels	800 × 480 pixels
	Touch panel detection	Capacitive type

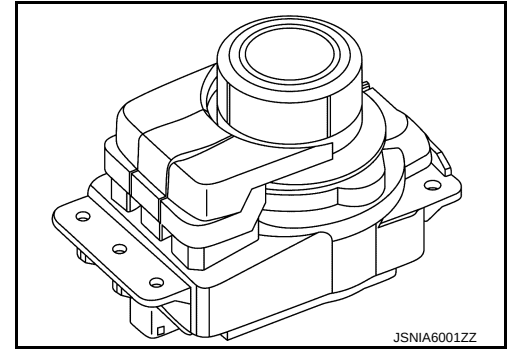
Multifunction Switch

INFOID:000000009586985

- Multifunction switch is located on the center console.
- Display of the display control unit can be operated.
- The multifunction switch is connected to the integral switch and a switch operation signal is transmitted to the display control unit by way of the integral switch via AV communication.

NOTE:

Camera switch signal is transmitted to the display control unit by way of the integral switch via hard wire.



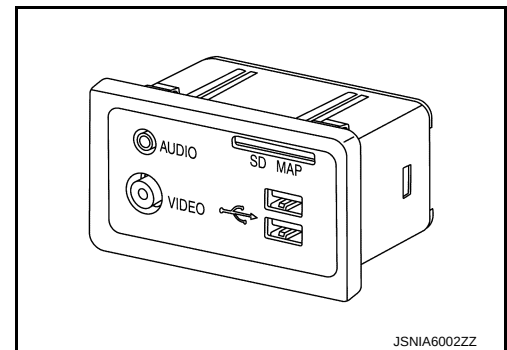
External Data Input Box

INFOID:000000009586986

WITH NAVIGATION

- External data input box is located in the console box.
- External data input box supports the following input, and is used by audio system and navigation system.

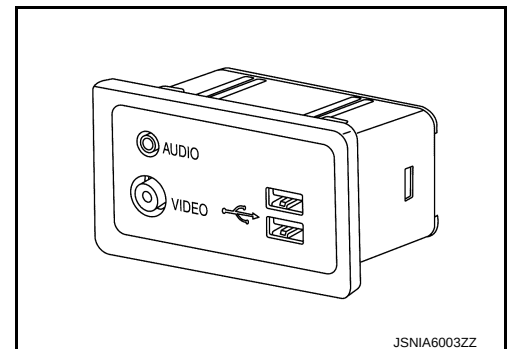
Interface
SD Card slot
USB port
Audio jack
Video jack



WITHOUT NAVIGATION

- External data input box is located in the console box.
- External data input box supports the following input, and is used by audio system.

Interface
USB port
Audio jack
Video jack

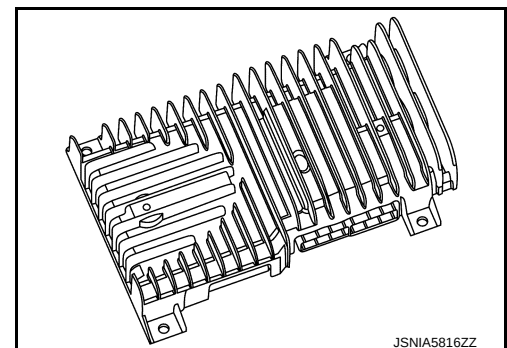


WITH BOSE SYSTEM

WITH BOSE SYSTEM : BOSE Amp.

INFOID:000000009586987

- BOSE amp. is located to the rear parcel shelf.
- Receives sound signal from AV control unit, and outputs sound signal to each speaker, squawker, and woofer.



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< SYSTEM DESCRIPTION >

WITH BOSE SYSTEM : Speaker

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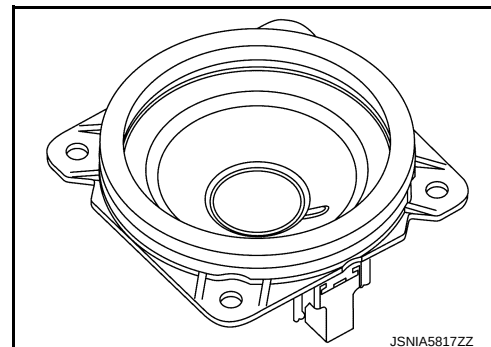
FRONT SQUAWKER

- $\phi 8.0$ cm (3.25 in) speaker is installed to the side of instrument panel.
- Sound signal is input from the BOSE amp. to output high, and mid range sound.

Maximum input : 22.5 W

Rated input : 7.6 W

Impedance : 3.6 Ω



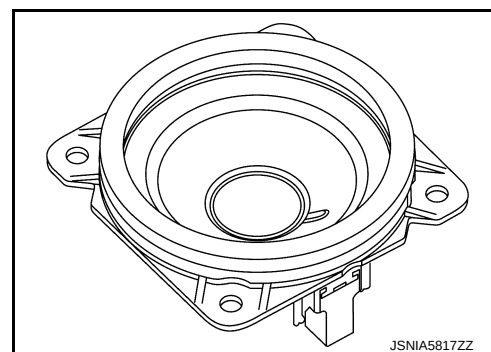
CENTER SQUAWKER

- $\phi 8.0$ cm (3.25 in) speaker is installed to the center of instrument panel.
- Sound signal is input from the BOSE amp. to output high, and mid range sound.

Maximum input : 22.5 W

Rated input : 7.6 W

Impedance : 3.6 Ω



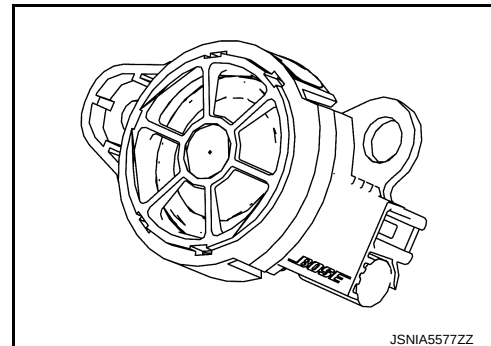
TWEETER

- $\phi 2.5$ cm (1 in) speaker is installed to the front door sash inner cover.
- Sound signal is input from the BOSE amp. to output high range sound.

Maximum input : 22.5 W

Rated input : 7.6 W

Impedance : 3.6 Ω



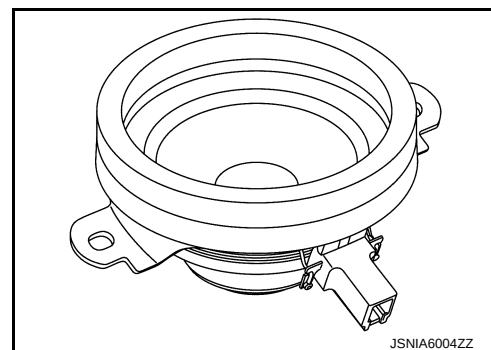
FRONT DOOR SQUAWKER

- $\phi 8.0$ cm (3.25 in) speaker is installed to the upper of the front door.
- Sound signal is input from the BOSE amp. to output mid range sound.

Maximum input : 22.5 W

Rated input : 7.6 W

Impedance : 3.6 Ω



FRONT DOOR WOOFER

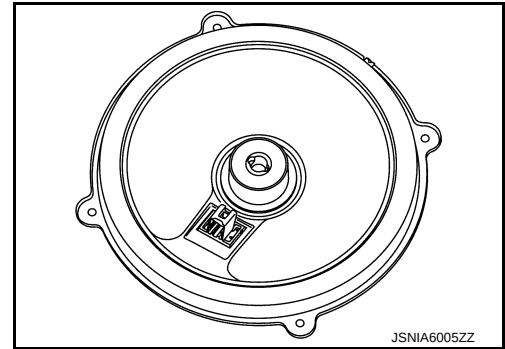
COMPONENT PARTS

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

- $\phi 25.0$ cm (10 in) speaker is installed to the bottom of the front door.
- Sound signal is input from the BOSE amp. to output low range sound.

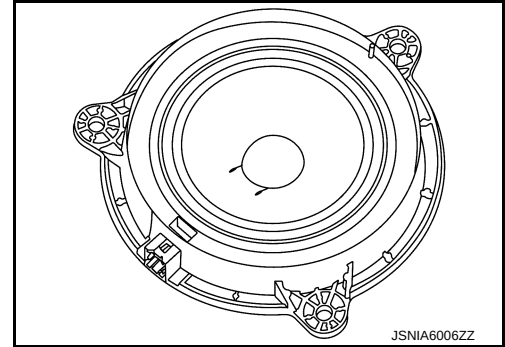
Maximum input : 40.5 W
Rated input : 13.6 W
Impedance : 2 Ω



REAR DOOR SPEAKER

- $\phi 13.0$ cm (5.25 in) speaker is installed to the bottom of the rear door.
- Sound signal is input from the BOSE amp. to output high, mid and low range sound.

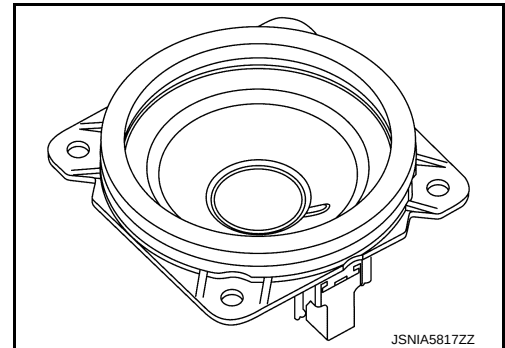
Maximum input : 21.6 W
Rated input : 7.2 W
Impedance : 3.6 Ω



SATELLITE SPEAKER

- $\phi 8.0$ cm (3.25 in) speaker is installed to the side of the rear parcel shelf.
- Sound signal is input from the BOSE amp. to output mid range sound.

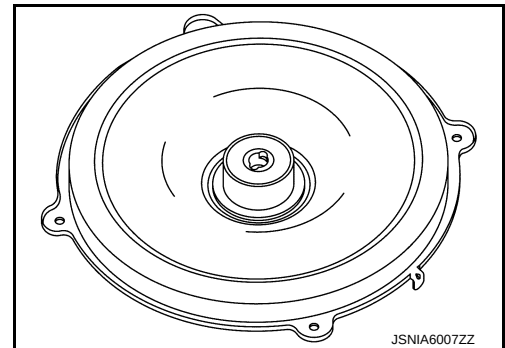
Maximum input : 22.5 W
Rated input : 7.6 W
Impedance : 3.6 Ω



REAR WOOFER

- $\phi 25.0$ cm (10 in) speaker is installed to the center of the rear parcel shelf.
- Sound signal is input from the BOSE amp. to output low range sound.

Maximum input : 40.5 W
Rated input : 13.6 W
Impedance : 1.0 Ω



WITHOUT BOSE SYSTEM

WITHOUT BOSE SYSTEM : Speaker

FRONT DOOR SPEAKER

INFOID:000000009586989

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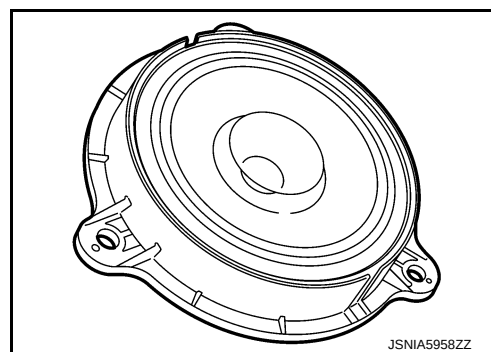
COMPONENT PARTS

[INFINITI INTOUCH]

< SYSTEM DESCRIPTION >

- $\phi 16.0$ cm (6.5 in) speaker is installed to the upper of the front door.
- Sound signal is input from the AV control unit to output high, mid and low range sound.

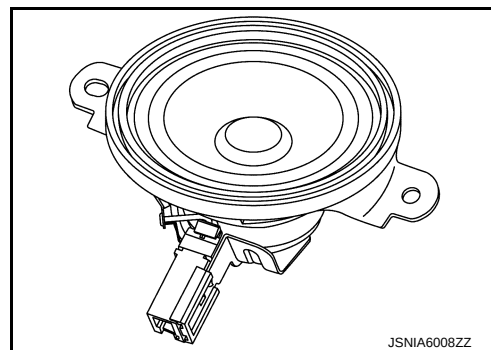
Maximum input	: 40.0 W
Rated input	: 20.0 W
Impedance	: 4.0 Ω



FRONT SQUAWKER

- $\phi 8.0$ cm (3.25 in) speaker is installed to the bottom of the front door.
- Sound signal is input from the AV control unit to output high, and mid range sound.

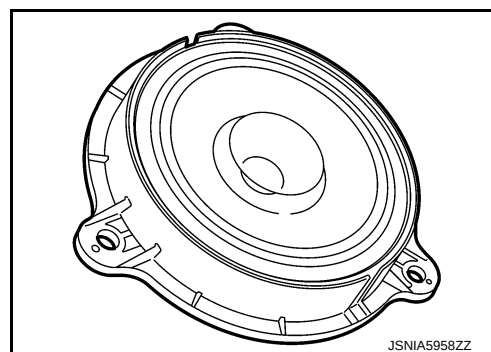
Maximum input	: 40.0 W
Rated input	: 7.0 W
Impedance	: 4.0 Ω



REAR DOOR SPEAKER

- $\phi 16.0$ cm (6.5 in) speaker is installed to the bottom of the rear door.
- Sound signal is input from the AV control unit to output high, mid and low range sound.

Maximum input	: 40.0 W
Rated input	: 20.0 W
Impedance	: 4.0 Ω

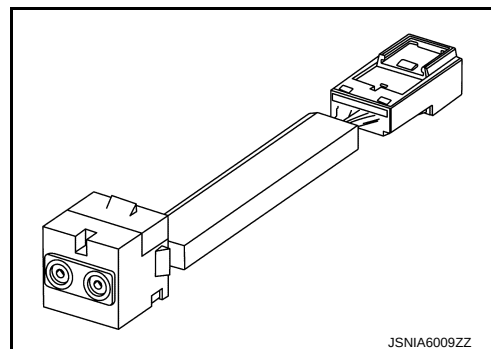


Microphone (for Hands-free Phone/Voice Recognition)

INFOID:000000009586990

WITH TELEMATICS SYSTEM

- Microphone is installed on the map lamp assembly.
- The microphone is used for the operator system of CARWINGS, hands-free phone system, voice recognition function.
- The power is supplied from the TCU to the microphone, transmitting sound signals to the TCU at the during operator system of CARWINGS, hands-free phone communication, and voice recognition.



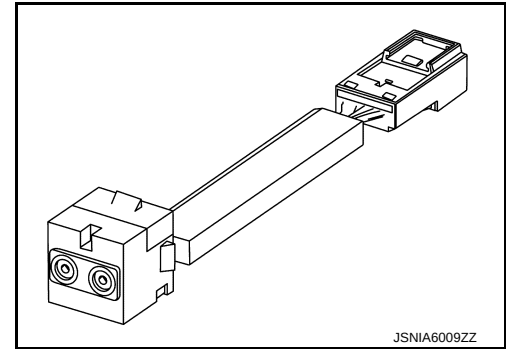
WITHOUT TELEMATICS SYSTEM

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

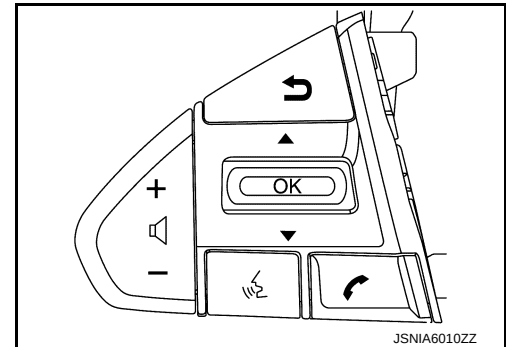
- The microphone is installed on the map lamp assembly.
- The power is supplied from the display control unit to the microphone, transmitting sound signals to the display control unit at the during hands-free phone communication, or voice recognition.



INFOID:000000009586991

Steering Switch

- Hands-free phone, navigation, and audio operations can be performed.
- This switch is connected to combination meter, and switch operation signal is transmitted to combination meter.
- Combination meter transmits steering switch signal to display control unit via AV communication.



INFOID:000000009586992

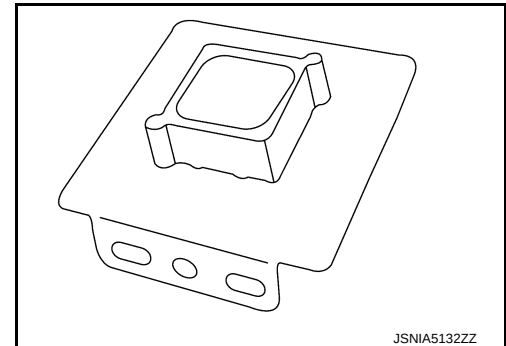
Antenna and Antenna Feeder

GPS ANTENNA

- GPS antenna is installed in the instrument panel.
- Power is supplied from the NAVI control unit.
- This antenna amplifies radio waves received from the GPS satellite and transmits the GPS signal to the NAVI control unit.

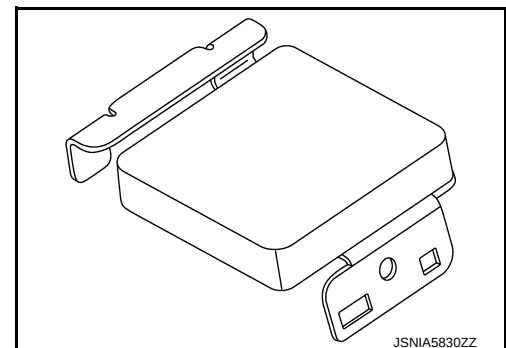
NOTE:

An object on the instrument panel may cause the reception sensitivity to be decreased.



TELEMATICS ANTENNA

- Telematics antenna is installed in the instrument panel.
- Power is supplied with TCU activated.



SATELLITE ANTENNA

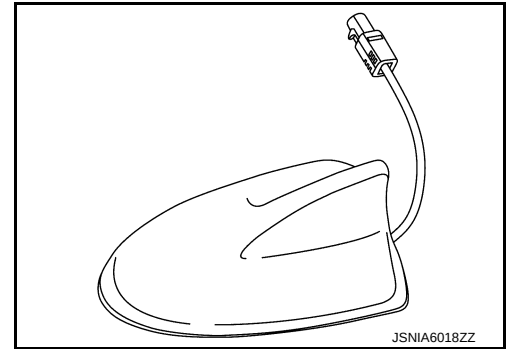
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COMPONENT PARTS

< SYSTEM DESCRIPTION >

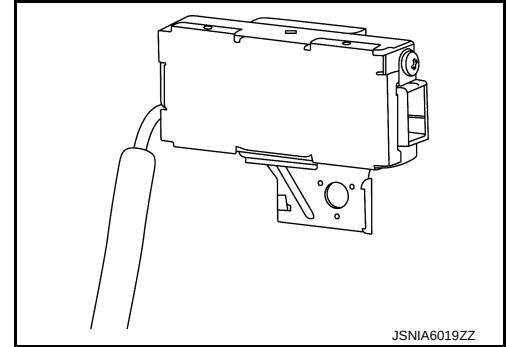
[INFINITI INTOUCH]

- Satellite radio antenna is installed to the rear center of the roof.
- Receives satellite radio waves and outputs it to AV control unit.

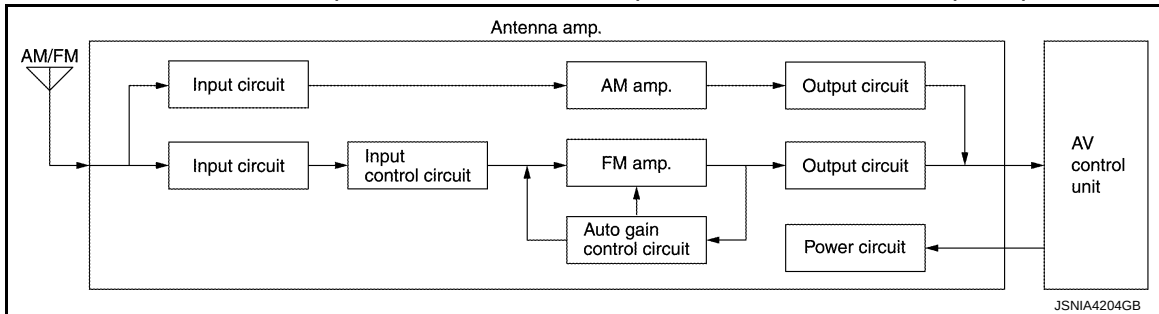


ANTENNA AMP. AND RADIO ANTENNA

- Antenna amp. is located on rear pillar (LH).



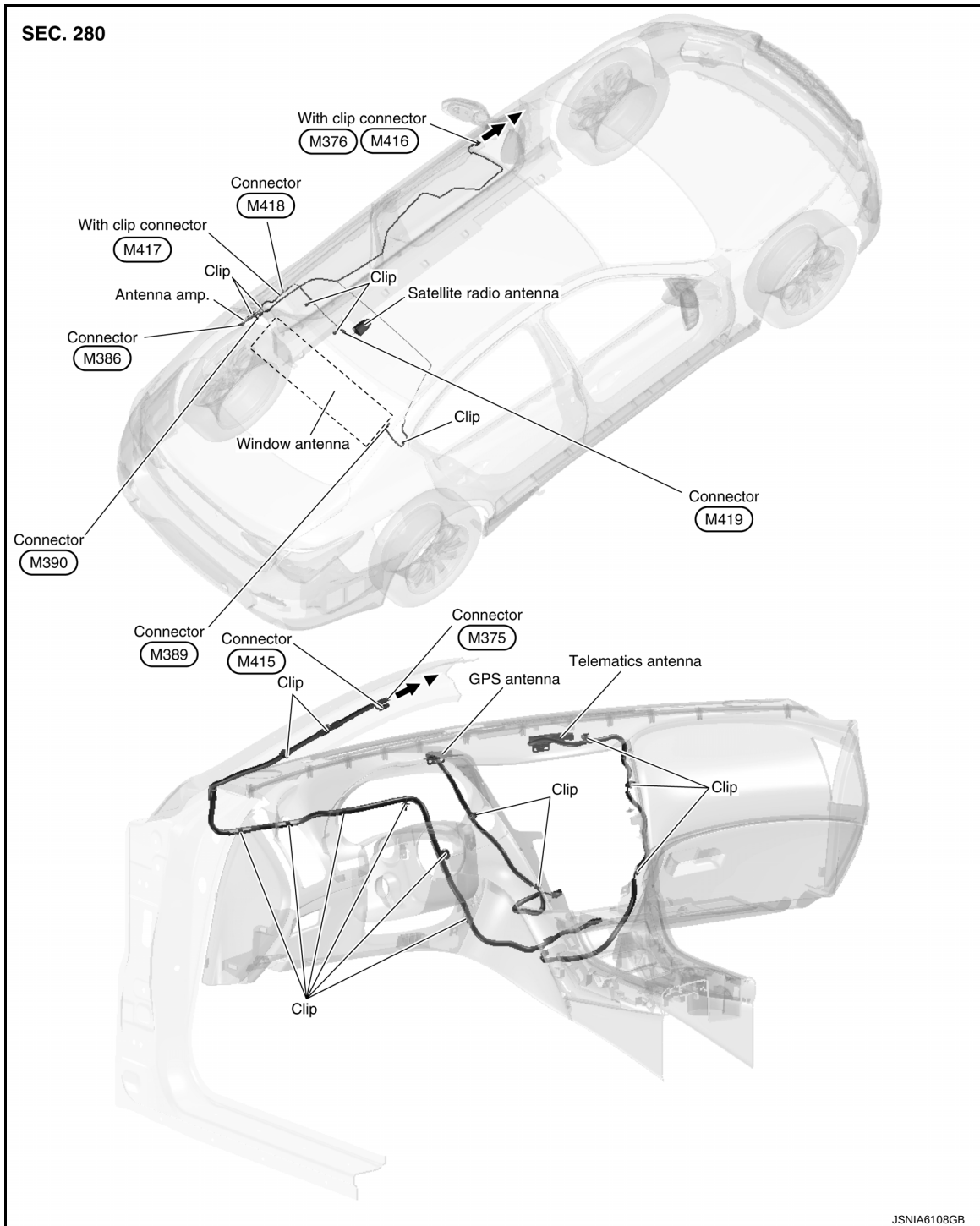
- AM/FM radio main antenna, and FM radio sub antenna on the rear window glass.
- The AM/FM radio main antenna path has an antenna amp. to obtain sufficient reception power.



CAUTION:

Affixing any mirror-type window films or metallic items (e.g. commercial antenna) on the rear window glass causes a reduction in the radio receiver sensitivity.

ANTENNA FEEDER



▲: Indicates that the part is connected at points with same symbol in actual vehicle.

Steering Angle Sensor

INFOID:000000009587001

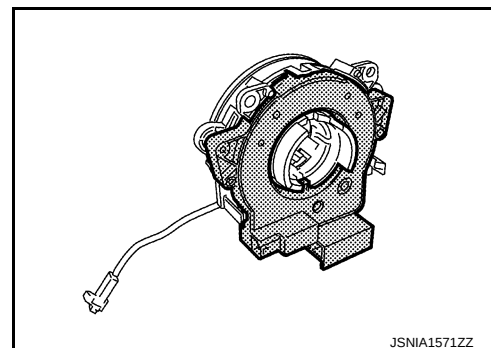
WITH AROUND VIEW MONITOR

COMPONENT PARTS

< SYSTEM DESCRIPTION >

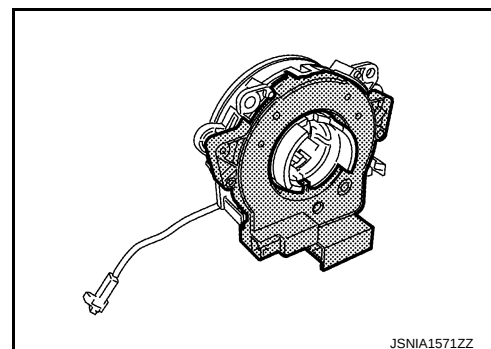
[INFINITI INTOUCH]

- Steering angle sensor is installed to the spiral cable.
- Steering angle sensor sends the steering angle signal necessary for predictive course line of the front or rear view monitor to the around view monitor control unit via CAN communication.



WITHOUT AROUND VIEW MONITOR

- Steering angle sensor is installed to the spiral cable.
- Steering angle sensor sends the steering angle signal necessary for predictive course line of the rear view monitor to the display control unit via CAN communication.



SD Card

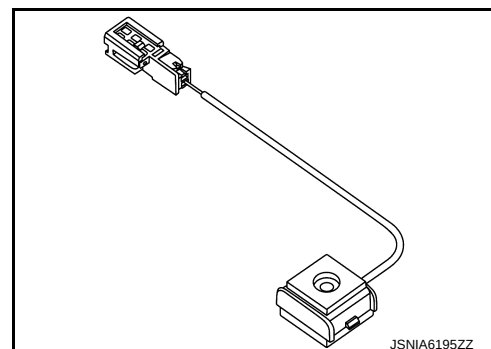
INFOID:000000009587002

Map data is sent to the NAVI control unit from the SD slot.

Front Microphone (AudioPilot)

INFOID:000000009697435

- Front microphone is installed on the map lamp assembly.
- The front microphone is used for the AudioPilot®.
- The power is supplied from the BOSE amp. to the microphone, transmitting sound signals to the BOSE amp. at the during AudioPilot®.



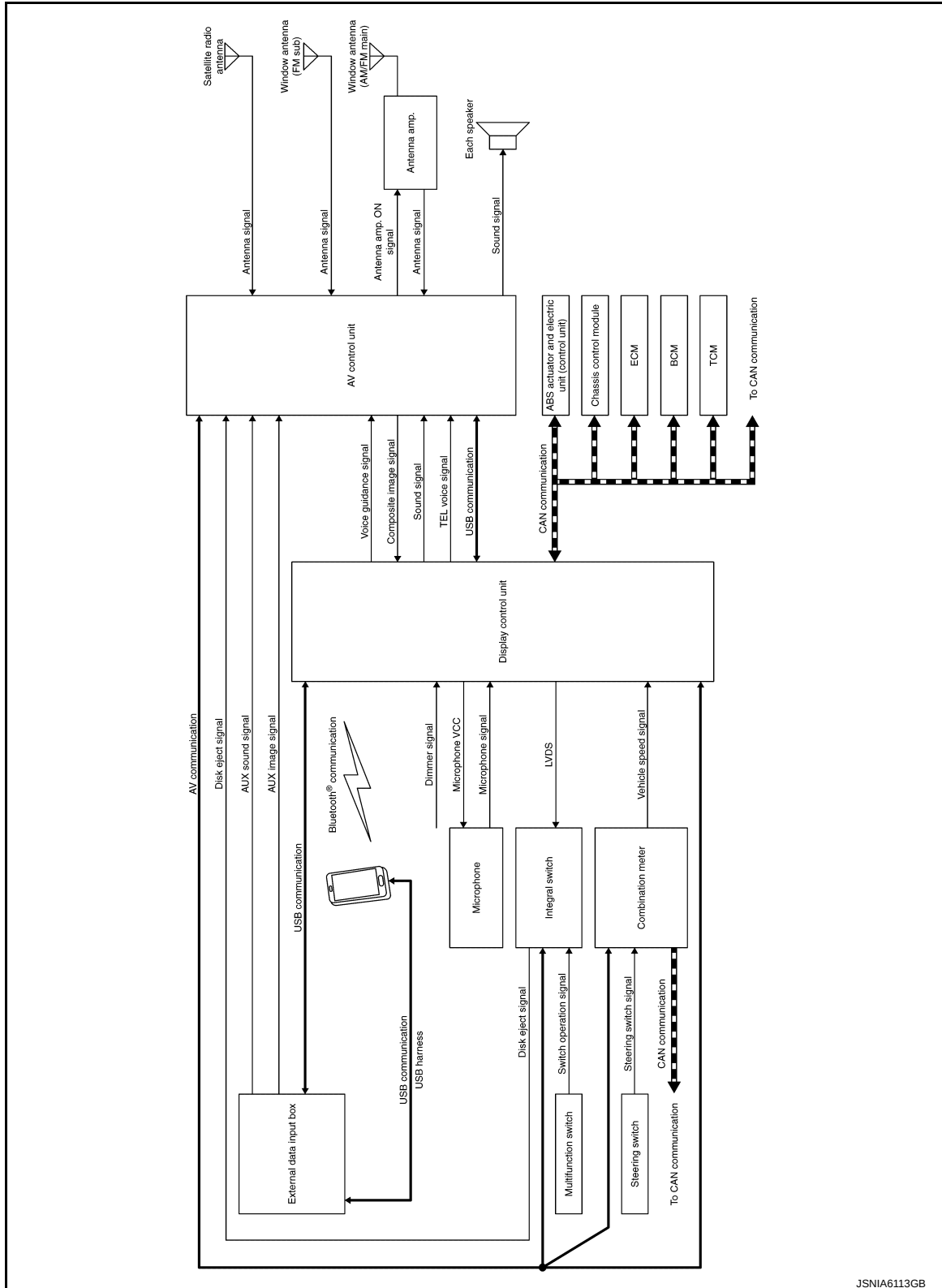
INFINITI INTOUCH

BASE AUDIO WITHOUT NAVIGATION

BASE AUDIO WITHOUT NAVIGATION : System Description

INFOID:0000000009587007

SYSTEM DIAGRAM



Display Control Unit Input Signal (CAN Communication)

Transmit unit	Signal name
ECM	Engine status signal
	Fuel consumption monitor signal
ABS actuator and electric unit (control unit)	Vehicle speed signal
Combination meter	Distance to empty signal
	Fuel level low warning signal
	Vehicle speed signal
Chassis control module	Drive mode signal
BCM	Vehicle setting signal
TCM	Shift position signal

DESCRIPTION

- Refer to Owner's Manual for Infiniti InTouch operating instructions.
- Display control unit controls the Infiniti InTouch.
- Infiniti InTouch consists of the systems listed in the following table.

System	Refer to
Audio	AV-55, "WITHOUT BOSE SYSTEM : System Description"
Hands-free phone	AV-59, "WITHOUT BOSE SYSTEM : System Description"

NOTE:

For camera system, refer to [AV-308, "System Description"](#) (Around view monitor) or [AV-474, "System Description"](#) (Rear view monitor).

VOICE RECOGNITION

- By speaking a command, operations of hands-free phone can be performed.
- To perform the voice control, press the  switch of the steering switch. The system changes to the speech reception status. When a command is spoken, the speech recognition result is displayed, and the operation is executed.
- The voice control cannot be performed under the conditions listed below.
 - When the camera image is displayed.
 - When the hand-free phone is used.

NOTE:

DTMF can be sent via audio during a telephone call.

Major Functions

With this function, the list of commands used for telephone operation can be checked.

VEHICLE SETTINGS FUNCTION

The display control unit transmits and receives data signals via CAN communication with the BCM, allowing the following vehicle settings.

- Lamp ON When Door Unlock
- Light Sensitivity
- Light Off Delay
- Speed Sensing Wiper Interval
- Auto lock
- Auto Unlock (I-Key)
- Rain Sensor
- Answer Back
- IGN/ACC Battery Saver
- Lock/Unlock by Hands Free
- Touch Sensitive Door Sensor
- Lane Change (3 Flashes)
- Wipe Drip
- Answer Back Exterior Light
- Selective Door Unlock
- Lift Steering upone Exit
- Slide Driver Seat Back on Exit

- Reset All Setting to Default

NOTE:

The setting items vary depending on the vehicle specification

AUTO LIGHT ADJUSTMENT SYSTEM

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

LOG-IN FUNCTION

For details on log-in function, refer to [DMS-9, "LOG-IN FUNCTION : System Description"](#).

Bluetooth® COMMUNICATION

Bluetooth® module is integrated in the display control unit, and a cell phone and a portable audio device can be connected by wireless communication using Bluetooth®.

USB COMMUNICATION

Each unit is connected by USB communication and used according to the descriptions in the following table.

Connecting unit	Description
Display control unit↔AV control unit	Text information (the CD album title, artist name, and song title) is transmitted from AV control unit to display control unit.
Display control unit↔External data input box	Music information stored in the iPod® or USB memory that is connected to external data input box is transmitted from external data input box to display control unit.

AV COMMUNICATION

Display control unit is connected to each unit via AV communication and used according to the descriptions in the following table.

Connecting unit	Description
AV control unit	The display control unit transmits a source switching signal to the AV control unit.
Around view monitor control unit	Camera image switching and setting signal is transmitted and received between display control unit and Around View Monitor control unit.
Integral switch	Integral switch transmits the operation signals of multifunction switch and integral switch to display control unit.
Combination meter	Display control unit transmits the information that is displayed on the information display of combination meter to combination meter.

LVDS

Display control unit is connected to each unit via LVDS and used according to the descriptions in the following table.

Image displayed on Integral switch display is output from Display control unit to Integral switch.

Connecting unit	Description
Integral switch	Image displayed on display is output from Display control unit to Integral switch.

CLOCK

The display control unit incorporates a clock and displays time on the display screen.

Operating voltage (V)	9 V or more	
Accuracy (sec./day)	Ignition switch OFF	Approx. ± 6
	Ignition switch ACC	Approx. ± 3

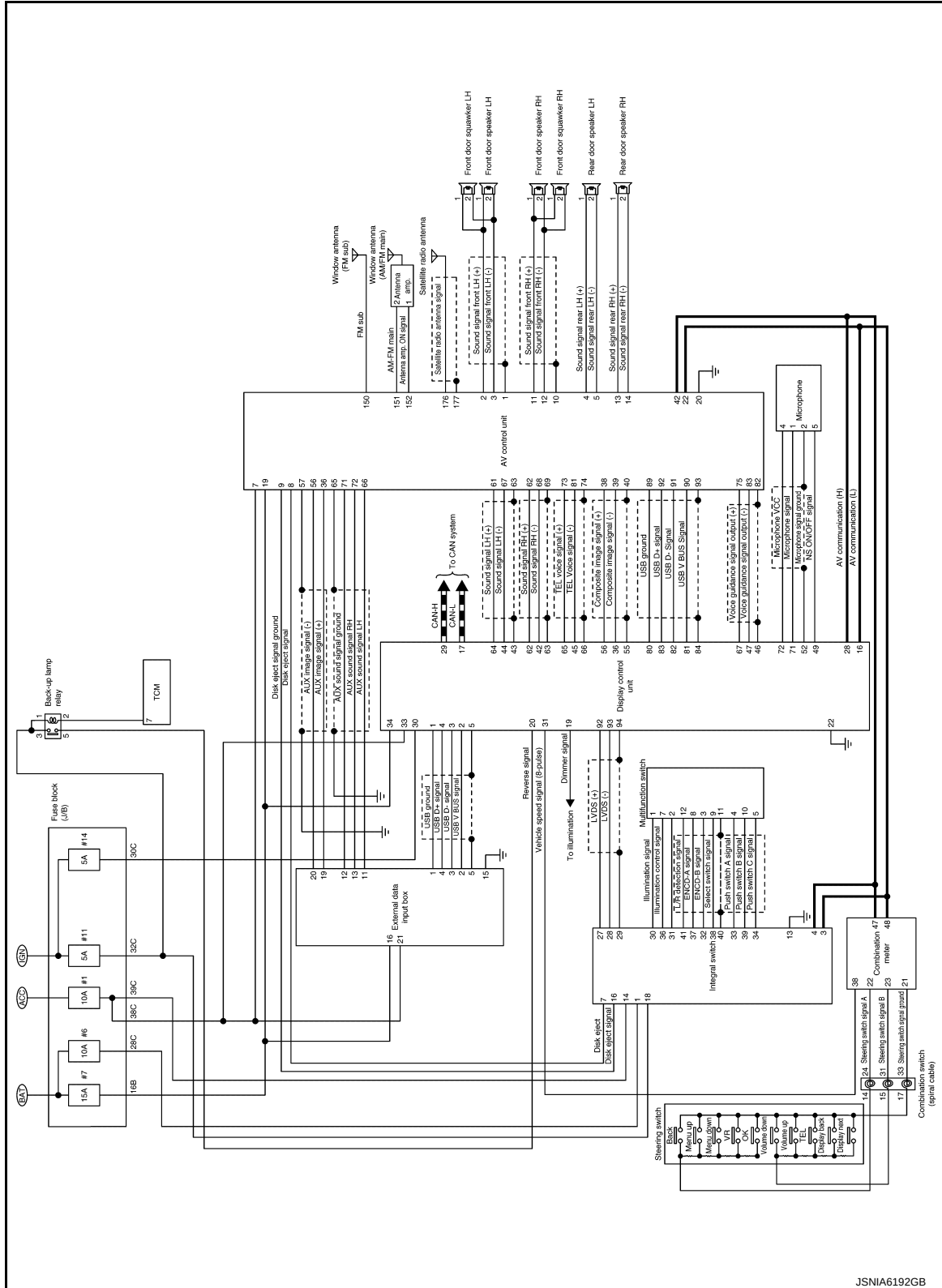
NOTE:

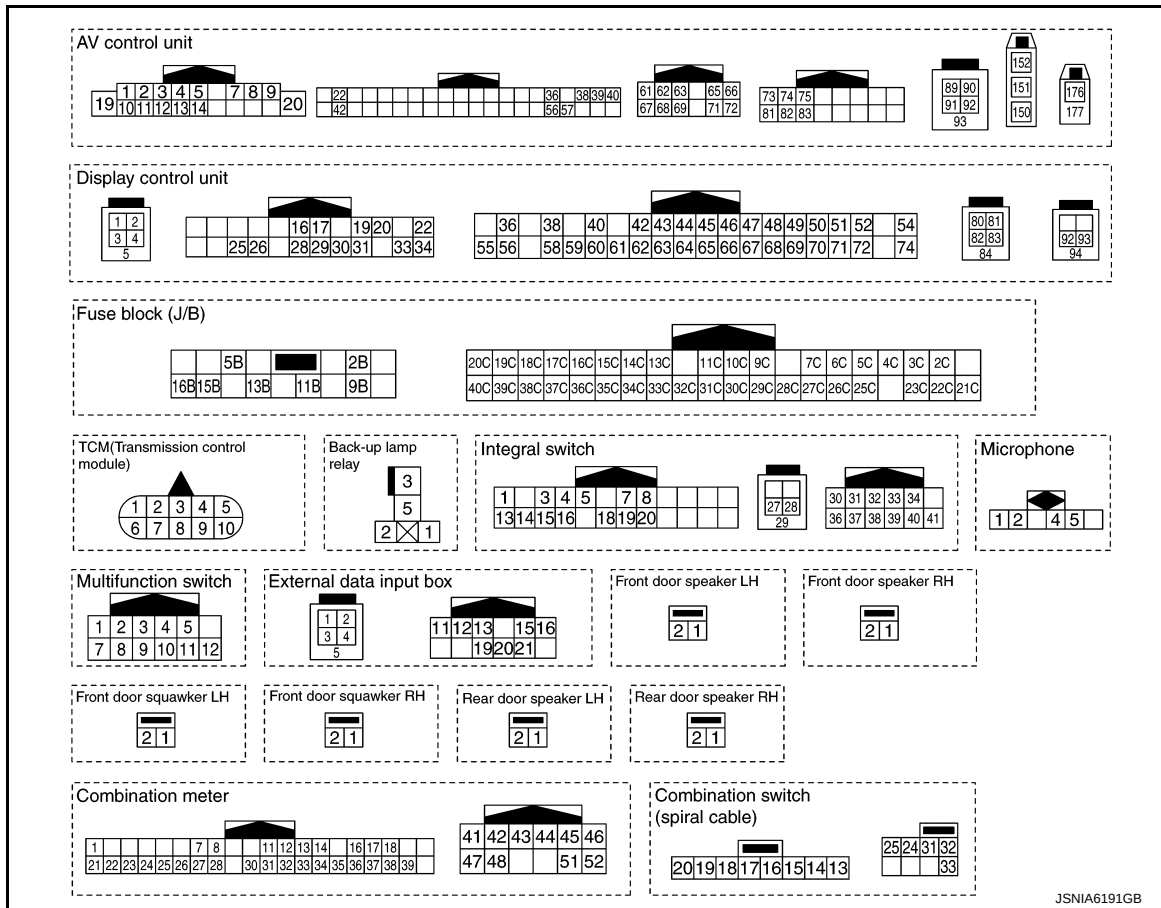
The time is displayed on the display. When a time lag of more than the above described accuracy occurs, the display control unit battery power supply voltage may be low. In this case, check 12 V battery for malfunction

causing low power supply voltage. Models with the navigation system are free of time lag resulted from low power supply voltage because of the synchronization with GPS signals.

BASE AUDIO WITHOUT NAVIGATION : Circuit Diagram

INFOID:000000009587008





BASE AUDIO WITHOUT NAVIGATION : Fail-Safe

INFOID:000000009728921

If a malfunction occurs in the Infiniti InTouch, display control unit performs fail-safe activation according to the detected malfunction.

Detection item	Infiniti InTouch operation in fail-safe mode	DTC
Engine speed signal	Active noise control and active sound control function are deactivated.	B1F01
Step lamp signal		B1F02
Front microphone	Active noise control function is deactivated.	B1F0B B1F0C B1F0D B1F0E
CAN communication	The system using the CAN communication signal from control unit which cannot communicate does not function.	U1000
	The system using the CAN communication signal does not function.	U1010
Display control unit	- Display is not displayed. - Display control unit restart. - Display control unit freezes. NOTE: Symptom other than an item may occur.	U121F
Configuration	A function of display control unit becomes mismatched with a vehicle specification and destination.	U1223
BOSE amp.	BOSE system does not function.	U1231
Steering angle sensor	Predictive course line is not displayed.	U1232

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INFINITI INTOUCH

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
NAVI control unit	- Map is not displayed. - Navigation screen does not operate. NOTE: Symptom other than an item may occur.		U1233
AV control unit	- Sound is not output by a speaker. - CD is not played. - Radio does not operate. NOTE: Symptom other than an item may occur.		U1234
GPS antenna	The vehicle positions of a navigation screen differ.		U1244
AV communication	AV control unit	- Sound is not output by a speaker. - CD is not played. - Radio does not operate. NOTE: Symptom other than an item may occur.	U1249
	BOSE amp.	Sound is not output by a speaker.	U124E
	Integral switch	- Integral switch display is not displayed. - Switch operation does not operate. - Touch panel operation does not operate. NOTE: Symptom other than an item may occur.	U1259
	Around view monitor control unit	Camera image is not displayed.	U125B
	Combination meter	- Audio information is not displayed by the information display in the combination meter. - Navigation indicator is not displayed by the information display in the combination meter. - Steering switch does not operate.	U1267
	Display control unit	The system of ECU which detected abnormalities does not operate.	U1300
		The system which is using AV communication does not operate.	U1310
Satellite radio antenna	Satellite radio is not received.		U1258
USB communication	NAVI control unit	A navigation menu cannot be selected (hatching display).	U125D
	TCU	Telematics system does not function.	U1266
	External data input box	Audio equipment which connected to USB does not operate.	U12B7
Rear view camera	Rear camera image is not displayed.		U12B8
Multifunction switch	Multifunction switch operation does not operate.		U12BA
Radio antenna	Radio is not received.		U12BE

INFINITI INTOUCH

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Speaker/squawker/tweeter/woofer	With BOSE system		
	Front door woofer	No sound from front door woofer LH or RH.	U1601 U1609
	Front door squawker	No sound from front door squawker LH or RH.	U1602 U160A
	Front door tweeter	No sound from front door tweeter LH or RH.	U1603 U160B
	Front squawker	No sound from front squawker LH or RH.	U1626 U162E
	Front center squawker	No sound from front center squawker.	U162A
	Rear door speaker	No sound from rear door speaker LH or RH.	U1708 U1710
	Rear satellite speaker	No sound from rear satellite speaker LH or RH.	U1722 U172A
	Rear woofer	No sound from rear woofer.	U1725
	Without BOSE system		
	Front door speaker	No sound from front door speaker LH or RH.	U1901 U1907
	Rear door speaker	No sound from rear door speaker LH or RH.	U1902 U1906
	Front door squawker	No sound from front door squawker LH or RH.	U190D U190E

BOSE AUDIO WITHOUT NAVIGATION

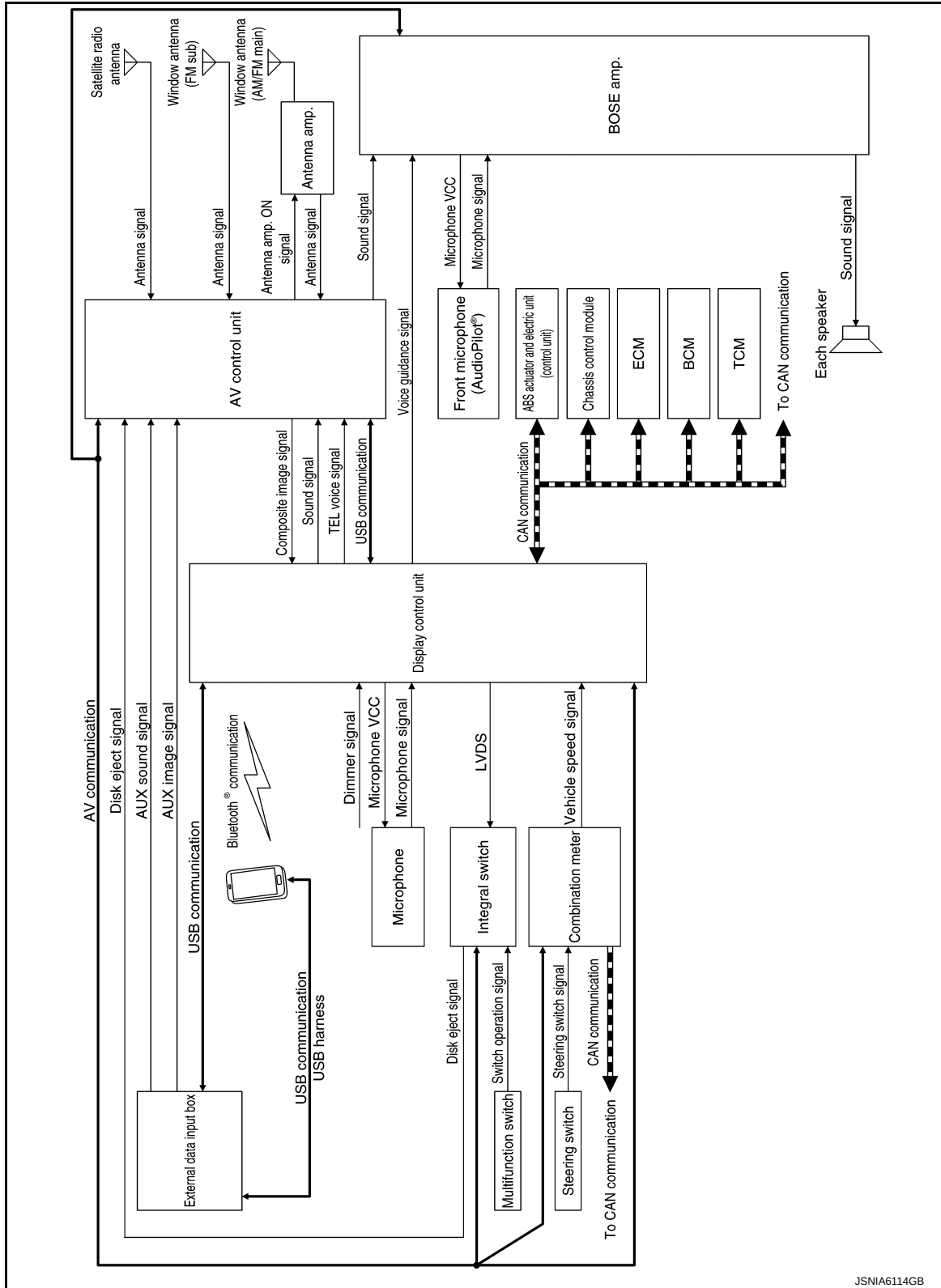
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BOSE AUDIO WITHOUT NAVIGATION : System Description

INFOID:000000009587010

SYSTEM DIAGRAM



Display Control Unit Input Signal (CAN Communication)

Transmit unit	Signal name
ECM	Engine status signal
	Fuel consumption monitor signal
ABS actuator and electric unit (control unit)	Vehicle speed signal
Combination meter	Distance to empty signal
	Fuel level low warning signal
	Vehicle speed signal
Chassis control module	Drive mode signal
BCM	Vehicle setting signal
TCM	Shift position signal

DESCRIPTION

- Refer to Owner's Manual for Infiniti InTouch operating instructions.
- Display control unit controls the Infiniti InTouch.
- Infiniti InTouch consists of the systems listed in the following table.

System	Refer to
Audio	AV-52. "WITH BOSE SYSTEM : System Description"
Hands-free phone	AV-58. "WITH BOSE SYSTEM : System Description"

NOTE:

For camera system, refer to [AV-308. "System Description"](#) (Around View Monitor) or [AV-474. "System Description"](#) (Rear view monitor).

VOICE RECOGNITION

- By speaking a command, operations of hands-free phone can be performed.
- To perform the voice control, press the  switch of the steering switch. The system changes to the speech reception status. When a command is spoken, the speech recognition result is displayed, and the operation is executed.
- The voice control cannot be performed under the conditions listed below.
 - When the camera image is displayed
 - When the hands-free phone is used

NOTE:

DTMF can be sent via audio during a telephone call.

Major Functions

With this function, the list of commands used for telephone operation can be checked.

VEHICLE SETTINGS FUNCTION

The display control unit transmits and receives data signals via CAN communication with the BCM, allowing the following vehicle settings.

- Lamp ON When Door Unlock
- Light Sensitivity
- Light Off Delay
- Speed Sensing Wiper Interval
- Auto lock
- Auto Unlock (I-Key)
- Rain Sensor
- Answer Back
- IGN/ACC Battery Saver
- Lock/Unlock by Hands Free
- Touch Sensitive Door Sensor
- Lane Change (3 Flashes)
- Wipe Drip
- Answer Back Exterior Light
- Selective Door Unlock
- Lift Steering upone Exit
- Slide Driver Seat Back on Exit

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< SYSTEM DESCRIPTION >

- Reset All Setting to Default

NOTE:

The setting items vary depending on the vehicle specification

AUTO LIGHT ADJUSTMENT SYSTEM

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

LOG-IN FUNCTION

For details on log-in function, refer to [DMS-9. "LOG-IN FUNCTION : System Description"](#).

Bluetooth® COMMUNICATION

Bluetooth® module is integrated in the display control unit, and a cell phone and a portable audio device can be connected by wireless communication using Bluetooth®.

USB COMMUNICATION

Each unit is connected by USB communication and used according to the descriptions in the following table.

Music information stored in the iPod® or USB memory that is connected to external data input box is transmitted from external data input box to display control unit.

Connecting unit	Description
Display control unit⇔AV control unit	Text information (the CD album title, artist name, and song title) is transmitted from AV control unit to display control unit.
Display control unit⇔External data input box	Music information stored in the iPod® or USB memory that is connected to external data input box is transmitted from external data input box to display control unit.

AV COMMUNICATION

Display control unit is connected to each unit via AV communication and used according to the descriptions in the following table.

Connecting unit	Description
AV control unit	The display control unit transmits a source switching signal to the AV control unit.
Around view monitor control unit	Camera image switching and setting signal is transmitted and received between display control unit and Around View Monitor control unit.
Integral switch	Integral switch transmits the operation signals of multifunction switch and integral switch to display control unit.
Combination meter	Display control unit transmits the information that is displayed on the information display of combination meter to combination meter.
BOSE amp.	Display control unit transmits the BOSE amp. ON signal to BOSE amp.

LVDS

Display control unit is connected to each unit via LVDS and used according to the descriptions in the following table.

Image displayed on Integral switch display is output from Display control unit to Integral switch.

Connecting unit	Description
Integral switch	Image displayed on display is output from Display control unit to Integral switch.

CLOCK

The display control unit incorporates a clock and displays time on the display screen.

Operating voltage (V)	9 V or more

Accuracy (sec./day)	Ignition switch OFF	Approx. ± 6
	Ignition switch ACC	Approx. ± 3

NOTE:

The time is displayed on the display. When a time lag of more than the above described accuracy occurs, the display control unit battery power supply voltage may be low. In this case, check 12 V battery for malfunction causing low power supply voltage. Models with the navigation system are free of time lag resulted from low power supply voltage because of the synchronization with GPS signals.

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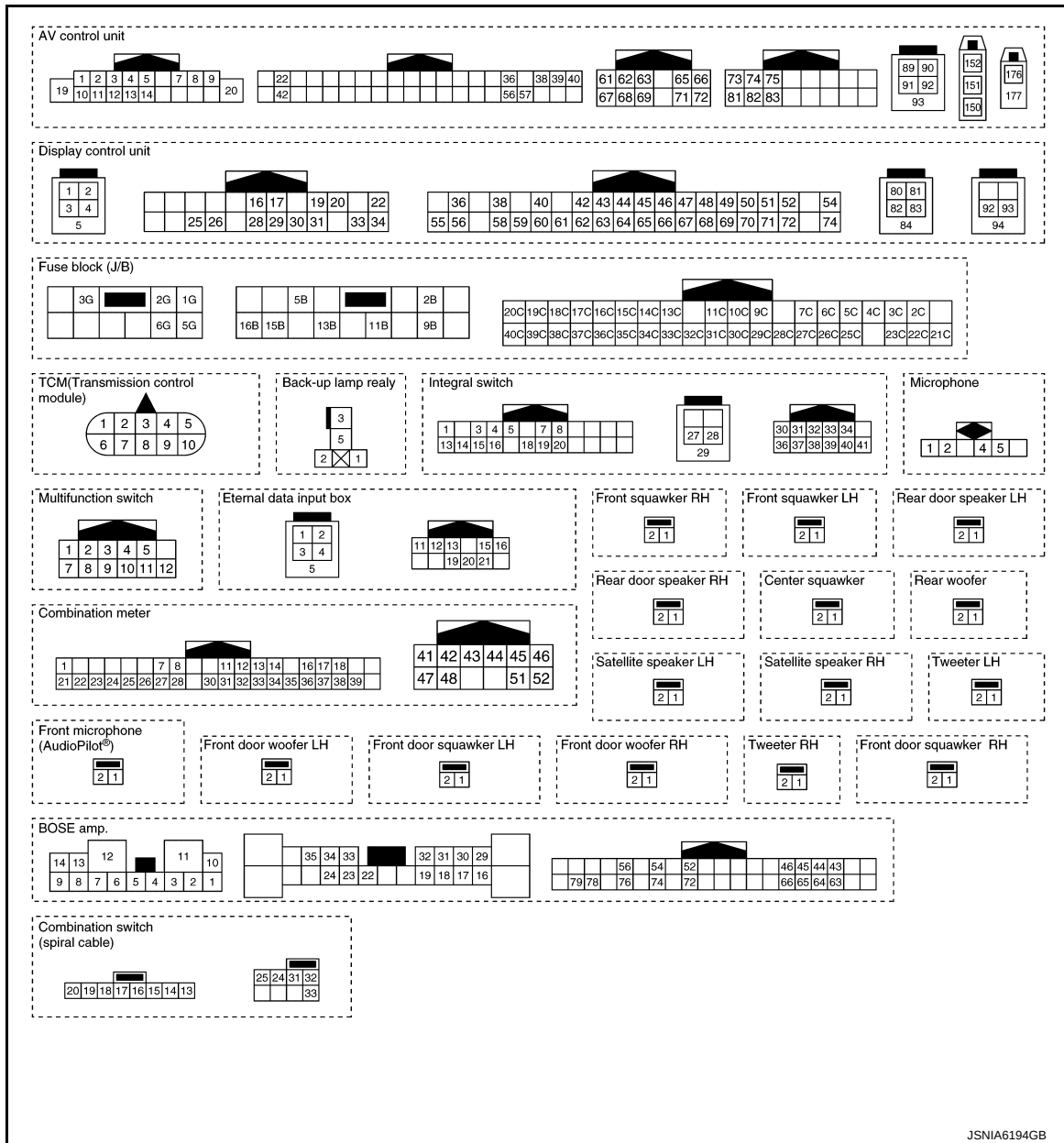
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BOSE AUDIO WITHOUT NAVIGATION : Fail-Safe

INFOID:000000009728922

If a malfunction occurs in the Infiniti InTouch, display control unit performs fail-safe activation according to the detected malfunction.

Detection item	Infiniti InTouch operation in fail-safe mode	DTC
Engine speed signal	Active noise control and active sound control function are deactivated.	B1F01
Step lamp signal		B1F02
Front microphone	Active noise control function is deactivated.	B1F0B B1F0C B1F0D B1F0E
CAN communication	The system using the CAN communication signal from control unit which cannot communicate does not function.	U1000
	The system using the CAN communication signal does not function.	U1010

INFINITI INTOUCH

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Display control unit	- Display is not displayed. - Display control unit restart. - Display control unit freezes. NOTE: Symptom other than an item may occur.		U121F
Configuration	A function of display control unit becomes mismatched with a vehicle specification and destination.		U1223
BOSE amp.	BOSE system does not function.		U1231
Steering angle sensor	Predictive course line is not displayed.		U1232
NAVI control unit	- Map is not displayed. - Navigation screen does not operate. NOTE: Symptom other than an item may occur.		U1233
AV control unit	- Sound is not output by a speaker. - CD is not played. - Radio does not operate. NOTE: Symptom other than an item may occur.		U1234
GPS antenna	The vehicle positions of a navigation screen differ.		U1244
AV communication	AV control unit	- Sound is not output by a speaker. - CD is not played. - Radio does not operate. NOTE: Symptom other than an item may occur.	U1249
	BOSE amp.	Sound is not output by a speaker.	U124E
	Integral switch	- Integral switch display is not displayed. - Switch operation does not operate. - Touch panel operation does not operate. NOTE: Symptom other than an item may occur.	U1259
	Around view monitor control unit	Camera image is not displayed.	U125B
	Combination meter	- Audio information is not displayed by the information display in the combination meter. - Navigation indicator is not displayed by the information display in the combination meter. - Steering switch does not operate.	U1267
	Display control unit	The system of ECU which detected abnormalities does not operate.	U1300
		The system which is using AV communication does not operate.	U1310
Satellite radio antenna	Satellite radio is not received.		U1258
USB communication	NAVI control unit	A navigation menu cannot be selected (hatching display).	U125D
	TCU	Telematics system does not function.	U1266
	External data input box	Audio equipment which connected to USB does not operate.	U12B7
Rear view camera	Rear camera image is not displayed.		U12B8
Multifunction switch	Multifunction switch operation does not operate.		U12BA
Radio antenna	Radio is not received.		U12BE

INFINITI INTOUCH

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Speaker/squawker/tweeter/woofer	With BOSE system		
	Front door woofer	No sound from front door woofer LH or RH.	U1601 U1609
	Front door squawker	No sound from front door squawker LH or RH.	U1602 U160A
	Front door tweeter	No sound from front door tweeter LH or RH.	U1603 U160B
	Front squawker	No sound from front squawker LH or RH.	U1626 U162E
	Front center squawker	No sound from front center squawker.	U162A
	Rear door speaker	No sound from rear door speaker LH or RH.	U1708 U1710
	Rear satellite speaker	No sound from rear satellite speaker LH or RH.	U1722 U172A
	Rear woofer	No sound from rear woofer.	U1725
	Without BOSE system		
	Front door speaker	No sound from front door speaker LH or RH.	U1901 U1907
	Rear door speaker	No sound from rear door speaker LH or RH.	U1902 U1906
	Front door squawker	No sound from front door squawker LH or RH.	U190D U190E

BOSE AUDIO WITH NAVIGATION

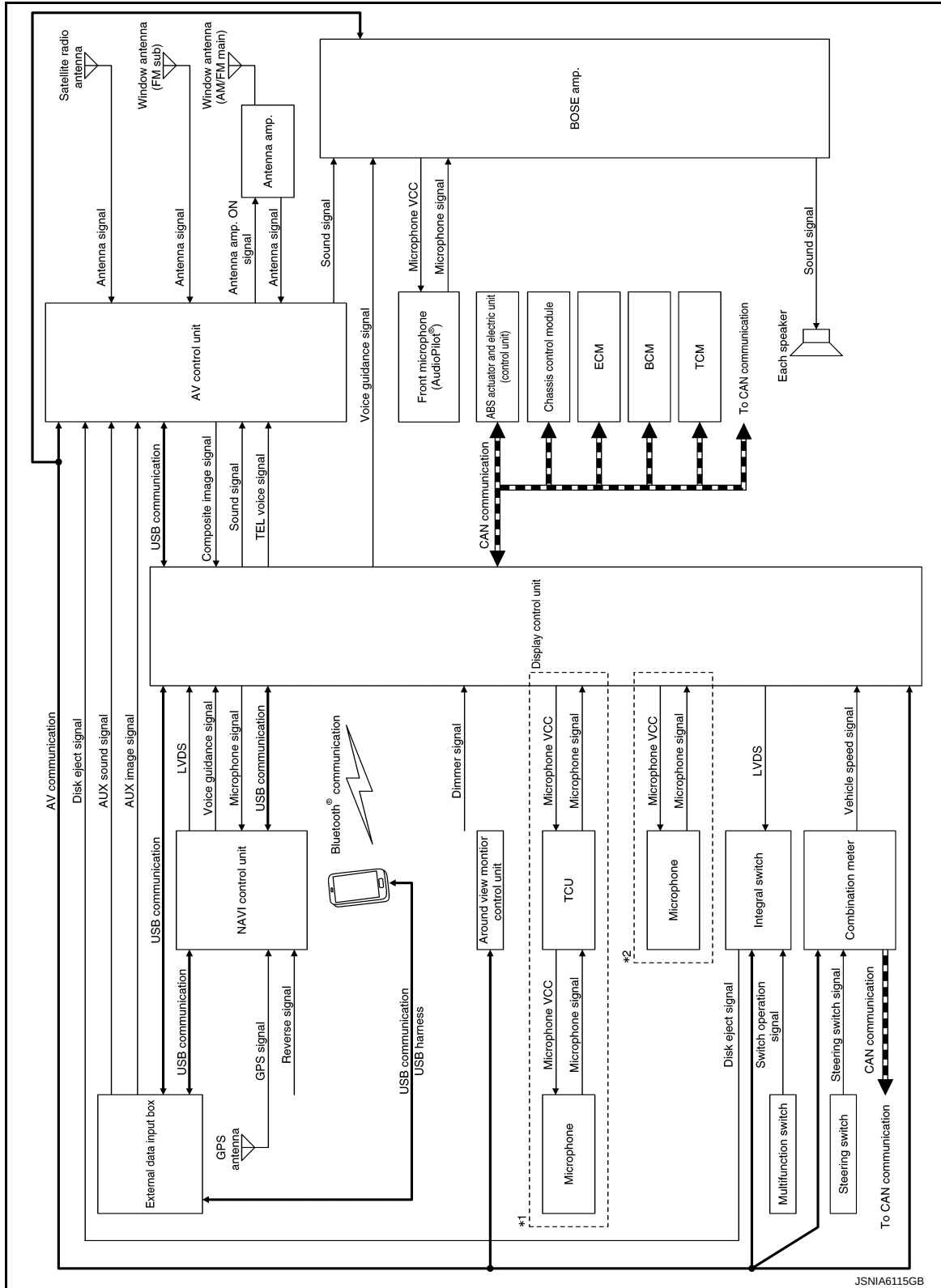
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BOSE AUDIO WITH NAVIGATION : System Description

INFOID:0000000009587016

SYSTEM DIAGRAM



*1: With telematics system

*2: Without telematics system

Display Control Unit Input Signal (CAN Communication)

Transmit unit	Signal name
ECM	Engine status signal
	Fuel consumption monitor signal
ABS actuator and electric unit (control unit)	Vehicle speed signal
Combination meter	Distance to empty signal
	Fuel level low warning signal
	Vehicle speed signal
Chassis control module	Drive mode signal
BCM	Vehicle setting signal
TCM	Shift position signal

DESCRIPTION

- Refer to Owner's Manual for multi AV system operating instructions.
- Display control unit controls the multi AV system.
- Multi AV system consists of the systems listed in the following table.

System	Refer to
Audio	AV-52. "WITH BOSE SYSTEM : System Description"
Hands-free phone	AV-58. "WITH BOSE SYSTEM : System Description"
Navigation	AV-61. "System Description"

NOTE:

For camera system, refer to [AV-308. "System Description"](#) (around View Monitor) or [AV-474. "System Description"](#) (rear view monitor).

VOICE RECOGNITION

- By speaking a command, operations of navigation and hands-free phone can be performed.
- To perform the voice control, press the  switch of the steering switch. The system changes to the speech reception status. When a command is spoken, the speech recognition result is displayed, and the operation is executed.
- The voice control cannot be performed under the conditions listed below.
 - When the camera image is displayed
 - When the hand-free phone is used

NOTE:

DTMF can be sent via audio during a telephone call.

Major Functions

With this function, the list of commands used for telephone, and navigation operation can be checked.

VEHICLE SETTINGS FUNCTION

The display control unit transmits and receives data signals via CAN communication with the BCM, allowing the following vehicle settings.

- Lamp ON When Door Unlock
- Light Sensitivity
- Light Off Delay
- Speed Sensing Wiper Interval
- Auto lock
- Auto Unlock (I-Key)
- Rain Sensor
- Answer Back
- IGN/ACC Battery Saver
- Lock/Unlock by Hands Free
- Touch Sensitive Door Sensor
- Lane Change (3 Flashes)
- Wipe Drip
- Answer Back Exterior Light
- Selective Door Unlock

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< SYSTEM DESCRIPTION >

- Lift Steering upon Exit
- Slide Driver Seat Back on Exit
- Reset All Setting to Default

NOTE:

The setting items vary depending on the vehicle specification

AUTO LIGHT ADJUSTMENT SYSTEM

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

LOG-IN FUNCTION

For details on log-in function, refer to [DMS-9. "LOG-IN FUNCTION : System Description"](#).

Bluetooth® COMMUNICATION

Bluetooth® module is integrated in the display control unit, and a cell phone and a portable audio device can be connected by wireless communication using Bluetooth®.

USB COMMUNICATION

Each unit is connected by USB communication and used according to the descriptions in the following table. Map data stored in map SD card is transmitted from NAVI control unit to the display control unit.

Connecting unit	Description
Display control unit⇔NAVI control unit	• The NAVI control unit transmits map data to the display control unit. • USB communication is used for operating Navigation.
Display control unit⇔AV control unit	Text information (the CD album title, artist name, and song title) is transmitted from AV control unit to display control unit.
Display control unit⇔External data input box	Music information stored in the iPod® or USB memory that is connected to external data input box is transmitted from external data input box to display control unit.
NAVI control unit⇔External data input box	The external data input box sends map data stored in Map SD Card to the NAVI control unit.

AV COMMUNICATION

Display control unit is connected to each unit via AV communication and used according to the descriptions in the following table.

Connecting unit	Description
AV control unit	The display control unit transmits a source switching signal to the AV control unit.
Around view monitor control unit	Camera image switching and setting signal is transmitted and received between display control unit and Around View Monitor control unit.
Integral switch	Integral switch transmits the operation signals of multifunction switch and integral switch to display control unit.
Combination meter	Display control unit transmits the information that is displayed on the information display of combination meter to combination meter.
BOSE amp.	Display control unit transmits the BOSE amp. ON signal to BOSE amp.

LVDS

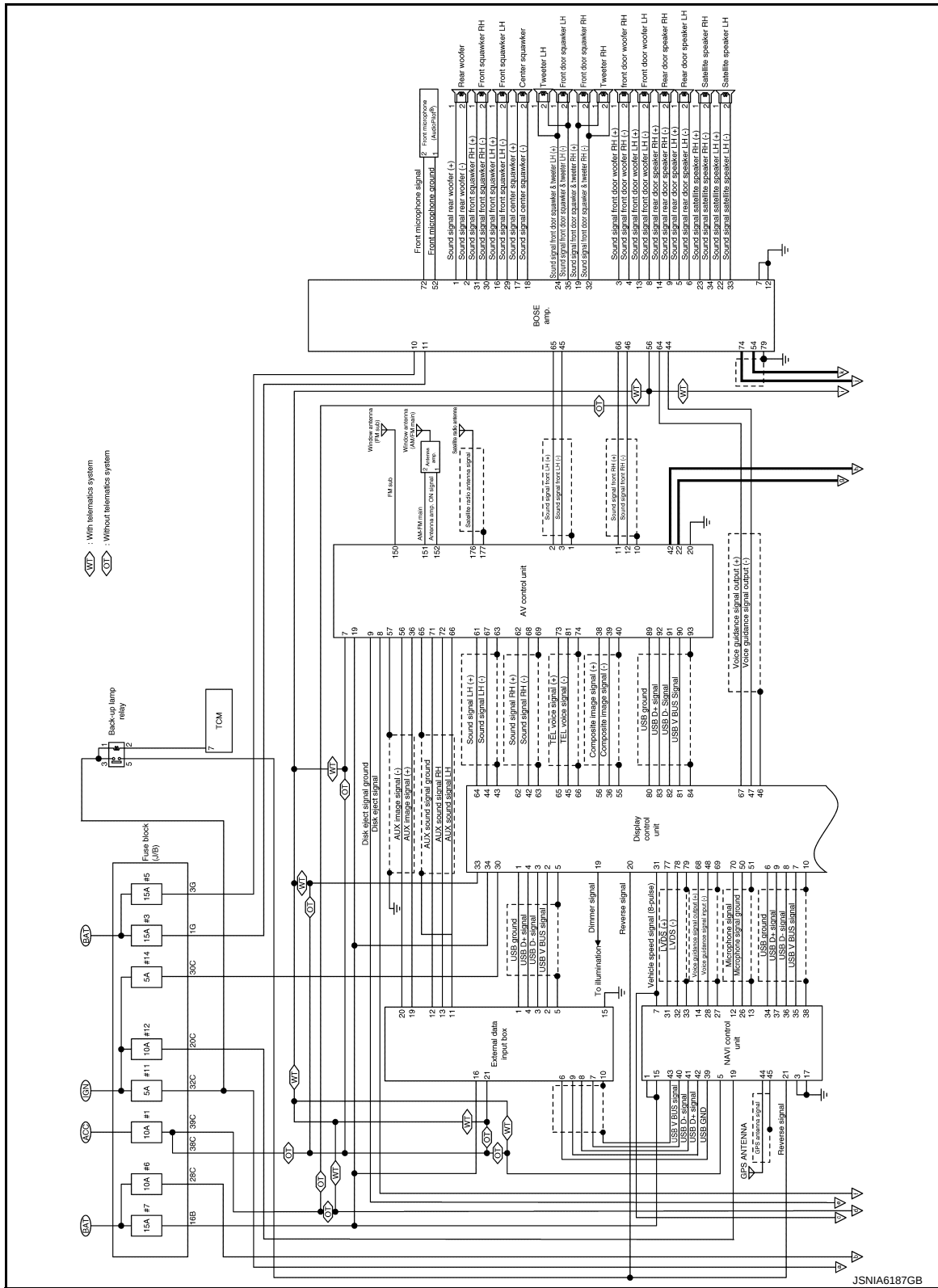
Display control unit is connected to each unit via LVDS and used according to the descriptions in the following table.

Connecting unit	Description
NAVI control unit	Map image displayed on the NAVI control unit display is output from NAVI control unit to display control unit.
Integral switch	Image displayed on display is output from Display control unit to Integral switch.

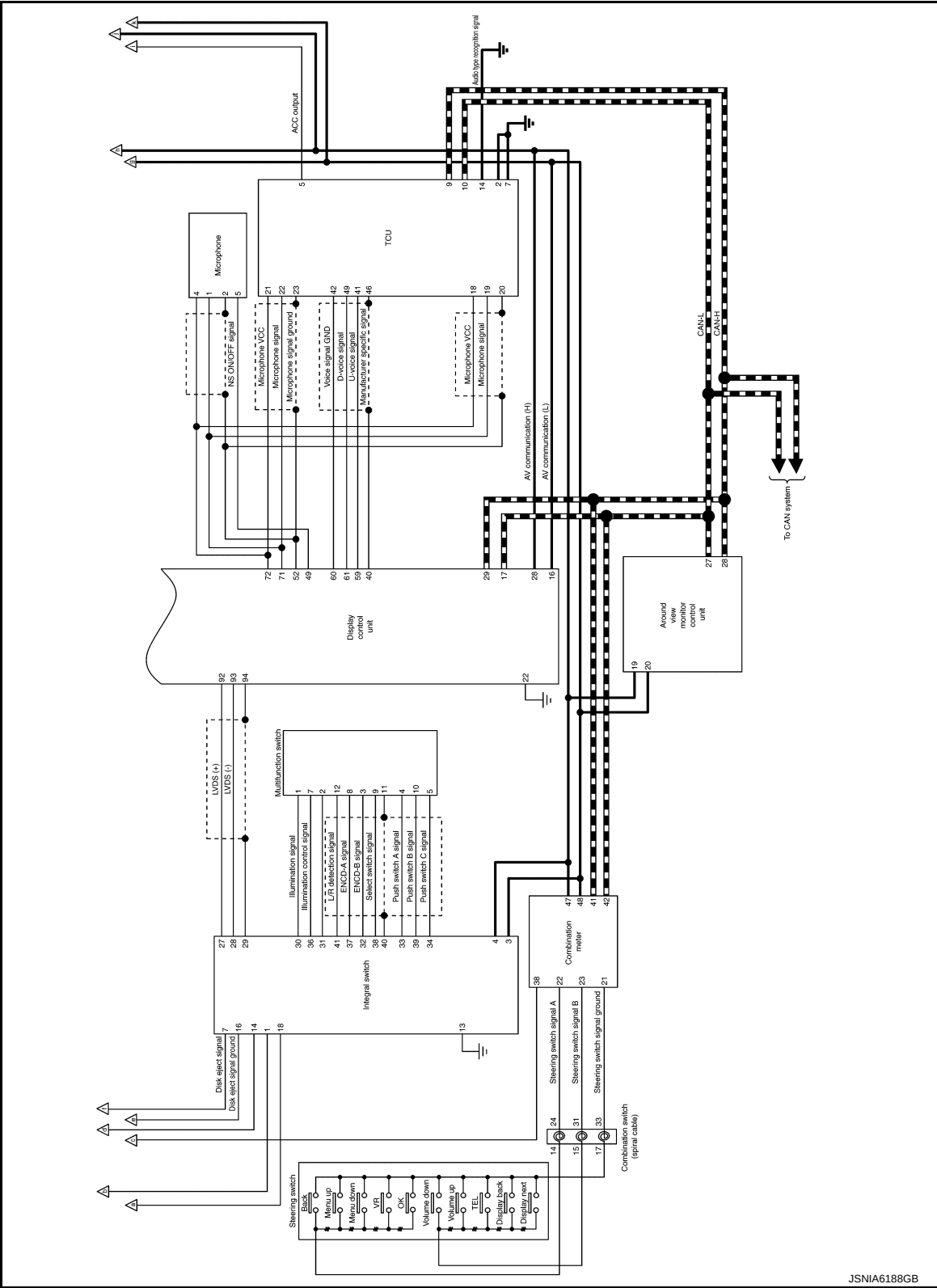
< SYSTEM DESCRIPTION >

BOSE AUDIO WITH NAVIGATION : Circuit Diagram

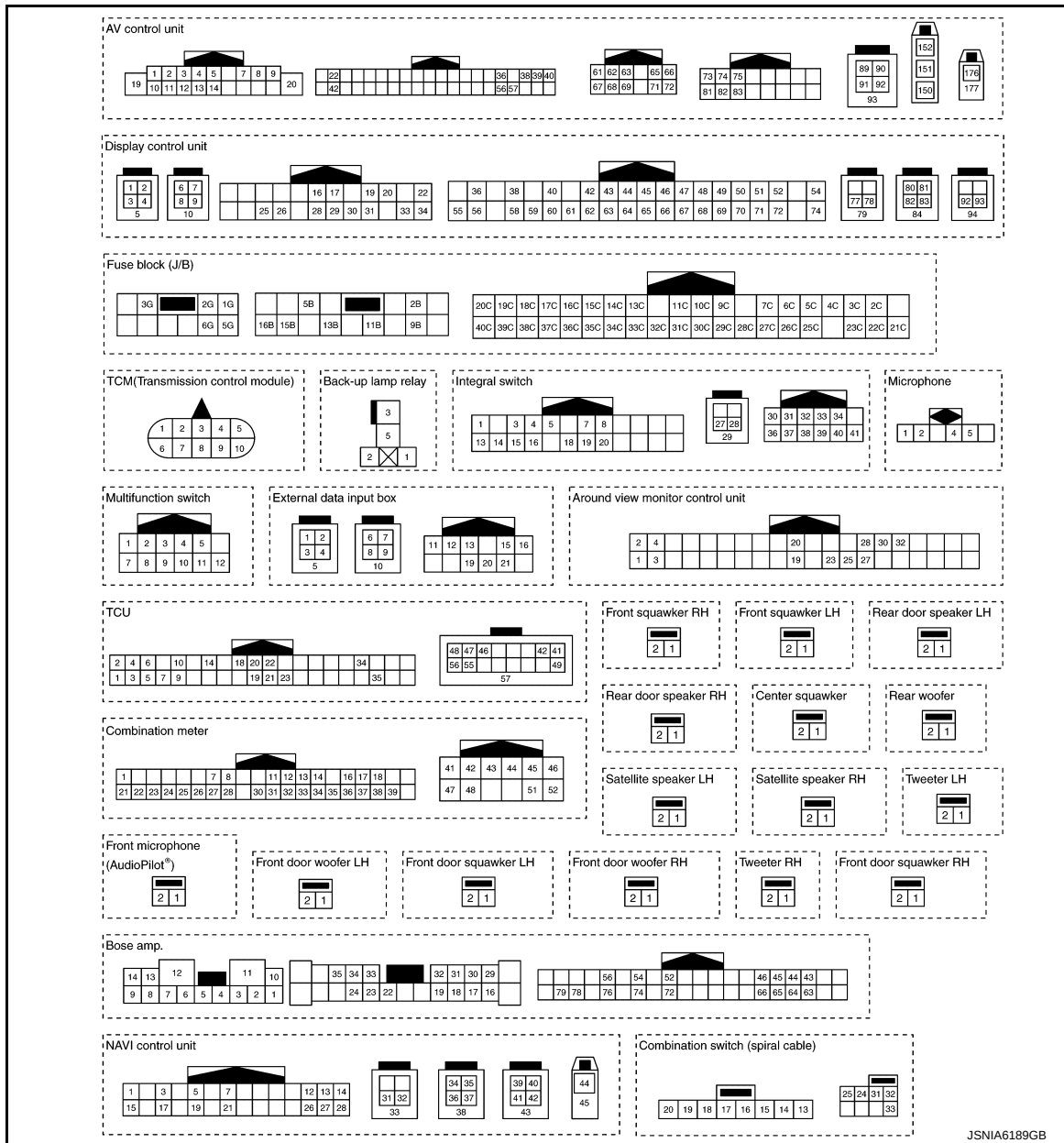
INFOID:0000000009587017



JSNIA6187GB



JSNIA6188GB



BOSE AUDIO WITH NAVIGATION : Fail-Safe

INFOID:000000009728923

If a malfunction occurs in the Infiniti InTouch, display control unit performs fail-safe activation according to the detected malfunction.

Detection item	Infiniti InTouch operation in fail-safe mode	DTC
Engine speed signal	Active noise control and active sound control function are deactivated.	B1F01
Step lamp signal		B1F02
Front microphone	Active noise control function is deactivated.	B1F0B B1F0C B1F0D B1F0E
CAN communication	The system using the CAN communication signal from control unit which cannot communicate does not function.	U1000
	The system using the CAN communication signal does not function.	U1010

INFINITI INTOUCH

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Display control unit	- Display is not displayed. - Display control unit restart. - Display control unit freezes. NOTE: Symptom other than an item may occur.		U121F
Configuration	A function of display control unit becomes mismatched with a vehicle specification and destination.		U1223
BOSE amp.	BOSE system does not function.		U1231
Steering angle sensor	Predictive course line is not displayed.		U1232
NAVI control unit	- Map is not displayed. - Navigation screen does not operate. NOTE: Symptom other than an item may occur.		U1233
AV control unit	- Sound is not output by a speaker. - CD is not played. - Radio does not operate. NOTE: Symptom other than an item may occur.		U1234
GPS antenna	The vehicle positions of a navigation screen differ.		U1244
AV communication	AV control unit	- Sound is not output by a speaker. - CD is not played. - Radio does not operate. NOTE: Symptom other than an item may occur.	U1249
	BOSE amp.	Sound is not output by a speaker.	U124E
	Integral switch	- Integral switch display is not displayed. - Switch operation does not operate. - Touch panel operation does not operate. NOTE: Symptom other than an item may occur.	U1259
	Around view monitor control unit	Camera image is not displayed.	U125B
	Combination meter	- Audio information is not displayed by the information display in the combination meter. - Navigation indicator is not displayed by the information display in the combination meter. - Steering switch does not operate.	U1267
	Display control unit	The system of ECU which detected abnormalities does not operate.	U1300
		The system which is using AV communication does not operate.	U1310
Satellite radio antenna	Satellite radio is not received.		U1258
USB communication	NAVI control unit	A navigation menu cannot be selected (hatching display).	U125D
	TCU	Telematics system does not function.	U1266
	External data input box	Audio equipment which connected to USB does not operate.	U12B7
Rear view camera	Rear camera image is not displayed.		U12B8
Multifunction switch	Multifunction switch operation does not operate.		U12BA
Radio antenna	Radio is not received.		U12BE

INFINITI INTOUCH

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Speaker/squawker/tweeter/woofer	With BOSE system		
	Front door woofer	No sound from front door woofer LH or RH.	U1601 U1609
	Front door squawker	No sound from front door squawker LH or RH.	U1602 U160A
	Front door tweeter	No sound from front door tweeter LH or RH.	U1603 U160B
	Front squawker	No sound from front squawker LH or RH.	U1626 U162E
	Front center squawker	No sound from front center squawker.	U162A
	Rear door speaker	No sound from rear door speaker LH or RH.	U1708 U1710
	Rear satellite speaker	No sound from rear satellite speaker LH or RH.	U1722 U172A
	Rear woofer	No sound from rear woofer.	U1725
	Without BOSE system		
	Front door speaker	No sound from front door speaker LH or RH.	U1901 U1907
	Rear door speaker	No sound from rear door speaker LH or RH.	U1902 U1906
	Front door squawker	No sound from front door squawker LH or RH.	U190D U190E

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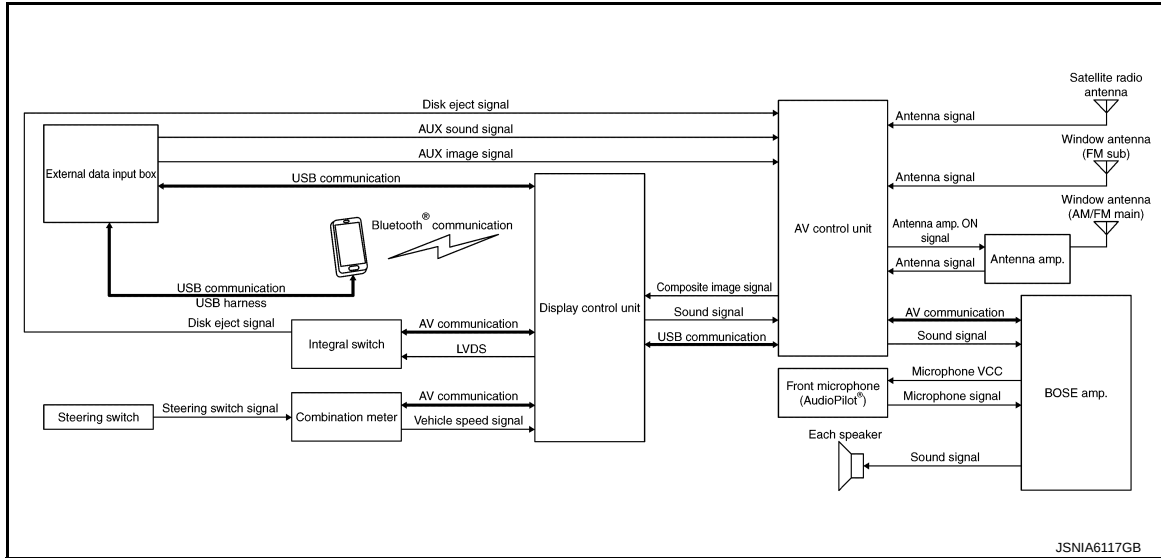
AV

AUDIO SYSTEM WITH BOSE SYSTEM

WITH BOSE SYSTEM : System Description

INFOID:000000009587019

SYSTEM DIAGRAM



DESCRIPTION

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

- Audio system consists of the following functions.

Function
Radio
CD
USB connection
AUX
Bluetooth® audio
BOSE® Centerpoint®
BOSE® AudioPilot®
Audio indicator

- Audio system is controlled by display control unit, AV control unit, and BOSE amp.
- Audio system can be operated with steering switch and integral switch.

RADIO

AM/FM Radio

- Radio signal for AM/FM radio is received by the antenna line printed on rear window.
- There are main and sub lines for the print of antenna line. Main is used for AM and FM, and sub is used for FM.

NOTE:

- For FM radio with FM diversity function, AV control unit selects from main or sub the antenna that receives the higher signal strength.
- Antenna amp. is connected to the main antenna line, which receives the antenna amp. ON signal from the AV control unit and transmits the antenna signal to the AV control unit after amplifying the signal received from the AM and FM antennas.
- AV control unit transmits the sound signal to the BOSE amp when the antenna signal is received from the window antenna (main or sub).
- BOSE amp. transmits the sound signal received from AV control unit to each speaker.

Satellite Radio

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

CD

AV control unit integrates the mechanism for reading the data stored in CD.

Music playback

- When AV control unit reads the music data from CD, it transmits the sound signal to BOSE amp.
- BOSE amp. transmits the sound signal received from AV control unit to each speaker.

Display of artist, album and song title

- When AV control unit reads the text data from CD, it transmits text information to the display control unit via USB communication.
- Display control unit displays the text data (artist, album, and song title) that is received from the AV control unit.

NOTE:

For the types of disc and music data format available for replay, refer to [AV-19, "AV Control Unit"](#).

USB CONNECTION

- USB port is located in the external data input box.
- When iPod® or USB memory is connected to the USB port, the external data input box transmits the music data and text data in iPod® or USB memory device to the display control unit via USB communication.
- When display control unit receives the music data from the external data input box, it transmits the sound signal to the AV control unit.
- When AV control unit transmits the sound signal from the display control unit, it transmits the sound signal to BOSE amp.
- BOSE amp. transmits the sound signal received from AV control unit to each speaker.
- When display control unit receives the text data from external data input box, it displays the text data (artist, album, and song title) on the display.

AUX

- Auxiliary input jacks are located in the external data input box.
- Auxiliary input jacks consist of the image input terminal and sound input terminal.
- When image data from outside is input into the image input terminal, the external data input box transmits the AUX image signal to AV control unit.
- When AV control unit received the AUX image signal, it transmits the composite image signal to the display control unit.
- When display control unit receives the composite image signal, it displays the image on the display.
- When sound data is input into the sound input terminal, the external data input box transmits the AUX sound signal to the AV control unit.
- When AV control unit receives the AUX sound signal, it transmits the sound signal to BOSE amp.
- BOSE amp. transmits the sound signal received from AV control unit to each speaker.

Bluetooth® AUDIO

- Bluetooth® module is integrated in the display control unit.
- Music data, artist, album, and song title in a portable audio device can be played/displayed via Bluetooth® communication.
- When display control unit receives the music data from a portable audio device via Bluetooth® communication, it transmits the sound signal to AV control unit.
- When AV control unit transmits the sound signal from the display control unit, it transmits the sound signal to BOSE amp.
- BOSE amp. transmits the sound signal received from AV control unit to each speaker.
- When display control unit receives the text data from a portable audio device via Bluetooth® communication, it displays the text data (artist, album, and song title) on the display.
- For further information about Bluetooth® compliant profile, refer to [AV-19, "AV Control Unit"](#).

BOSE® Centerpoint®

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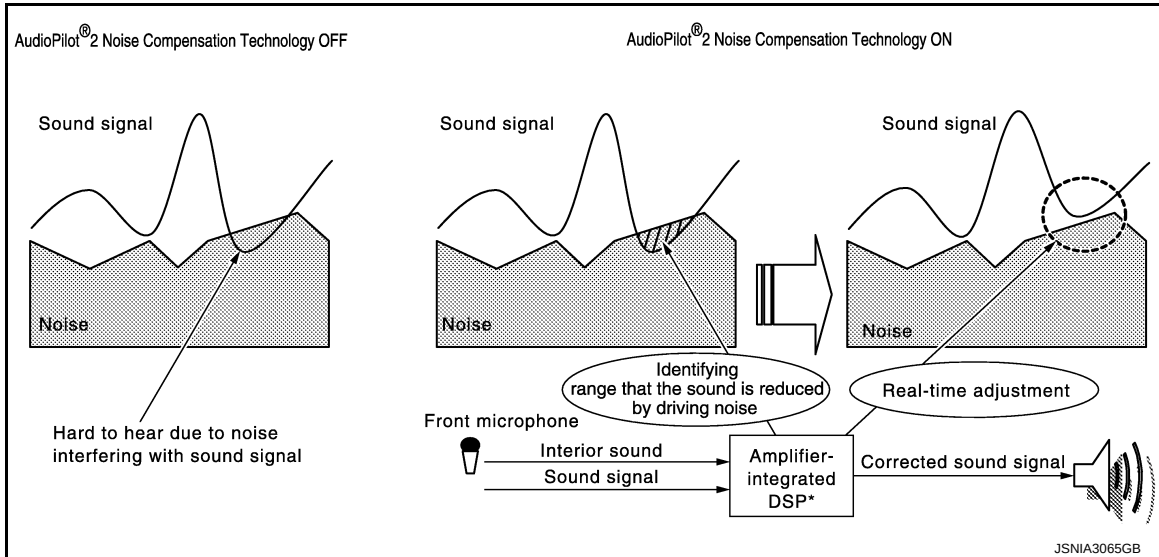
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- BOSE® Centerpoint® provides a surround-sound effect, based on a stereo sound source, such as CD, MP3, WMA, and AAC.
- The BOSE amp. receives a BOSE® Centerpoint® ON signal from display control unit during a stereophonic sound playback and divides the sound among five channels to add a sense of simulated surround playback sound.

BOSE® AudioPilot® Noise Compensation Technology

- BOSE® AudioPilot® continuously corrects audio signals to compensate for background noise.
- BOSE® AudioPilot® noise compensation technology is a sound improving system that picks up by a front microphone any noises or the sound of music coming into the vehicle, and that uses the BOSE amp. to revise the frequency feature of music in real time in response to the frequency feature of the noise while driving and listening to music.



*: 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.

AUDIO INDICATOR

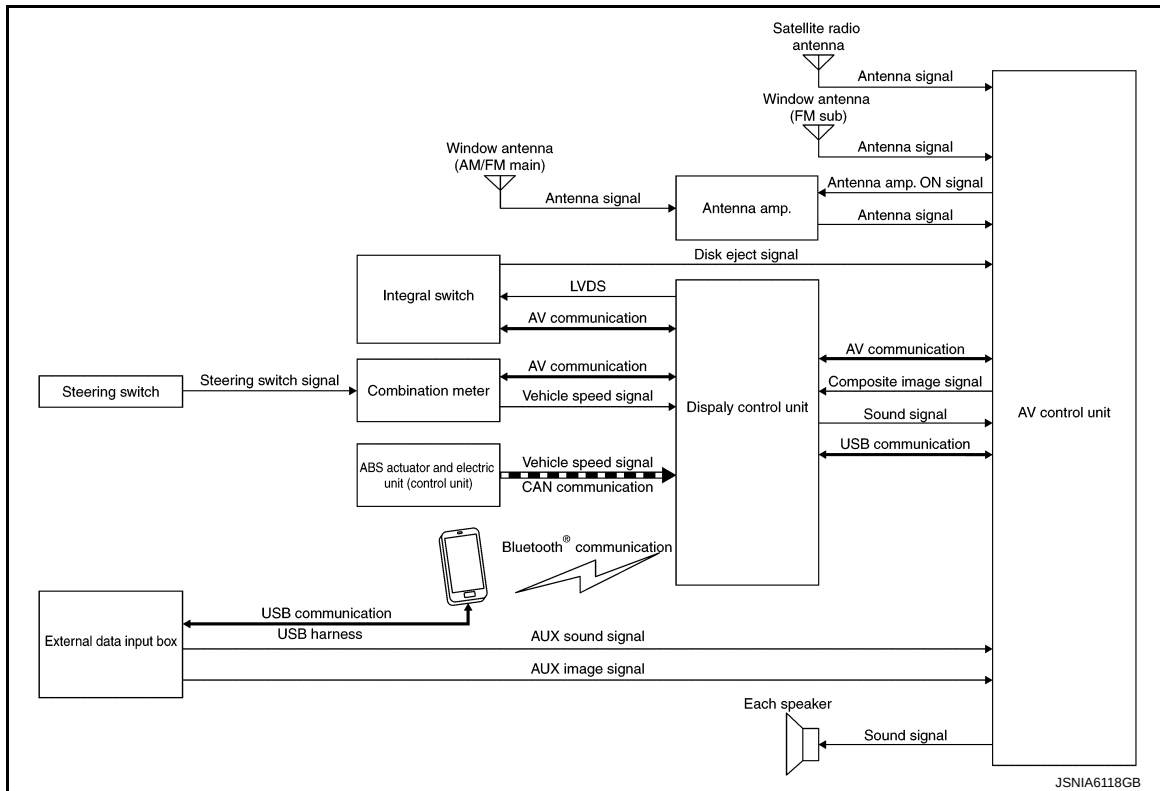
- The AV control unit sends the status of audio to the display control unit via AV communication.
- The display control unit transmits the meter display signal as the audio status to the combination meter via AV communication.
- When combination meter receives the meter display signal, the audio status is displayed on the information display in combination meter.

WITHOUT BOSE SYSTEM

WITHOUT BOSE SYSTEM : System Description

INFOID:000000009587020

SYSTEM DIAGRAM



Display Control Unit Input Signal (CAN Communication)

Transmit unit	Signal name
ABS actuator and electric unit (control unit)	Vehicle speed signal

DESCRIPTION

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

- Audio system consists of the following functions.

Function
Radio
CD
USB connection
AUX
Bluetooth® audio
Speed Sensitive Volume
Audio indicator

- Audio system is controlled by display control unit and AV control unit.
- Audio system can be operated with steering switch and integral switch.

RADIO

AM/FM radio

- Radio signal for AM/FM radio is received by the antenna line printed on rear window.
- There are main and sub lines for the print of antenna line. Main is used for AM and FM, and sub is used for FM.

NOTE:

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AV

For FM radio with FM diversity function, AV control unit selects from main or sub the antenna that receives the higher signal strength.

- Antenna amp. is connected to the main antenna line, which receives the antenna amp. ON signal from the AV control unit, and transmits the antenna signal to the AV control unit after amplifying the AM or FM radio signal.
- AV control unit transmits the sound signal to the each speaker when the antenna signal is received from the window antenna (main or sub).

Satellite Radio

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

CD

AV control unit integrates the mechanism for reading the data stored in CD.

Music playback

- When AV control unit reads the music data from CD, it transmits the sound signal to each speaker.

Display of artist, album and song title

- When AV control unit reads the text data from CD, it transmits text information to the display control unit via USB communication.
- Display control unit displays the text data (artist, album, and song title) that is received from the AV control unit.

NOTE:

For the types of disc and music data format available for replay, refer to [AV-19, "AV Control Unit"](#).

USB CONNECTION

- USB port is located in the external data input box.
- When iPod® or USB memory is connected to the USB port, the external data input box transmits the music data and text data in iPod® or USB memory device to the display control unit via USB communication.
- When display control unit receives the music data from the external data input box, it transmits the sound signal to the AV control unit.
- When AV control unit transmits the sound signal from the display control unit, it transmits the sound signal to each speaker.
- When display control unit receives the text data from external data input box, it displays the text data (artist, album, and song title) on the display.

AUX

- Auxiliary input jacks are located in the external data input box.
- Auxiliary input jacks consist of the image input terminal and sound input terminal.
- When image data from outside is input into the image input terminal, the external data input box transmits the AUX image signal to AV control unit.
- When AV control unit received the AUX image signal, it transmits the composite image signal to the display control unit.
- When display control unit receives the composite image signal, it displays the image on the display.
- When sound data is input into the sound input terminal, the external data input box transmits the AUX sound signal to the AV control unit.
- When AV control unit receives the AUX sound signal, it transmits the sound signal to each speaker.

Bluetooth® AUDIO

- Bluetooth® module is integrated in the display control unit.
- Music data, artist, album, and song title in a portable audio device can be played/displayed via Bluetooth® communication.
- When display control unit receives the music data from a portable audio device via Bluetooth® communication, it transmits the sound signal to AV control unit.
- When AV control unit transmits the sound signal from the display control unit, it transmits the sound signal to each speaker.
- When display control unit receives the text data from a portable audio device via Bluetooth® communication, it displays the text data (artist, album, and song title) on the display.
- For further information about Bluetooth® compliant profile, refer to [AV-19, "AV Control Unit"](#).

SPEED SENSITIVE VOLUME

- Display control unit receives the vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication and transmits the vehicle speed signal to AV control unit via AV communication.
- AV control unit determines the volume level according to the vehicle speed signal received from display control unit, and transmits the sound signal to each speaker.
- The display control unit receives the vehicle speed signal from the combination meter and changes the sound volume in conjunction with the vehicle speed.
- The control level can be selected by the customer.

AUDIO INDICATOR

- The AV control unit sends the status of audio to the display control unit via AV communication.
- The display control unit transmits the meter display signal as the audio status to the combination meter via AV communication.
- When combination meter receives the meter display signal, the audio status is displayed on the information display in combination meter.

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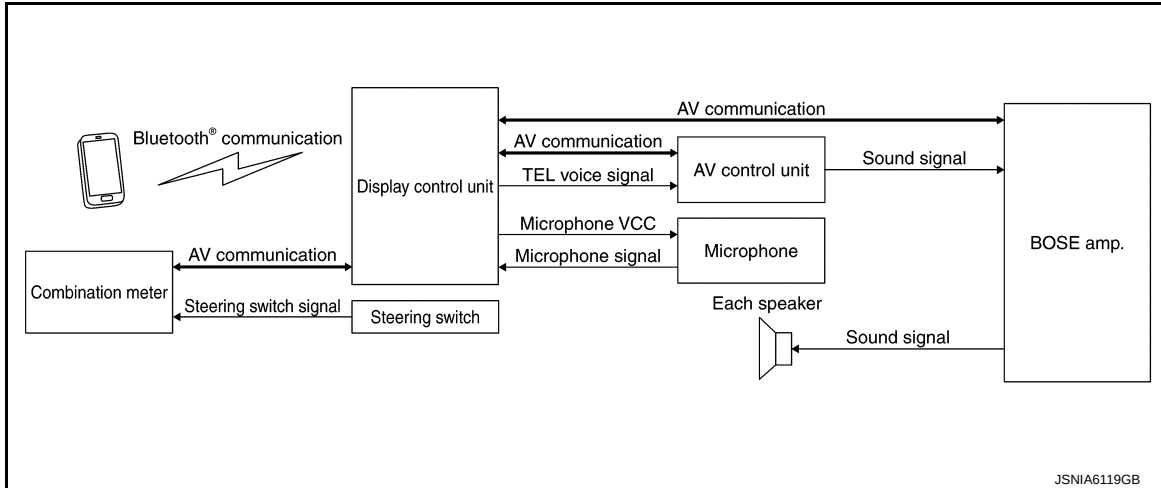
AV

HANDS-FREE PHONE SYSTEM WITH BOSE SYSTEM

WITH BOSE SYSTEM : System Description

INFOID:000000009587021

SYSTEM DIAGRAM



DESCRIPTION

- Refer to Owner's Manual for hands-free phone system operating instructions.
- For further information about Bluetooth® compliant profile, refer to [AV-18. "Display Control Unit"](#).
- Simply operating the steering switch without releasing hands from the steering wheel allows the driver to receive a phone call.
- When a Bluetooth® communication compliant phone is registered to the display control unit, hands-free phone communication can be performed. Five units of Bluetooth® communication devices including audio devices and cellular phones can be registered to the display control unit.
- The content of the memory (telephone book) of the cellular phone can be recorded in the display control unit.

When Receiving a Call

- When display control unit receives the voice of the other party from a cell phone via Bluetooth® communication, it transmits the TEL voice signal to AV control unit.
- When AV control unit transmits the TEL voice signal, it transmits the sound signal to BOSE amp.
- BOSE amp. transmits the sound signal received from AV control unit to each speaker.

When a Call Is Originated

When display control unit receives the microphone signal from microphone, it transmits the sound signal to a cell phone via Bluetooth® communication.

HANDS-FREE PHONE INDICATOR

- When a cell phone that is connected with the display control unit via Bluetooth® communication receives a phone call, the incoming call is displayed on the information display in combination meter.
- When display control unit recognizes an incoming call from a cell phone via Bluetooth® communication, it transmits the meter display signal to combination meter via AV communication.
- When combination meter receives the meter display signal, it displays the incoming call of cell phone on information display.
- When an incoming call is received, the driver can operate the steering switch to answer the phone.
- When steering switch is operated, the combination meter receives the steering switch signal, and then combination meter transmits the steering switch signal to the display control unit via AV communication.
- When display control unit receives the steering switch signal, it activates the hands-free phone.

SMS INDICATOR

- When a cell phone that is connected with the display control unit via Bluetooth® communication receives an SMS, the incoming SMS is displayed on the information display located in combination meter.

HANDS-FREE PHONE SYSTEM

[INFINITI INTOUCH]

< SYSTEM DESCRIPTION >

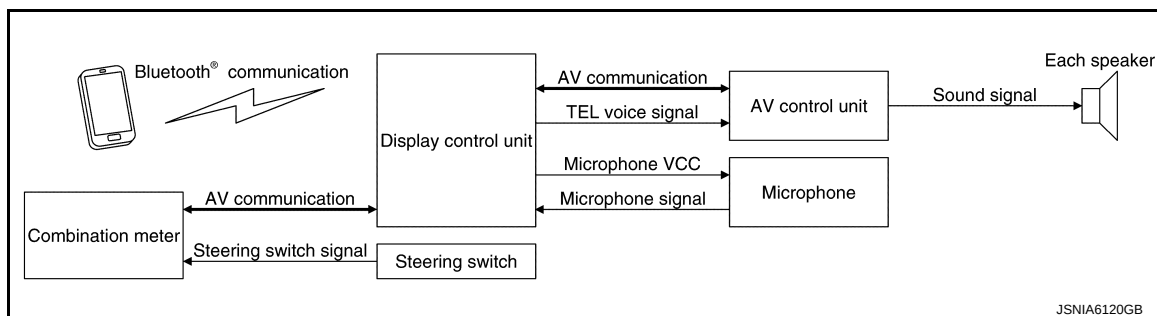
- The display control unit transmits an SMS signal to the combination meter via AV communication when receiving SMS from a cellular phone via Bluetooth® communication.
- The combination meter indicates the reception of SMS on the information display when receiving an SMS signal.
- When an SMS is received, the SMS can be confirmed by operating the steering switch.
- When steering switch is operated, the combination meter receives the steering switch signal, and then combination meter transmits the steering switch signal to the display control unit via AV communication.
- When display control unit receives the steering switch signal, it transmits the SMS signal to combination meter via AV communication.
- When combination meter receives the SMS signal, it displays SMS on information display.

WITHOUT BOSE SYSTEM

WITHOUT BOSE SYSTEM : System Description

INFOID:000000009587022

SYSTEM DIAGRAM



DESCRIPTION

- Refer to Owner's Manual for hands-free phone system operating instructions.
- For further information about Bluetooth® compliant profile, refer to [AV-18, "Display Control Unit"](#).
- Simply operating the steering switch without releasing hands from the steering wheel allows the driver to receive a phone call.
- When a Bluetooth® communication compliant phone is registered to the display control unit, hands-free phone communication can be performed. Five units of Bluetooth® communication devices including audio devices and cellular phones can be registered to the display control unit.
- The content of the memory (telephone book) of the cellular phone can be recorded in the display control unit.

When Receiving a Call

- When display control unit receives the voice of the other party from a cell phone via Bluetooth® communication, it transmits the TEL voice signal to AV control unit.
- When AV control unit transmits the TEL voice signal, it received the sound signal to each speaker.

When a Call Is Originated

When display control unit receives the microphone signal from microphone, it transmits the sound signal to a cell phone via Bluetooth® communication.

HANDS-FREE PHONE INDICATOR

- When a cell phone that is connected with the display control unit via Bluetooth® communication receives a phone call, the incoming call is displayed on the information display in combination meter.
- When display control unit recognizes an incoming call from a cell phone via Bluetooth® communication, it transmits the meter display signal to combination meter via AV communication.
- When combination meter receives the meter display signal, it displays the incoming call of cell phone on information display.
- When an incoming call is received, the driver can operate the steering switch to answer the phone.
- When steering switch is operated, the combination meter receives the steering switch signal, and then combination meter transmits the steering switch signal to the display control unit via AV communication.
- When display control unit receives the steering switch signal, it activates the hands-free phone.

SMS INDICATOR

HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

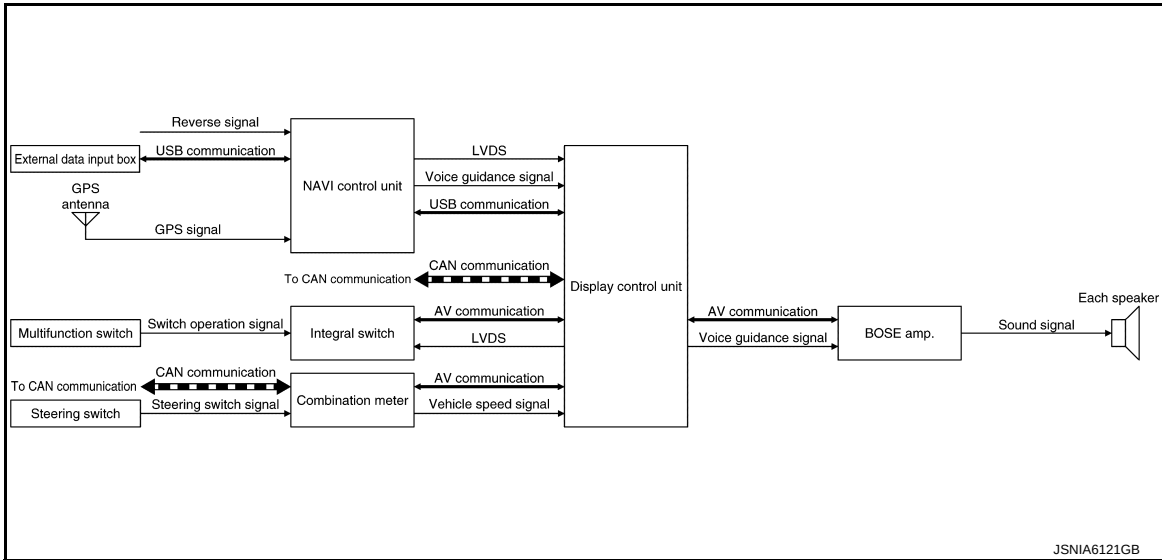
- When a cell phone that is connected with the display control unit via Bluetooth® communication receives an SMS, the incoming SMS is displayed on the information display located in combination meter.
- The display control unit transmits an SMS signal to the combination meter via AV communication when receiving SMS from a cellular phone via Bluetooth® communication.
- The combination meter indicates the reception of SMS on the information display when receiving an SMS signal.
- When an SMS is received, the SMS can be confirmed by operating the steering switch.
- When steering switch is operated, the combination meter receives the steering switch signal, and then combination meter transmits the steering switch signal to the display control unit via AV communication.
- When display control unit receives the steering switch signal, it transmits the SMS signal to combination meter via AV communication.
- When combination meter receives the SMS signal, it displays SMS on information display.

NAVIGATION SYSTEM

System Description

INFOID:000000009587023

SYSTEM DIAGRAM



Display Control Unit Input Signal (CAN Communication)

Transmit unit	Signal name
Combination meter	Parking brake switch signal
TCM	Shift position signal (Reverse signal)

DESCRIPTION

- Refer to Owner's Manual for navigation system operating instructions.
- Navigation system can be operated with the integral switch, multifunction switch, and display control unit.
- Guidance voice is output from the NAVI control unit, via display control unit and BOSE amp., to the front speaker.
- NAVI control unit calculates the vehicle location based on the signals from GYRO (angle speed sensor), vehicle sensor, and GPS satellite, as well as the map data from map SD card. It is displayed on display of the display control unit.

POSITION DETECTION PRINCIPLE

The navigation system periodically calculates the vehicle's current position according to the following three signals:

- Travel distance of the vehicle as determined by the vehicle speed sensor.
- Turning angle of the vehicle as determined by the gyroscope (angular velocity sensor).
- Direction of vehicle travel as determined by the GPS antenna (GPS information).

The current position of the vehicle is then identified by comparing the calculated vehicle position with map data read from the map SD card (map-matching), and indicated on the screen as a vehicle mark. More accurate data is judged and used by comparing vehicle position detection results found by the GPS with the result by map-matching.

NAVIGATION SYSTEM

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

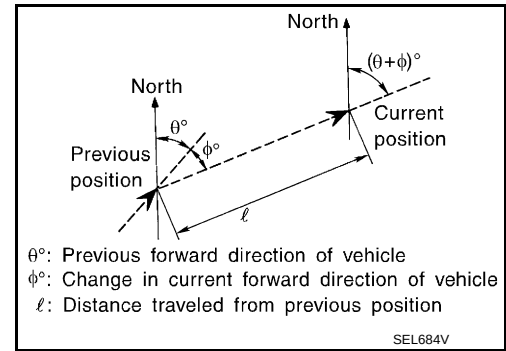
The current vehicle position will be calculated by detecting the distance the vehicle moved from the previous calculation point and its direction.

- Travel distance

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

- Travel direction

Change in the travel direction of the vehicle is calculated by a gyroscope (angular velocity sensor) and a GPS antenna (GPS information). They have both advantages and disadvantages.



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

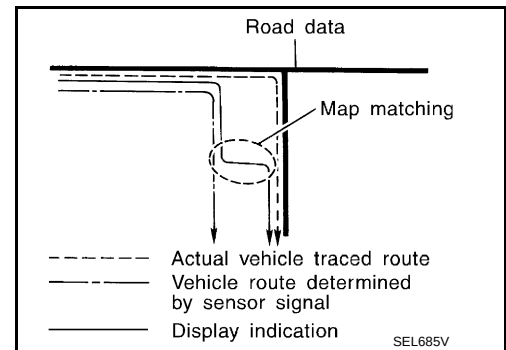
More accurate traveling direction is detected because priorities are set for the signals from these two devices according to the situation.

MAP-MATCHING

Map-matching compares a current location detected by the method in the "Location Detection Principle" with a road map data from map SD card.

NOTE:

The road map data is based on data stored in the map SD card.

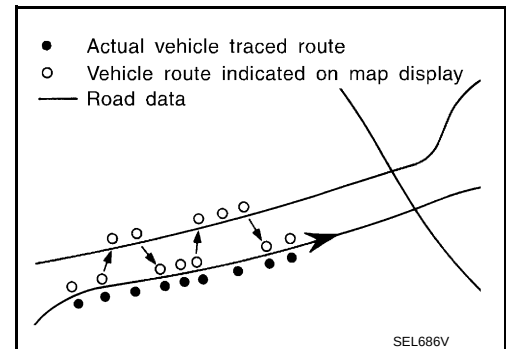


The vehicle position may not be corrected under the following circumstances and after driving for a certain time when GPS information is difficult to receive.

- In map-matching, alternative routes to reach the destination will be shown and prioritized, after the road on which the vehicle is currently driven has been judged and the vehicle mark has been repositioned.

Alternative routes will be shown in different order of priority, and the incorrect road can be avoided if there is an error in distance and/or direction.

They are of the same priority if two roads are running in parallel. Therefore, the vehicle mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road.

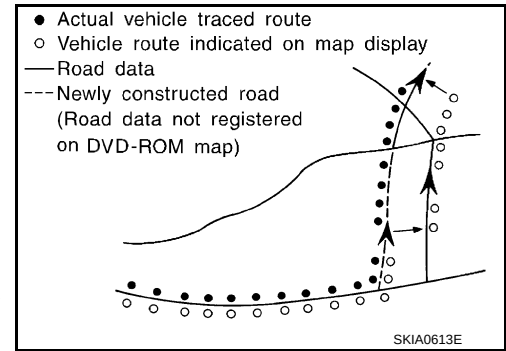


NAVIGATION SYSTEM

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

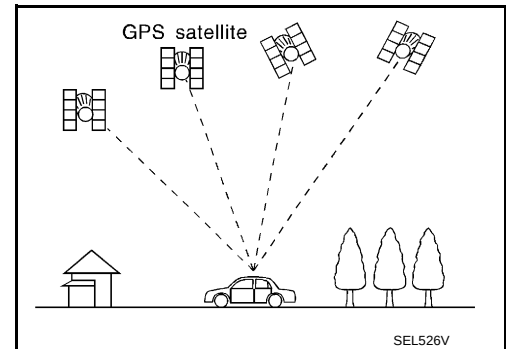
- Map-matching does not function correctly when a road on which the vehicle is driving is new and not recorded in the map SD card, or when road pattern stored in the map data and the actual road pattern are different due to repair. The map-matching function may find another road and position the vehicle mark on it when driving on a road not present in the map. Then, the vehicle mark may change to it when 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 read from the map SD card 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.

NAVIGATION INDICATOR

- When the navigation system is ON, the display control unit transmits a meter display signal to the combination meter via AV communication.
- The combination meter displays a navigation status on the combination meter (in the information display) when receiving a navigation indicator signal.

COMPASS

- NAVI control unit acquires direction information from GPS antenna, and transmits it to the display control unit via USB communication.
- Display control unit transmits direction information which is acquired from NAVI control unit to combination meter via AV communication.
- When direction information is acquired, combination meter displays it on information display.

HANDLING PRECAUTION

Display

INFOID:000000009587029

- When the compartment temperature is low, the display images may look slower because the LCD response is deteriorated. The system will recover its normal operation when the cabin temperature increases to an appropriate level.
- When the compartment temperature is low [0°C (32°F) or less], the display images may look slower. It is characteristic of the LCD monitor and should not be considered to be a malfunction. When the temperature is at the operating temperature [0°C (32°F) to 50°C (122°F)], the display returns to normal.
- There may be small dark or bright dots in the screen or remaining display content may be found (image lag). These are inherent symptoms to any LCD monitor and should not be considered to be a malfunction.
- The image may look bright or dark when viewed obliquely from the rear. It is inherent to any LCD monitor and should not be considered to be a malfunction.
- Do not apply pressure on the LCD monitor. Doing so may cause irregularities in the screen image or render it inoperative.
- Do not use hard cloth, organic solvent (alcohol, benzene, and thinner), or chemical wipe to clean the LCD monitor. Doing so may affect the panel surface. When cleaning the LCD monitor, always wipe it with a soft cloth after shutting off the power. For severe contamination, use a soft cloth dampened with mild detergent (no droplets can be present).

Audio

INFOID:000000009587030

- When an MP3, WMA, or AAC disc is replayed, it may take some time to start the playback after the disc is inserted, because the contents of the disc files must be analyzed.
- The extensions for MP3, WMA, and AAC files are ".MP3", ".WMA", ".mp3", ".wma", and ".aac". Any file with a different extension or no extension cannot be played back.
- If trying to play a music CD (CD-DA) containing MP3, WMA, or AAC file, MP3, WMA, or AAC file is not played.
- The compatibility of a CD-R depends on the combination of the writing software/hardware and the writing rate. The disc has digital pulse signals written on it. If the specifications for writing depth and width (area) are not compatible, these signals may not be played back correctly or the sounds may be lost or skipped.
- The file recorded with high bit rate* may have sound skipping.
- The playback order of MP3, WMA, or AAC files may differ from the intended order because the writing software could change the folder and file positions when writing data to a CD-R/CD-RW disc.
- For an MP3 file, the folder name and file name can be displayed as the title on the condition that each name string consists of up to 16 alphanumeric letters (except for the extension). Any MP3 file with a name containing other letters or that is longer than the maximum length cannot be displayed correctly.
- Some MP3, WMA, or AAC making software, text information editing software, writing software, or software configurations may create files and discs in a format different from the proper specifications. In such a case, the text information display or the playback function may not be available.
- A disc for which no session close or disc close process has been finished may not be played back.
- Some files may have incorrect playback time displays and therefore a part of the music cannot be played back.
- 8 cm disc cannot be used.
- When playing back a Bluetooth® audio data, the sound may be interrupted for a moment. This is due to data communication and should not be considered to be a malfunction. After the data communication finishes, the playback will restart normally.
- If incoming call takes place during Bluetooth® audio playback, the screen changes to the relevant mode and the audio playback is interrupted.
- Sound skipping may occur depending on the location where the Bluetooth audio device is installed.
- If any operation for traffic information reception is performed during Bluetooth® audio playback, the audio playback is interrupted.
- Music data stored in a Bluetooth® audio device at low bit rate has poor sound quality.
- Radio reception may decrease in performance during charge.

NOTE:

*: Bit rate means how many bits of data are processed or transmitted per the unit time.

iPod®

INFOID:0000000009587031

- If a headphone is connected to the iPod®, the iPod® may not be controlled.
- Some iPod® may not be compliant with connection. It is necessary to check compliant models of iPod®.
- If a USB extension cable is used for iPod® connection, iPod® may not be recognized or sound skipping may occur in playback.
- In playing back iPod® audio, if the EQ function (equalizer function) of the iPod® is ON, sound may be distorted.
- If the number of music in one category is increased to a large number, response may be poor. If the number of music is large and shuffle is ON, operation of the iPod® itself may be slower.

RESTRICTIONS ON iPod®

The following symptoms may occur, but the functions are not compliant and they should not be considered to be a malfunction.

- When a Podcast divided into chapters is played back with iPod nano 3G, the play time may be displayed incorrectly.
- The number of Audiobook is not displayed normally. When iPod® is disconnected and reset, it is displayed.
- When jacket photos are played with iPod nano 3G and iPod Classic, iPod® may be frozen or reset.

USB Connection

INFOID:0000000009587032

If a USB-HUB or USB extension cable is used when a USB is connected, USB is not recognized.

SD Card

INFOID:0000000009587033

To remove the SD card, wait for 15 seconds or more after turning the ignition switch OFF.

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AV

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

Description

INFOID:000000009726916

- The display control unit diagnosis function starts up with multifunction switch operation and the display 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:000000009726917

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 display control unit, connections between system components. 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	• Display control unit diagnosis. • Diagnoses the connections across system components.

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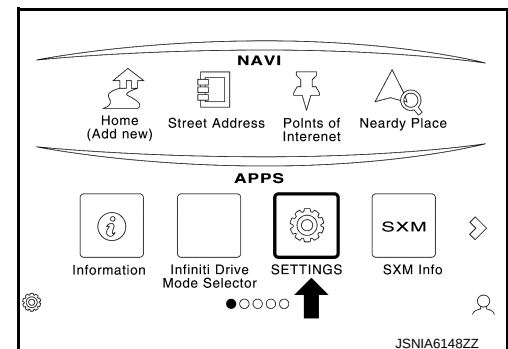
[INFINITI INTOUCH]

Mode		Description
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: • Color tone check by color bar display, white display and black display • Light and shade check by gray scale display • Touch panel check • Sensor sensitivity settings
	Vehicle Signals	Diagnosis of signals can be performed .
	Speaker Test	The connection of a speaker can be confirmed by test tone.
	Navigation*	The reception status of GPS can be confirmed. Display On/Off of the simulation menu of navigation.
	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.
	AV COMM Diagnosis	The communication condition of each unit of Infiniti InTouch can be monitored.
	Clock Setting*	The date and time information can be adjusted.
	Camera Control Unit	The signal connected to camera control unit can be checked and the guiding line position that overlaps rear view camera image can be adjusted.
	SXM	Display the information related to satellite radio.
	Delete Unit Connection Log	Erase the connection history of unit and error history.
	Reset Settings	Initializes the each data.
	Version Information	Version information of the following items is displayed. • Display control unit • NAVI control unit • AV control unit • BOSE amp. • Integral switch • Combination meter • Around view monitor control unit
	Program Update	Version of the display control unit can be update.
	Switch Information	Display each switch information.
	ANC/ASC	Display the information related to ANC and ASC.
	Hands-free Phone	The received volume adjustment of hands-free phone and microphone speaker check can be performed.

*: Only models with navigation system

METHOD OF STARTING

1. Start the engine.
2. Turn the audio system OFF.
3. Touch the "SETTINGS" icon and display a settings menu screen.



DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

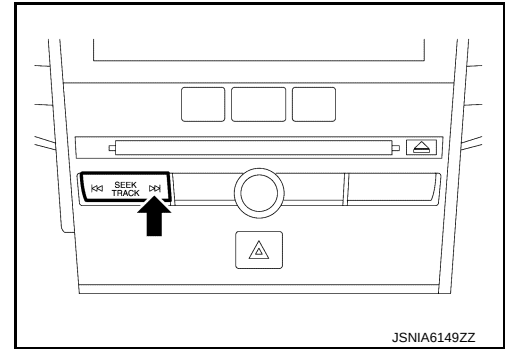
[INFINITI INTOUCH]

< SYSTEM DESCRIPTION >

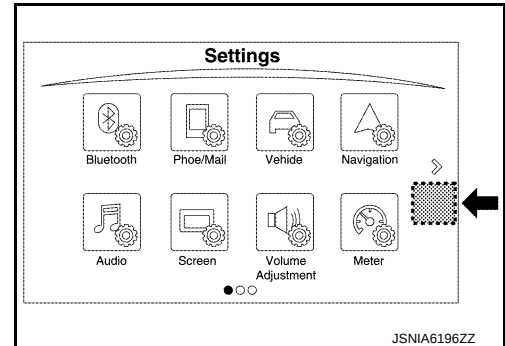
- Press the “Seek/Track Up” switch at least 3 times. (Within 15 seconds after the settings menu screen display.)

NOTE:

When press the “Seek/Track Up” switch more than 4 times, a self-diagnosis mode is not started. press the “MENU” switch again.



- Touch the screen (area of the figure) for 3 seconds.



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

NOTE:

When a diagnostic screen is not displayed, press the “MENU” switch. And then, restart from the procedure of Step 3.

SELF-DIAGNOSIS MODE

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

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

NOTE:

Control Unit (display control unit) and BOSE Amp. are displayed in red.

- Replace display control unit if “Self-Diagnosis did not run because of a control unit malfunction” is indicated. The symptom is display control unit internal error. Refer to [AV-277. "Removal and Installation"](#).
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

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

Detection Range of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between display control unit and each unit and the internal operation of the display control unit.

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< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

- Because the start condition of diagnosis function is a switch operation, the on board diagnosis function cannot be started up if any malfunction is detected in the communication circuit between display control unit and multifunction switch.

SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

Screen switch	Description	Possible malfunction location / Action to take
DCU	Malfunction is detected in display control unit power supply and ground circuits.	Check display control unit power supply and ground circuits. Refer to AV-239, "DISPLAY CONTROL UNIT : Diagnosis Procedure" . When detecting no malfunction in those components, replace display control unit. Refer to AV-277, "Removal and Installation" .
Audio Head Unit	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. Refer to AV-240, "AV CONTROL UNIT : Diagnosis Procedure" . When detecting no malfunction in those components, replace AV control unit. Refer to AV-278, "Removal and Installation" .
Navigation unit	Malfunction is detected in NAVI control unit power supply and ground circuits.	Check NAVI control unit power supply and ground circuits. Refer to AV-241, "NAVI CONTROL UNIT : Diagnosis Procedure" . When detecting no malfunction in those components, replace NAVI control unit. Refer to AV-279, "Removal and Installation" .
BOSE Amp.	When either one of the following items are detected: - Sound signal circuits between BOSE amp. and each speaker are malfunctioning. - Sound signal circuits between BOSE amp. and 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-283, "Removal and Installation".

A Connecting Cable Between Units Is Displayed In Yellow.

AV

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DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

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[INFINITI INTOUCH]

Area with yellow connection lines	Description	Possible malfunction location / Action to take
DCU ⇔ Audio Head Unit	When either one of the following items are detected: • AV control unit power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and AV control unit are malfunctioning. • USB communication circuits between display control unit and AV control unit are malfunctioning.	• AV control unit power supply and ground circuits. Refer to AV-240, "AV CONTROL UNIT : Diagnosis Procedure". • AV communication circuits between display control unit and AV control unit are malfunctioning. • USB communication circuits between display control unit and AV control unit are malfunctioning.
DCU ⇔ Second Display	When either one of the following items are detected: • Integral switch power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and integral switch are malfunctioning.	• Integral switch power supply and ground circuits. Refer to AV-244, "INTEGRAL SWITCH : Diagnosis Procedure". • AV communication circuits between display control unit and integral switch are malfunctioning.
DCU ⇔ BOSE Amp	When either one of the following items are detected: • BOSE amp. power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and BOSE amp. are malfunctioning.	• BOSE amp. power supply and ground circuits. Refer to AV-243, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between display control unit and BOSE amp. are malfunctioning.
DCU ⇔ AVM	When either one of the following items are detected: • Around view monitor control unit power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and around view monitor control unit are malfunctioning.	• Around view monitor control unit power supply and ground circuits. Refer to AV-435, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure". • AV communication circuits between display control unit and around view monitor control unit are malfunctioning.
DCU ⇔ Meter	When either one of the following items are detected: • Combination meter power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and combination meter are malfunctioning.	• Combination meter power supply and ground circuits. Refer to MWI-104, "COMBINATION METER : Diagnosis Procedure". • AV communication circuits between display control unit and combination meter are malfunctioning.
DCU ⇔ Rear Camera	Malfunction is detected in rear view camera circuit between display control unit and rear view camera.	Rear view camera power supply and ground circuits. Refer to AV-199, "Diagnosis Procedure" .
Navigation unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	GPS antenna Refer to AV-184, "Diagnosis Procedure" .
Audio Head Unit ⇔ XM Antenna	Satellite antenna connection malfunctions detected.	Satellite antenna Refer to AV-188, "Diagnosis Procedure" .
Audio Head Unit ⇔ Radio Antenna	Window antenna connection malfunctions detected.	Window antenna Refer to AV-203, "Diagnosis Procedure" .
Second Display ⇔ IT-Commander	Multifunction switch connection malfunctions detected.	Multifunction switch Refer to AV-201, "Diagnosis Procedure" .
DCU ⇔ Navigation unit	USB communication circuits between display control unit and NAVI control unit are malfunctioning.	USB communication circuits between display control unit and NAVI control unit are malfunctioning. Refer to AV-194, "Diagnosis Procedure" .
DCU ⇔ TCU	USB communication circuits between display control unit and TCU are malfunctioning.	USB communication circuits between display control unit and TCU are malfunctioning. Refer to AV-195, "Diagnosis Procedure" .

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[INFINITI INTOUCH]

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. Touch the "Back" to return to the initial Confirmation/Adjustment Mode screen.

Display Diagnosis

Confirmation of the display control unit screen and integral switch screen.

Item		Description
Display Settings	Color Spectrum Bar	• Display 8 colors of following bars. - White - Yellow - Cyan (Close to light blue) - Green - Magenta (Close to purplish red) - Red - Blue - Black - Gray Scale
	Gradation Bar	Display 64 gradation gray-scale image to a screen.
	White Display	Display white screen.
	Black Display	Display black screen.
Touch Panel		• The function can check the presence of a "+" indication and deviation from where it should be while touching the touch panel. • Display coordinates and gesture operation name (Drag, Tap, Double Tap, Spread, etc.) of the screen which touched.
Sensor Sensitivity Settings		• Display a current touch panel sensor sensitivity set value. • Can change the touch panel sensor sensitivity set value with 1 (Low) - 5 (high) phases. NOTE: The set value is the same as display control unit screen and integral switch screen.

Vehicle Signals

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

Display control unit

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 Signal	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Light Signal	ON	Block the light beam from the auto light optical sensor when the light switch is ON.	—
	OFF	Either of the following conditions • Lighting switch OFF. • Expose the auto light optical sensor to light when the light switch is ON.	
Ignition Signal	ON	Ignition switch ON.	—
	OFF	Ignition switch in ACC position.	
Reverse Signal	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.	

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

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[INFINITI INTOUCH]

NAVI control unit

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)	
Ignition Signal	ON	Ignition switch ON.	—
	OFF	Ignition switch in ACC position.	
Reverse Signal	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.	

NOTE:

Only models with navigation system.

Speaker Test

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

Navigation

Item	Description
Sensor Information	The reception status of GPS can be confirmed.
Route Simulation	Set the display ON/OFF of the “simulation” menu of the navigation.

NOTE:

Only models with navigation system.

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.

- Place of the error occurrence is represented by the longitude and latitude 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 up-and-down manner.

Count up method

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

Display type of occurrence frequency	Error history display item
Count up method	CAN communication line, control unit (CAN), AV communication line, control unit (AV)

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	Applicable DTC	Reference
TACHO signal failure	B1F01	AV-168
DOOR state signal failure	B1F02	AV-170
Compensat. mic1 IN: Open	B1F0B	AV-172
Compensat. mic1 IN: Short	B1F0C	AV-172

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Error item	Applicable DTC	Reference
Compensat. mic1 IN: Short to battery	B1F0D	AV-172
Compensat. mic1 IN: Short to ground	B1F0E	AV-172
CAN COMM CIRCUIT	U1000	AV-175
CONTROL UNIT (CAN)	U1010	AV-177
Control unit internal error	U121F	AV-178
Mismatched configuration data stored	U1223	AV-179
Amplifier temperature error	U1231	AV-180
Steer. Angle Sensor calibration	U1232	AV-181
Navi unit internal error	U1233	AV-182
Audio unit internal error	U1234	AV-183
Audio unit connection error	U1249	AV-185
GPS Antenna error	U1244	AV-184
Bose AMP connection error	U124E	AV-187
XM Antenna connection error : open	U1258	AV-188
XM Antenna connection error : short		
2nd Display connection error	U1259	AV-190
AVM connection error	U125B	AV-192
Navi unit connection error	U125D	AV-194
TCU connection error	U1266	AV-195
Cluster connection error	U1267	AV-196
Confirm user connection unit	U12B7	AV-198
Rear Camera connection error	U12B8	AV-199
IT Comander connection error	U12BA	AV-201
Radio Antenna error : open	U12BE	AV-203
Radio Antenna error : short		
AV COMM CIRCUIT	U1300	AV-205
CONTROL UNIT (AV)	U1310	AV-207
FL-DOOR woofer OUT: open	U1601	AV-208
FL-DOOR woofer OUT: short		
FL-DOOR woofer OUT: short to ground		
FL-DOOR woofer OUT: short to battery		
FL-DOOR squawker OUT: open	U1602 U190D	AV-211 AV-236
FL-DOOR squawker OUT: short		
FL-DOOR squawker OUT: short to ground		
FL-DOOR squawker OUT: short to battery		
FL-PILLAR tweeter OUT: open	U1603	AV-214
FL-PILLAR tweeter OUT: short		
FL-PILLAR tweeter OUT: short to ground		
FL-PILLAR tweeter OUT: short to battery		
FR-DOOR woofer OUT: open	U1609	AV-208
FR-DOOR woofer OUT: short		
FR-DOOR woofer OUT: short to ground		
FR-DOOR woofer OUT: short to battery		

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DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

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[INFINITI INTOUCH]

Error item	Applicable DTC	Reference
FR-DOOR squawker OUT: open	U160A U190E	AV-211 AV-236
FR-DOOR squawker OUT: short		
FR-DOOR squawker OUT: short to ground		
FR-DOOR squawker OUT: short to battery		
FR-PILLAR tweeter OUT: open	U160B	AV-214
FR-PILLAR tweeter OUT: short		
FR-PILLAR tweeter OUT: short to ground		
FR-PILLAR tweeter OUT: short to battery		
F-INST L-squawker OUT: open	U1626	AV-217
F-INST L-squawker OUT: short		
F-INST L-squawker OUT: short to ground		
F-INST L-squawker OUT: short to battery		
F-INST C-squawker OUT: open	U162A	AV-220
F-INST C-squawker OUT: short		
F-INST C-squawker OUT: short to ground		
F-INST C-squawker OUT: short to battery		
F-INST R-squawker OUT: open	U162E	AV-217
F-INST R-squawker OUT: short		
F-INST R-squawker OUT: short to ground		
F-INST R-squawker OUT: short to battery		
RL-DOOR speaker OUT: open	U1708	AV-222
RL-DOOR speaker OUT: short		
RL-DOOR speaker OUT: short to ground		
RL-DOOR speaker OUT: short		
RR-DOOR speaker OUT: open	U1710	AV-222
RR-DOOR speaker OUT: short		
RR-DOOR speaker OUT: short to ground		
RR-DOOR speaker OUT: short to battery		
R-PSHELF L-speaker OUT: open	U1722	AV-225
R-PSHELF L-speaker OUT: short		
R-PSHELF L-speaker OUT: short to ground		
R-PSHELF L-speaker OUT: short to battery		
R-PSHELF C-woofer OUT: open	U1725	AV-228
R-PSHELF C-woofer OUT: short		
R-PSHELF C-woofer OUT: short to ground		
R-PSHELF C-woofer OUT: short to battery		
R-PSHELF R-speaker OUT: open	U172A	AV-225
R-PSHELF R-speaker OUT: short		
R-PSHELF R-speaker OUT: short to ground		
R-PSHELF R-speaker OUT: short to battery		
FL-DOOR speaker OUT: open	U1901	AV-230
FL-DOOR speaker OUT: short		
FL-DOOR speaker OUT: short to ground		
FL-DOOR speaker OUT: short to battery		

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Error item	Applicable DTC	Reference
RR-DOOR speaker OUT: open	U1902	AV-233
RR-DOOR speaker OUT: short		
RR-DOOR speaker OUT: short to ground		
RR-DOOR speaker OUT: short to battery		
RL-DOOR speaker OUT: open	U1906	AV-233
RL-DOOR speaker OUT: short		
RL-DOOR speaker OUT: short to ground		
RL-DOOR speaker OUT: short to battery		
FR-DOOR speaker OUT: open	U1907	AV-230
FR-DOOR speaker OUT: short		
FR-DOOR speaker OUT: short to ground		
FR-DOOR speaker OUT: short to battery		

AV COMM Diagnosis

AV COMM Monitor

- Displays the communication status between display 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)
CMF Send Switch	OK / UNKW	OK / 0 – 39 / —
CMF Receive 2ndDisp	OK / UNKW	OK / 0 – 39 / —
CMF Receive Bose AMP	OK / UNKW	OK / 0 – 39 / —
CMF Receive AVM	OK / UNKW	OK / 0 – 39 / —
CMF Receive Meter	OK / UNKW	OK / 0 – 39 / —
CMF Receive Audio	OK / UNKW	OK / 0 – 39 / —

Clock Setting

The date and time information can be adjusted.

NOTE:

Only models with navigation system.

Camera Cont.

Item	Description
Adjust Guide Line of Rear View Cam	The guiding lines in the rear view monitor can be adjusted.
Check/Change Configuration	Displays the current configuration data. NOTE: Refer to the following list for the items of the configuration adjustment function.
Reset Configuration	Initializes the camera system configuration.
Camera System Type	Sets the type of camera that is connected.

Configuration list

Setting item	Setting (Default value)	
	Direct adaptive steering models	Vehicle speed sensitive P/S models
Predictive Course Lines	With SBW	Without SBW
Rear Coeff. K	1.37847	1.37847

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

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[INFINITI INTOUCH]

Setting item	Setting (Default value)	
	Direct adaptive steering models	Vehicle speed sensitive P/S models
Rear Coeff. F	0.0394	0.0394
Rear Coeff. P1	-0.24463	-0.24463
Rear Coeff. P2	0.07005	0.07005
Rear Coeff. C1	-0.00608	-0.00608
Rear Coeff. C2	-0.00001	-0.00001
Rear Coeff. D1	130.6	130.6
Rear Coeff. D2	-35	-35
Car Width	1822.9	1822.9
Rear Offset	3835.175	3835.175
Rear Height	581.589	581.589
Rear L/R Angle	0	0
Rear Up/Dn Angle	0	0
Rear Roll Angle	0	0
Bumper Rear Dist.	0	0
Bumper Rear Ax Dist	0	0
Max. Steering Angle	31.56	31.56
Min. Turning Radius	1	1.47
Wheelbase	2850	2850
Total Length	4792	4792
Steering Gear Ratio	0.032	0.047
Tot.Width With Mirrors	0	0

SMX

XM Mode Diagnosis

Item	Description
Show XM Diagnosis	Display adjustment items to test satellite radio function.
External Connection Mode	Set in external diagnostic mode.

Delete Unit Connection Log

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

Reset Settings

Item	Description
Reset User Data	Initializes the display control unit, NAVI control unit and AV control unit memory.
Reset Configuration	Initializes the configuration data.

Version Information

Version information of the each control unit and switch is displayed.

Program Update

Version of the display control unit can be update.

Switch Information

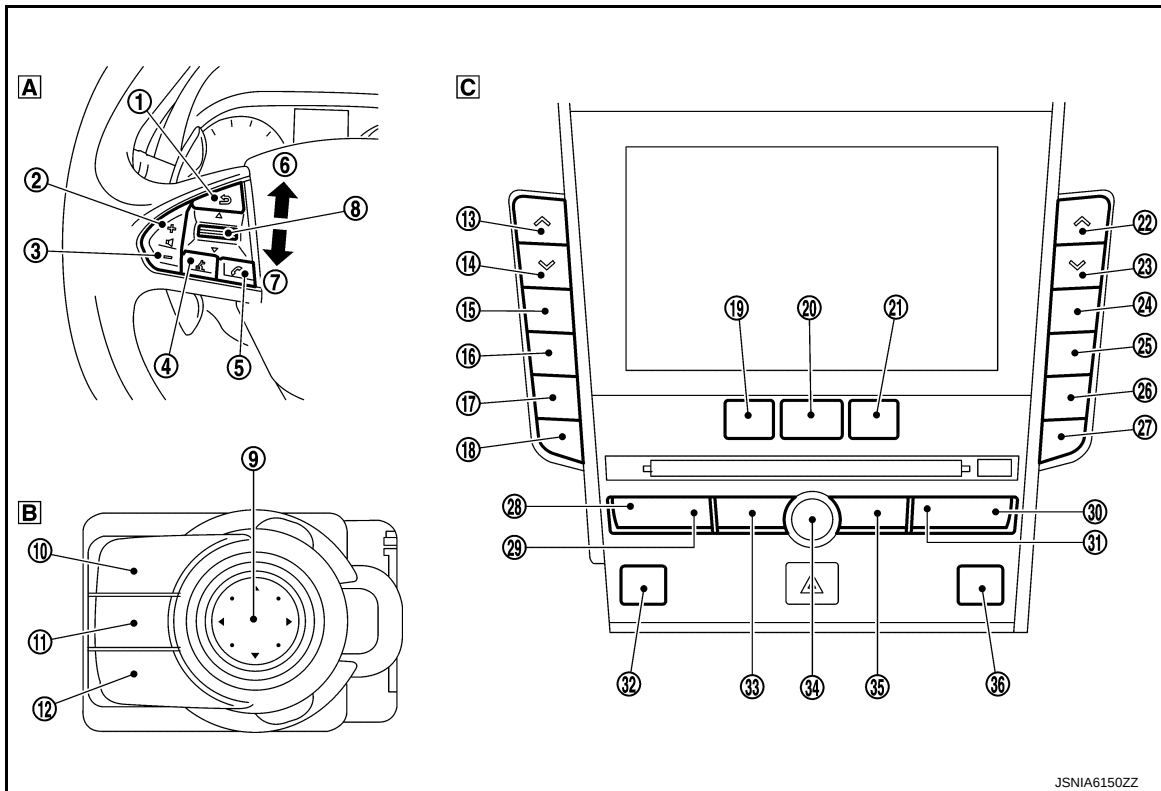
Steering switch, multifunction switch and integral switch information can be checked.

Switch name and ID are displayed when press each switch.

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

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[INFINITI INTOUCH]



A Steering switch

B Multifunction switch

C Integral switch

No.	Display name	Switch position
①	Source	Steering switch
②	VOL UP/Right	
③	VOL DOWN/Left	
④	Voice Recognition Engine:	
⑤	Phone	
⑥	MENU UP	
⑦	MENU DOWN	
⑧	Enter	Multifunction switch
⑨	OK	
⑩	MAP	
⑪	Back	
⑫	Not displayed	

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

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[INFINITI INTOUCH]

No.	Display name	Switch position
⑬	Temperature	Integral switch
⑭	Temperature	
⑮	Auto	
⑯	Wind Speed +	
⑰	Wind Speed –	
⑱	MODE	
⑲	Audio	
⑳	Menu	
㉑	Climate	
㉒	Temperature	
㉓	Temperature	
㉔	Recirculation	
㉕	Front Defrost	
㉖	Rear Defrost	
㉗	OFF	
㉘	⏮	
㉙	⏭	
㉚	TUNE/CH/HOLDER>	
㉛	<TUNE/CH/HOLDER	
㉜	Seat Heater (Left Seat)	
㉝	Radio	
㉞	Not displayed	
㉟	DISC/AUX	
㊱	Seat Heater (Right Seat)	

ANC/ASC

Item		Description
ANC/ASC Diagnosis	Show Settings	Following items can be confirmed. • Part number • Config result • ANC ON/OFF status • ASC ON/OFF status
	Connection Diagnosis	Display a state of wiring connected with in BOSE amp.
	Active Test	ANC function can be confirmed by test tone.
	Version	ANC and ASC function ON/OFF can be set.

Hands-Free Phone

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

Item	Description
HF Vol. Adjustment	The reception volume can be set in three steps: “Low”, “Standard” and “High”.

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Item	Description
Voice Microphone Test	The microphone audio can be directly connected to the speakers to perform a microphone test.
Onload model ID	Displays the on board unit ID.

CONSULT Function

INFOID:000000009726918

APPLICATION ITEMS

CONSULT performs the following functions via the communication with the display control unit

Diagnosis mode	Description
Self Diagnostic Result	Performs a diagnosis on the display 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 display control unit can be performed.
Work Support	Steering angle sensor can be adjusted.
ECU Identification	The part number of display control unit can be checked.
Configuration	- Read and save the vehicle specification. - Write the vehicle specification when replacing display 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 display control unit to each unit as well as the error counter.
	AUDIO	Displays the display control unit communication status and the error counter.

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.
- Refer to [AV-89, "DTC Index"](#).

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.

- Displays the status of the following vehicle signals inputted into the display 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 switch is ON.	—
	Off	Either of the following conditions - Lighting switch OFF. - Expose the auto light optical sensor to light when the light switch is ON.	
IGN SIG	On	Ignition switch ON.	
	Off	Ignition switch in ACC position.	

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[INFINITI INTOUCH]

Display Item	Display	Vehicle status	Remarks
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.	

WORK SUPPORT

Adjusts the neutral position of the steering angle sensor.

CAUTION:

For vehicles with VDC, adjust the steering angle sensor neutral position on the ABS actuator control unit side. Refer to [BRC-70, "Work Procedure"](#).

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

ECU IDENTIFICATION

The part number of display control unit is displayed.

CONFIGURATION

Configuration has three functions as follows.

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

CAUTION:

- When replacing display control unit, you must perform "Read / Write Configuration" or "Manual Configuration" with CONSULT.
- Complete the procedure of "Read / Write Configuration" or "Manual Configuration" in order.
- If you set incorrect "Read / Write Configuration" or "Manual Configuration", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

ECU DIAGNOSIS INFORMATION

DISPLAY CONTROL UNIT

Reference Value

INFOID:000000009726919

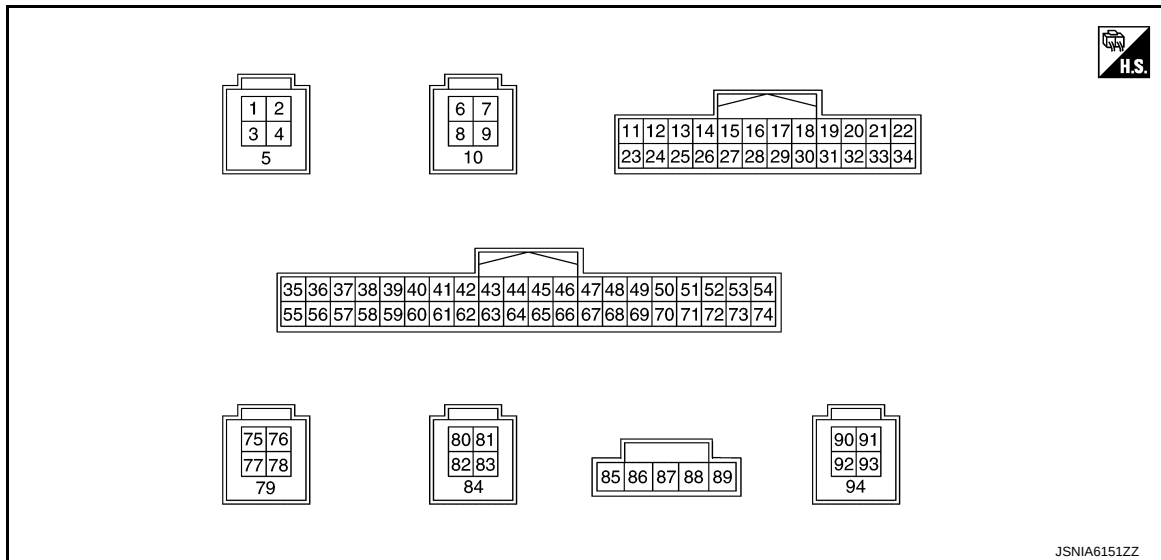
VALUES ON THE DIAGNOSIS TOOL

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
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	Block the light beam from the auto light optical sensor when the light switch is ON.	On
		Expose the auto light optical sensor to light when the light switch is OFF or ON.	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

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
1 (G)	—	USB ground	—	—	—
2 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

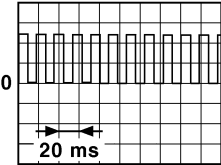
[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
3 (R)	—	USB D- signal	Input/ Output	—	—
4 (L)	—	USB D+ signal	Input/ Output	—	—
5 (—)	—	Shield	—	—	—
6 (G)	—	USB ground	—	—	—
7 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
8 (R)	—	USB D- signal	Input/ Output	—	—
9 (L)	—	USB D+ signal	Input/ Output	—	—
10 (—)	—	Shield	—	—	—
16 (SB)	—	AV communication signal (L)	Input/ Output	—	—
17 (P)	—	CAN-L	Input/ Output	—	—
19 (R)	22 (B)	Dimmer signal	Input	[Ignition switch ON] • Either of the following conditions - Lighting switch OFF - Expose the auto light optical sensor to light when the light switch is ON.	0 V
				[Ignition switch ON] • Block the light beam from the auto light optical sensor when the light switch is ON.	12.0 V
20 (BR)	22 (B)	Reverse signal	Input	[Ignition switch ON] • R position	12.0 V
				[Ignition switch ON] • Other than R position	0 V
22 (B)	—	Ground	—	[Ignition switch ON]	0 V
25 (SB)	—	—	—	—	—
26 (BR)	22 (B)	Camera switch signal	Input	[Ignition switch ON] • Camera switch: ON	0 - 2.5 V
				[Ignition switch ON] • Camera switch: OFF	3.0 V
28 (LG)	—	AV communication signal (H)	Input/ Output	—	—
29 (L)	—	CAN-H	Input/ Output	—	—
30 (R)	22 (B)	Ignition signal	Input	[Ignition switch ON]	Battery voltage

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

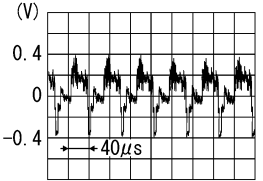
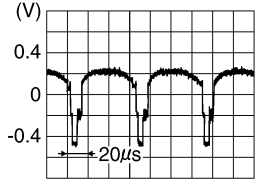
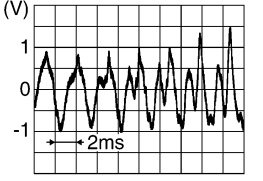
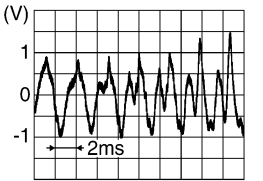
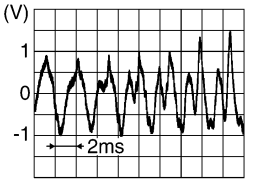
Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
31 (R)	22 (B)	Vehicle speed signal (8-pulse)	Input	[Ignition switch ON] • When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
33 (SB)	22 (B)	ACC power supply	Input	[Ignition switch ACC]	Battery voltage
34 (Y)	22 (B)	Battery power supply	Input	[Ignition switch OFF]	Battery voltage
36 (LG)	—	Composite image signal (-)	—	—	—
38 (—)	—	Shield	—	—	—
40* (—)	—	Manufacturer specific signal	—	—	—
42 (G)	—	Sound signal RH (-)	—	—	—
43 (—)	—	Shield	—	—	—
44 (L)	—	Sound signal LH (-)	—	—	—
45 (W)	—	TEL voice signal (-)	—	—	—
46 (—)	—	Shield	—	—	—
47 (R)	—	Voice guidance signal output (-)	—	—	—
48 (B)	—	Voice guidance signal input (-)	—	—	—
49 (W)	—	NS ON/OFF signal	—	—	—
50 (R)	—	Microphone signal ground	—	[Ignition switch ON]	0 V
51 (—)	—	Shield	—	—	—
52 (—)	22 (B)	Microphone signal ground (NAVI)	—	[Ignition switch ON]	0 V
54 (W)	22 (B)	Camera power supply ground	—	[Ignition switch ON]	0 V
55 (—)	—	Shield	—	—	—

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

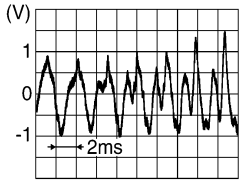
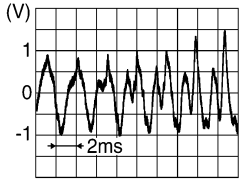
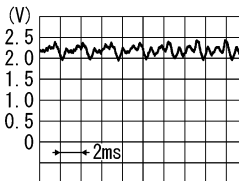
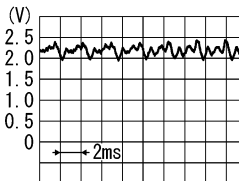
[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
56 (BR)	36 (LG)	Composite image signal (+)	Input	[Ignition switch ON] • Image is displayed.	 SKIB2251J
58 (B)	22 (B)	Camera image signal	Input	[Ignition switch ON] • Image is displayed.	 SKIB0827E
59 (R)	—	U-VOICE signal	Output	—	—
60 (W)	—	VOICE signal ground	—	—	—
61 (B)	—	D-VOICE signal	Input	—	—
62 (R)	42 (G)	Sound signal RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
63 (—)	—	Shield	—	—	—
64 (V)	44 (L)	Sound signal LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
65 (B)	45 (W)	TEL voice signal (+)	Input	[Ignition switch ON] • During voice guide output with the  switch pressed	 SKIB3609E
66 (—)	—	Shield	—	—	—

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
67 (G)	47 (R)	Voice guidance signal out- put (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
68 (W)	48 (B)	Voice guidance signal input (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
69 (—)	—	Shield	—	—	—
70 (G)	52 (—)	Microphone signal (NAVI)	Output	[Ignition switch ON] • Give a voice	 PKIB5037J
71 (G)	50 (R)	Microphone signal	Output	[Ignition switch ON] • Give a voice	 PKIB5037J
72 (L)	22 (B)	Microphone VCC	Output	[Ignition switch ON]	5.0 V
74 (R)	54 (W)	Camera power supply	Output	[Ignition switch ON] • At rear view camera image is dis- played	6.0 V
				[Ignition switch ON] • Except for above	0 V
77 (W)	78 (B)	LVDS (+)	Input/ Output	—	—
78 (B)	—	LVDS (—)	Input/ Output	—	—
79 (—)	—	Shield	—	—	—
80 (G)	—	USB ground	—	—	—
81 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
82 (R)	—	USB D- signal	Input/ Output	—	—

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
83 (L)	—	USB D+ signal	Input/ Output	—	—
84 (—)	—	Shield	—	—	—
85 (R)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
86 (P)	—	USB D- signal	Input/ Output	—	—
87 (W)	—	USB D+ signal	Input/ Output	—	—
88 (—)	—	Shield	—	—	—
89 (Y)	—	USB ground	—	—	—
92 (W)	—	LVDS (+)	Input/ Output	—	—
93 (B)	—	LVDS (—)	Input/ Output	—	—
94 (—)	—	Shield	—	—	—

*: Not used

Fail-Safe

INFOID:000000009726920

If a malfunction occurs in the Infiniti InTouch, display control unit performs fail-safe activation according to the detected malfunction.

Detection item	Infiniti InTouch operation in fail-safe mode	DTC
Engine speed signal	Active noise control and active sound control function are deactivated.	B1F01
Step lamp signal		B1F02
Front microphone	Active noise control function is deactivated.	B1F0B B1F0C B1F0D B1F0E
CAN communication	The system using the CAN communication signal from control unit which cannot communicate does not function.	U1000
	The system using the CAN communication signal does not function.	U1010
Display control unit	- Display is not displayed. - Display control unit restart. - Display control unit freezes. NOTE: Symptom other than an item may occur.	U121F
Configuration	A function of display control unit becomes mismatched with a vehicle specification and destination.	U1223
BOSE amp.	BOSE system does not function.	U1231
Steering angle sensor	Predictive course line is not displayed.	U1232
NAVI control unit	- Map is not displayed. - Navigation screen does not operate. NOTE: Symptom other than an item may occur.	U1233

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
AV control unit	- Sound is not output by a speaker. - CD is not played. - Radio does not operate. NOTE: Symptom other than an item may occur.		U1234
GPS antenna	The vehicle positions of a navigation screen differ.		U1244
AV communication	AV control unit	- Sound is not output by a speaker. - CD is not played. - Radio does not operate. NOTE: Symptom other than an item may occur.	U1249
	BOSE amp.	Sound is not output by a speaker.	U124E
	Integral switch	- Integral switch display is not displayed. - Switch operation does not operate. - Touch panel operation does not operate. NOTE: Symptom other than an item may occur.	U1259
	Around view monitor control unit	Camera image is not displayed.	U125B
	Combination meter	- Audio information is not displayed by the information display in the combination meter. - Navigation indicator is not displayed by the information display in the combination meter. - Steering switch does not operate.	U1267
	Display control unit	The system of ECU which detected abnormalities does not operate.	U1300
		The system which is using AV communication does not operate.	U1310
Satellite radio antenna	Satellite radio is not received.		U1258
USB communication	NAVI control unit	A navigation menu cannot be selected (hatching display).	U125D
	TCU	Telematics system does not function.	U1266
	External data input box	Audio equipment which connected to USB does not operate.	U12B7
Rear view camera	Rear camera image is not displayed.		U12B8
Multifunction switch	Multifunction switch operation does not operate.		U12BA
Radio antenna	Radio is not received.		U12BE

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Speaker/squawker/tweeter/woofer	With BOSE system		
	Front door woofer	No sound from front door woofer LH or RH.	U1601 U1609
	Front door squawker	No sound from front door squawker LH or RH.	U1602 U160A
	Front door tweeter	No sound from front door tweeter LH or RH.	U1603 U160B
	Front squawker	No sound from front squawker LH or RH.	U1626 U162E
	Front center squawker	No sound from front center squawker.	U162A
	Rear door speaker	No sound from rear door speaker LH or RH.	U1708 U1710
	Rear satellite speaker	No sound from rear satellite speaker LH or RH.	U1722 U172A
	Rear woofer	No sound from rear woofer.	U1725
	Without BOSE system		
	Front door speaker	No sound from front door speaker LH or RH.	U1901 U1907
	Rear door speaker	No sound from rear door speaker LH or RH.	U1902 U1906
	Front door squawker	No sound from front door squawker LH or RH.	U190D U190E

DTC Inspection Priority Chart

INFOID:000000009802172

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1223: CONFIG UNFINISH
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- B1F01: ENG SPEED SIG ERROR - B1F02: DOOR STATUS SIG ERROR - U1249: AUDIO H/U CONN - U124E: AMP CONN - U1259: 2ND DISP CONN - U125B: AROUND CAMERA CONN - U1267: METER CONN

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Priority	Detected items (DTC)	
4	• U121F: DISPLAY CONTROL UNIT	A
	• U1233: NAVI CONTROL UNIT	
	• U1234: AV CONTROL UNIT	B
	• U1300: AV COMM CIRCUIT	
	• U1310: CONTROL UNIT(AV)	
5	• B1F0B: ANC MIC1 CIRC OPEN	
	• B1F0C: ANC MIC1 CIRC SHORT	C
	• B1F0D: ANC MIC1 CIRC SHORT-BAT	
	• B1F0E: ANC MIC1 CIRC SHORT-GND	D
	• U1232: ST ANGLE SEN CALIB	
	• U1244: GPS ANTENNA CONN	E
	• U1258: XM ANTENNA CONN	
	• U125D: DVD NAVI CONN	F
	• U1266: TCU CONN	
	• U12B7: USB CONN	G
	• U12B8: REAR CAMERA CONN	
	• U12BA: MULTIFUNCTION SWITCH CONN	H
	• U12BE: RADIO ANTENA CONN	
	• U1231: AMP TEMP	I
	• U1601: FL-DOOR WOOFER	
	• U1602: FL-DOOR SQUAWK	J
	• U1603: FL-DOOR TWEETER	
	• U1609: FR-DOOR WOOFER	K
	• U160A: FR-DOOR SQUAWK	
	• U160B: FR-DOOR TWEETER	L
	• U1626: F-INST L-SQUAWK	
	• U162A: F-INST C-SQUAWK	M
	• U162E: F-INST R-SQUAWK	
	• U1708: RL-DOOR SPEAKER	
	• U1710: RR-DOOR SPEAKER	
	• U1722: R-PSHELF L-SQUAWK	
	• U1725: R-PSHELF C-WOOFER	
	• U172A: R-PSHELF R-SQUAWK	
	• U1901: FL-DOOR SPEAKER	
	• U1902: RR-DOOR SPEAKER	
	• U1906: RL-DOOR SPEAKER	
	• U1907: FR-DOOR SPEAKER	
	• U190D: FR TWEETER	
	• U190E: FL TWEETER	

DTC Index

INFOID:000000009726921

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	CONSULT display	Reference	
B1F01	ENG SPEED SIG ERROR	AV-168, "DTC Description"	
B1F02	DOOR STATUS SIG ERROR	AV-170, "DTC Description"	AV
B1F0B	ANC MIC1 CIRC OPEN	AV-172, "DTC Description"	
B1F0C	ANC MIC1 CIRC SHORT	AV-172, "DTC Description"	
B1F0D	ANC MIC1 CIRC SHORT-BAT	AV-172, "DTC Description"	O
B1F0E	ANC MIC1 CIRC SHORT-GND	AV-172, "DTC Description"	
U1000	CAN COMM CIRCUIT	AV-175, "DTC Description"	P
U1010	CONTROL UNIT (CAN)	AV-177, "DTC Description"	
U121F	DISPLAY CONTROL UNIT	AV-178, "DTC Description"	
U1223	CONFIG UNFINISH	AV-179, "DTC Description"	
U1231	AMP TEMP	AV-180, "DTC Description"	
U1232	ST ANGLE SEN CALIB	AV-181, "DTC Description"	

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

DTC	CONSULT display		Reference
U1233	NAVI CONTROL UNIT		AV-182, "DTC Description"
U1234	AV CONTROL UNIT		AV-183, "DTC Description"
U1244	GPS ANTENNA CONN		AV-184, "DTC Description"
U1249	AUDIO H/U CONN		AV-185, "DTC Description"
U124E	AMP CONN		AV-187, "DTC Description"
U1258	XM ANTENNA CONN	GND-SHORT	AV-188, "DTC Description"
		OPEN	
U1259	2ND DISP CONN		AV-190, "DTC Description"
U125B	AROUND CAMERA CONN		AV-192, "DTC Description"
U125D	DVD NAVI CONN		AV-194, "DTC Description"
U1266	TCU CONN		AV-195, "DTC Description"
U1267	METER CONN		AV-196, "DTC Description"
U12B7	USB CONN		AV-198, "DTC Description"
U12B8	REAR CAMERA CONN		AV-199, "DTC Description"
U12BA	MULTIFUNCTION SWITCH CONN		AV-201, "DTC Description"
U12BE	RADIO ANTENNA CONN	GND-SHORT	AV-203, "DTC Description"
		OPEN	
U1300	AV COMM CIRCUIT		AV-205, "DTC Description"
U1310	CONTROL UNIT(AV)		AV-207, "DTC Description"
U1601	FL-DOOR WOOFER	OPEN	AV-208, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1602	FL-DOOR SQUAWK	OPEN	AV-211, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1603	FL-DOOR TWEETER	OPEN	AV-214, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1609	FR-DOOR WOOFER	OPEN	AV-208, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U160A	FR-DOOR SQUAWK	OPEN	AV-211, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U160B	FR-DOOR TWEETER	OPEN	AV-214, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

DTC	CONSULT display		Reference
U1626	F-INST L-SQUAWK	OPEN	AV-217, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U162A	F-INST C-SQUAWK	OPEN	AV-220, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U162E	F-INST R-SQUAWK	OPEN	AV-217, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1708	RL-DOOR SPEAKER	OPEN	AV-222, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1710	RR-DOOR SPEAKER	OPEN	AV-222, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1722	R-PSHELF L-SQUAWK	OPEN	AV-225, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1725	R-PSHELF C-WOOFER	OPEN	AV-228, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U172A	R-PSHELF R-SQUAWK	OPEN	AV-225, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1901	FL-DOOR SPEAKER	OPEN	AV-230, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1902	RR-DOOR SPEAKER	OPEN	AV-233, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1906	RL-DOOR SPEAKER	OPEN	AV-233, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

DTC	CONSULT display		Reference
U1907	FR-DOOR SPEAKER	OPEN	AV-230, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U190D	FR TWEETER	OPEN	AV-236, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U190E	FL TWEETER	OPEN	AV-236, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

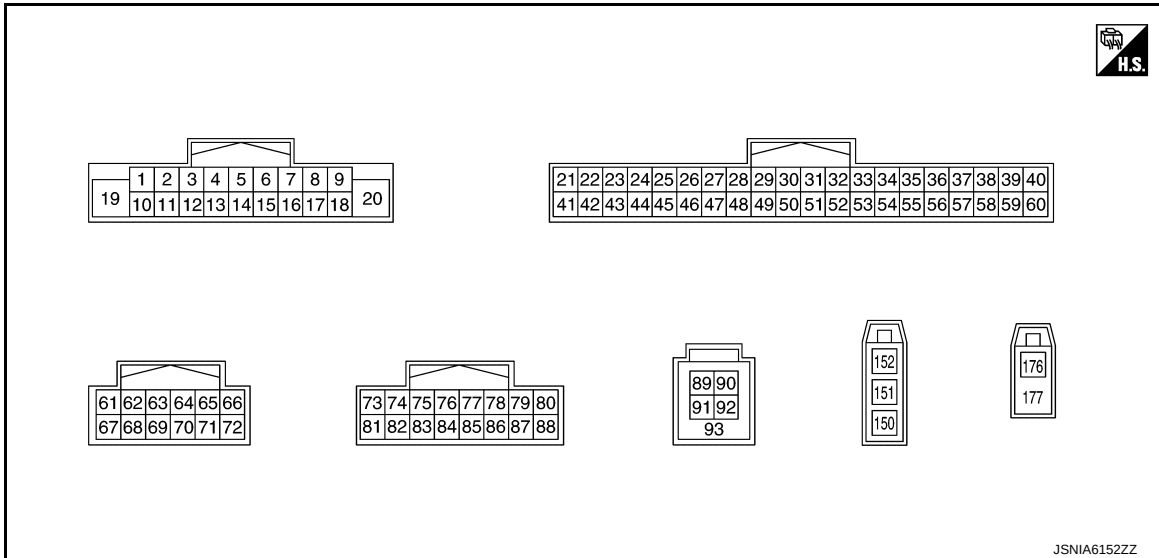
[INFINITI INTOUCH]

AV CONTROL UNIT

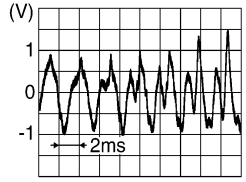
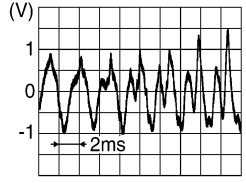
Reference Value

INFOID:000000009726922

TERMINAL LAYOUT



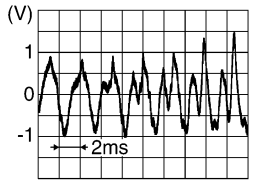
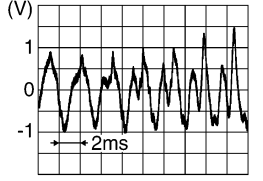
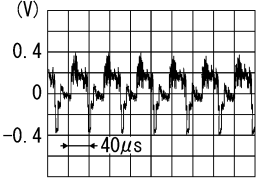
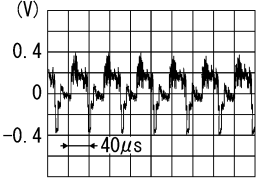
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
1 (—)	—	Shield	—	—	—
2 (L)	3 (R)	Sound signal front LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
3 (R)	—	Sound signal front LH (—)	—	—	—
4 (LG)	5 (SB)	Sound signal rear LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
5 (SB)	—	Sound signal rear LH (—)	—	—	—
7 (SB)	20 (B)	ACC power supply	Input	[Ignition switch ACC]	Battery voltage
8 (W/B)	9 (BG)	Disk eject signal	Input	[Ignition switch ON] • Pressing the eject switch	0 V
				[Ignition switch ON] • Except for above	3.3 V

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

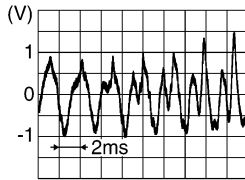
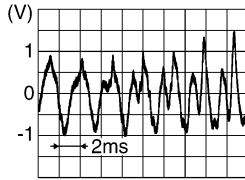
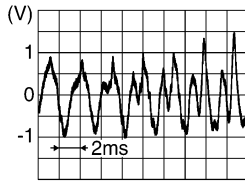
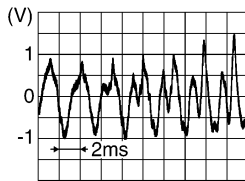
[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
9 (BG)	—	Disk eject signal ground	—	[Ignition switch ON]	0 V
10 (—)	—	Shield	—	—	—
11 (LG)	12 (P)	Sound signal front RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
12 (P)	—	Sound signal front RH (—)	—	—	—
13 (L)	14 (P)	Sound signal rear RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
14 (P)	—	Sound signal rear RH (—)	—	—	—
19 (Y)	20 (B)	Battery power supply	Input	[Ignition switch OFF]	Battery voltage
20 (B)	—	Ground	—	[Ignition switch ON]	0 V
22 (SB)	—	AV communication signal (L)	Input/ output	—	—
36 (L)	56 (V)	AUX image signal (+)	Input	[Ignition switch ON] • Image is displayed.	 SKIB2251J
38 (BR)	39 (LG)	Composite image signal (+)	Output	[Ignition switch ON] • Image is displayed.	 SKIB2251J
39 (LG)	—	Composite image signal (—)	—	—	—
40 (—)	—	Shield	—	—	—
42 (LG)	—	AV communication signal (H)	Input/ output	—	—

AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
56 (V)	—	AUX image signal (—)	—	—	—
57 (—)	—	Shield	—	—	—
61 (V)	67 (L)	Sound signal LH (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
62 (R)	68 (G)	Sound signal RH (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
63 (—)	—	Shield	—	—	—
65 (—)	—	Shield	—	—	—
66 (W)	71 (R)	AUX sound signal LH	Input	[Ignition switch ON] • Sound output	 SKIB3609E
67 (L)	—	Sound signal LH (—)	—	—	—
68 (G)	—	Sound signal RH (—)	—	—	—
69 (—)	—	Shield	—	—	—
71 (R)	—	AUX sound signal ground	—	—	—
72 (B)	71 (R)	AUX sound signal RH	Input	[Ignition switch ON] • Sound output	 SKIB3609E

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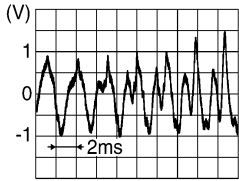
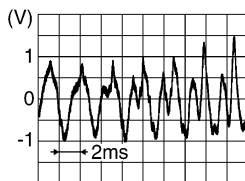
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AV CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
73 (B)	81 (W)	TEL voice signal (+)	Input	[Ignition switch ON] • During voice guide output with the  switch pressed	 SKIB3609E
74 (—)	—	Shield	—	—	—
75 (G)	83 (R)	Voice guidance signal out- put (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
81 (W)	—	TEL voice signal (—)	—	—	—
82 (—)	—	Shield	—	—	—
83 (R)	—	Voice guidance signal out- put (—)	—	—	—
89 (G)	—	USB ground	—	—	—
90 (W)	—	USB V BUS signal	—	—	—
91 (R)	—	USB D- signal	—	—	—
92 (L)	—	USB D+ signal	—	—	—
93 (—)	—	Shield	—	—	—
150 (—)	—	FM sub	Input	—	—
151 (—)	—	AM-FM main	Input	—	—
152 (—)	20 (B)	Antenna amp. ON signal	Output	[Ignition switch ACC]	12.0 V
176 (—)	20 (B)	Satellite radio antenna sig- nal	Input	[Ignition switch ON] • Not connected satellite antenna connector.	5.0 V
177 (—)	—	Shield	—	—	—

BOSE AMP.

< ECU DIAGNOSIS INFORMATION >

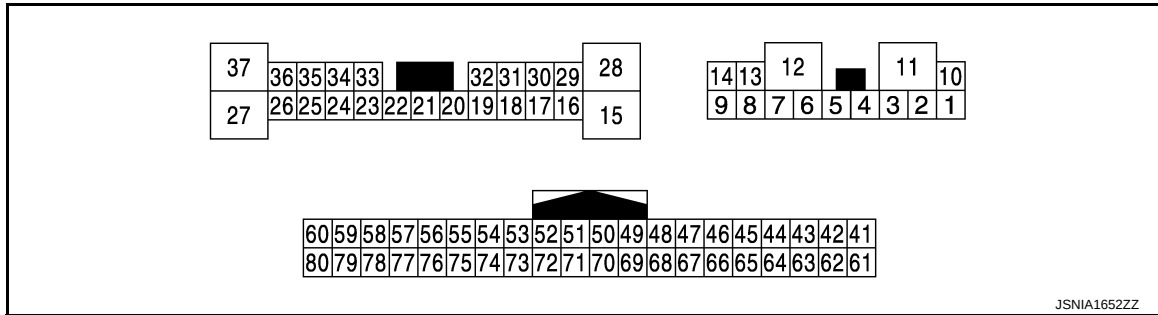
[INFINITI INTOUCH]

BOSE AMP.

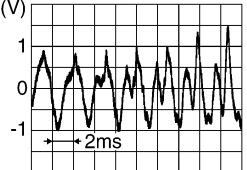
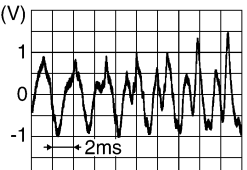
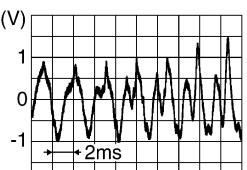
Reference Value

INFOID:000000009726923

TERMINAL LAYOUT



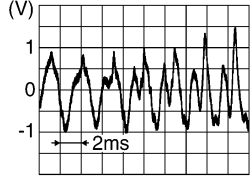
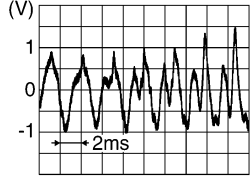
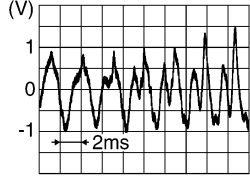
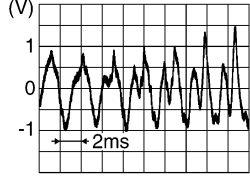
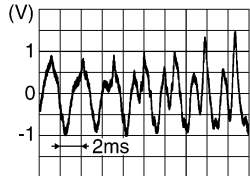
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
1 (W/R)	2 (LG)	Sound signal rear woofer (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
2 (W/L)	—	Sound signal rear woofer (—)	—	—	—
3 (L)	4 (Y)	Sound signal front door woofer RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
4 (Y)	—	Sound signal front door woofer RH (—)	—	—	—
5 (BR)	6 (R)	Sound signal rear door speaker LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
6 (R)	—	Sound signal rear door speaker LH (—)	—	—	—
7 (B)	—	Ground	—	[Ignition switch ON]	0 V
8 (V)	—	Sound signal front door woofer LH (—)	—	—	—
9 (P)	—	Sound signal rear door speaker RH (—)	—	—	—

BOSE AMP.

< ECU DIAGNOSIS INFORMATION >

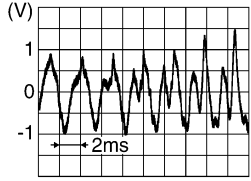
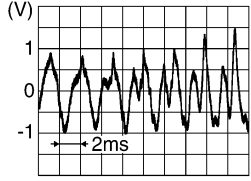
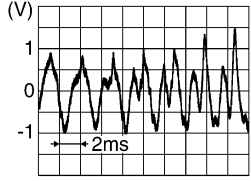
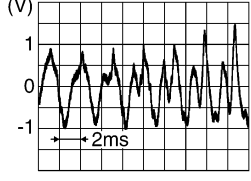
[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
10 (BR)	7 (B)	Battery power supply	Input	[Ignition switch OFF]	Battery voltage
11 (GR)	7 (B)	Battery power supply	Input	[Ignition switch OFF]	Battery voltage
12 (B)	—	Ground	—	[Ignition switch ON]	0 V
13 (P)	8 (V)	Sound signal front door woofer LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
14 (L)	9 (P)	Sound signal rear door speaker RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
16 (P)	29 (V)	Sound signal front squawker LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
17 (BR)	18 (GR)	Sound signal center squawker (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
18 (GR)	—	Sound signal center squawker (—)	—	—	—
19 (W)	32 (B)	Sound signal front door squawker & tweeter RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E

BOSE AMP.

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
22 (W)	33 (B)	Sound signal satellite speaker LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
23 (L)	34 (P)	Sound signal satellite speaker RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
24 (G)	35 (R)	Sound signal front door squawker & tweeter LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
28 (B)	—	Ground	—	[Ignition switch ON]	0 V
29 (V)	—	Sound signal front squawker LH (—)	—	—	—
30 (L)	—	Sound signal front squawker RH (—)	—	—	—
31 (P)	30 (L)	Sound signal front squawker RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
32 (B)	—	Sound signal front door squawker & tweeter RH (—)	—	—	—
33 (B)	—	Sound signal satellite speaker LH (—)	—	—	—
34 (P)	—	Sound signal satellite speaker RH (—)	—	—	—
35 (R)	—	Sound signal front door squawker & tweeter LH (—)	—	—	—
44 (R)	—	Voice guidance signal (—)	—	—	—
45 (R)	—	Sound signal LH (—)	—	—	—
46 (B)	—	Sound signal RH (—)	—	—	—

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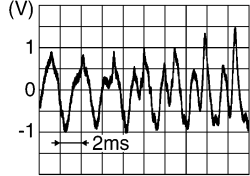
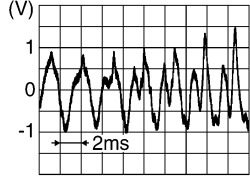
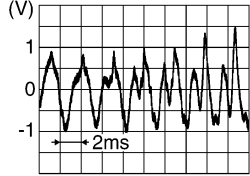
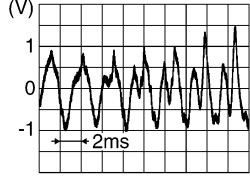
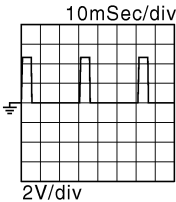
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BOSE AMP.

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

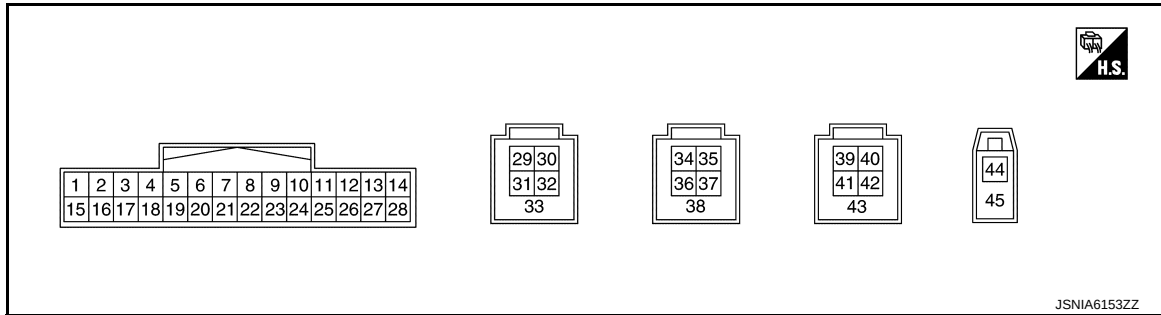
Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
52 (R)	—	Front microphone ground	—	—	—
54 (P)	—	AV communication signal (L)	Input/ Output	—	—
56 (V)	7 (B)	ACC power supply	Input	[Ignition switch ACC]	Battery voltage
64 (G)	44 (R)	Voice guidance signal (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
65 (L)	45 (R)	Sound signal LH (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
66 (W)	46 (B)	Sound signal RH (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
72 (G)	52 (R)	Front microphone signal	Input	[Ignition switch ON] • When inputting interior sound	 SKIB3609E
74 (LG)	—	AV communication signal (H)	Input/ Output	—	—
76 (G)	7 (B)	Step lamp signal	Input	[Ignition switch ON] • When opened any doors.	0 V
				[Ignition switch ON] • When closed all doors.	12.0 V
78 (W)	7 (B)	Engine speed signal	Input	[Engine running] • Idle speed	 2V/div JMBIA0076GB
79 (—)	—	Shield	—	—	—

NAVI CONTROL UNIT

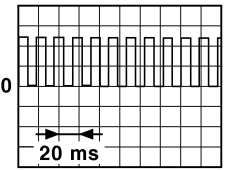
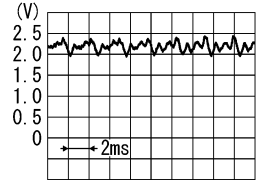
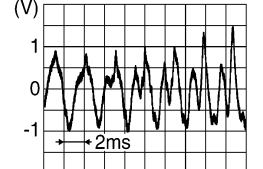
Reference Value

INFOID:000000009726924

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
1 (Y)	3 (B)	Battery voltage	Input	[Ignition switch OFF]	Battery voltage
3 (B)	—	Ground	—	[Ignition switch ON]	0 V
5 (SB)	3 (B)	Acc power supply	Input	[Ignition switch ACC]	Battery voltage
7 (R)	3 (B)	Vehicle speed signal (8-pulse)	Input	[Ignition switch ON] • When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
12 (G)	26 (R)	Microphone signal	Input	[Ignition switch ON] • Give a voice	 PKIB5037J
13 (—)	—	Shield	—	—	—
14 (W)	28 (B)	Voice guidance signal output (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E

NAVI CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
15 (Y)	3 (B)	Battery voltage	Input	[Ignition switch OFF]	Battery voltage
17 (B)	—	Ground	—	[Ignition switch ON]	0 V
19 (W)	3 (B)	Ignition signal	Input	[Ignition switch ON]	Battery voltage
21 (BR)	3 (B)	Reverse signal	Input	[Ignition switch ON] • R position	12.0 V
				[Ignition switch ON] • Other than R position	0 V
26 (R)	—	Microphone signal ground	—	—	—
27 (—)	—	Shield	—	—	—
28 (B)	—	Voice guidance signal out- put (—)	—	—	—
31 (W)	—	LVDS (+)	Input/ output	—	—
32 (B)	—	LVDS (—)	Input/ output	—	—
33 (—)	—	Shield	—	—	—
34 (G)	—	USB ground	—	—	—
35 (W)	—	USB V BUS signal	—	—	—
36 (R)	—	USB D- signal	—	—	—
37 (L)	—	USB D+ signal	—	—	—
38 (—)	—	Shield	—	—	—
39 (G)	—	USB ground	—	—	—
40 (W)	—	USB V BUS signal	—	—	—
41 (R)	—	USB D- signal	—	—	—
42 (L)	—	USB D+ signal	—	—	—
43 (—)	—	Shield	—	—	—
44 (—)	3 (B)	GPS antenna signal	Input	[Ignition switch ON] • Not connected GPS antenna con- nector	5.0 V
45 (—)	—	Shield	—	—	—

INTEGRAL SWITCH

< ECU DIAGNOSIS INFORMATION >

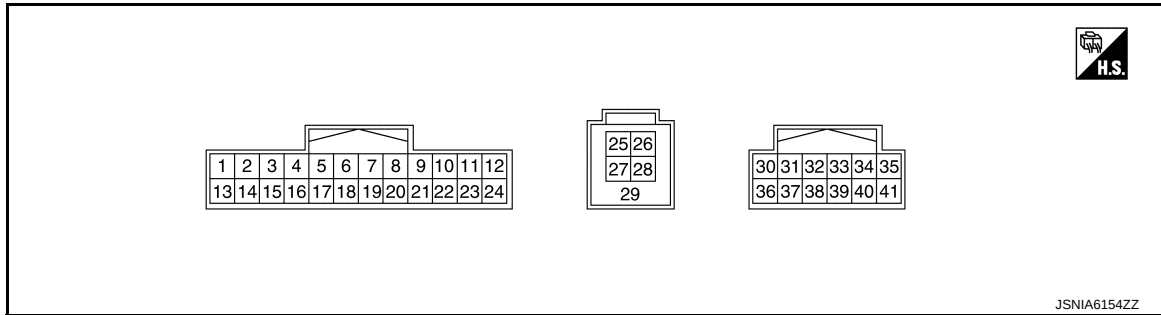
[INFINITI INTOUCH]

INTEGRAL SWITCH

Reference Value

INFOID:000000009726925

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	–	Signal name	Input/ Output		
1 (W)	13 (B)	Battery power supply	Input	[Ignition switch ON]	Battery voltage
2 (R)	13 (B)	Illumination signal	Input	[Ignition switch ON] • Lighting switch 1ST position	12.0 V
				[Ignition switch ON] • Lighting switch OFF	0 V
3 (SB)	—	AV communication signal (L)	—	—	—
4 (LG)	—	AV communication signal (H)	—	—	—
7 (W/B)	16 (BG)	Disk eject signal	Output	[Ignition switch ON] • Pressing the eject switch	0 - 1.5 V
				[Ignition switch ON] • Except for above	Battery voltage
13 (B)	—	Ground	—	[Ignition switch ON]	0 V
14 (V)	13 (B)	ACC power supply	Input	[Ignition switch ACC]	Battery voltage

AV

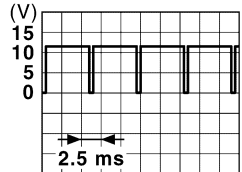
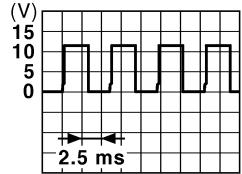
O

P

INTEGRAL SWITCH

< ECU DIAGNOSIS INFORMATION >

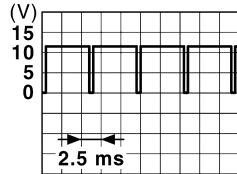
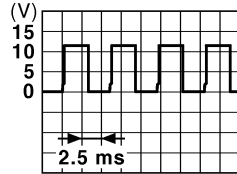
[INFINITI INTOUCH]

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
15 (B)	13 (B)	Illumination control signal	Input	[Ignition switch ON] • Lighting switch 1ST position • When meter illumination is minimum	 JSNIA5983GB	
				[Ignition switch ON] • Lighting switch 1ST position • When meter illumination is step 11	 JPNIA1686GB	
				[Ignition switch ON] • Lighting switch 1ST position • When meter illumination is maximum	0 V	
16 (BG)	—	Disk eject signal ground	—	[Ignition switch ON]	0 V	
18* (R)	13 (B)	Ignition signal	Input	[Ignition switch ON]	Battery voltage	
19 (BR)	13 (B)	Camera switch signal	Output	[Ignition switch ON] • Camera switch: ON	0 - 2.5 V	
				[Ignition switch ON] • Camera switch: OFF	3.0 V	
27 (W)	—	LVDS (+)	Input/ output	—	—	
28 (B)	—	LVDS (—)	Input/ output	—	—	
29 (—)	—	Shield	—	—	—	
30 (BR)	31 (W)	Illumination signal (Multi- function switch)	Output	[Ignition switch ON] • Lighting switch 1ST position	12.0 V	
				[Ignition switch ON] • Lighting switch OFF	0 V	
31 (W)	—	Ground (multifunction switch)	—	[Ignition switch ON]	0 V	
32 (R)	31 (W)	ENCD-B signal	Input	[Ignition switch ON] • Multifunction switch: Rotate	2.0 - 4.3 V	
33 (R)	31 (W)	Push switch A signal	Input	[Ignition switch ON] • Multifunction switch	OFF	4.3 - 4.9 V
					UP	2.8 - 3.3 V
					Down	1.6 - 2.0 V
					Back	0.4 - 0.55 V
34 (W)	31 (W)	Push switch C signal	Input	[Ignition switch ON] • Multifunction switch	OFF	4.3 - 4.9 V
					OK	2.3 - 2.8 V
					MAP/DISP	0.4 - 0.55 V

INTEGRAL SWITCH

< ECU DIAGNOSIS INFORMATION >

[INFINITI INTOUCH]

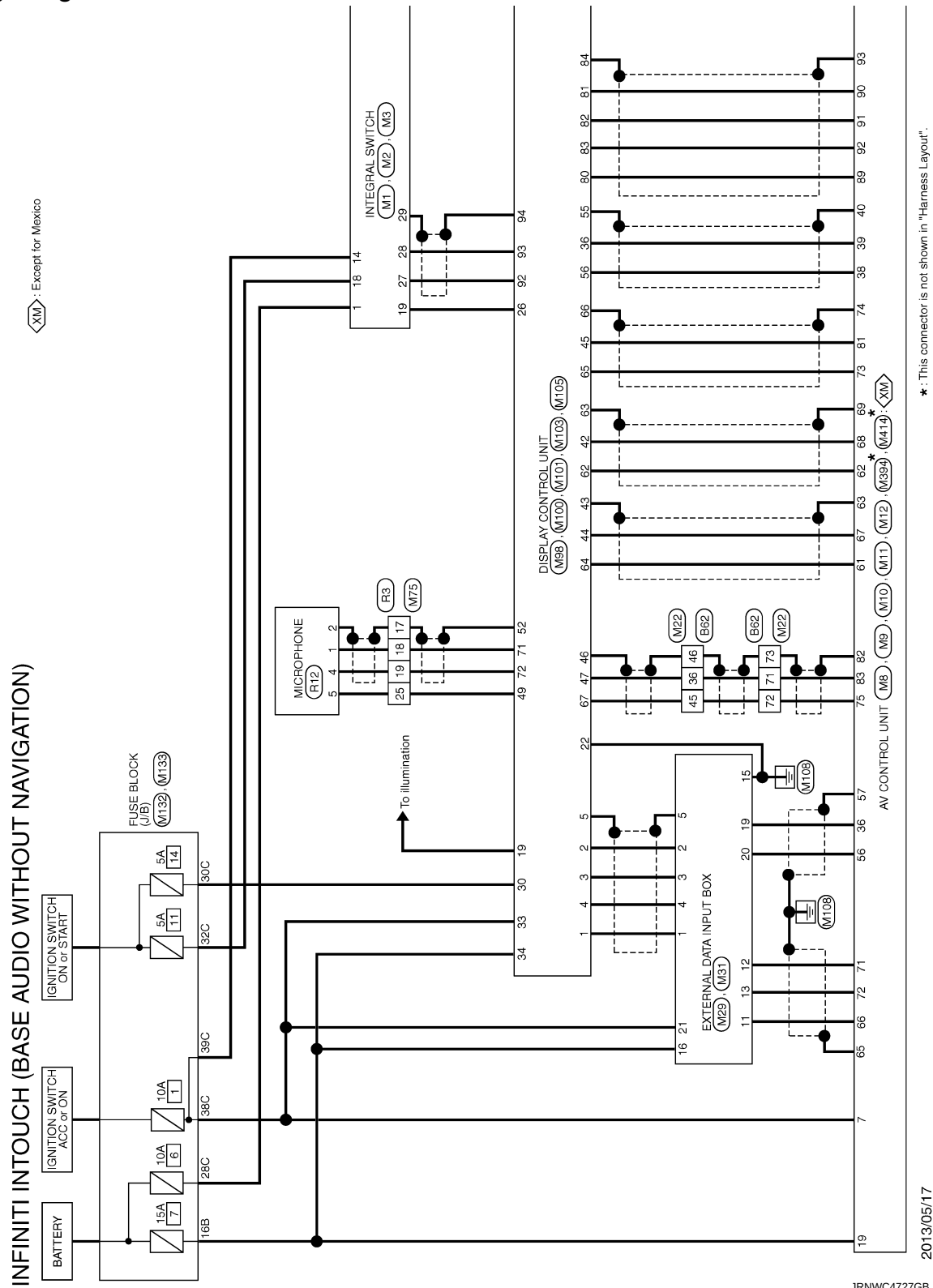
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	—	Signal name	Input/ Output			
36 (V)	31 (W)	Illumination control switch (multifunction switch)	Output	[Ignition switch ON] • Lighting switch 1ST position • When meter illumination is minimum		 JSNIA5983GB
				[Ignition switch ON] • Lighting switch 1ST position • When meter illumination is step 11		 JPNIA1686GB
				[Ignition switch ON] • Lighting switch 1ST position • When meter illumination is maximum		0 V
37 (W)	31 (W)	ENCD-A signal	Input	[Ignition switch ON] • Multifunction switch: Rotate		2.0 - 4.3 V
38 (G)	31 (W)	Select switch signal	Input	[Ignition switch ON]		0.7 - 4.2 V
39 (B)	31 (W)	Push switch B signal	Input	[Ignition switch ON] • Multifunction switch	OFF	4.3 - 4.9 V
					Left	2.8 - 3.3 V
					Right	1.6 - 2.0 V
					CAMERA/ DAY NIGHT	0.4 - 0.55 V
40 (B)	—	Shield	—	—		—
41 (L)	31 (W)	L/R detection signal	Input	[Ignition switch ON]		0.7 - 4.2 V

*: Not used

[INFINITI INTOUCH]

Wiring Diagram

INFOID:0000000009728927



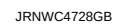
★: This connector is not shown in "Harness Layout".

2013/05/17

JRNWC4727GB

[INFINITI INTOUCH]

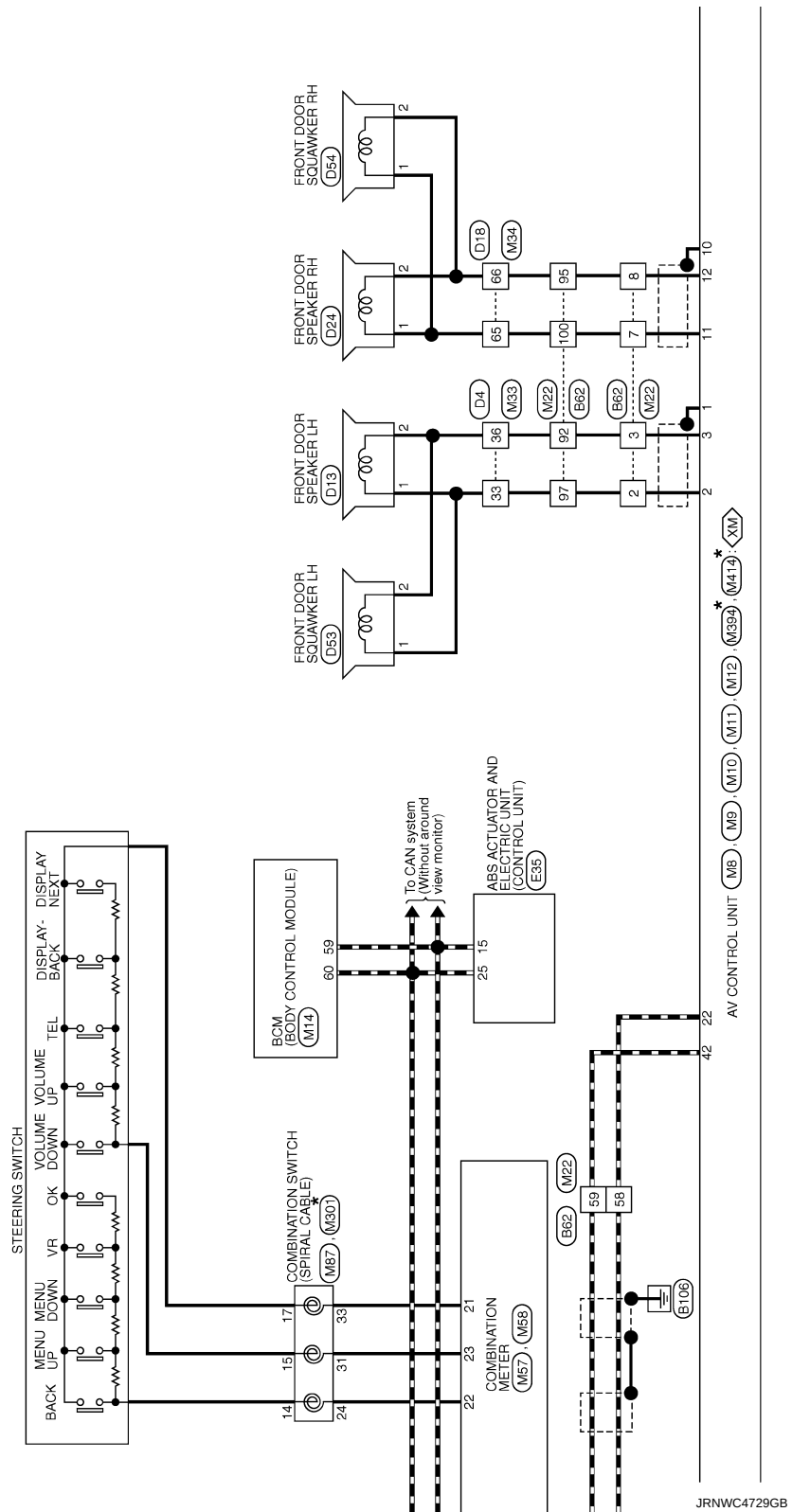
A
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INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

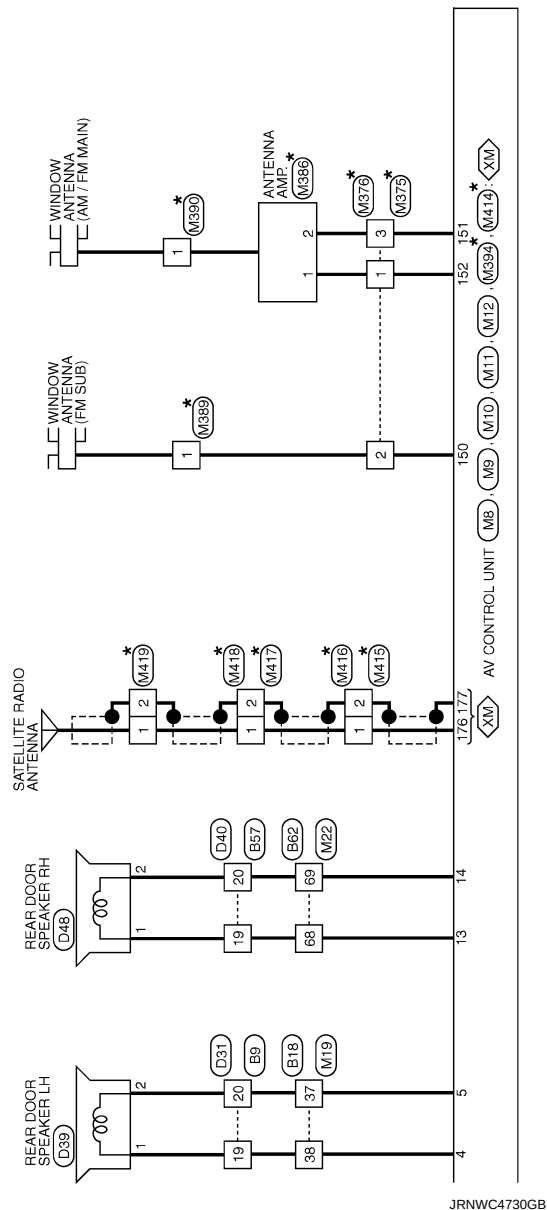


JRNWC4729GB

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]



AV

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

Connector No.	B9
Connector Name	WIRE TO WIRE
Connector Type	TH8DFW-CS10

1	2	3	4	5	6	7
20	19					



Terminal No.	Color	Wire	Signal Name [Specification]
1	LG		
2	LG		
3	R		
4	V		
7	B		
19	BR		
19	LG		
20	R		
20	SB		

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH8DFW-CS10-TM4

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



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

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

Connector No.	B57
Connector Name	WIRE TO WIRE
Connector Type	TH8DFW-CS10

1	2	3	4	5	6	7
20	19					



Terminal No.	Color	Wire	Signal Name [Specification]
1	LG		
2	W		
3	R		
4	V		
7	B		
19	L		
20	P		

Connector No.	B62
Connector Name	WIRE TO WIRE
Connector Type	TH8DFW-CS10-TM4

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



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

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INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

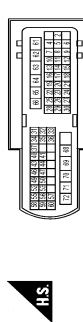
< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

90	V	-
92	W	-
93	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
98	BR	-
99	BR	-
100	BR	-

Connector No.	D14
Connector Name	WIRE TO WIRE
Connector Type	NH60FW-TS12

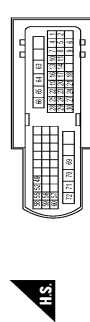


Terminal No.	Color Of Wire	Signal Name [Specification]
2	R	- [With DRPO]
2	SB	- [Without DRPO]
4	BG	- [With DRPO]
5	R	- [Without DRPO]
6	Y	- [With DRPO]
6	V	- [Without DRPO]
7	LG	-
8	GR	-
9	GR	-
10	Y	-
11	SHIELD	-
12	BG	-
13	L	-
14	B	-
15	Y	-
16	GR	-
17	R	-
18	GR	-
19	R	-
20	W	-
21	LG	-
22	W	-
23	L	-
24	G	-
25	BR	-

26	R	-
27	BR	-
28	V	-
29	G	-
30	W	-
31	P	-
32	Y	-
33	BR	-
34	L	-
35	R	-
36	GR	-
37	G	-
40	P	-
41	L	-
43	BG	-
44	Y	-
46	W	-
47	R	-
49	BR	-
50	B	-
52	V	-
53	GR	-
55	GR	-
56	BR	-
57	R	-
58	L	-
59	V	-
60	G	-
61	BG	-
62	SB	-
64	P	-
66	BR	-
68	Y	-
69	L	-
70	W	-
71	LG	-
72	P	-

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

Connector No.	D18
Connector Name	WIRE TO WIRE
Connector Type	NH60FW-TS12



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	P	-
4	SB	-
5	BR	-
6	Y	-
7	LG	-
8	W	-
9	L	-
10	L	-
11	GR	-
13	Y	-
14	R	-
16	R	-
17	B	-
18	W	-
19	B	-
20	G	-
21	SHIELD	-

22	GR	-
23	BG	-
24	B	-
25	BR	-
26	Y	-
27	G	-
28	Y	-
29	Y	-
30	R	-
49	LG	-
52	P	-
55	L	-
56	Y	-
57	R	-
58	SB	-
59	R	-
60	G	-
63	B	-
64	Y	-
65	BR	-
66	GR	-
69	W	-
70	L	-
71	BG	-
72	Y	-

Connector No.	D24
Connector Name	FRONT DOOR SPEAKER RH
Connector Type	NS22FW-CS



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

JRNWC4732GB

A
B
C
D
E
F
G
H
I
J
K
L
M
AV
O
P

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

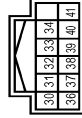
Connector No.	Signal Name [Specification]
M2	INTEGRAL SWITCH
Connector Name	AV CONTROL UNIT
Connector Type	TH18FW-CS2



H.S.

Terminal No.	Color	Wire	Signal Name [Specification]
27	W	B	LVDS (+)
28	B	W	LVDS (-)
29	SHIELD		SHIELD

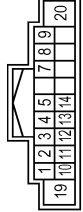
Connector No.	Signal Name [Specification]
M3	INTEGRAL SWITCH
Connector Name	AV CONTROL UNIT
Connector Type	TH12FW-NH



H.S.

Terminal No.	Color	Wire	Signal Name [Specification]
30	BR	W	ILL
31	W		END-B SIGNAL
32	R		PUSH SWITCH A SIGNAL
33	R		PUSH SWITCH C SIGNAL
34	W		ILLUMINATION CONTROL SIGNAL
36	V		END-A SIGNAL
37	W		SELECT SWITCH SIGNAL
38	G		PUSH SWITCH B SIGNAL
39	B		SHIELD
40	B		L/R DETECTION SIGNAL
41	L		

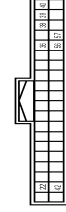
Connector No.	Signal Name [Specification]
M8	AV CONTROL UNIT
Connector Name	AV CONTROL UNIT
Connector Type	TH18FW-CS2



H.S.

Terminal No.	Color	Wire	Signal Name [Specification]
1	SHIELD		SHIELD
2	L		SOUND SIGNAL FRONT LH (+)
3	R		SOUND SIGNAL FRONT RH (+)
4	LG		SOUND SIGNAL REAR LH (-)
5	SB		SOUND SIGNAL REAR RH (-)
7	SB		ACC
8	W/B		DISK EJECT SIGNAL
9	B/G		DISK EJECT SIGNAL GND
10	SHIELD		SHIELD
11	LG		SOUND SIGNAL FRONT RH (+)
12	P		SOUND SIGNAL FRONT LH (-)
13	L		SOUND SIGNAL REAR RH (+)
14	P		SOUND SIGNAL REAR LH (-)
19	Y		BAT
20	B		GND

Connector No.	Signal Name [Specification]
M8	AV CONTROL UNIT
Connector Name	AV CONTROL UNIT
Connector Type	TH18FW-NH

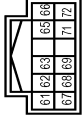


H.S.

Terminal No.	Color	Wire	Signal Name [Specification]
22	SB		AV COMM (L)
36	L		AUX IMAGE SIGNAL (+)
38	BR		COMPOSITE IMAGE SIGNAL (+)
39	LG		COMPOSITE IMAGE SIGNAL (-)
40	SHIELD		SHIELD

Terminal No.	Color	Wire	Signal Name [Specification]
42	LG		AV COMM (H)
56	V		AUX IMAGE SIGNAL (-)
57	SHIELD		SHIELD

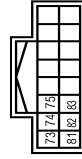
Connector No.	Signal Name [Specification]
M10	AV CONTROL UNIT
Connector Name	AV CONTROL UNIT
Connector Type	TH12FW-NH



H.S.

Terminal No.	Color	Wire	Signal Name [Specification]
61	V		SOUND SIGNAL LH (+)
62	R		SOUND SIGNAL RH (+)
63	SHIELD		SHIELD
65	W		AUX SOUND SIGNAL LH
66	L		AUX SOUND SIGNAL RH (-)
67	L		SOUND SIGNAL LH (-)
68	G		SOUND SIGNAL RH (-)
69	SHIELD		SHIELD
71	R		AUX SOUND SIGNAL GND
72	B		AUX SOUND SIGNAL RH

Connector No.	Signal Name [Specification]
M11	AV CONTROL UNIT
Connector Name	AV CONTROL UNIT
Connector Type	TH18FW-NH



H.S.

Terminal No.	Color	Wire	Signal Name [Specification]
73	B		TEL VOICE SIGNAL (+)
74	SHIELD		SHIELD
75	G		VOICE GUIDANCE SIGNAL (+)
81	W		TEL VOICE SIGNAL (-)
82	SHIELD		SHIELD

JRNWC4734GB

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

83	R	VOICE GUIDANCE SIGNAL (-)

Connector No.	M12
Connector Name	AV CONTROL UNIT
Connector Type	Type 1554887-1



Terminal No.	Color Of Wire	Signal Name [Specification]
89	G	USB GND
90	W	USB V BUS SIGNAL
91	R	USB D+ SIGNAL
92	L	USB D- SIGNAL
93	SHIELD	SHIELD

Connector No.	M14
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40PE-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
48	R	PUSH-BTN IGN SW (ILL PWR)
52	G	DONGLE LINK
54	V	COMM LINE
55	R	RAIN SENSOR
59	P	CAN-L
60	L	CAN-H
61	G	REAR WINDOW DEF RLY CONT
62	R	STARTER RLY CONT
64	V	I-KEY WARN BUZZER
65	B	OUTS HD LAMP CONT
66	B	BLOWER FAN RLY CONT
67	W/B	IGN RELAY (F/B) CONT

68	R	DIMMER
69	GR	A-T SHFT SELECT PWR SPLY
70	G	IGN RELAY POWER CONT
71	BR	IGN RELAY POWER SW
72	SB	PASS DOOR LOCK SW
75	BR	PASS DOOR LOCK SW
76	RG	COMB SW INPUT 3
78	RG	COMB SW INPUT 4
77	V	COMB SW INPUT 2
78	Y	COMB SW INPUT 1
79	LG	COMB SW INPUT 1
80	L	TR LID OPNR SW

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	
2	G	
3	SB	
4	BR	
6	W	
7	W	
8	V	
9	BR	
10	P	
11	BR	
12	LG	
13	GR	
24	Y	
25	W	
31	BR	
32	B	
33	B	
34	V	
35	P	
36	W	
37	SB	
38	LG	
40	P	

Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	
2	L	
3	R	
4	SHIELD	
5	G	
6	BG	
7	LG	
8	P	
9	SHIELD	
10	V	
11	GR	
12	V	
13	LG	
14	LG	
15	P	
16	SB	
17	Y	
18	Y	
19	G	
20	GR	
21	R	
22	W	
23	L	
24	V	
25	LG	
26	GR	
29	SB	
30	LG	
35	R	
37	R	
38	W	
39	W	
45	G	
46	SHIELD	
47	G	

41	G	
42	BR	
43	BR	
44	BR	
46	RG	
51	V	
52	V	
54	R	
55	R	
57	W	
58	V	
59	RG	
62	RG	
63	BR	
64	Y	
65	W	
70	LG	
71	W	
72	B	
74	L	
75	W	
76	BR	
77	B	
81	B	
83	RG	
84	L	
85	W	
86	B	
88	G	
91	GR	
94	W	
96	V	
97	V	
98	BR	

JRNWC4735GB

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

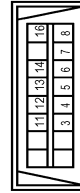
< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

Terminal No.	Color	Wire	Signal Name [Specification]
48	BR	-	-
49	SB	-	-
52	Y	-	-
53	R	-	-
54	GR	-	-
57	GR	-	-
58	SB	-	-
59	LG	-	-
62	V	-	-
63	L	-	-
64	W	-	-
66	R	-	-
68	L	-	-
69	P	-	-
71	R	-	-
72	G	-	-
73	SHIELD	-	-
76	V	-	-
84	BR	-	-
85	BR	-	-
86	V	-	-
87	LG	-	-
89	BR	-	-
90	V	-	-
92	W	-	-
93	R	-	-
94	R	-	-
95	Y	-	-
96	W	-	-
97	L	-	-
99	BR	-	-
100	BR	-	-

Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	BD18FW



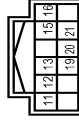
Terminal No.	Color	Wire	Signal Name [Specification]
3	SB	-	-
4	B	-	-
5	B	-	-
6	B	-	-
7	V	-	-
8	W	-	-
11	LG	-	-
12	R	-	-
13	L	-	-
14	P	-	-
16	W	-	-

Connector No.	M29
Connector Name	EXTERNAL DATA INPUT BOX
Connector Type	Typo 1554987-1



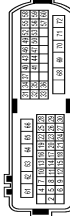
Terminal No.	Color	Wire	Signal Name [Specification]
1	G	-	-
2	W	-	-
3	R	-	-
5	SHIELD	-	-

Connector No.	M31
Connector Name	EXTERNAL DATA INPUT BOX
Connector Type	TH12FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
11	W	-	-
12	R	-	-
13	B	-	-
15	B	-	-
16	Y	-	-
19	L	-	-
20	V	-	-
21	SB	-	-

Connector No.	M33
Connector Name	WIRE TO WIRE
Connector Type	INR6MW-TS12



Terminal No.	Color	Wire	Signal Name [Specification]
2	W	-	-
4	G	-	-
4	SB	-	-
5	G	-	-
6	R	-	-
7	R	-	-
8	GR	-	-
9	GR	-	-
10	W	-	-
11	SHIELD	-	-
12	P	-	-
13	SB	-	-

14	LG	-
15	Y	-
16	Y	-
17	P	-
18	W/B	-
19	LG	-
20	V	-
21	B	-
22	EG	-
22	G	-
23	L	-
24	Y	-
25	EG	-
25	L	-
26	Y	-
27	GR	-
28	V	-
29	B	-
30	W	-
31	B	-
32	SB	-
33	L	-
34	BR	-
35	LG	-
36	W	-
37	B	-
40	P	-
41	SB	-
43	Y	-
44	EG	-
45	BR	-
46	G	-
48	V	-
50	B	-
52	BR	-
53	B	-
55	EG	-
56	LG	-
57	V	-
58	R	-
59	G	-
60	L	-
61	G	-
62	R	-
63	V	-
64	B	-
65	R	-
66	BR	-
68	P	-

JRNWC4736GB

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

69	V	-
70	W	-
71	LG	-
72	V	-

Connector No.	M64
Connector Name	WIRE TO WIRE
Connector Type	NH60MM-TS12



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	R	-
4	G	- [With DRPO]
4	SB	- [Without DRPO]
5	L	-
6	R	-
7	R	-
8	W	-
9	GR	-
10	V	-
11	Y	-
12	LG	-
13	W	-
14	W	-
16	G	-
17	B	-
18	W	-
19	B	-
20	SB	- [With DRPO]
20	SB	- [Without DRPO]
21	SHIELD	-
22	B	-
23	BG	- [Without DRPO]
23	P	- [With DRPO]
24	G	-
25	LG	-
26	BG	-
26	BR	-
27	R	-
28	SB	-
29	BG	- [Without DRPO]

29	W/B	- [With DRPO]
30	L	-
31	G	-
32	V	-
33	LG	-
34	SB	-
35	SB	-
36	G	-
37	LG	-
38	R	-
39	LG	-
40	R	-
41	B	-
42	R	-
43	BR	-
44	Y	-
45	BR	-
46	Y	-
47	SB	-
48	W	-

Connector No.	M67
Connector Name	ECM
Connector Type	RH24FGY-423-R-1H-Z



Terminal No.	Color Of Wire	Signal Name [Specification]
97	Y	ACCELERATOR PEDAL POSITION SENSOR 1
98	BR	ACCELERATOR PEDAL POSITION SENSOR 2
99	W	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
100	G	ASC2 STEERING SWITCH
101	SB	ASC2 STEERING SWITCH
102	LG	EVAP CONTROL SYSTEM PRESSURE SENSOR
103	L	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)
104	R	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)
105	L	REFRIGERANT PRESSURE SENSOR
106	P	FUEL TANK TEMPERATURE SENSOR
107	GR	SENSOR GROUND (ASC2/ASC3 STEERING SWITCH)
108	Y	TRANSMISSION RANGE SWITCH
109	BR	ENGINE SPEED SIGNAL SWITCH
110	V	ENGINE SPEED SIGNAL OUTPUT
112	V	GNDA PDIPRES/FTIPRES

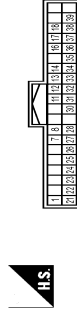
113	P	GN COMMUNICATION LINE
114	L	GN COMMUNICATION LINE
115	LG	DATA LINE COMMUNICATOR
116	LG	EVAP CANISTER VENT CONTROL VALVE
117	V	STOP LAMP SWITCH
118	SB	STOP LAMP SWITCH
119	B	ECM GROUND
120	B	ECM GROUND
121	R	POWER SUPPLY FOR ECM
122	BR	POWER SUPPLY FOR ECM
123	B	ECM GROUND
124	R	ECM GROUND
125	R	ECM GROUND
126	BG	ECM GROUND
127	B	ECM GROUND
128	B	ECM GROUND

Connector No.	M55
Connector Name	MULTIFUNCTION SWITCH
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	ILL
2	W	GRD
3	R	END-B SIGNAL
4	R	PUSH SWITCH A SIGNAL
5	V	PUSH SWITCH B SIGNAL
6	V	PUSH SWITCH C SIGNAL
7	V	ILLUMINATION CONTROL SWITCH SIGNAL
8	W	END-A SIGNAL
9	G	SELECT SWITCH SIGNAL
10	B	PUSH SWITCH B SIGNAL
11	B	SHIELD
12	L	L/R DETECTION SIGNAL

Connector No.	M67
Connector Name	COMBINATION METER
Connector Type	TH40FH-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
7	G	SECURITY SIGNAL
8	B	-
11	W	ALTERNATOR SIGNAL
12	G	LED HEADLAMP (RH) WARNING SIGNAL
13	BR	LED HEADLAMP (LH) WARNING SIGNAL
14	V	ACC POWER SUPPLY
16	V	AIR BAG SIGNAL
17	BR	METER CONTROL SWITCH GROUND
18	SB	TRIP/RESET SIGNAL
21	B	STEERING SWITCH SIGNAL GROUND
22	P	STEERING SWITCH SIGNAL A
23	W/B	STEERING SWITCH SIGNAL B
24	L	WASHER LEVEL SWITCH SIGNAL
25	LG	BRAKE FLUID LEVEL SWITCH SIGNAL
26	V	CRANKING BRAKE SWITCH SIGNAL
27	G	PASSENGER SEBELT (LH) SIGNAL
28	G	SEAT BELT (LH) SIGNAL
29	SB	NON-MANUAL MODE SIGNAL
30	SB	MANUAL MODE SIGNAL
31	G	MANUAL MODE SHIFT UP SIGNAL
32	EG	MANUAL MODE SHIFT DOWN SIGNAL
33	GR	PADDLE SHIFTER UP SIGNAL
34	EG	PADDLE SHIFTER DOWN SIGNAL
35	G	ILLUMINATION CONTROL SWITCH SIGNAL (+)
36	V	ILLUMINATION CONTROL SWITCH SIGNAL (-)
37	GR	VEHICLE SPEED SIGNAL (8-PULSE)
38	R	VEHICLE SPEED SIGNAL (2-PULSE)
39	L	VEHICLE SPEED SIGNAL (2-PULSE)

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

Connector No.	M68
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
41	L		CAN-H
42	P		CAN-L
43	B		ILLUMINATION CONTROL SIGNAL
44	Y		FUEL LEVEL SENSOR GROUND
45	W		BATTERY POWER SUPPLY
46	R		IGNITION SIGNAL
47	LG		AV COMMUNICATION SIGNAL (H)
48	SB		AV COMMUNICATION SIGNAL (L)
51	BR		FUEL LEVEL SENSOR SIGNAL
52	B		GROUND

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	R		
2	W		
3	W		
4	BR		
5	R		
6	G		
7	B		
10	V		
11	LG		
12	W		

13	G		
14	B		
16	R		
17	SHIELD		
18	G		
19	L		
21	B		
22	R		
23	V		
25	W		
26	B		
27	R		
28	GR		
29	W		
31	W		
32	L		

Connector No.	M67
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TH08FGY-TV



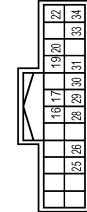
Terminal No.	Color	Wire	Signal Name [Specification]
24	SB		
25	W/B		
32	Y		
33	B		

Connector No.	M68
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 1554937-5



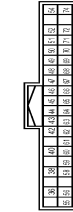
Terminal No.	Color	Wire	Signal Name [Specification]
1	G		USB GND
2	W		USE V BUS SIGNAL
3	R		USB D- SIGNAL
4	L		USB D+ SIGNAL
5	SHIELD		SHIELD

Connector No.	M100
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH24FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
16	SB		AV COMM (L)
17	P		CAN-L
19	R		DIMMER SIGNAL
20	B		REVERSE SIGNAL
22	B		GND
25	SB		
26	BR		CAMERA SWITCH SIGNAL
28	LG		AV COMM (H)
29	L		CAN-H
30	R		IGN
31	R		VEHICLE SPEED SIGNAL (6-PULSE)
33	SB		ACC
34	Y		BAT

Connector No.	M101
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
36	LG		COMPOSITE IMAGE SIGNAL (-)
38	SHIELD		SHIELD
40	SHIELD		MANUFACTURER SPECIFIC SIGNAL
42	G		SOUND SIGNAL RH (-)
43	SHIELD		SHIELD
44	L		SOUND SIGNAL LH (-)
45	W		TEL VOICE SIGNAL (-)
46	SHIELD		SHIELD
47	R		VOICE GUIDANCE SIGNAL OUTPUT (-)
48	B		VOICE GUIDANCE SIGNAL INPUT (-)
49	W		NS ON/OFF SIGNAL
50	R		MICROPHONE SIGNAL GND
51	SHIELD		SHIELD
52	SHIELD		MICROPHONE SIGNAL GND
54	W		CAMERA GND
55	SHIELD		SHIELD
56	BR		COMPOSITE IMAGE SIGNAL (+)
58	B		CAMERA IMAGE SIGNAL
59	R		AV COMM (L)
61	W		VOICE SIGNAL GND
62	B		D-VOICE SIGNAL
63	SHIELD		SHIELD
64	V		SOUND SIGNAL LH (+)
65	B		TEL VOICE SIGNAL (+)
66	SHIELD		SHIELD
67	G		VOICE GUIDANCE SIGNAL OUTPUT (+)
68	W		VOICE GUIDANCE SIGNAL INPUT (+)
69	SHIELD		SHIELD
70	G		MICROPHONE SIGNAL
71	G		MICROPHONE SIGNAL
72	L		MICROPHONE VCC
74	R		CAMERA POWER SUPPLY

JRNWC4738GB

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

Connector No.	M103
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 154487-1



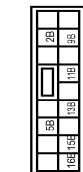
Terminal No.	Color Of Wire	Signal Name [Specification]
80	G	USB GROUND
81	W	USB V BUS SIGNAL
82	R	USB D+ SIGNAL
83	L	USB D- SIGNAL
84	SHIELD	SHIELD

Connector No.	M105
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 154487-4



Terminal No.	Color Of Wire	Signal Name [Specification]
92	W	LVDS (+)
93	B	LVDS (-)
94	SHIELD	SHIELD

Connector No.	M132
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
11B	LG	-
13B	P	-
15B	Y	-
16B	Y	-
2B	B	-
9B	Y	-

Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH40FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
11C	V	-
13C	L	-
14C	Y	-
15C	R	-
16C	R	-
17C	L	-
18C	BG	- [Without DRPO]
19C	P	- [With DRPO]
20C	W	-
21C	L	-
22C	L	-

23C	L	-
24C	LG	-
25C	SB	-
26C	W	-
27C	W	-
28C	W	-
29C	R	-
30C	R	-
31C	W	-
32C	R	-
33C	B	-
34C	W/B	-
35C	SB	-
36C	R	-
37C	W	-
38C	SB	-
39C	V	-
40C	P	-
41C	G	-
42C	P	-
43C	P	-
44C	G	-
45C	P	-
46C	G	-
47C	G	-
48C	V	-

Connector No.	M301
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.	M375
Connector Name	WIRE TO WIRE
Connector Type	GT13SC-2.1S-HU



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

Connector No.	M376
Connector Name	WIRE TO WIRE
Connector Type	GT13SCN-2.1P-HU



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

JRNWC4739GB

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

Connector No.

M386

Connector Name

ANTENNA AMP.

Connector Type

GT13SSN-L1PP-HU

1

2

HS

Terminal No.

1

Color Of Wire

-

Signal Name [Specification]

ANTENNA AMP.

Terminal No.

2

Color Of Wire

-

Signal Name [Specification]

ANTENNA AMP. ON SIGNAL

AM-FM MAIN

Connector No.

M389

Connector Name

WINDOW ANTENNA (FM SUB)

Connector Type

P01FB-A

Terminal No.

1

Color Of Wire

-

Signal Name [Specification]

WINDOW ANTENNA (FM SUB)

Terminal No.

2

Color Of Wire

-

Signal Name [Specification]

ANTENNA AMP. ON SIGNAL

AM-FM MAIN

Connector No.

M390

Connector Name

WINDOW ANTENNA (AM/FM MAIN)

Connector Type

P01FB-A

Terminal No.

1

Color Of Wire

-

Signal Name [Specification]

-

Terminal No.

2

Color Of Wire

-

Signal Name [Specification]

-

Connector No.

M394

Connector Name

AV CONTROL UNIT

Connector Type

GT13SH-2, IS-HU

Terminal No.

13

Color Of Wire

-

Signal Name [Specification]

AV CONTROL UNIT

Terminal No.

15

Color Of Wire

-

Signal Name [Specification]

AV CONTROL UNIT

Terminal No.

16

Color Of Wire

-

Signal Name [Specification]

AV CONTROL UNIT

HS

Terminal No.

176

Color Of Wire

-

Signal Name [Specification]

SATELLITE RADIO ANTENNA SIGNAL

Terminal No.

177

Color Of Wire

-

Signal Name [Specification]

SATELLITE RADIO ANTENNA SIGNAL

SHIELD

Connector No.

M414

Connector Name

AV CONTROL UNIT

Connector Type

FAKRA

Terminal No.

1

Color Of Wire

-

Signal Name [Specification]

AV CONTROL UNIT

Terminal No.

2

Color Of Wire

-

Signal Name [Specification]

AV CONTROL UNIT

Connector No.

M415

Connector Name

WIRE TO WIRE

Connector Type

GT16C-IPP-HU

Terminal No.

1

Color Of Wire

-

Signal Name [Specification]

WIRE TO WIRE

Terminal No.

2

Color Of Wire

-

Signal Name [Specification]

WIRE TO WIRE

Connector No.

M416

Connector Name

WIRE TO WIRE

Connector Type

GT16C-IPP-HU

Terminal No.

1

Color Of Wire

-

Signal Name [Specification]

WIRE TO WIRE

Terminal No.

2

Color Of Wire

-

Signal Name [Specification]

WIRE TO WIRE

Connector No.

M417

Connector Name

WIRE TO WIRE

Connector Type

GT16C-IPP-HU

Terminal No.

1

Color Of Wire

-

Signal Name [Specification]

WIRE TO WIRE

Terminal No.

2

Color Of Wire

-

Signal Name [Specification]

WIRE TO WIRE

JRNWC4740GB

INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

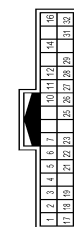
INFINITI INTOUCH (BASE AUDIO WITHOUT NAVIGATION)

Connector No.	M419
Connector Name	SATELLITE RADIO ANTENNA
Connector Type	GT18C-1PP-RU



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

Connector No.	R3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	R	--	--
2	GR	--	--
3	W	--	--
4	BR	--	--
5	R	--	--
6	G	--	--
7	B	--	--
10	BR	--	--
11	SB	--	--
12	GR	--	--
14	B	--	--
16	V	--	--
17	SHIELD	--	--
18	R	--	--
19	L	--	--
21	LG	--	--
22	V	--	--

23	GR	--	--
28	W	--	--
29	B	--	--
27	BR	--	--
26	RG	--	--
28	RG	--	--
31	W	--	--
32	L	--	--

Connector No.	R12
Connector Name	MICROPHONE
Connector Type	A09FW



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

JRNWC4741GB

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

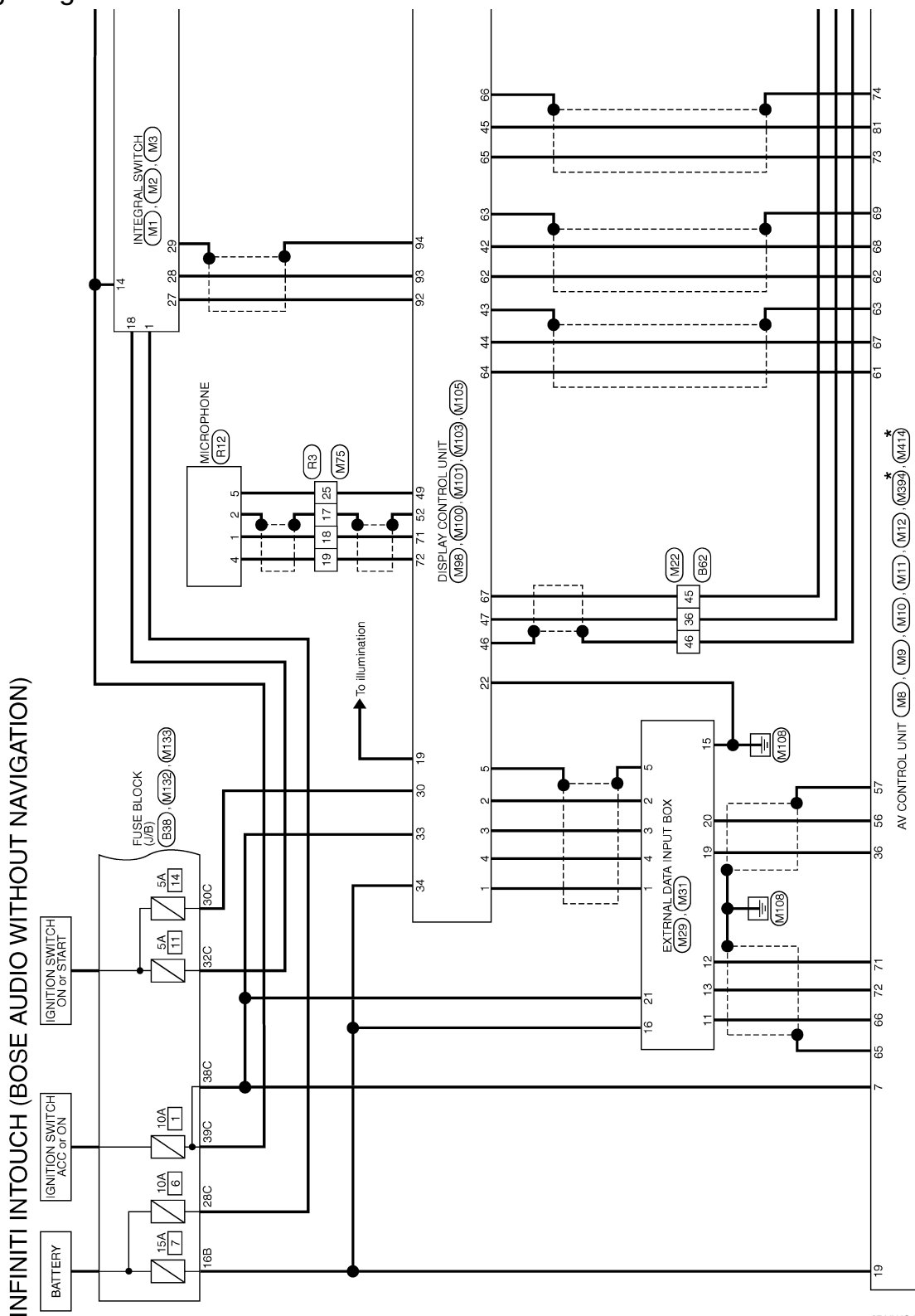
< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Wiring Diagram

INFOID:000000009728928



*: This connector is not shown in "Harness Layout".

2013/05/17

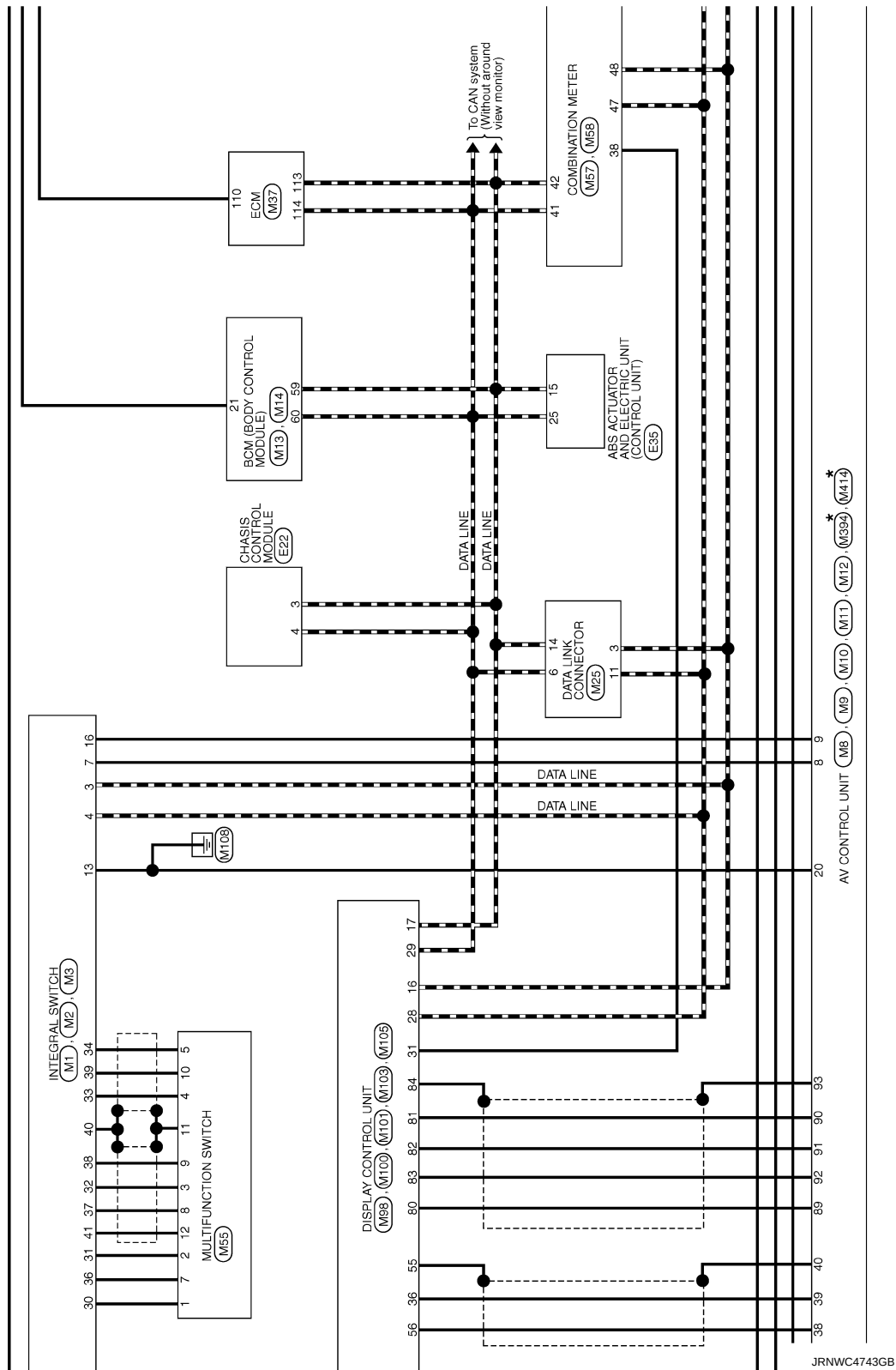
JRNWC4742GB

AV

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

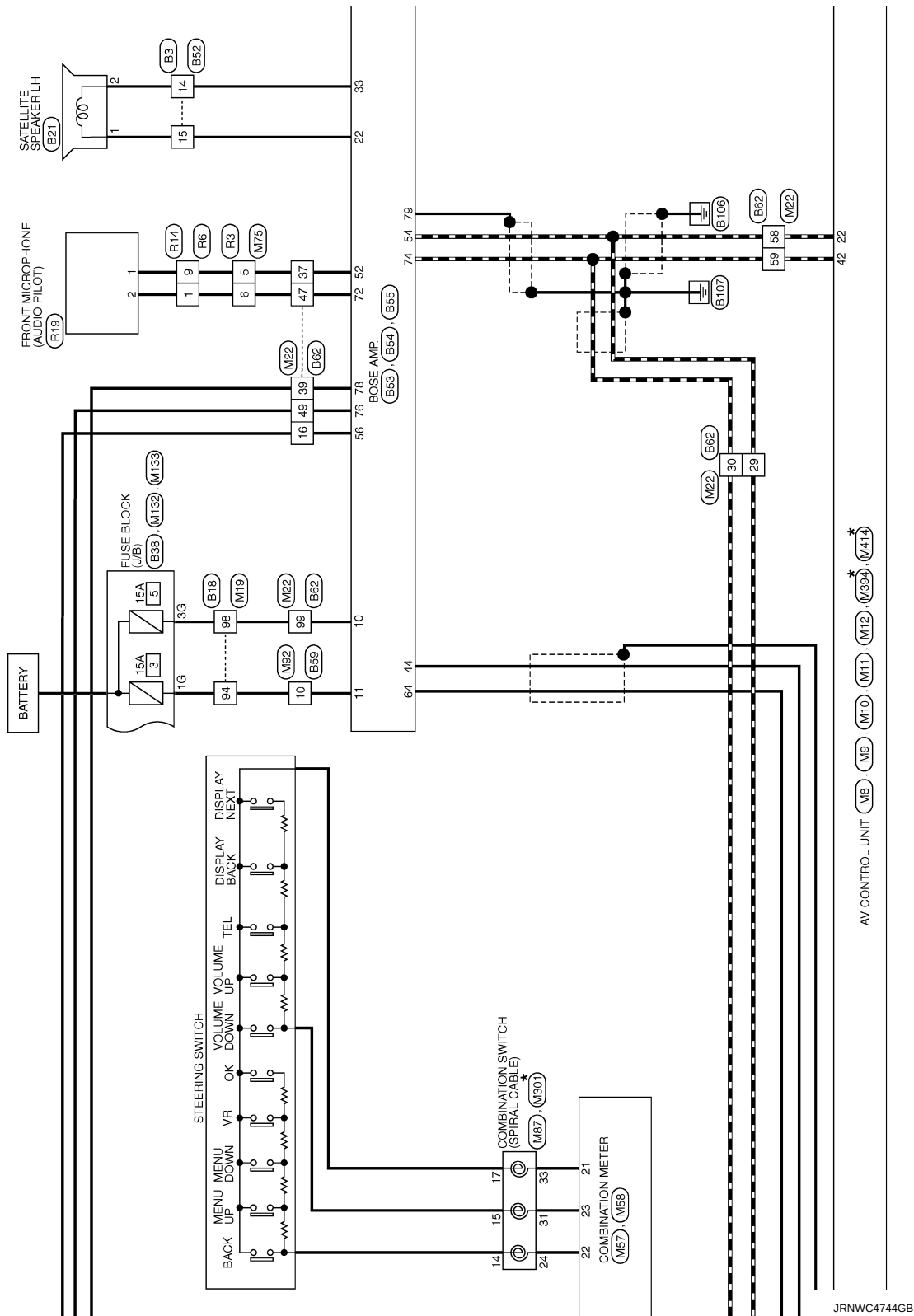


JRNWC4743GB

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]



JRNWC4744GB

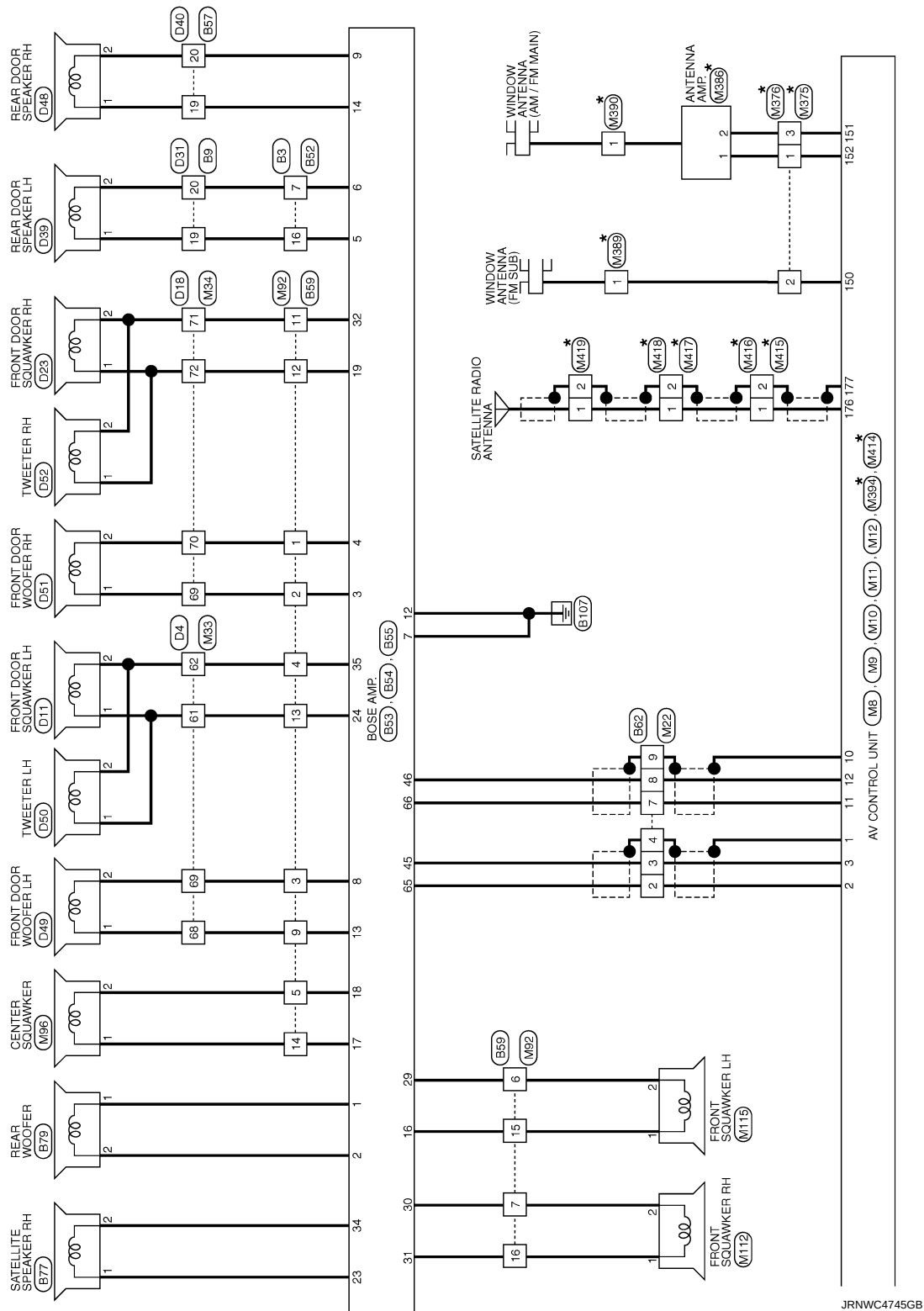
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

AV

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]



JRNWC4745GB

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

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

7	16	15	14	1	3	8



Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	12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INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

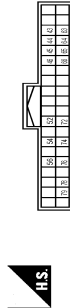
INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Connector No.	BS3
Connector Name	BOSE AMP.
Connector Type	SGA12FR-SJA2



24	G	SOUND SIGNAL FRONT LH (+)
25	V	SOUND SIGNAL FRONT SQUAWKER LH (-)
30	L	SOUND SIGNAL FRONT SQUAWKER RH (-)
31	P	SOUND SIGNAL FRONT SQUAWKER RH (+)
32	B	SOUND SIGNAL FRONT RH (-)
33	B	SOUND SIGNAL SATELLITE SPEAKER LH (-)
34	P	SOUND SIGNAL SATELLITE SPEAKER RH (-)
35	R	SOUND SIGNAL FRONT LH (-)

Connector No.	BS5
Connector Name	BOSE AMP.
Connector Type	TH48FW-H4



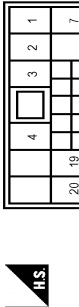
Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	SOUND SIGNAL REAR WOOFER (+)
2	W	SOUND SIGNAL REAR WOOFER (-)
3	L	SOUND SIGNAL FRONT DOOR WOOFER RH (+)
4	Y	SOUND SIGNAL FRONT DOOR WOOFER RH (-)
5	BR	SOUND SIGNAL REAR DOOR SPEAKER LH (+)
6	R	SOUND SIGNAL REAR DOOR SPEAKER LH (-)
7	B	SOUND SIGNAL FRONT DOOR WOOFER LH (-)
8	V	SOUND SIGNAL REAR DOOR SPEAKER RH (-)
9	P	SOUND SIGNAL REAR DOOR SPEAKER RH (+)
10	BR	BAT
11	GR	BAT
12	B	GND
13	P	SOUND SIGNAL FRONT DOOR WOOFER LH (+)
14	L	SOUND SIGNAL REAR DOOR SPEAKER RH (+)

Connector No.	BS4
Connector Name	BOSE AMP.
Connector Type	SGA18FR-SGA4



Terminal No.	Color Of Wire	Signal Name [Specification]
16	P	SOUND SIGNAL FRONT SQUAWKER LH (+)
17	BR	SOUND SIGNAL CENTER SQUAWKER (-)
18	GR	SOUND SIGNAL CENTER SQUAWKER (+)
19	W	SOUND SIGNAL FRONT RH (+)
22	W	SOUND SIGNAL SATELLITE SPEAKER LH (+)
23	L	SOUND SIGNAL SATELLITE SPEAKER RH (+)

Connector No.	BS7
Connector Name	WIRE TO WIRE
Connector Type	NS10FW-CS10



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	W	-
3	R	-
4	V	-
7	B	-
19	L	-
20	P	-

Connector No.	BS9
Connector Name	WIRE TO WIRE
Connector Type	NS10FW-CS



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

15	P	-
19	P	-

Connector No.	BS2
Connector Name	WIRE TO WIRE
Connector Type	TH88FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	R	- [With BOSE system]
4	SHIELD	- [Without BOSE system]
5	G	-
6	W	-
7	BR	- [Without BOSE system]
8	W	- [With BOSE system]
9	B	- [With BOSE system]
10	SHIELD	- [Without BOSE system]
11	V	-
12	Y	-
13	R	-
14	GR	-
15	BR	-
16	V	-
17	P	-
18	L	-
19	R	-
20	GR	-
21	R	-
22	P	-
23	W	-
24	V	-
25	SB	-
26	G	-
29	P	-
30	LG	-
36	R	-

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

37	R	-
38	W	-
39	W	-
40	W	-
41	W	-
42	W	-
43	G	-
44	SHIELD	-
45	G	-
46	BG	-
47	G	-
48	BG	-
49	G	-
50	Y	-
51	Y	-
52	Y	-
53	R	-
54	GR	-
55	R	-
56	P	-
57	LG	-
58	P	-
59	LG	-
60	P	-
61	W	-
62	W	-
63	W	-
64	LG	-
65	L	-
66	P	-
67	P	-
68	P	-
69	P	-
70	R	-
71	R	-
72	G	-
73	SHIELD	-
74	GR	-
75	GR	-
76	GR	-
77	GR	-
78	GR	-
79	GR	-
80	GR	-
81	GR	-
82	GR	-
83	R	-
84	R	-
85	Y	-
86	W	-
87	LG	-
88	LG	-
89	LG	-
90	W	-
91	W	-
92	W	-
93	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
98	BR	-
99	BR	-
100	BR	-

Connector No.	B77
Connector Name	SATELLITE SPEAKER RH
Connector Type	TK02FBR



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

Connector No.	B79
Connector Name	REAR WOOFER
Connector Type	NS02FW-LG



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

Connector No.	D4
Connector Name	WIRE TO WIRE
Connector Type	NH02FW-TS12



Terminal No.	Color Of Wire	Signal Name [Specification]
2	R	- [With DRPO]
3	R	- [Without DRPO]
4	GR	- [With DRPO]
5	R	- [Without DRPO]
6	Y	- [With DRPO]
7	LG	- [Without DRPO]
8	G	-
9	GR	-
10	Y	-
11	SHIELD	-
12	BG	-
13	L	-
14	B	-
15	GR	-
16	GR	-
17	R	-
18	R	-
19	R	-
20	W	-
21	LG	-
22	W	-
23	L	-
24	G	-
25	BR	-
26	R	-
27	BR	-
28	V	-
29	B	-
30	P	-
31	P	-
32	Y	-
33	BR	-
34	L	-
35	R	-
36	GR	-

Connector No.	D11
Connector Name	FRONT DOOR SQUAWKER LH
Connector Type	TK02FBR



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

JRNWC4748GB

A
B
C
D
E
F
G
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I
J
K
L
M
N
O
P

AV

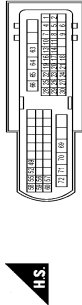
INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Connector No.	D18
Connector Name	WIRE TO WIRE
Connector Type	NS02FW-TS12



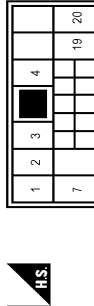
44	Y	-
45	BR	-
46	GR	-
47	W	-
48	L	-
49	BG	-
50	Y	-

Connector No.	D23
Connector Name	FRONT DOOR SQUAWKER RH
Connector Type	TS02FBR



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

Connector No.	D31
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS10



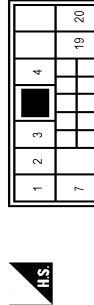
Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	P	-
3	W	-
4	V	-
5	Y	-
6	R	-
7	B	-
8	P	-
9	R	-
10	BR	-
11	L	-

Connector No.	D39
Connector Name	REAR DOOR SPEAKER LH
Connector Type	NS02FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	- [With BOSE system]
2	R	- [Without BOSE system]
3	BR	- [With BOSE system]
4	BR	- [Without BOSE system]

Connector No.	D49
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS10



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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	- [With BOSE system]
2	R	- [Without BOSE system]
3	BR	- [With BOSE system]
4	BR	- [Without BOSE system]

Connector No.	D49
Connector Name	FRONT DOOR WOOFER LH
Connector Type	NS02FW-CS



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

JRNWC4749GB

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

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[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

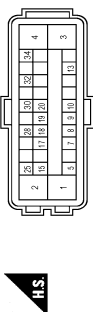
Connector No.	D50
Connector Name	TWEETER LH
Connector Type	TK02FB



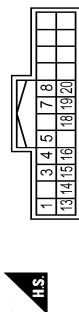
Connector No.	D52
Connector Name	TWEETER RH
Connector Type	TK02FB



Connector No.	E55
Connector Name	ABS ACTUATOR AND ELECTRIC ANT CONTROL UNIT
Connector Type	SA220FB-SJ24-U



Connector No.	M1
Connector Name	INTEGRAL SWITCH
Connector Type	TH24FW-NH



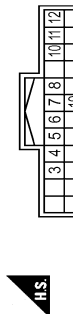
Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	BG	-

Connector No.	D51
Connector Name	FRONT DOOR WOOFER RH
Connector Type	NS02FW-CS



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

Connector No.	E22
Connector Name	CHASSIS CONTROL MODULE
Connector Type	TH24FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	G	GROUND
3	G	VALVE BATTERY
4	Y	MOTOR BATTERY
5	V	STOP LAMP SW SIGNAL [With GCD]
6	GR	STOP LAMP SW SIGNAL [With ASCD]
7	GR	RR LH WHEEL SENSOR SIGNAL
8	G	RR LH WHEEL SENSOR POWER SUPPLY
9	BR	FR RH WHEEL SENSOR SIGNAL
10	GR	FR RH WHEEL SENSOR POWER SUPPLY
11	R	VACUUM SENSOR SIGNAL
12	P	CAN-L [Without Gateway]
13	R	CAN-L [With Gateway]
14	R	RR RH WHEEL SENSOR SIGNAL
15	R	RR RH WHEEL SENSOR POWER SUPPLY
16	Y	RR RH WHEEL SENSOR SIGNAL
17	Y	RR RH WHEEL SENSOR POWER SUPPLY
18	Y	RR RH WHEEL SENSOR SIGNAL
19	Y	RR RH WHEEL SENSOR POWER SUPPLY
20	BR	FR LH WHEEL SENSOR SIGNAL
21	BR	FR LH WHEEL SENSOR POWER SUPPLY
22	L	CAN-H
23	L	VDC OFF SW SIGNAL
24	G	VDC OFF SW SIGNAL
25	R	VDC OFF SW SIGNAL
26	R	VDC OFF SW SIGNAL
27	R	VDC OFF SW SIGNAL
28	R	VDC OFF SW SIGNAL
29	R	VDC OFF SW SIGNAL
30	R	VDC OFF SW SIGNAL
31	R	VDC OFF SW SIGNAL
32	R	VDC OFF SW SIGNAL
33	R	VDC OFF SW SIGNAL
34	G	VACUUM SENSOR GROUND

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

Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	CAN-L [Without Gateway]
4	R	CAN-L [With Gateway]
5	V	DRIVE MODE SELECT SW (UP)
6	G	DRIVE MODE SELECT SW (DOWN)
7	W	CHASSIS COMM-L
8	W	CHASSIS COMM-L
9	W	CHASSIS COMM-L
10	G	IGN
11	L	CHASSIS COMM-H
12	B	GROUND
13	L	CHASSIS COMM-H

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	G	GROUND
3	G	VALVE BATTERY
4	Y	MOTOR BATTERY
5	V	STOP LAMP SW SIGNAL [With GCD]
6	GR	STOP LAMP SW SIGNAL [With ASCD]
7	GR	RR LH WHEEL SENSOR SIGNAL
8	G	RR LH WHEEL SENSOR POWER SUPPLY
9	BR	FR RH WHEEL SENSOR SIGNAL
10	GR	FR RH WHEEL SENSOR POWER SUPPLY
11	R	VACUUM SENSOR SIGNAL
12	P	CAN-L [Without Gateway]
13	R	CAN-L [With Gateway]
14	R	RR RH WHEEL SENSOR SIGNAL
15	R	RR RH WHEEL SENSOR POWER SUPPLY
16	Y	RR RH WHEEL SENSOR SIGNAL
17	Y	RR RH WHEEL SENSOR POWER SUPPLY
18	Y	RR RH WHEEL SENSOR SIGNAL
19	Y	RR RH WHEEL SENSOR POWER SUPPLY
20	BR	FR LH WHEEL SENSOR SIGNAL
21	BR	FR LH WHEEL SENSOR POWER SUPPLY
22	L	CAN-H
23	L	VDC OFF SW SIGNAL
24	G	VDC OFF SW SIGNAL
25	R	VDC OFF SW SIGNAL
26	R	VDC OFF SW SIGNAL
27	R	VDC OFF SW SIGNAL
28	R	VDC OFF SW SIGNAL
29	R	VDC OFF SW SIGNAL
30	R	VDC OFF SW SIGNAL
31	R	VDC OFF SW SIGNAL
32	R	VDC OFF SW SIGNAL
33	R	VDC OFF SW SIGNAL
34	G	VACUUM SENSOR GROUND

Connector No.	M2
Connector Name	INTEGRAL SWITCH
Connector Type	Type 1554887-6



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	G	GROUND
3	G	VALVE BATTERY
4	Y	MOTOR BATTERY
5	V	STOP LAMP SW SIGNAL [With GCD]
6	GR	STOP LAMP SW SIGNAL [With ASCD]
7	GR	RR LH WHEEL SENSOR SIGNAL
8	G	RR LH WHEEL SENSOR POWER SUPPLY
9	BR	FR RH WHEEL SENSOR SIGNAL
10	GR	FR RH WHEEL SENSOR POWER SUPPLY
11	R	VACUUM SENSOR SIGNAL
12	P	CAN-L [Without Gateway]
13	R	CAN-L [With Gateway]
14	R	RR RH WHEEL SENSOR SIGNAL
15	R	RR RH WHEEL SENSOR POWER SUPPLY
16	Y	RR RH WHEEL SENSOR SIGNAL
17	Y	RR RH WHEEL SENSOR POWER SUPPLY
18	Y	RR RH WHEEL SENSOR SIGNAL
19	Y	RR RH WHEEL SENSOR POWER SUPPLY
20	BR	FR LH WHEEL SENSOR SIGNAL
21	BR	FR LH WHEEL SENSOR POWER SUPPLY
22	L	CAN-H
23	L	VDC OFF SW SIGNAL
24	G	VDC OFF SW SIGNAL
25	R	VDC OFF SW SIGNAL
26	R	VDC OFF SW SIGNAL
27	R	VDC OFF SW SIGNAL
28	R	VDC OFF SW SIGNAL
29	R	VDC OFF SW SIGNAL
30	R	VDC OFF SW SIGNAL
31	R	VDC OFF SW SIGNAL
32	R	VDC OFF SW SIGNAL
33	R	VDC OFF SW SIGNAL
34	G	VACUUM SENSOR GROUND

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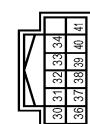
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[INFINITI INTOUCH]

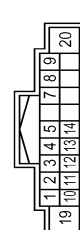
INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Connector No.	M8
Connector Name	INTEGRAL SWITCH
Connector Type	TH12FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
30	DR	W	ILL
31	W	R	GND
32	R	R	END-B SIGNAL
33	R	R	PUSH SWITCH A SIGNAL
34	W	W	PUSH SWITCH C SIGNAL
36	V	V	ILLUMINATION CONTROL SIGNAL
37	W	W	END-A SIGNAL
38	G	G	SELECT SWITCH SIGNAL
39	B	B	PUSH SWITCH B SIGNAL
40	B	B	SHIELD
41	L	L	L/R DETECTION SIGNAL

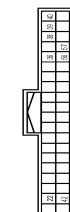
Connector No.	M8
Connector Name	AV CONTROL UNIT
Connector Type	TH18FW-CS2



Terminal No.	Color	Wire	Signal Name [Specification]
1	SHIELD	SHIELD	SHIELD
2	R	R	SOUND SIGNAL FRONT LH (+)
3	B	B	SOUND SIGNAL FRONT LH (-)
4	LG	LG	SOUND SIGNAL REAR LH (+)
5	SB	SB	SOUND SIGNAL REAR LH (-)
7	SB	SB	ACC
8	W/B	W/B	DISK EJECT SIGNAL
9	B/G	B/G	DISK EJECT SIGNAL GND
10	SHIELD	SHIELD	SHIELD

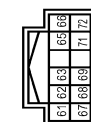
11	LG	W	AUX SOUND SIGNAL RH (+)
12	P	L	SOUND SIGNAL FRONT RH (-)
13	L	G	SOUND SIGNAL REAR RH (+)
14	P	SHIELD	SHIELD
19	Y	R	BAT
20	B	B	GND

Connector No.	M9
Connector Name	AV CONTROL UNIT
Connector Type	TH140FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
22	SB	B	AV COM1 (L)
36	L	L	AUX IMAGE SIGNAL (+)
38	BR	G	COMPOSITE IMAGE SIGNAL (+)
39	LG	W	COMPOSITE IMAGE SIGNAL (-)
40	SHIELD	SHIELD	SHIELD
42	LG	R	AV COM1 (R)
43	SHIELD	SHIELD	AUX IMAGE SIGNAL (-)
47	SHIELD	SHIELD	SHIELD

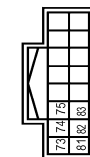
Connector No.	M10
Connector Name	AV CONTROL UNIT
Connector Type	TH12FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
61	V	V	SOUND SIGNAL LH (+)
62	R	R	SOUND SIGNAL RH (+)
63	SHIELD	SHIELD	SHIELD
65	SHIELD	SHIELD	SHIELD

66	W	W	AUX SOUND SIGNAL LH
67	L	L	SOUND SIGNAL LH (-)
68	G	G	SOUND SIGNAL RH (-)
69	SHIELD	SHIELD	SHIELD
71	R	R	AUX SOUND SIGNAL GND
72	B	B	AUX SOUND SIGNAL RH

Connector No.	M11
Connector Name	AV CONTROL UNIT
Connector Type	TH16FW-NH



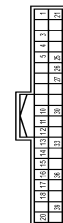
Terminal No.	Color	Wire	Signal Name [Specification]
73	B	B	TEL VOICE SIGNAL (+)
74	SHIELD	SHIELD	SHIELD
75	G	G	VOICE GUIDANCE SIGNAL (+)
81	W	W	TEL VOICE SIGNAL (-)
82	SHIELD	SHIELD	SHIELD
83	R	R	VOICE GUIDANCE SIGNAL (-)

Connector No.	M12
Connector Name	AV CONTROL UNIT
Connector Type	Type 1554897-1



Terminal No.	Color	Wire	Signal Name [Specification]
88	G	G	USB GND
90	W	W	USB V BUS SIGNAL
91	R	R	USB D- SIGNAL
92	L	L	USB D+ SIGNAL
93	SHIELD	SHIELD	SHIELD

Connector No.	M13
Connector Name	BOM (BODY CONTROL MODULE)
Connector Type	TH140FC-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	R	R	PUSH SW
3	Y	Y	SENS DIMB SW
4	EG	EG	OPTICAL SENSOR
5	LG	LG	-
10	W	W	COMBI SW OUTPUT 5
11	SB	SB	COMBI SW OUTPUT 4
12	L	L	COMBI SW OUTPUT 3
13	G	G	COMBI SW OUTPUT 2
14	P	P	COMBI SW OUTPUT 1
15	G	G	ONE TOUCH UNLK SENS (DR)
16	G	G	ONE TOUCH UNLK SENS (PASS)
17	P	P	RECEIVER SENSOR GND
18	L	L	SECURITY IND LAMP CONT
20	R	R	PERMIT SW
21	SB	SB	STOP LAMP SW
25	R	R	STOP LAMP SW2
26	R	R	EXTENDED STORAGE FUSE SW
27	P	P	STOP LAMP SW
30	W	W	DR DOOR UNLK SENS
33	V	V	TRILLID OP CANCEL SW
36	G	G	HAZARD SW
39	BR	BR	P/N POSITION

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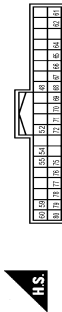
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[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Connector No.	M14
Connector Name	BDM (BODY CONTROL MODULE)
Connector Type	1144FEB-M4



Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS16-TM4

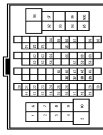


Terminal No.	Color	Wire	Signal Name [Specification]
8	R		PUSH-BTN IGN SW ILL PWR
52	G		COMBI SW
53	V		COMBI SW
54	R		COMBI SW
55	R		RAIN SENSOR
59	P		CAN-H
60	L		CAN-L
61	G		REAR WINDOW DEF RLY CONT
62	R		STARTER RLY CONT
64	V		I-KEY WARN BUZZER
65	B		OUTS HD LAMP CONT
66	B		BLOWER FAN RLY CONT
67	W/B		IGN RLYAY (P/B) CONT
68	R		DIMMER
69	GR		A.T. SHIFT SELECT PWR SPLY
70	B		IGN RLYAY UP/DN L/R CONT
71	G		DOOR LOCK SW
72	SB		PASS DOOR LOCK SW
75	BR		COMBI SW INPUT 3
76	BG		COMBI SW INPUT 4
77	V		COMBI SW INPUT 3
78	Y		COMBI SW INPUT 2
79	LG		COMBI SW INPUT 1
80	L		TR LID OPNIE SW

Terminal No.	Color	Wire	Signal Name [Specification]
1	Y		
2	G		
3	SB		
4	BR		
6	R		
7	W		
8	V		
9	BR		
10	P		
11	BR		
12	LG		
13	GR		
24	Y		
25	W		
31	BR		
32	P		
33	B		
34	V		
35	P		
36	W		
37	SB		
38	LG		
40	P		
41	G		
42	BR		
43	BR		
44	BR		
46	BG		
51	Y		
52	V		
53	R		
55	R		
57	W		
58	V		
59	BG		
62	BG		



Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS16-TM4



Terminal No.	Color	Wire	Signal Name [Specification]
1	LG		
2	L		
3	R		
4	SHIELD		
5	G		
9	BG		
10	V		
8	SHIELD		
10	V		
11	GR		
12	V		
13	LG		

14	LG		
15	D		
16	SB		
17	V		
18	Y		
19	L		
20	GR		
21	R		
22	W		
23	L		
24	V		
25	LG		
26	GR		
29	SB		
30	GR		
37	R		
38	W		
39	V		
45	G		
46	SHIELD		
47	G		
48	BR		
49	SB		
52	Y		
53	R		
54	GR		
57	R		
58	SB		
59	LG		
62	V		
63	L		
64	W		
66	R		
68	L		
69	P		
71	R		
72	G		
73	SHIELD		
76	V		
84	BR		
85	BR		
87	LG		
89	BR		
90	V		
92	W		
93	R		
94	R		

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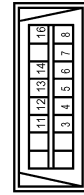
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INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

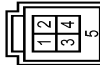
Terminal No.	Color Of Wire	Signal Name [Specification]
86	Y	-
87	W	-
88	L	USB GND
89	BR	USB VBUS SIGNAL
90	BR	USB D+ SIGNAL
100	BR	SHIELD

Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	BD18FW



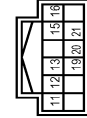
Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	AV COMM (L)
4	B	EARTH
5	B	EARTH
6	L	CAN-H
7	V	KLINE
8	W	IGN SW
11	LG	AV COMM (H)
12	R	CAN-L
13	L	CAN-H
14	P	COM-L
16	W	POWER

Connector No.	M29
Connector Name	EXTERNAL DATA INPUT BOX
Connector Type	Type 1554887-1



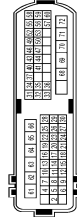
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	USB GND
2	W	USB VBUS SIGNAL
3	R	USB D- SIGNAL
4	L	USB D+ SIGNAL
5	SHIELD	SHIELD

Connector No.	M31
Connector Name	EXTERNAL DATA INPUT BOX
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
11	W	AUX SOUND SIGNAL LH
12	R	AUX SOUND SIGNAL GND
13	B	AUX SOUND SIGNAL RH
15	B	GND
16	Y	BAT
18	L	AUX IMAGE SIGNAL (+)
20	V	AUX IMAGE SIGNAL (-)
21	SB	AGC

Connector No.	M33
Connector Name	WIRE TO WIRE
Connector Type	NH80MM-TS12

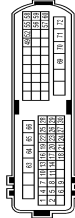


Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
4	G	- [With DRPO]
4	SB	- [Without DRPO]

Terminal No.	Color Of Wire	Signal Name [Specification]
5	G	-
6	R	-
7	R	-
8	GR	-
9	GR	-
10	W	-
11	SHIELD	-
12	P	-
13	SB	-
14	LG	-
15	Y	-
16	Y	-
17	P	-
18	W/B	- [With DRPO]
19	LY	- [Without DRPO]
20	V	-
21	B	-
22	B/G	- [Without DRPO]
22	G	- [With DRPO]
23	L	-
24	Y	-
25	B/G	- [Without DRPO]
25	L	- [With DRPO]
26	Y	-
27	GR	-
28	V	-
29	B	-
30	B	-
31	B	-
32	SB	-
33	L	-
34	BR	-
35	LG	-
36	W	-
37	B	-
40	P	-
41	SB	-
43	Y	-
44	B/G	-
46	BR	-
47	G	-
48	B	-
50	B	-
52	BR	-
53	B	-
55	B/G	-
56	LG	-
57	V	-
58	R	-

Terminal No.	Color Of Wire	Signal Name [Specification]
59	G	-
60	L	-
61	G	-
62	R	-
63	V	-
64	B	-
65	R	-
66	BR	-
68	P	-
69	V	-
70	W	-
71	LG	-
72	V	-

Connector No.	M24
Connector Name	WIRE TO WIRE
Connector Type	NH80MM-TS12



Terminal No.	Color Of Wire	Signal Name [Specification]
2	R	-
2	G	- [With DRPO]
4	G	- [Without DRPO]
4	SB	-
5	L	-
6	R	-
7	R	-
8	W	-
9	GR	-
10	Y	-
11	Y	-
13	LG	-
14	W	-
15	G	-
17	B	-
18	W	-
19	B	-
20	SB	- [With DRPO]
20	Y	- [Without DRPO]
21	SHIELD	-
22	B	-

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

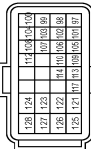
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[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Terminal No.	Color Of Wire	Signal Name [Specification]
23	BG	- [Without DRPO]
24	G	- [With DRPO]
25	LG	-
26	BG	- [Without DRPO]
27	R	- [With DRPO]
28	SB	-
29	BG	- [Without DRPO]
30	W/B	- [With DRPO]
39	L	CAN COMMUNICATION LINE
49	P	DATA LINK CONNECTOR
52	V	EVAP CANISTER VENT CONTROL VALVE
55	B	STOP LAMP SWITCH
56	SB	ECM GROUND
57	G	ECM GROUND
58	G	POWER SUPPLY FOR ECM
59	LG	BRAKE PEDAL POSITION SWITCH
60	R	ECM GROUND
63	B	ECM GROUND
64	R	-
65	BR	-
66	Y	-
69	BR	-
70	Y	-
71	SB	-
72	W	-

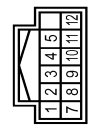
Connector No.	M57
Connector Name	ECM
Connector Type	RH24FCV-R2E-R-LH-Z



Terminal No.	Color Of Wire	Signal Name [Specification]
31	BR	ACCELERATOR PEDAL POSITION SENSOR 1
38	BR	ACCELERATOR PEDAL POSITION SENSOR 2
39	W	SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1)
100	G	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
101	SB	ASC/D STEERING SWITCH
101	SB	ECU STEERING SWITCH
102	LG	EVAP CONTROL SYSTEM PRESSURE SENSOR

Terminal No.	Color Of Wire	Signal Name [Specification]
103	L	SENSOR POWER SUPPLY (PASSENGER SEAT BELT WARNING SIGNAL)
104	L	SENSOR GROUND (PASSENGER SEAT BELT WARNING SIGNAL)
105	L	REFRIGERANT PRESSURE SENSOR
106	P	FUEL TANK TEMPERATURE SENSOR
107	GR	-
108	Y	SENSOR GROUND (ASC/D/ECU STEERING SWITCH)
109	BR	TRANSMISSION RANGE SWITCH
110	V	ENGINE SPEED SIGNAL OUTPUT
112	V	GNDA PD/PRES/F/PRES
113	P	CAN COMMUNICATION LINE
114	L	CAN COMMUNICATION LINE
117	V	DATA LINK CONNECTOR
121	LG	EVAP CANISTER VENT CONTROL VALVE
122	SB	STOP LAMP SWITCH
123	B	ECM GROUND
124	B	ECM GROUND
125	R	POWER SUPPLY FOR ECM
126	BG	BRAKE PEDAL POSITION SWITCH
127	B	ECM GROUND
128	B	ECM GROUND

Connector No.	M55
Connector Name	MULTIFUNCTION SWITCH
Connector Type	TH12FW-NH



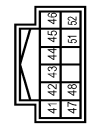
Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	ILL
2	W	GND
3	R	END-C-B SIGNAL
4	R	PUSH SWITCH A SIGNAL
5	W	PUSH SWITCH C SIGNAL
7	V	ILLUMINATION CONTROL SIGNAL
8	W	END-C-A SIGNAL
9	G	PUSH SWITCH B SIGNAL
11	B	SHIELD SIGNAL
12	L	L/R DETECTION SIGNAL

Connector No.	M57
Connector Name	COMBINATION METER
Connector Type	TH146FW-NH



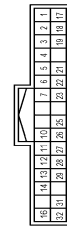
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	B	SECURITY SIGNAL
8	B	-
11	W	ALTERNATOR SIGNAL
12	G	LED HEADLAMP (RH) WARNING SIGNAL
13	BR	LED HEADLAMP (LH) WARNING SIGNAL
14	V	A/C POWER SUPPLY
16	V	AIR BAG SIGNAL
17	BR	METER CONTROL SWITCH GROUND
18	SB	TRIP/RESET SIGNAL
21	B	STEERING SWITCH SIGNAL GROUND
22	P	STEERING SWITCH SIGNAL A
23	W/B	STEERING SWITCH SIGNAL B
24	L	WASHER LEVEL SWITCH SIGNAL
25	LG	BRAKE FLUID LEVEL SWITCH SIGNAL
26	G	WASHER FLUID LEVEL SWITCH SIGNAL
27	G	PASSENGER SEAT BELT WARNING SIGNAL
28	W	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
30	SB	MANUAL MODE SIGNAL
31	G	NON-MANUAL MODE SIGNAL
32	BG	MANUAL MODE SHIFT UP SIGNAL
33	GR	MANUAL MODE SHIFT DOWN SIGNAL
34	BG	PADDLE SHIFTER UP SIGNAL
35	G	PADDLE SHIFTER DOWN SIGNAL
36	V	ILLUMINATION CONTROL SWITCH SIGNAL (+)
37	GR	ILLUMINATION CONTROL SWITCH SIGNAL (-)
38	R	VEHICLE SPEED SIGNAL (8-PULSE)
39	L	VEHICLE SPEED SIGNAL (2-PULSE)

Connector No.	M58
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CAN-H
42	B	GROUND
43	B	ILLUMINATION CONTROL SIGNAL
44	Y	FUEL LEVEL SENSOR GROUND
45	W	BATTERY POWER SUPPLY
46	R	IGNITION SIGNAL
47	LG	AV COMMUNICATION SIGNAL (H)
48	SB	AV COMMUNICATION SIGNAL (L)
51	BR	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	W	-
3	W	-
5	BR	-
6	G	-
7	B	-
10	V	-
11	LG	-
12	W	-

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Terminal No.	13	G	
Wire	B		
Color	B		
Signal Name	WIRE TO WIRE		
Connector No.	16		
Connector Name	NS18MW-GS		
Connector Type	17	SHIELD	
Terminal No.	18	G	
Wire	L		
Color	L		
Signal Name			
Connector No.	21	B	
Connector Name	22	R	
Connector Type	23	V	
Terminal No.	25	W	
Wire	B		
Color	B		
Signal Name			
Connector No.	27	R	
Connector Name	28	GR	
Connector Type	29	W	
Terminal No.	32	L	
Wire			
Color			
Signal Name			



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

Connector No.	M68
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Trico ISS4807-5



1	2	3	4	5

Terminal No.	Color	Wire	Signal Name [Specification]
1	GR		
2	BR		
3	V		
4	R		
5	GR		
6	V		
7	L		
9	P		
10	GR		
11	SB		
12	W		
13	G		
14	BR		
15	P		
16	LG		



23	24	31	32	33

Terminal No.	Color	Wire	Signal Name [Specification]
1	W		USB GND
2	W		USB V BUS SIGNAL
3	R		USB D- SIGNAL
4	L		USB D+ SIGNAL
5	SHIELD		

Connector No.	M100
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH24FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
24	P		
25	SB		
31	W/B		
32	Y		
33	B		



2	1

Terminal No.	Color	Wire	Signal Name [Specification]
16	SB		AV COMM (L)
17	P		CAH-L
19	R		DIMMER SIGNAL
20	BR		REVERSE SIGNAL
22	B		GND
25	SB		
28	BR		CAMERA SWITCH SIGNAL
29	LG		AV COMM (R)
30	CO		COMMON
31	R		VEHICLE SPEED SIGNAL (8-PULSE)
33	SB		ACC
34	Y		BAT

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

Connector No.	M101
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH46FW-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Terminal No.	Color	Wire	Signal Name [Specification]
39	SHIELD		COMPOSITE IMAGE SIGNAL (-)
40	SHIELD		SHIELD
42	G		MANUFACTURER SPECIFIC SIGNAL
43	SHIELD		SOUND SIGNAL RH (-)
44	L		SOUND SIGNAL LH (-)
45	W		TEL VOICE SIGNAL (-)
46	SHIELD		SHIELD
47	R		VOICE GUIDANCE SIGNAL OUTPUT (-)
48	B		VOICE GUIDANCE SIGNAL INPUT (-)
49	W		NS ON/OFF SIGNAL
50	R		MICROPHONE SIGNAL GND
51	SHIELD		SHIELD
52	SHIELD		MICROPHONE SIGNAL GND
53	SHIELD		COMPOSITE IMAGE SIGNAL (-)
54	SHIELD		SHIELD
55	SHIELD		COMPOSITE IMAGE SIGNAL (-)
56	BR		U-VOICE SIGNAL
58	B		CAMERA IMAGE SIGNAL
59	R		U-VOICE SIGNAL
60	W		VOICE SIGNAL GND
61	B		D-VOICE SIGNAL
62	R		SOUND SIGNAL RH (+)
63	SHIELD		SHIELD
64	V		SOUND SIGNAL LH (+)
65	B		TEL VOICE SIGNAL (+)
66	SHIELD		SHIELD
67	G		VOICE GUIDANCE SIGNAL OUTPUT (+)
68	W		VOICE GUIDANCE SIGNAL INPUT (+)
69	SHIELD		SHIELD
70	SHIELD		MICROPHONE SIGNAL
71	G		MICROPHONE SIGNAL
72	L		MICROPHONE VCC
74	R		CAMERA POWER SUPPLY

JRNWC4755GB

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Connector No.	M103
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 1554687-1



Terminal No.	Color Of Wire	Signal Name [Specification]
80	G	USB GROUND
81	W	USB D+ SIGNAL
82	R	USB D- SIGNAL
83	L	USB D+ SIGNAL
84	SHIELD	SHIELD

Connector No.	M105
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 1554687-6



Terminal No.	Color Of Wire	Signal Name [Specification]
92	W	LVDS (+)
93	B	LVDS (-)
94	SHIELD	SHIELD

Connector No.	M112
Connector Name	FRONT SQUAWKER RH
Connector Type	TH02FBR



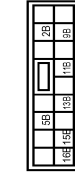
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	L	-

Connector No.	M115
Connector Name	FRONT SQUAWKER LH
Connector Type	TH02FBR



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

Connector No.	M132
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



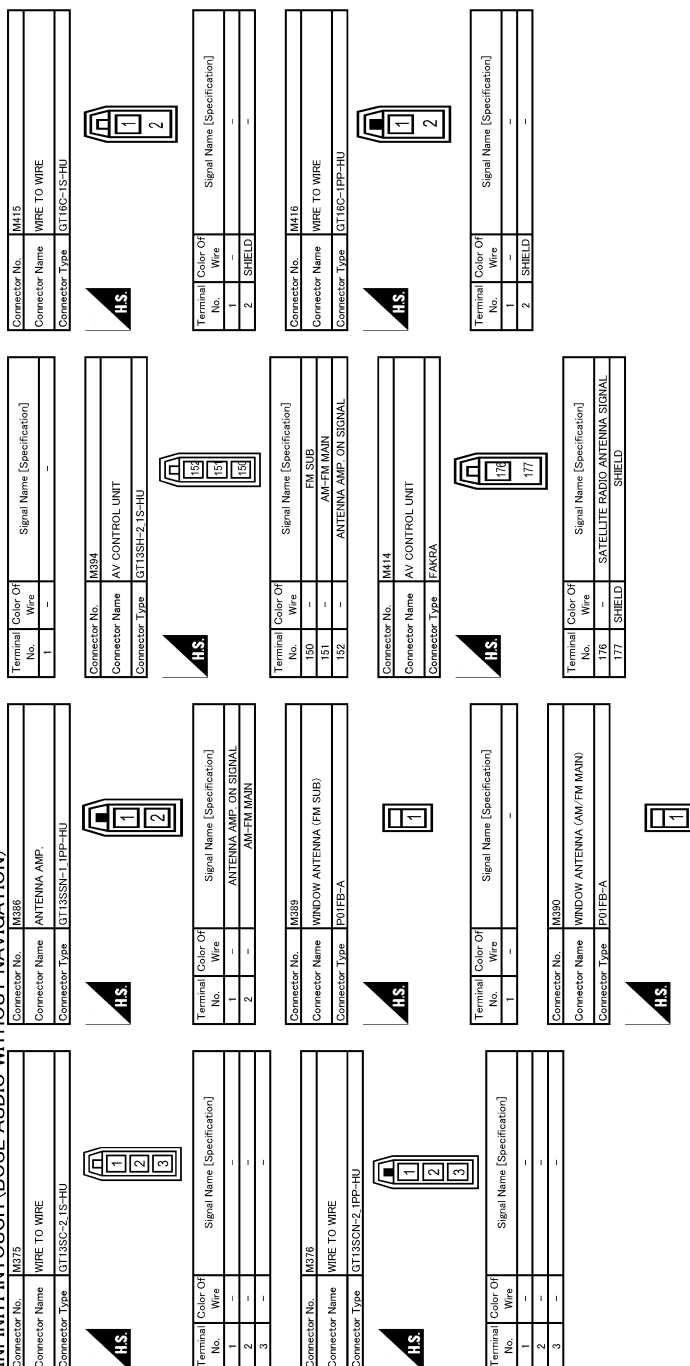
Terminal No.	Color Of Wire	Signal Name [Specification]
118	LG	-
119	Y	-
120	Y	-
121	Y	-
122	Y	-
123	Y	-
124	Y	-
125	Y	-
126	Y	-
127	Y	-
128	Y	-
129	Y	-
130	Y	-
131	Y	-
132	Y	-
133	Y	-
134	Y	-
135	Y	-
136	Y	-
137	Y	-
138	Y	-
139	Y	-
140	Y	-
141	Y	-
142	Y	-
143	Y	-
144	Y	-
145	Y	-
146	Y	-
147	Y	-
148	Y	-
149	Y	-
150	Y	-
151	Y	-
152	Y	-
153	Y	-
154	Y	-
155	Y	-
156	Y	-
157	Y	-
158	Y	-
159	Y	-
160	Y	-
161	Y	-
162	Y	-
163	Y	-
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166	Y	-
167	Y	-
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169	Y	-
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326	Y	-
327	Y	-
328	Y	-
329	Y	-
330	Y	-
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334	Y	-
335	Y	-
336	Y	-
337	Y	-
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342	Y	-
343	Y	-
344	Y	-
345	Y	-
346	Y	-
347	Y	-
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350	Y	-
351	Y	-
352	Y	-
353	Y	-
354	Y	-
355	Y	-
356	Y	-
357	Y	-
358	Y	-
359	Y	-
360	Y	-
361	Y	-
362	Y	-
363	Y	-
364	Y	-
365	Y	-

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)



JRNWC4757GB

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Connector No.	M417
Connector Name	WIRE TO WIRE
Connector Type	GT16C-1SP-HU



Connector No.	M419
Connector Name	SATELLITE RADIO ANTENNA
Connector Type	GT16C-1PP-HU



25	W	-
27	BR	-
28	EG	-
29	EG	-
31	W	-
32	L	-

Connector No.	RE
Connector Name	WIRE TO WIRE
Connector Type	TH18MW-NH

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

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



Connector No.	M418
Connector Name	WIRE TO WIRE
Connector Type	GT16C-1PP-HU



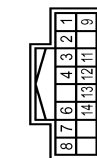
Connector No.	H3
Connector Name	WIRE TO WIRE
Connector Type	TH432MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	GR	-
3	W	-
4	BR	-
5	R	-
6	G	-
7	B	-
10	BR	-
11	SP	-
12	GR	-
14	B	-
16	V	-
17	SHIELD	-
18	R	-
19	L	-
21	LG	-
22	V	-
23	GR	-

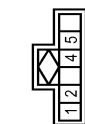
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	GR	-
3	BR	-
4	V	-
6	SB	-
7	W	-
8	EG	- [Without BOSE system]
9	R	-
11	LG	-
12	G	-
13	B	-
14	L	-

Connector No.	R14
Connector Name	WIRE TO WIRE
Connector Type	TH18FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	GR	-
3	BR	-
4	V	-
6	SB	-
7	W	-
8	EG	- [Without BOSE system]
9	R	- [With BOSE system]
11	LG	-
12	G	-
13	B	-
14	L	-

Connector No.	R12
Connector Name	MICROPHONE
Connector Type	AG8FW



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

JRNWC4758GB

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITHOUT NAVIGATION)

Connector No.	R19
Connector Name	FRONT MICROPHONE (AUDIOPILOT)
Connector Type	ISOFEER

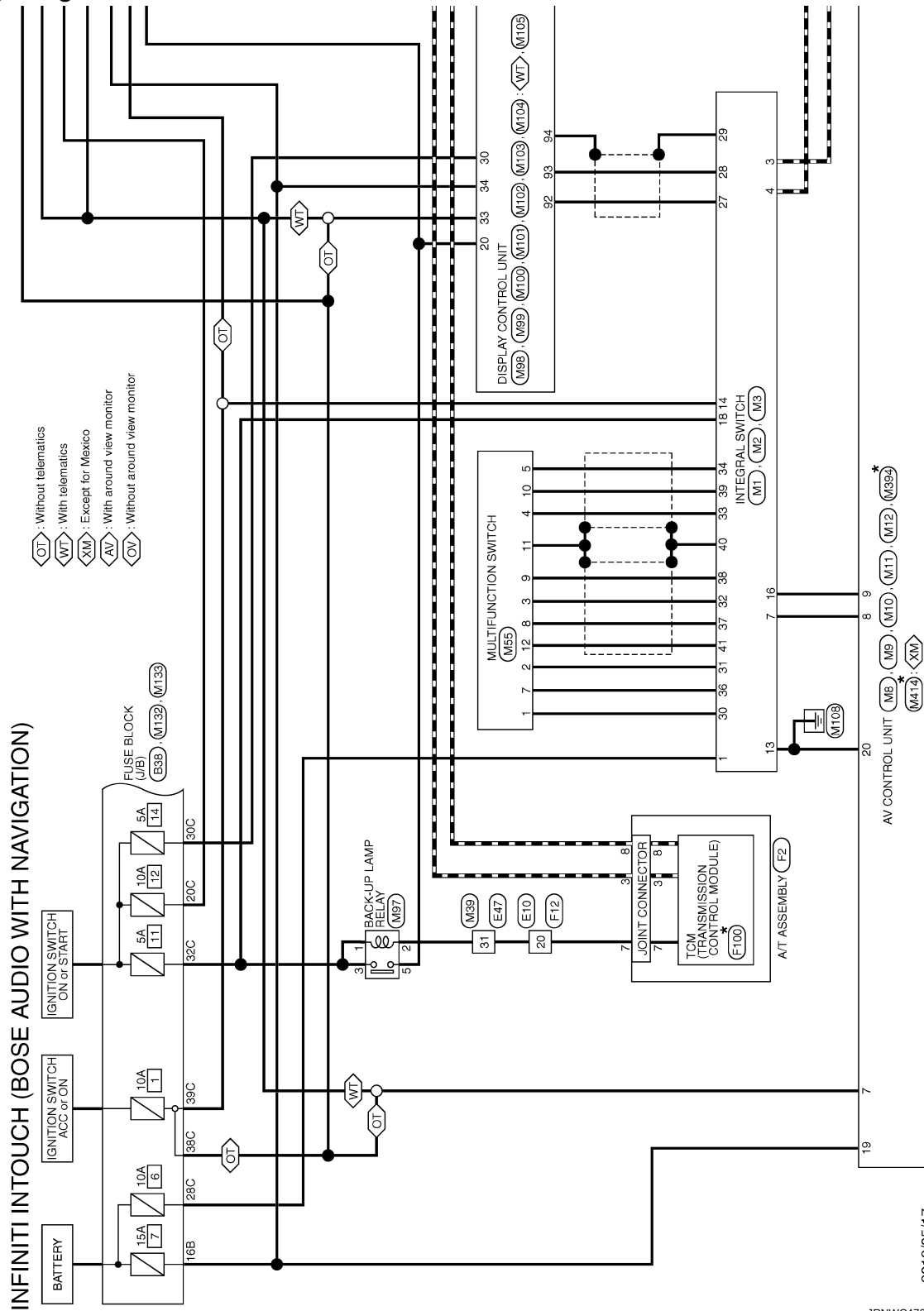


Terminal No.	Color	Wire	Signal Name (Specification)
1	W		-
2	LG		-

JRNWC4759GB

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Wiring Diagram



INFOID:000000009240056

★: This connector is not shown in "Harness Layout".

2013/05/17

JRNWC4760GB

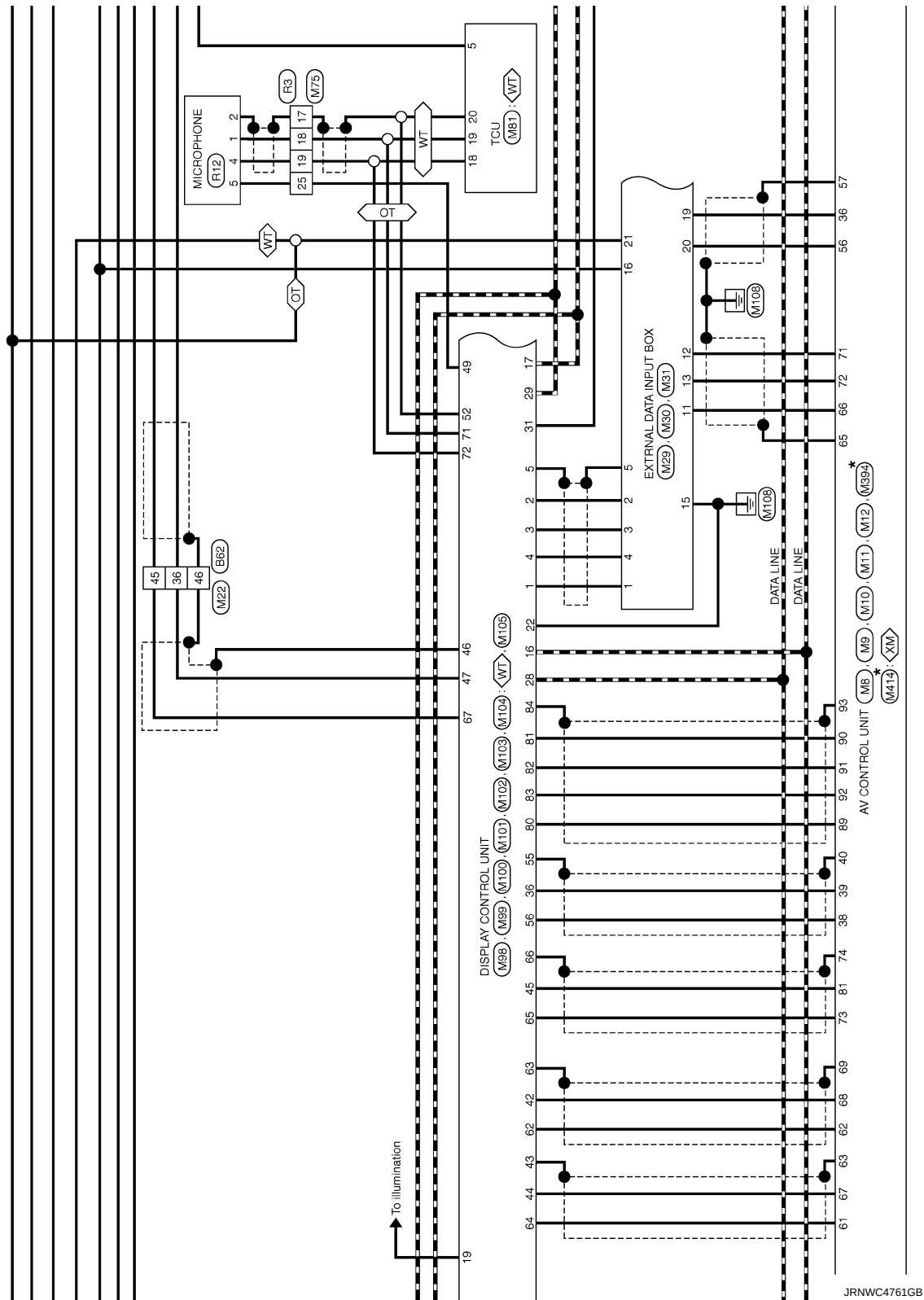
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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

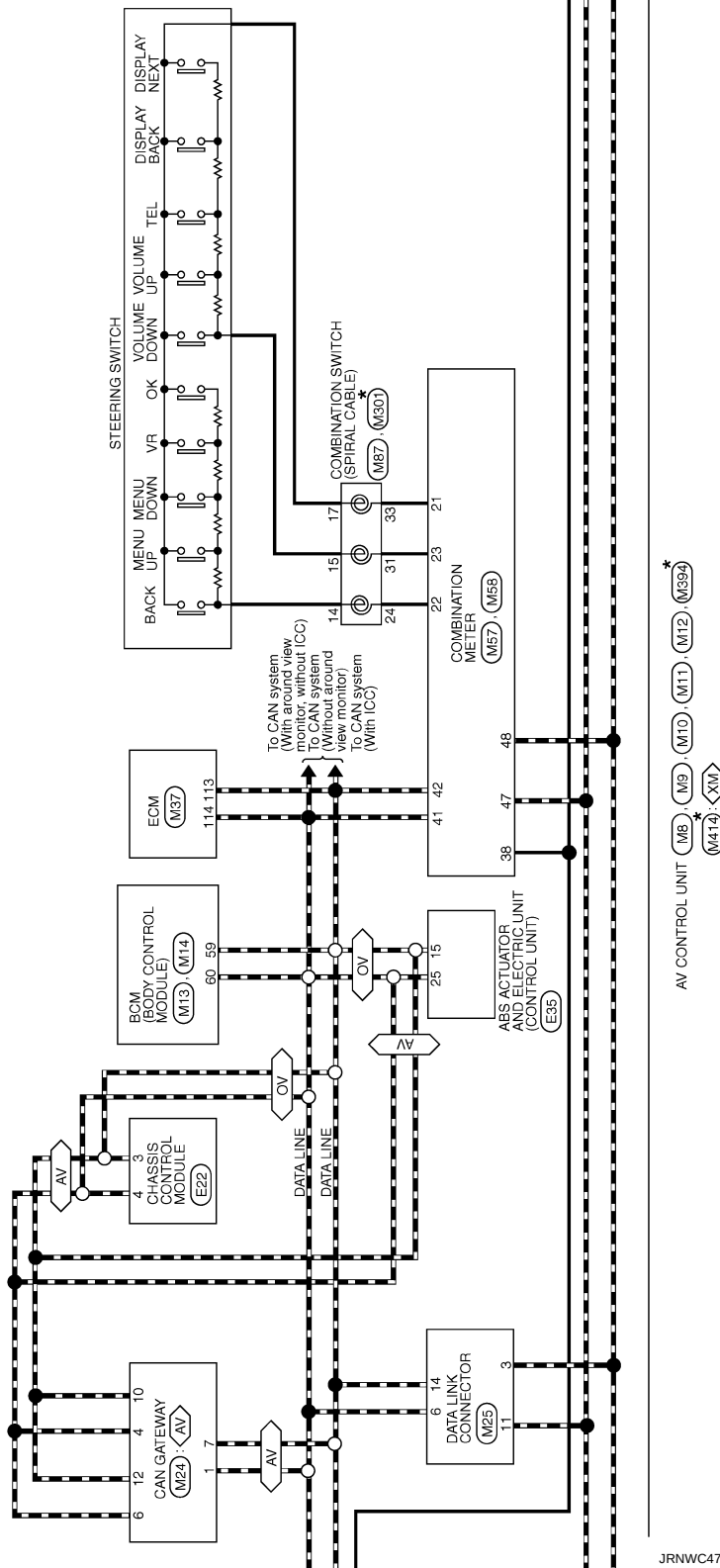


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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]



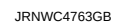
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[INFINITI INTOUCH]

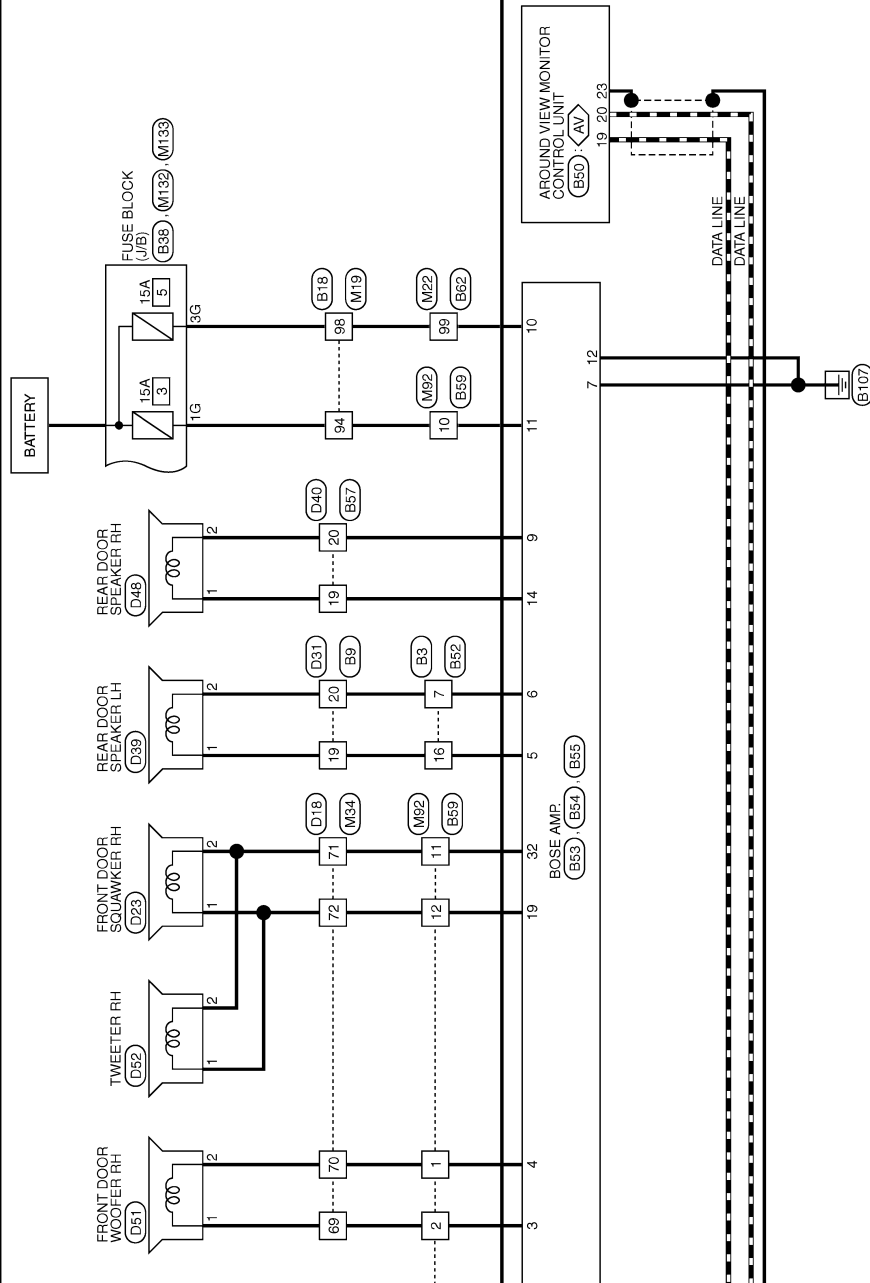
[INFINITI INTOUCH]



INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]



JRNWC4764GB

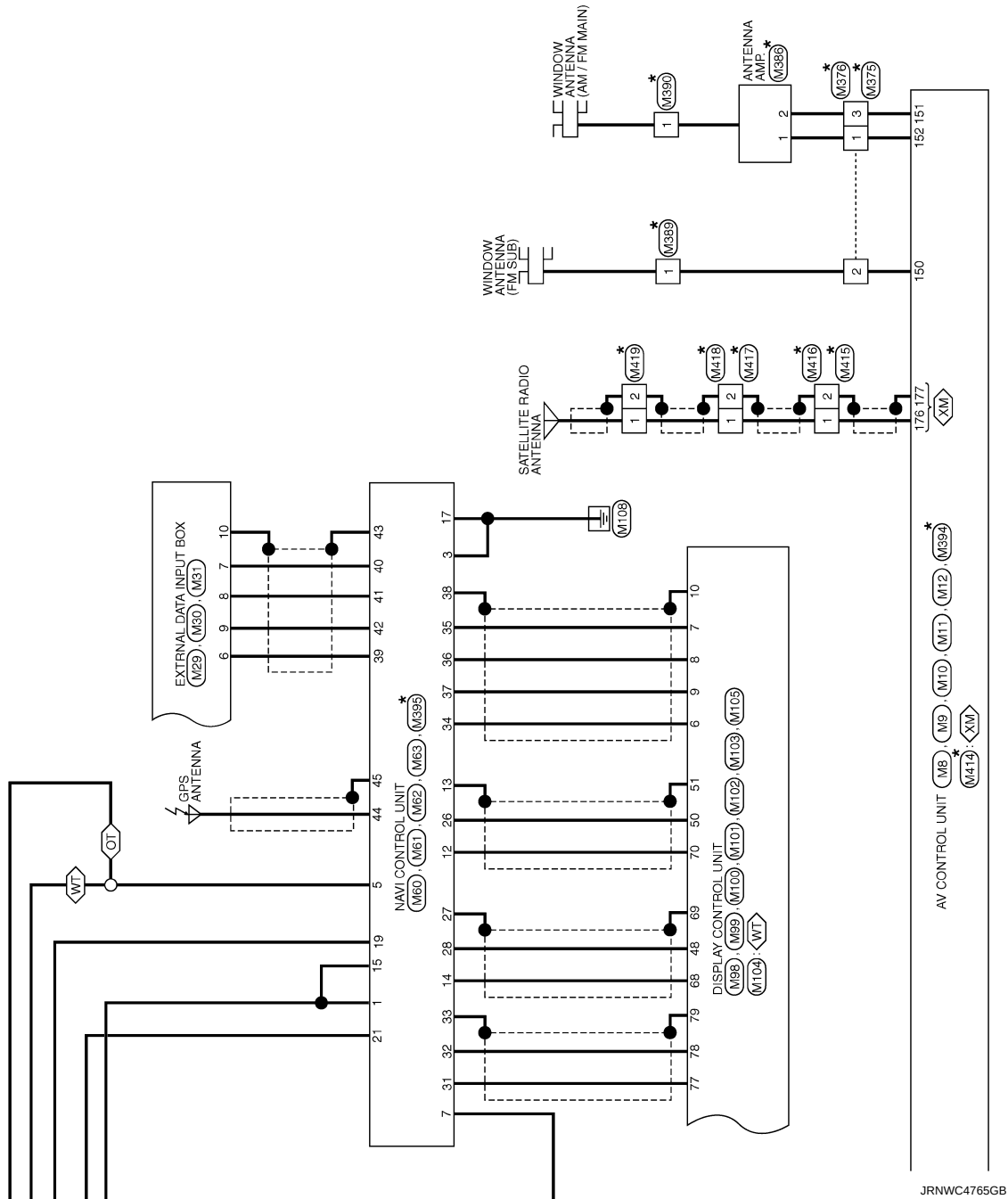
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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]



JRNWC4765GB

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

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

7	1
16	14
13	9
15	8



Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

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



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	B	-
3	B	-
9	P	-
14	B	-
15	W	-
16	BR	-

Connector No.	B9
Connector Name	WIRE TO WIRE
Connector Type	TH10FW-CS10

20	19
4	3
2	1
7	



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	LG	-
3	R	-
4	V	-
7	B	- [With BOSE system]
19	BR	- [Without BOSE system]
20	G	- [With BOSE system]
20	SB	- [Without BOSE system]

82	BG	-
84	W	-
85	W	-
70	R	-
71	W	-
72	B	-
74	L	-
75	V	-
76	BR	-
77	B	-
81	B	-
83	BG	-
84	L	-
85	V	-
86	G	-
87	GR	-
84	GR	-
86	Y	-
87	V	-
89	BR	-

Connector No.	B21
Connector Name	SATELLITE SPEAKER LH
Connector Type	TK02FBR



2	1

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

Connector No.	B38
Connector Name	FUSE BLOCK (J B)
Connector Type	NSJDFW-CS



34	24	16
16	14	13

Terminal No.	Color Of Wire	Signal Name [Specification]
1G	GR	-
2G	BR	-
5G	W	-
6G	G	-

Connector No.	B50
Connector Name	AROUND VIEW MONITOR CONTROL UNIT
Connector Type	TH40FW-NH



2	4	13	18	19	20	23	24

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GND
2	Y	BAT
3	LG	IGN
4	P	ACC
19	LG	AV COMM (H)
20	P	AV COMM (L)
23	SHIELD	AV COMM GND
25	BG	REVERSE SIGNAL
26	GR	AV COMM (H)
28	P	CAN-L (WIR. ASCD)
28	R	CAN-H (WIR. ASCD)
30	W	RETRACT MOTOR OPERATION SIGNAL (OPEN)
32	G	RETRACT MOTOR OPERATION SIGNAL (CLOSE)

JRNWC4766GB

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	B52
Connector Name	WIRE TO WIRE
Connector Type	NS18MW-CS

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



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	—
2	B	—
3	SHIELD	—
4	—	—
5	—	—
6	—	—
7	—	—
8	—	—
9	—	—
10	—	—
11	—	—
12	—	—
13	—	—
14	—	—
15	—	—
16	—	—

Connector No.	B53
Connector Name	BOSE AMP.
Connector Type	SGA12BRC-SJA2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W/R	SOUND SIGNAL REAR WOOFER (+)
2	W/L	SOUND SIGNAL REAR WOOFER (-)
3	L	SOUND SIGNAL FRONT DOOR WOOFER RH (+)
4	Y	SOUND SIGNAL FRONT DOOR WOOFER RH (-)
5	BR	SOUND SIGNAL REAR DOOR SPEAKER LH (+)
6	R	SOUND SIGNAL REAR DOOR SPEAKER LH (-)
7	B	SOUND SIGNAL FRONT DOOR WOOFER LH (+)
8	V	SOUND SIGNAL FRONT DOOR WOOFER LH (-)
9	P	SOUND SIGNAL REAR DOOR SPEAKER RH (+)
10	BR	BAT
11	GR	BAT
12	B	GND
13	P	SOUND SIGNAL FRONT DOOR WOOFER LH (+)

14	L	SOUND SIGNAL REAR DOOR SPEAKER RH (+)

Connector No.	B54
Connector Name	BOSE AMP.
Connector Type	SGA18BFR-SGA4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



Terminal No.	Color Of Wire	Signal Name [Specification]
16	P	SOUND SIGNAL FRONT SQUAWKER LH (+)
17	BR	SOUND SIGNAL CENTER SQUAWKER (-)
18	GR	SOUND SIGNAL FRONT RH (+)
19	W	SOUND SIGNAL FRONT RH (+)
20	W	SOUND SIGNAL SATELLITE SPEAKER RH (+)
21	L	SOUND SIGNAL FRONT LH (+)
22	G	SOUND SIGNAL FRONT SQUAWKER LH (-)
23	V	SOUND SIGNAL FRONT SQUAWKER RH (-)
24	L	SOUND SIGNAL FRONT SATELLITE SPEAKER LH (+)
25	P	SOUND SIGNAL FRONT SATELLITE SPEAKER RH (+)
26	B	SOUND SIGNAL FRONT RH (+)
27	BR	SOUND SIGNAL FRONT RH (+)
28	P	SOUND SIGNAL SATELLITE SPEAKER RH (-)
29	R	SOUND SIGNAL FRONT LH (-)
30	R	SOUND SIGNAL FRONT LH (-)

Connector No.	B55
Connector Name	BOSE AMP.
Connector Type	TH40FW-NH

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



Terminal No.	Color Of Wire	Signal Name [Specification]
43	W	REAR MICROPHONE GND
44	R	VOICE GUIDANCE SIGNAL (-)
45	R	SOUND SIGNAL LH (-)

46	B	SOUND SIGNAL RH (-)
47	R	FRONT MICROPHONE GND
48	P	AV COMM (L)
49	V	ACC
50	GR	REAR MICROPHONE SIGNAL
51	G	VOICE GUIDANCE SIGNAL (-)
52	L	SOUND SIGNAL LH (-)
53	W	SOUND SIGNAL RH (-)
54	G	FRONT MICROPHONE SIGNAL
55	L	AV COMM (H)
56	G	STEP LAMP CONTROL SIGNAL
57	W	ENGINE SPEED SIGNAL
58	SHIELD	SHIELD

Connector No.	B57
Connector Name	WIRE TO WIRE
Connector Type	NH10FW-CS10

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



Terminal No.	Color Of Wire	Signal Name [Specification]
2	LG	—
3	W	—
4	V	—
7	B	—
19	L	—
20	P	—

Connector No.	B59
Connector Name	WIRE TO WIRE
Connector Type	NS18FW-CS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	—
2	L	—
3	V	—
4	R	—
5	GR	—
6	V	—
7	L	—
8	P	—
9	GR	—
10	GR	—
11	B	—
12	W	—
13	G	—
14	BR	—
15	P	—
16	P	—

Connector No.	B62
Connector Name	WIRE TO WIRE
Connector Type	TH8BFW-CS18-TM4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	—
2	L	—
3	R	— (With BOSE system)
4	W	— (Without BOSE system)

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Terminal No.	Color Of Wire	Signal Name [Specification]
5	G	-
6	BR	-
7	BR	- [Without BOSE system]
8	W	- [With BOSE system]
9	Y	- [Without BOSE system]
10	SHIELD	-
11	GR	-
12	Y	-
13	R	-
14	BG	-
15	GR	-
16	V	-
17	P	-
18	L	-
19	B	-
20	GR	-
21	R	-
22	P	-
23	W	-
24	V	-
25	SB	-
26	G	-
29	P	-
30	LG	-
36	R	-
37	R	-
38	W	-
39	W	-
45	G	-
46	SHIELD	-
47	G	-
48	BG	-
49	G	-
52	Y	-
53	R	-
54	GR	-
57	R	-
58	P	-
59	LG	-
62	P	-
63	W	-
64	W	-
65	LG	-
66	L	-
69	P	-
71	R	-
72	G	-
73	SHIELD	-

Terminal No.	Color Of Wire	Signal Name [Specification]
76	GR	-
77	GR	-
78	BG	-
79	W	-
80	LG	-
81	LG	-
82	V	-
83	R	-
84	R	-
85	Y	-
86	W	-
87	L	-
88	BR	-
89	BR	-
90	BR	-
91	BR	-
92	BR	-
93	BR	-
94	BR	-
95	BR	-
96	BR	-
97	BR	-
98	BR	-
99	BR	-
100	BR	-

Connector No.	Connector Name	Connector Type
B77	SATELLITE SPEAKER RH	TH02FBR



HS

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

Connector No.	Connector Name	Connector Type
B79	REAR WOOFER	NS02FW-LG



HS

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

Connector No.	Connector Name	Connector Type
D4	WIRE TO WIRE	HH06FW-TS12

HS



Terminal No.	Color Of Wire	Signal Name [Specification]
2	R	- [With DRPO]
3	SB	- [Without DRPO]
4	BG	-
5	R	- [With DRPO]
6	Y	- [Without DRPO]
7	LG	-
8	G	-
9	GR	-
10	SHIELD	-
11	SHIELD	-
12	EG	-
13	L	-
14	B	-
15	Y	-
16	GR	-
17	R	-
18	GR	-
19	R	-
20	W	-
21	LG	-
22	W	-
23	L	-
24	GR	-
25	BR	-
26	R	-
27	BR	-
28	V	-
29	B	-
30	W	-

Terminal No.	Color Of Wire	Signal Name [Specification]
31	P	-
32	Y	-
33	BR	-
34	R	-
35	R	-
36	GR	-
37	G	-
40	P	-
41	L	-
43	EG	-
44	Y	-
46	W	-
47	R	-
49	BR	-
50	B	-
51	V	-
52	GR	-
55	GR	-
56	BR	-
57	R	-
58	L	-
59	V	-
60	G	-
61	EG	-
62	Y	-
63	SB	-
64	B	-
65	Y	-
66	Y	-
68	Y	-
69	I	-
70	W	-
71	LG	-
72	P	-

JRNWC4768GB

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[INFINITI INTOUCH]

< WIRING DIAGRAM >

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	- [With BOSE system] - [Without BOSE system]
2	BR	- [With BOSE system] - [Without BOSE system]
2	L	- [With BOSE system]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	D49
Connector Name	FRONT DOOR WOOFER LH
Connector Type	NS02FW-CS



Connector No.	D51
Connector Name	FRONT DOOR WOOFER RH
Connector Type	NS02FW-CS



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

Connector No.	D50
Connector Name	TWEETER LH
Connector Type	TK02FBR



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

Connector No.	D52
Connector Name	TWEETER RH
Connector Type	TK02FBR



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

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

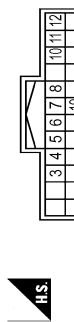
Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Type	SAX39MB-RS3-SN28



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

37	SHIELD	-
38	P	-
39	P	-
40	R	-
41	W	-
42	LG	-
43	G	-
44	V	-
45	Y	-
46	SHIELD	-
47	W	-
48	BR	-
49	G	-
50	B	-
51	SB	-
52	R	-

Connector No.	E22
Connector Name	CHASSIS CONTROL MODULE
Connector Type	TH24FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	CAN-L [Without Gateway]
4	R	CAN-L [With Gateway]
5	V	CAN-H
6	G	DRIVE MODE SELECT SW (UP)
7	W	DRIVE MODE SELECT SW (DOWN)
8	W	CHASSIS COMM-L
9	W	CHASSIS COMM-L
10	G	IGN
11	L	CHASSIS COMM-H
12	B	GROUND
19	L	CHASSIS COMM-H

JRNWC4770GB

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	E35
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT CONTROL (UNIT)
Connector Type	SAZ30FB-SL24-U



Connector No.	E47
Connector Name	WIRE TO WIRE
Connector Type	TH130MW-N4

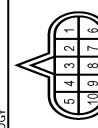


Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	B	GROUND
3	G	GROUND
4	Y	MOTOR BATTERY
5	LG	STOP LAMP SW SIGNAL [With ICG]
6	V	STOP LAMP SW SIGNAL [With ASD]
7	GR	RR LH WHEEL SENSOR SIGNAL
8	G	RR LH WHEEL SENSOR POWER SUPPLY
9	BR	FR RH WHEEL SENSOR SIGNAL
10	GR	FR RH WHEEL SENSOR POWER SUPPLY
13	R	VACUUM SENSOR SIGNAL
15	P	CAN-L [Without Gateway]
17	R	RR RH WHEEL SENSOR SIGNAL
18	Y	RR RH WHEEL SENSOR POWER SUPPLY
19	V	RR LH WHEEL SENSOR SIGNAL
20	SB	FR LH WHEEL SENSOR SIGNAL
25	LG	FR LH WHEEL SENSOR POWER SUPPLY
28	L	CAN-H
29	G	VACUUM SENSOR POWER SUPPLY
30	R	VDC OFF SW SIGNAL
32	SHIELD	VACUUM SENSOR GROUND
34	G	IGN

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	—
2	V	—
3	L	—
4	P	— [Without Gateway]
4	R	— [With Gateway]
7	L	—
8	W	—
13	G	—
15	BR	—
17	W	—
18	BG	—
27	LG	—
28	BR	—
29	W	—
30	W	—
31	G	—
32	LG	—

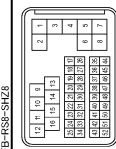


Connector No.	F2
Connector Name	A/T ASSEMBLY
Connector Type	HR10FG-D0Y



5	B	GROUND
8	GR	IGNITION POWER SUPPLY
7	BG	BACK-UP LAMP RELAY
8	P	CAN-L
9	GR	STARTER RELAY
10	B	GROUND

Connector No.	F12
Connector Name	WIRE TO WIRE
Connector Type	SAAX3FB-HS8-SH28



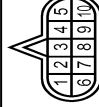
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L/Y	—
2	SHIELD	—
3	L/B	—
4	SHIELD	—
5	BR	—
6	GR	—
7	W	—
8	W	—
9	W	—
10	G	—
11	R	—
12	P	—
13	L	—
14	LG	—
15	P	—
16	Y	—
17	L	—
18	P	—
19	GR	—
20	BG	—
21	W	—
22	W	—
23	Y	—
24	LG	—
25	V	—
26	W	—
27	V	—
28	BR	—



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	IGNITION POWER SUPPLY
2	P	BATTERY POWER SUPPLY MEMORY BACK-UP
3	L	CAN-H
4	LG	K-LINE

29	LG	—
30	R	—
31	P	—
32	GR	—
33	B	—
34	BG	—
35	LG	—
36	SB	—
37	SHIELD	—
38	W	—
39	Y	—
40	G	—
41	B	—
42	GR	—
43	BG	—
44	BG	—
45	V	—
46	SHIELD	—
47	W	—
48	LG	—
49	L	—
50	R	—
51	SB	—
52	G	—

Connector No.	F100
Connector Name	TON/TRANSMISSION CONTROL MODULE
Connector Type	SPH0EG



Terminal No.	Color Of Wire	Signal Name [Specification]
1	—	IGNITION POWER SUPPLY
2	—	BATTERY POWER SUPPLY MEMORY BACK-UP
3	—	CAN-H
4	—	K-LINE
5	—	GROUND
6	—	IGNITION POWER SUPPLY
7	—	BACK-UP LAMP RELAY
8	—	CAN-L
9	—	STARTER RELAY
10	—	GROUND

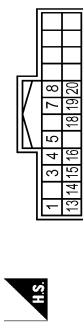
INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	M1
Connector Name	INTEGRAL SWITCH
Connector Type	TH12FW-NH



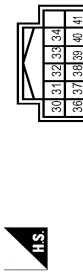
Terminal No.	Color	Wire	Signal Name [Specification]
1	W	BR	BATT
2	SB	W	AV COMM (L)
3	LG	R	AV COMM (R)
4	LG	R	AV COMM (A)
5	G	R	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	R	DISK EJECT SIGNAL
7	W/B	W	HAZARD SIGNAL
8	G	G	GND
9	B	B	ACC
10	V	B	ILLUMINATION CONTROL SIGNAL
11	B	B	DISK EJECT SIGNAL GROUND
12	EG	B	IGN
13	R	R	CAMERA SWITCH SIGNAL
14	BR	BR	AIR BAG INDICATOR OFF SIGNAL
15	LG	LG	

Connector No.	M2
Connector Name	INTEGRAL SWITCH
Connector Type	Type 1554687-6



Terminal No.	Color	Wire	Signal Name [Specification]
1	W	BR	BATT
2	SB	W	AV COMM (L)
3	LG	R	AV COMM (R)
4	LG	R	AV COMM (A)
5	G	R	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	R	DISK EJECT SIGNAL
7	W/B	W	HAZARD SIGNAL
8	G	G	GND
9	B	B	ACC
10	V	B	ILLUMINATION CONTROL SIGNAL
11	B	B	DISK EJECT SIGNAL GROUND
12	EG	B	IGN
13	R	R	CAMERA SWITCH SIGNAL
14	BR	BR	AIR BAG INDICATOR OFF SIGNAL
15	LG	LG	

Connector No.	M3
Connector Name	INTEGRAL SWITCH
Connector Type	TH12FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	W	BR	BATT
2	SB	W	AV COMM (L)
3	LG	R	AV COMM (R)
4	LG	R	AV COMM (A)
5	G	R	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	R	DISK EJECT SIGNAL
7	W/B	W	HAZARD SIGNAL
8	G	G	GND
9	B	B	ACC
10	V	B	ILLUMINATION CONTROL SIGNAL
11	B	B	DISK EJECT SIGNAL GROUND
12	EG	B	IGN
13	R	R	CAMERA SWITCH SIGNAL
14	BR	BR	AIR BAG INDICATOR OFF SIGNAL
15	LG	LG	

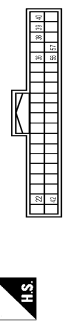
Connector No.	M4
Connector Name	AV CONTROL UNIT
Connector Type	TH18FW-CS2



Terminal No.	Color	Wire	Signal Name [Specification]
1	W	BR	BATT
2	SB	W	AV COMM (L)
3	LG	R	AV COMM (R)
4	LG	R	AV COMM (A)
5	G	R	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	R	DISK EJECT SIGNAL
7	W/B	W	HAZARD SIGNAL
8	G	G	GND
9	B	B	ACC
10	V	B	ILLUMINATION CONTROL SIGNAL
11	B	B	DISK EJECT SIGNAL GROUND
12	EG	B	IGN
13	R	R	CAMERA SWITCH SIGNAL
14	BR	BR	AIR BAG INDICATOR OFF SIGNAL
15	LG	LG	

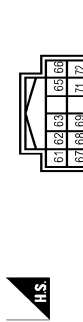
Terminal No.	11	12	13	14	15	16	17	18	19	20
Color	LG	P	P	P	P	P	P	P	P	B
Wire	W	W	W	W	W	W	W	W	W	B
Signal Name [Specification]	SOUND SIGNAL FRONT RH (+)	SOUND SIGNAL FRONT RH (-)	SOUND SIGNAL REAR RH (+)	SOUND SIGNAL REAR RH (-)	SOUND SIGNAL REAR LH (+)	SOUND SIGNAL REAR LH (-)	BAT	GND		

Connector No.	M5
Connector Name	AV CONTROL UNIT
Connector Type	TH16FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	W	BR	BATT
2	SB	W	AV COMM (L)
3	LG	R	AV COMM (R)
4	LG	R	AV COMM (A)
5	G	R	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	R	DISK EJECT SIGNAL
7	W/B	W	HAZARD SIGNAL
8	G	G	GND
9	B	B	ACC
10	V	B	ILLUMINATION CONTROL SIGNAL
11	B	B	DISK EJECT SIGNAL GROUND
12	EG	B	IGN
13	R	R	CAMERA SWITCH SIGNAL
14	BR	BR	AIR BAG INDICATOR OFF SIGNAL
15	LG	LG	

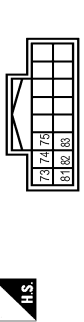
Connector No.	M6
Connector Name	AV CONTROL UNIT
Connector Type	TH12FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	W	BR	BATT
2	SB	W	AV COMM (L)
3	LG	R	AV COMM (R)
4	LG	R	AV COMM (A)
5	G	R	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	R	DISK EJECT SIGNAL
7	W/B	W	HAZARD SIGNAL
8	G	G	GND
9	B	B	ACC
10	V	B	ILLUMINATION CONTROL SIGNAL
11	B	B	DISK EJECT SIGNAL GROUND
12	EG	B	IGN
13	R	R	CAMERA SWITCH SIGNAL
14	BR	BR	AIR BAG INDICATOR OFF SIGNAL
15	LG	LG	

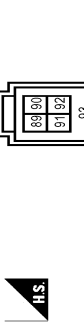
Terminal No.	66	67	68	69	70	71	72
Color	W	W	G	G	SHIELD	R	B
Wire	W	W	G	G	SHIELD	R	B
Signal Name [Specification]	AUX SOUND SIGNAL LH	AUX SOUND SIGNAL RH (+)	AUX SOUND SIGNAL RH (-)	AUX SOUND SIGNAL LH	SHIELD	AUX SOUND SIGNAL GND	AUX SOUND SIGNAL RH

Connector No.	M11
Connector Name	AV CONTROL UNIT
Connector Type	TH18FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	W	BR	BATT
2	SB	W	AV COMM (L)
3	LG	R	AV COMM (R)
4	LG	R	AV COMM (A)
5	G	R	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	R	DISK EJECT SIGNAL
7	W/B	W	HAZARD SIGNAL
8	G	G	GND
9	B	B	ACC
10	V	B	ILLUMINATION CONTROL SIGNAL
11	B	B	DISK EJECT SIGNAL GROUND
12	EG	B	IGN
13	R	R	CAMERA SWITCH SIGNAL
14	BR	BR	AIR BAG INDICATOR OFF SIGNAL
15	LG	LG	

Connector No.	M12
Connector Name	AV CONTROL UNIT
Connector Type	Type 1554687-1



Terminal No.	Color	Wire	Signal Name [Specification]
1	W	BR	BATT
2	SB	W	AV COMM (L)
3	LG	R	AV COMM (R)
4	LG	R	AV COMM (A)
5	G	R	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	R	DISK EJECT SIGNAL
7	W/B	W	HAZARD SIGNAL
8	G	G	GND
9	B	B	ACC
10	V	B	ILLUMINATION CONTROL SIGNAL
11	B	B	DISK EJECT SIGNAL GROUND
12	EG	B	IGN
13	R	R	CAMERA SWITCH SIGNAL
14	BR	BR	AIR BAG INDICATOR OFF SIGNAL
15	LG	LG	

JRNWC4772GB

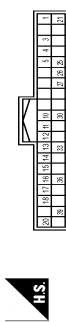
INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

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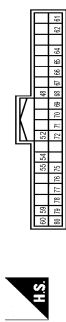
[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	M13
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FC-NH



Connector No.	M14
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-GS16-TM4



63	BR	-
64	-	-
65	W	-
70	LG	-
71	W	-
72	B	-
74	L	-
75	W	-
76	BR	-
77	B	-
81	B	-
83	B	-
84	L	-
85	W	-
88	B	-
91	GR	-
94	GR	-
96	W	-
97	V	-
98	BR	-

Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH80MP-GS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	L	-
3	R	-
4	SHIELD	-
5	G	-
9	EG	-
10	LG	-
8	P	-
8	SHIELD	-
10	V	-
11	GR	-
12	V	-
13	LG	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	G	-
3	SR	-
4	BR	-
6	R	-
7	W	-
8	V	-
9	BR	-
10	P	-
11	BR	-
12	LG	-
13	GR	-
24	Y	-
25	W	-
32	B	-
33	B	-
34	V	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	G	-
42	BR	-
43	BR	-
44	BR	-
46	B	-
52	V	-
54	R	-
55	R	-
57	W	-
58	V	-
59	B	-
62	B	-

Terminal No.	Color Of Wire	Signal Name [Specification]
53	R	PUSH BTN IGN SW L/L PWR
54	G	COMBI UNK
55	P	COMBI LINE
55	R	RAIN SENSOR
59	P	CAN-L
60	L	CAN-H
61	G	REAR WINDOW DEF RLY CONT
62	R	STARTER RLY CONT
64	V	I-KEY WARN BUZZER
65	B	OUTS HD LAMP CONT
66	B	BLOWER FAN RLY CONT
67	W/B	IGN RLY (F/B) CONT
68	R	DIMMER
69	GR	A/T SHIFT SELECT PWR SP/LY
70	P	IGN RLY (F/B) CONT
71	G	DOOR DOOR SW
72	SB	PASS DOOR REG SW
75	BR	COMBI SW INPUT 5
76	B	COMBI SW INPUT 4
77	V	COMBI SW INPUT 3
78	Y	COMBI SW INPUT 2
79	LG	COMBI SW INPUT 1
80	L	TR LID OPNR SW

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	PUSH SW
3	Y	SENS PWR SP/LY
4	EG	OPTICAL SENSOR
5	LG	-
10	W	COMBI SW OUTPUT 5
11	SB	COMBI SW OUTPUT 4
12	L	COMBI SW OUTPUT 3
13	G	COMBI SW OUTPUT 2
14	P	COMBI SW OUTPUT 1
15	G	ONE TOUCH UNLK SENS (DR)
16	G	ONE TOUCH UNLK SENS (PASS)
17	P	RECEIVER SENSOR GND
18	L	SECURITY IND LAMP CONT
20	R	DETENT SW
21	SB	STOP LAMP SW1
25	B	EXTENDED STORAGE FUSE SW
26	R	STOP LAMP SW2
27	P	DR DOOR UNLK SENS
30	W	TR LID OP CANCEL SW
33	G	HAZARD SW
36	V	P/N POSITION
39	BR	-

JRNWC4773GB

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

14	LG	-
15	W	-
16	SB	- [With DCM]
17	V	- [Without DCM]
18	Y	-
19	L	-
20	GR	-
21	R	-
22	W	-
23	L	-
24	V	-
25	LG	-
26	GR	-
27	SB	-
28	G	-
29	R	-
30	Y	-
31	W	-
32	V	-
33	L	-
34	GR	-
35	R	-
36	Y	-
37	L	-
38	W	-
39	V	-
40	G	-
41	SB	-
42	Y	-
43	L	-
44	GR	-
45	R	-
46	W	-
47	V	-
48	LG	-
49	GR	-
50	SB	-
51	Y	-
52	L	-
53	R	-
54	W	-
55	V	-
56	LG	-
57	GR	-
58	SB	-
59	Y	-
60	L	-
61	GR	-
62	R	-
63	W	-
64	V	-
65	LG	-
66	GR	-
67	SB	-
68	Y	-
69	L	-
70	GR	-
71	R	-
72	W	-
73	V	-
74	LG	-
75	GR	-
76	SB	-
77	Y	-
78	L	-
79	GR	-
80	R	-
81	W	-
82	V	-
83	LG	-
84	GR	-
85	SB	-
86	Y	-
87	L	-
88	GR	-
89	R	-
90	W	-
91	V	-
92	LG	-
93	GR	-
94	SB	-

95	W	-
96	L	-
97	BR	-
98	BR	-
99	BR	-
100	BR	-

1	3	4	5	6
7	9	10	11	12

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
3	W	BATTERY
4	L	CAN2-H
5	B	GND
6	L	CAN3-H
7	P	CAN-L
9	R	IGN
10	R	CAN2-L
12	R	CAN3-L

Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	ED11EW

1	11	12	13	14	16
3	4	5	6	7	8

Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	AV COMM (L)
4	B	EARTH
5	B	EARTH

9	L	CAN-H
8	W	IGN SW
11	LG	AV COMM (H)
12	R	CAN-L
13	L	CAN-H
14	P	CAN-L
16	W	POWER

Connector No.	M29
Connector Name	EXTERNAL DATA INPUT BOX
Connector Type	Type 1554837-1

1	2	3	4	5

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	USB GND
2	W	USB V BUS SIGNAL
3	R	USB D- SIGNAL
4	L	USB D+ SIGNAL
5	SHIELD	SHIELD

Connector No.	M30
Connector Name	EXTERNAL DATA INPUT BOX
Connector Type	Type 1554837-5

6	7	8	9	10

Terminal No.	Color Of Wire	Signal Name [Specification]
6	G	USB GND
7	W	USB V BUS SIGNAL
8	R	USB D- SIGNAL
9	L	USB D+ SIGNAL
10	SHIELD	SHIELD

Connector No.	M31
Connector Name	EXTERNAL DATA INPUT BOX
Connector Type	Type 1712FW-NH

11	12	13	15	16
18	19	20	21	

Terminal No.	Color Of Wire	Signal Name [Specification]
11	W	AUX SOUND SIGNAL LH
12	R	AUX SOUND SIGNAL RH
13	B	AUX SOUND SIGNAL RT
15	B	GND
16	Y	BAT
19	L	AUX IMAGE SIGNAL (+)
20	V	AUX IMAGE SIGNAL (-)
21	SB	ACC

Connector No.	M33
Connector Name	WIRE TO WIRE
Connector Type	NH60MM-TS12

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

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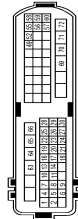
[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

14	LG	-
15	Y	-
16	Y	-
17	P	-
18	W/B	-
19	LG	- [With DRPO]
20	V	- [Without DRPO]
21	B	-
22	BG	- [Without DRPO]
23	G	- [With DRPO]
24	Y	-
25	BG	- [Without DRPO]
26	Y	- [Without DRPO]
27	GR	-
28	V	-
29	B	-
30	W	-
31	B	-
32	SB	-
33	L	-
34	BR	-
35	LG	-
36	W	-
37	B	-
38	P	-
39	SP	-
40	Y	-
41	GR	-
42	RG	-
43	Y	-
44	BR	-
45	G	-
46	BR	-
47	G	-
48	V	-
49	V	-
50	B	-
51	B	-
52	BR	-
53	B	-
54	B	-
55	BG	-
56	LG	-
57	V	-
58	R	-
59	G	-
60	G	-
61	G	-
62	R	-
63	V	-
64	B	-
65	R	-
66	BR	-
67	P	-

68	V	-
69	W	-
70	W	-
71	LG	-
72	V	-

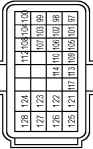
Connector No.	M34
Connector Name	WIRE TO WIRE
Connector Type	NR60MM-TS12



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	R	-
3	G	- [With DRPO]
4	SB	- [Without DRPO]
5	L	-
6	R	-
7	R	-
8	W	-
9	GR	-
10	Y	-
11	Y	-
12	LG	-
13	LG	-
14	W	-
15	G	-
16	B	-
17	B	-
18	W	-
19	B	-
20	SB	- [With DRPO]
21	SHIELD	- [Without DRPO]
22	B	-
23	BG	-
24	G	- [Without DRPO]
25	LG	- [Without DRPO]
26	BG	- [Without DRPO]
27	R	- [With DRPO]
28	SB	-
29	BG	- [Without DRPO]

29	W/B	- [With DRPO]
30	P	-
31	P	-
32	V	-
33	B	-
34	SB	-
35	G	-
36	G	-
37	LG	-
38	LG	-
39	R	-
40	R	-
41	R	-
42	GR	-
43	Y	-
44	Y	-
45	SB	-
46	W	-

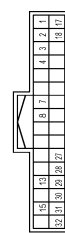
Connector No.	M37
Connector Name	ECM
Connector Type	RH24GY-R2B-R-LH-Z



Terminal No.	Color Of Wire	Signal Name [Specification]
87	Y	ACCELERATOR PEDAL POSITION SENSOR 1
88	BR	ACCELERATOR PEDAL POSITION SENSOR 2
89	W	SENSOR POWER SUPPLY/ACCELERATOR PEDAL POSITION SENSOR 1
90	G	SENSOR GROUND/ACCELERATOR PEDAL POSITION SENSOR 1
100	G	ASC/STEERING SWITCH
101	SB	ASC/STEERING SWITCH
102	LG	EVAP CONTROL SYSTEM PRESSURE SENSOR
103	L	SENSOR POWER SUPPLY/ACCELERATOR PEDAL POSITION SENSOR 2
104	Y	SENSOR GROUND/ACCELERATOR PEDAL POSITION SENSOR 2
105	P	REFRIGERANT PRESSURE SENSOR
106	P	FUEL TANK TEMPERATURE SENSOR
107	GR	SENSOR GROUND/ASC/STEERING SWITCH
108	Y	TRANSMISSION RANGE SWITCH
109	BR	ENGINE SPEED SIGNAL OUTPUT
110	V	ENGINE SPEED SIGNAL OUTPUT
112	V	GRND PDRES/FT PRES

113	P	CAN COMMUNICATION LINE
114	L	CAN COMMUNICATION LINE
117	V	DATA LINK CONNECTOR
121	LG	EVAP CANISTER VENT CONTROL VALVE
122	SB	STOP LAMP SWITCH
123	B	ECM GROUND
124	B	ECM GROUND
125	R	POWER SUPPLY FOR ECM
126	BG	BRAKE PEDAL POSITION SWITCH
127	B	ECM GROUND
128	B	ECM GROUND

Connector No.	M39
Connector Name	WIRE TO WIRE
Connector Type	TH25PW-4H



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W/B	-
2	SB	-
3	P	- [Without Gateway]
4	R	- [With Gateway]
7	L	-
8	W	-
13	G	-
15	R	-
17	BR	-
18	BG	-
27	LG	-
28	BR	-
29	W/B	-
30	Y	-
31	W	-
32	LG	-

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

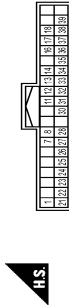
INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	M65
Connector Name	MULTIFUNCTION SWITCH
Connector Type	TH12FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	BR	W	ILL
2	R	W	END-A SIGNAL
3	R	W	END-R SIGNAL
4	R	W	PUSH SWITCH A SIGNAL
5	W	W	PUSH SWITCH C SIGNAL
7	V	W	ILLUMINATION CONTROL SIGNAL
8	W	W	END-A SIGNAL
9	G	W	SELECT SWITCH SIGNAL
10	B	W	PUSH SWITCH B SIGNAL
11	B	W	SHIELD
12	L	W	L/R DETECTION SIGNAL

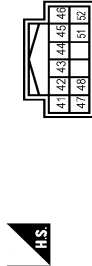
Connector No.	M67
Connector Name	COMBINATION METER
Connector Type	TH46FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	B	W	GROUND
7	G	W	SECURITY SIGNAL
8	B	W	W
11	W	W	ALTERNATOR SIGNAL
12	G	W	LED HEADLAMP (RH) WARNING SIGNAL
13	BR	W	LED HEADLAMP (LH) WARNING SIGNAL
14	V	W	ACC POWER SUPPLY
16	V	W	AIR BAG SIGNAL
17	BR	W	METER CONTROL SWITCH GROUND

18	SB	W	TRIP/RESET SIGNAL
19	P	W	STEERING SWITCH SIGNAL A
22	P	W	STEERING SWITCH SIGNAL B
23	W/B	W	WASHER LEVEL SWITCH SIGNAL
24	L	W	WASHER LEVEL SWITCH SIGNAL
25	LG	W	BRAKE FLUID LEVEL SWITCH SIGNAL
26	V	W	PARKING BRAKE SWITCH SIGNAL
27	G	W	PASSENGER SEAT BELT WARNING SIGNAL
28	W	W	SEAT BELT TUCKLE SWITCH SIGNAL (DRIVER SIDE)
30	SB	W	MANUAL MODE SIGNAL
31	G	W	NON-MANUAL MODE SIGNAL
32	EG	W	MANUAL MODE SHIFT UP SIGNAL
33	GR	W	MANUAL MODE SHIFT DOWN SIGNAL
34	EG	W	PADDLE SHIFTER UP SIGNAL
35	G	W	PADDLE SHIFTER DOWN SIGNAL
36	GR	W	ILLUMINATION CONTROL SWITCH SIGNAL (+)
37	GR	W	ILLUMINATION CONTROL SWITCH SIGNAL (-)
38	R	W	VEHICLE SPEED SIGNAL (8-PULSE)
39	L	W	VEHICLE SPEED SIGNAL (2-PULSE)

Connector No.	M68
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
41	L	W	CAN-H
42	P	W	CAN-L
43	B	W	ILLUMINATION CONTROL SIGNAL
44	Y	W	FUEL LEVEL SENSOR GROUND
45	W	W	BATTERY POWER SUPPLY
46	R	W	IGNITION SIGNAL
47	LG	W	AV COMMUNICATION SIGNAL (H)
48	SB	W	AV COMMUNICATION SIGNAL (L)
52	B	W	FUEL LEVEL SENSOR SIGNAL GROUND

Connector No.	M60
Connector Name	NAVI CONTROL UNIT
Connector Type	TH28FW



Terminal No.	Color	Wire	Signal Name [Specification]
1	Y	W	BAT
2	Y	W	BAT
3	SB	W	ACC
5	SB	W	VEHICLE SPEED SIGNAL (8-PULSE)
7	R	W	MICROPHONE SIGNAL
12	G	W	SHIELD
13	SHIELD	W	SHIELD
14	W	W	VOICE GUIDANCE SIGNAL OUTPUT (+)
15	Y	W	BAT
17	B	W	IGN
19	W	W	ION
21	BR	W	REVERSE SIGNAL
26	R	W	MICROPHONE SIGNAL GND
27	SHIELD	W	SHIELD
28	B	W	VOICE GUIDANCE SIGNAL OUTPUT (-)

Connector No.	M61
Connector Name	NAVI CONTROL UNIT
Connector Type	Typo.1554887-3



Terminal No.	Color	Wire	Signal Name [Specification]
31	W	W	LVD5 (+)
32	B	W	LVD5 (-)
33	SHIELD	W	SHIELD

Connector No.	M62
Connector Name	NAVI CONTROL UNIT
Connector Type	Typo.1554887-4



Terminal No.	Color	Wire	Signal Name [Specification]
34	G	W	USB GND
35	W	W	USB B+ SIGNAL
36	R	W	USB D- SIGNAL
37	L	W	USB D+ SIGNAL
38	SHIELD	W	SHIELD

Connector No.	M63
Connector Name	NAVI CONTROL UNIT
Connector Type	Typo.1554887-5



Terminal No.	Color	Wire	Signal Name [Specification]
39	G	W	USB GND
40	W	W	USB V BUS SIGNAL
41	R	W	USB D- SIGNAL
42	L	W	USB D+ SIGNAL
43	SHIELD	W	SHIELD

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

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

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	M89
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 1554687-5



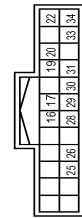
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	USB GND
2	W	USB V BUS SIGNAL
3	R	USB D- SIGNAL
4	L	USB D+ SIGNAL
5	SHIELD	SHIELD

Connector No.	M89
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 1554687-4



Terminal No.	Color Of Wire	Signal Name [Specification]
6	G	USB GROUND
7	W	USB V BUS SIGNAL
8	R	USB D- SIGNAL
9	L	USB D+ SIGNAL
10	SHIELD	SHIELD

Connector No.	M100
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH46FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
16	SB	AV COMM (L)
17	R	AV COMM (H)
18	R	DMRIVE SIGNAL
19	R	REVERSE SIGNAL
20	BR	GND
22	B	—
25	SB	CAMERA SWITCH SIGNAL
26	BR	AV COMM (H)
28	LG	AV COMM (H)
29	L	CAN-H
30	R	IGN
31	R	VEHICLE SPEED SIGNAL (8-PULSE)
33	SB	ACC
34	Y	BAT

Connector No.	M101
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH46FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
38	LG	COMPOSITE IMAGE SIGNAL (-)
39	SHIELD	SHIELD
40	SHIELD	MANUFACTURED SPECIFIC SIGNAL
42	G	SOUND SIGNAL RH (-)
43	SHIELD	SHIELD
44	L	SOUND SIGNAL LH (-)
45	W	TEL VOICE SIGNAL (-)

Terminal No.	Color Of Wire	Signal Name [Specification]
46	SHIELD	SHIELD
47	R	VOICE GUIDANCE SIGNAL OUTPUT (-)
48	W	VOICE GUIDANCE SIGNAL INPUT (-)
49	W	US ON/OFF SIGNAL
50	R	MICROPHONE SIGNAL GND
51	SHIELD	SHIELD
52	SHIELD	MICROPHONE SIGNAL GND
54	W	CAMERA GND
55	SHIELD	SHIELD
56	BR	COMPOSITE IMAGE SIGNAL (+)
58	B	CAMERA IMAGE SIGNAL
59	R	U-VOICE SIGNAL
60	W	VOICE SIGNAL GND
61	B	D-VOICE SIGNAL
62	R	SOUND SIGNAL RH (+)
64	SHIELD	SHIELD
65	R	SOUND SIGNAL LH (+)
66	B	TEL VOICE SIGNAL (-)
67	SHIELD	SHIELD
68	G	VOICE GUIDANCE SIGNAL OUTPUT (+)
69	W	VOICE GUIDANCE SIGNAL INPUT (+)
70	G	SHIELD
71	G	MICROPHONE SIGNAL
72	L	MICROPHONE VCC
74	R	CAMERA POWER SUPPLY

Connector No.	M102
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 1554687-3



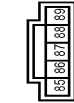
Terminal No.	Color Of Wire	Signal Name [Specification]
77	W	LVDS (+)
78	SHIELD	SHIELD
79	SHIELD	SHIELD

Connector No.	M103
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 1554687-1



Terminal No.	Color Of Wire	Signal Name [Specification]
80	G	USB GROUND
81	W	USB V BUS SIGNAL
82	R	USB D- SIGNAL
83	L	USB D+ SIGNAL
84	SHIELD	SHIELD

Connector No.	M104
Connector Name	DISPLAY CONTROL UNIT
Connector Type	USCARD0-MC-F



Terminal No.	Color Of Wire	Signal Name [Specification]
85	R	USB V BUS SIGNAL
86	P	USB D- SIGNAL
87	W	USB D+ SIGNAL
88	SHIELD	SHIELD
89	Y	USB GROUND

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	M109
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type LS4687-6



Terminal No.	Color Of Wire	Signal Name [Specification]
32	B	LVS (+)
33	B	LVS (-)
34	SHIELD	SHIELD

Connector No.	M112
Connector Name	FRONT SQUAWKER RH
Connector Type	TK02FBR



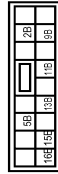
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	L	-

Connector No.	M115
Connector Name	FRONT SQUAWKER LH
Connector Type	TK02FBR



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

Connector No.	M132
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
11B	LG	-
13B	P	-
15B	Y	-
16B	Y	-
2B	B	-
9B	Y	-

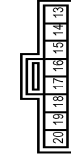
Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH46FW-1H4



Terminal No.	Color Of Wire	Signal Name [Specification]
11C	Y	-
13C	L	-
14C	Y	-
15C	R	-
16C	R	-
17C	L	-
18C	BQ	- [Without DRPO]
19C	P	- [With DRPO]
19C	B	-
20C	W	-
21C	L	-
22C	L	-
23C	LG	-
24C	SG	-
24C	P	-
24C	W	-
2C	R	-
30C	R	-
31C	W	-
32C	R	-
33C	B	-
34C	W/B	-
35C	SB	-
36C	R	-
37C	W	-
38C	SB	-
39C	Y	-
40C	P	-
40C	G	-
5C	P	-
6C	G	-
7C	G	-

8C	Y	-

Connector No.	M301
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08CQY



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

Connector No.	M375
Connector Name	WIRE TO WIRE
Connector Type	GT15SC-2 (S-HU)



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

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	M376
Connector Name	WIRE TO WIRE
Connector Type	GT13SSN-2, 1PP-HU



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

Connector No.	M386
Connector Name	ANTENNA AMP.
Connector Type	GT13SSH-1, 1PP-HU



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

Connector No.	M390
Connector Name	WINDOW ANTENNA (FM SUB)
Connector Type	PRO1FB-A



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

Connector No.	M390
Connector Name	WINDOW ANTENNA (AM/FM MAIN)
Connector Type	PRO1FB-A



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

Connector No.	M394
Connector Name	AV CONTROL UNIT
Connector Type	GT13SH-2, 1S-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
150	-	FM SUB
151	-	AM-FM MAIN
152	-	ANTENNA AMP. ON SIGNAL



Connector No.	M395
Connector Name	NAVI CONTROL UNIT
Connector Type	GT5-1S-HU



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

Connector No.	M414
Connector Name	AV CONTROL UNIT
Connector Type	F4KGA



Terminal No.	Color Of Wire	Signal Name [Specification]
176	-	SATELLITE RADIO ANTENNA SIGNAL
177	SHIELD	SHIELD

Connector No.	M415
Connector Name	WIRE TO WIRE
Connector Type	GT18C-1S-HU



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

Connector No.	M416
Connector Name	WIRE TO WIRE
Connector Type	GT18C-1PP-HU



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

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

< WIRING DIAGRAM >

[INFINITI INTOUCH]

INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	M417
Connector Name	WIRE TO WIRE
Connector Type	GT18C-1S-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	WIRE TO WIRE
2	SHIELD	WIRE TO WIRE

Connector No.	M418
Connector Name	WIRE TO WIRE
Connector Type	GT18C-1PP-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	WIRE TO WIRE
2	SHIELD	WIRE TO WIRE

Connector No.	M419
Connector Name	SATELLITE RADIO ANTENNA
Connector Type	GT18C-1PP-HU



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	WIRE TO WIRE
2	SHIELD	WIRE TO WIRE

Connector No.	R3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	WIRE TO WIRE
2	GR	WIRE TO WIRE
3	W	WIRE TO WIRE
4	BR	WIRE TO WIRE
5	R	WIRE TO WIRE
6	G	WIRE TO WIRE
7	B	WIRE TO WIRE
10	BR	WIRE TO WIRE
11	SB	WIRE TO WIRE
12	GR	WIRE TO WIRE
14	R	WIRE TO WIRE
16	V	WIRE TO WIRE
17	SHIELD	WIRE TO WIRE
18	R	WIRE TO WIRE
19	L	WIRE TO WIRE
21	LG	WIRE TO WIRE
22	V	WIRE TO WIRE
23	GR	WIRE TO WIRE

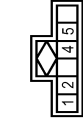
25	W	WIRE TO WIRE
26	B	WIRE TO WIRE
27	BR	WIRE TO WIRE
28	RG	WIRE TO WIRE
29	RG	WIRE TO WIRE
31	W	WIRE TO WIRE
32	L	WIRE TO WIRE

Connector No.	R6
Connector Name	WIRE TO WIRE
Connector Type	TH18MW-NH



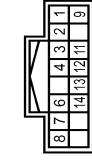
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	WIRE TO WIRE
2	GR	WIRE TO WIRE
3	BR	WIRE TO WIRE
4	V	WIRE TO WIRE
5	SB	WIRE TO WIRE
6	W	WIRE TO WIRE
7	BR	WIRE TO WIRE
8	BR	WIRE TO WIRE
9	R	WIRE TO WIRE
11	LG	WIRE TO WIRE
12	G	WIRE TO WIRE
13	B	WIRE TO WIRE
14	L	WIRE TO WIRE

Connector No.	R12
Connector Name	MICROPHONE
Connector Type	A08FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	WIRE TO WIRE
2	SHIELD	WIRE TO WIRE
4	W	WIRE TO WIRE
5	W	WIRE TO WIRE

Connector No.	R14
Connector Name	WIRE TO WIRE
Connector Type	TH18FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	WIRE TO WIRE
2	GR	WIRE TO WIRE
3	BR	WIRE TO WIRE
4	V	WIRE TO WIRE
5	SB	WIRE TO WIRE
6	W	WIRE TO WIRE
7	W	WIRE TO WIRE
8	BR	WIRE TO WIRE
9	BR	WIRE TO WIRE
11	LG	WIRE TO WIRE
12	G	WIRE TO WIRE
13	B	WIRE TO WIRE
14	L	WIRE TO WIRE

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INFINITI INTOUCH (BOSE AUDIO WITH NAVIGATION)

Connector No.	R19
Connector Name	FRONT MICROPHONE (AUDIOPILOT)
Connector Type	1X02FBR



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

AV

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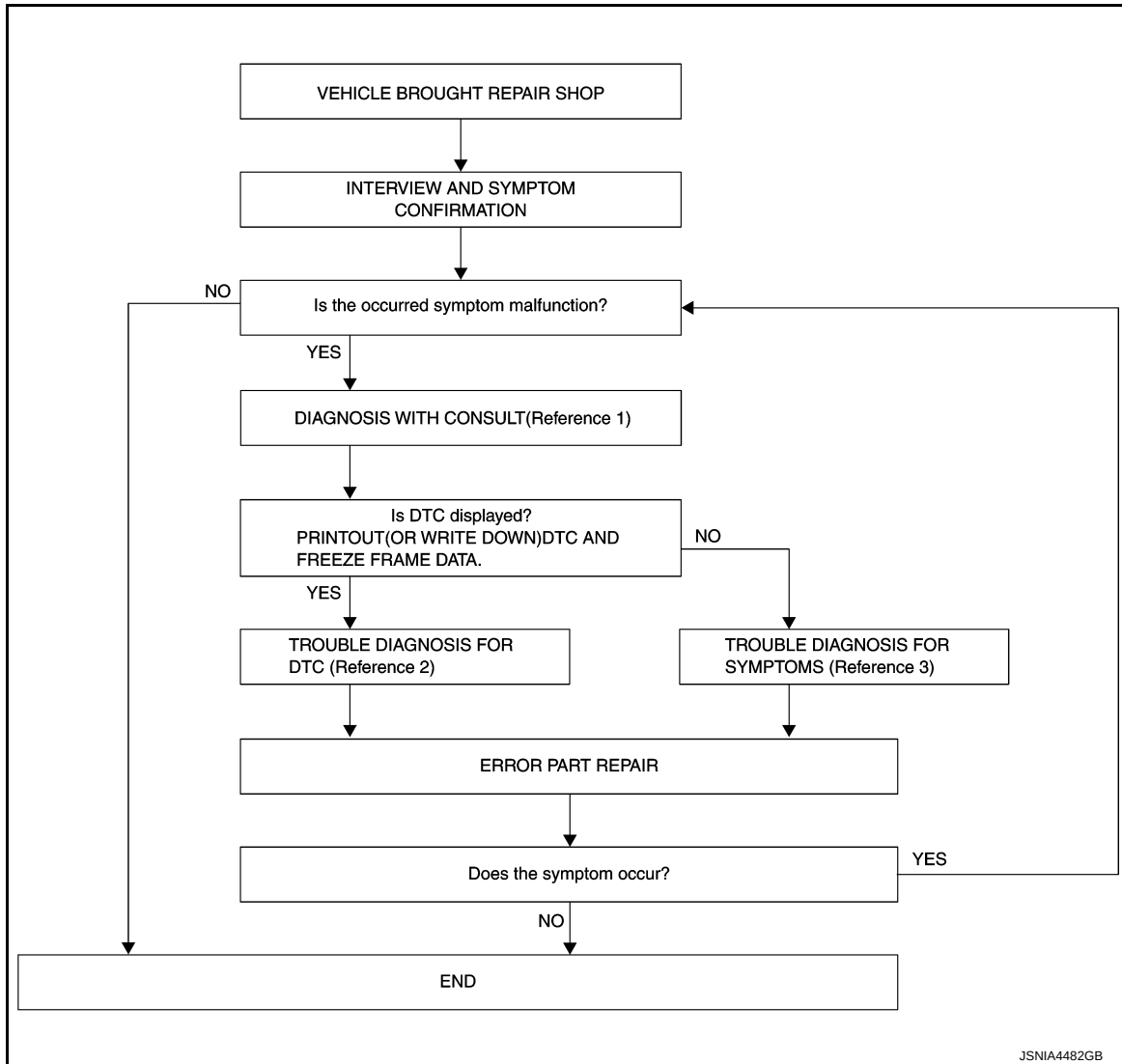
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000009726926

OVERALL SEQUENCE



- Reference 1... Refer to [AV-79, "CONSULT Function"](#).
- Reference 2... Refer to [AV-89, "DTC Index"](#).
- Reference 3... Refer to [AV-267, "Symptom Table"](#).

DETAILED FLOW

1. INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

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

Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2. DIAGNOSIS WITH CONSULT

DIAGNOSIS AND REPAIR WORKFLOW

[INFINITI INTOUCH]

< BASIC INSPECTION >

1. Connect CONSULT and perform a self-diagnosis for "MULTI AV". Refer to [AV-79, "CONSULT Function"](#).
NOTE:
Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.
2. When DTC is detected, follow the instructions below:
 - Record DTC and Freeze Frame Data.

Is DTC displayed?

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

3.TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the "Self-Diagnosis Results".
2. Perform the relevant diagnosis referring to the DTC Index. Refer to [AV-89, "DTC Index"](#).

>> GO TO 5.

4.TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-267, "Symptom Table"](#).

>> GO TO 5.

5.ERROR PART REPAIR

1. Repair or replace the identified malfunctioning parts.
2. Perform a self-diagnosis for "MULTI AV" with CONSULT.
NOTE:
Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the "Self-Diagnosis Results".
3. Check that the symptom does not occur.

Does the symptom occur?

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

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AV

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING DISPLAY CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING DISPLAY CONTROL UNIT : Description

INFOID:000000009728915

Perform the following operations when replacing display control unit.

Configuration, refer to [AV-164, "ADDITIONAL SERVICE WHEN REPLACING DISPLAY CONTROL UNIT : Work Procedure"](#).

ADDITIONAL SERVICE WHEN REPLACING DISPLAY CONTROL UNIT : Work Procedure

INFOID:000000009809659

1. SAVING VEHICLE SPECIFICATION

⑧CONSULT Configuration

Perform "Before Replace ECU" of "Read / Write Configuration" to save or print current vehicle specification.

NOTE:

If "Before Replace ECU" of "Read / Write Configuration" can not be used, use the "Manual Configuration" after replacing display control unit.

>> GO TO 2.

2. REPLACE DISPLAY CONTROL UNIT

Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

⑧CONSULT Configuration

Perform "After Replace ECU" of "Read / Write Configuration" or "Manual Configuration" to write vehicle specification. Refer to [AV-165, "CONFIGURATION \(DISPLAY CONTROL UNIT\) : Work Procedure"](#).

>> WORK END

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description

INFOID:000000009728916

Perform the following operations when replacing AV control unit.

Configuration of display control unit, refer to [AV-164, "ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Work Procedure"](#).

ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Work Procedure

INFOID:000000009809660

1. SAVING VEHICLE SPECIFICATION

⑧CONSULT Configuration

Perform "Before Replace ECU" of "Read / Write Configuration" in "MULTI AV" to save or print current vehicle specification.

NOTE:

If "Before Replace ECU" of "Read / Write Configuration" can not be used, use the "Manual Configuration" after replacing AV control unit.

>> GO TO 2.

2. REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to [AV-278, "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Perform "After Replace ECU" of "Read / Write Configuration" or "Manual Configuration" to write vehicle specification. Refer to [AV-165. "CONFIGURATION \(DISPLAY CONTROL UNIT\) : Work Procedure"](#).

>> WORK END

ADDITIONAL SERVICE WHEN REPLACING NAVI CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING NAVI CONTROL UNIT : Description

INFOID:000000009728918

Perform the following operations when replacing NAVI control unit.

Configuration of display control unit, refer to [AV-165. "ADDITIONAL SERVICE WHEN REPLACING NAVI CONTROL UNIT : Work Procedure"](#).

ADDITIONAL SERVICE WHEN REPLACING NAVI CONTROL UNIT : Work Procedure

INFOID:000000009809661

1. SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform "Before Replace ECU" of "Read / Write Configuration" in "MULTI AV" to save or print current vehicle specification.

NOTE:

If "Before Replace ECU" of "Read / Write Configuration" can not be used, use the "Manual Configuration" after replacing NAVI control unit.

>> GO TO 2.

2. REPLACE NAVI CONTROL UNIT

Replace NAVI control unit. Refer to [AV-279. "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Perform "After Replace ECU" of "Read / Write Configuration" or "Manual Configuration" to write vehicle specification. Refer to [AV-165. "CONFIGURATION \(DISPLAY CONTROL UNIT\) : Work Procedure"](#).

>> WORK END

CONFIGURATION (DISPLAY CONTROL UNIT)

CONFIGURATION (DISPLAY CONTROL UNIT) : Work Procedure

INFOID:000000009728917

1. WRITING MODE SELECTION

CONSULT Configuration

Select "Re/programming, Configuration" of "MULTI AV".

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

2. WRITING VEHICLE SPECIFICATION

CONSULT Configuration

< BASIC INSPECTION >

Select "Configuration" or "After Replace ECU", and write the vehicle specification saved in CONSULT to display control unit.

>> GO TO 4.

3. WRITE VEHICLE SPECIFICATION

CONSULT Configuration

Select "Manual Configuration", and write the setting value as shown in the following table to display control unit according to the vehicle specification.

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.
- If selection items are not displayed on the CONSULT screen, touch "NEXT".

MANUAL SETTING ITEM		Detail
Items	Setting value	
STEERING	LHD	LHD models
	RHD	RHD models
NAVIGATION	WITH	Models with navigation
	WITHOUT	Models without navigation
LDP (LANE DEPARTURE PREVENTION)	On	Models with LDP
	Off	Models without LDP
ENGINE TYPE	VQ ENGINE	VQ37VHR engine models
	EXCEPT FOR VQ ENGINE	Except VQ37VHR engine models
HYBRID	OFF	Except hybrid models
	FR TYPE	Hybrid models (2WD)
	FR TYPE 4WD	Hybrid models (4WD)
CAMERA SYSTEM	REAR CAMERA	With rear view monitor system
	NONE/AVM ph3	With around view monitor system
PREDICTIVE COURSE LINE	WITHOUT	Without predictive course line
	WITH (WITHOUT DAST)	With predictive course line (without direct adaptive steering)
	WITH (WITH DAST)	With predictive course line (with direct adaptive steering)
TRANSMISSION	AT/CVT	A/T models
	MT	M/T models
SONAR TYPE	NONE	Models without sonar
	FRONT&REAR	Models with sonar
AUDIO AMP TYPE	160W AMP	Models without BOSE system
	2ch AMP	Models with BOSE system
DAB FUNCTION	Off	Models without DAB (digital audio broadcast) function
	On	Models without DAB (digital audio broadcast) function

>> GO TO 5.

4. PERFORM SELF-DIAGNOSIS

CONSULT Self Diagnostic Result

Perform self-diagnosis of CONSULT, and check whether or not DTC U1223 is detected.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[INFINITI INTOUCH]

Is DTC U1223 detected?

YES >> GO TO 3.

NO >> GO TO 5.

5. OPERATION CHECK

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

>> WORK END

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DTC/CIRCUIT DIAGNOSIS

B1F01 ENGINE SPEED SIGNAL

DTC Description

INFOID:000000009726927

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B1F01	ENG SPEED SIG ERROR (Engine speed signal error)	When during engine running, the engine speed signal received via CAN communication and the engine speed signal inputted into BOSE amp detect 20% or more of error 1 second or more

POSSIBLE CAUSE

- Harness or connectors (Engine speed signal circuit)
- BOSE amp.
- ECM

FAIL-SAFE

Active noise control and active sound control function are deactivated

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If B1F01 is displayed with DTC U1000 or U1010, first perform the confirmation procedure (trouble diagnosis) for DTC U1000 or U1010.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [AV-175, "DTC Description"](#).
 - U1010: Refer to [AV-177, "DTC Description"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Start engine and wait at least 30 seconds.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC B1F01 detected?

- YES >> Proceed to [AV-168, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726928

1.CHECK SELF-DIAGNOSTIC RESULT OF ECM

With CONSULT

Check "Self Diagnostic Result" of "ENGINE" using CONSULT.

Is any DTC detected?

- YES >> Perform trouble diagnosis for detected DTC. Refer to [EC-106, "DTC Index"](#).
- NO >> GO TO 2.

2.CHECK HARNESS CONTINUITY BETWEEN BOSE AMP. AND ECM

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

B1F01 ENGINE SPEED SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

BOSE amp.		ECM		Continuity
Connector	Terminal	Connector	Terminal	
B55	78	M37	110	Existed

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK HARNESS CONTINUITY BETWEEN BOSE AMP. AND GROUND

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

BOSE amp.		Ground	Continuity
Connector	Terminal		
B55	78		Not existed

Is inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK VOLTAGE BETWEEN BOSE AMP. AND GROUND

Check the voltage between BOSE amp. harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(−)	
BOSE amp.			
Connector	Terminal		
B55	78	Ground	0 V

Is inspection result normal?

YES >> Replace BOSE amp. Refer to [AV-283, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

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AV

B1F02 DOOR STATUS SIGNAL

DTC Description

INFOID:000000009726929

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B1F02	DOOR STATUS SIG ERROR (Door status signal error)	When any door is in an opened condition, step lamp signal input into BOSE amp is different from the door status signal which received via CAN communication for 1 second or more.

POSSIBLE CAUSE

- Harness or connectors (Door signal circuit)
- BOSE amp.
- BCM

FAIL-SAFE

Active noise control and active sound control function are deactivated

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If B1F02 is displayed with DTC U1000 or U1010, first perform the confirmation procedure (trouble diagnosis) for DTC U1000 or U1010.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1000: Refer to [AV-175, "DTC Description"](#).
 - U1010: Refer to [AV-177, "DTC Description"](#).
- NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON.
4. Open the driver's door and wait at least 2 seconds or more.
5. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
6. Check DTC.

Is DTC B1F02 detected?

- YES >> Proceed to [AV-170, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726930

1.CHECK SELF-DIAGNOSTIC RESULT OF BCM

With CONSULT

Check "Self Diagnostic Result" of "BCM" using CONSULT.

Is any DTC detected?

- YES >> Perform trouble diagnosis for detected DTC. Refer to [BCS-62, "DTC Index"](#).
- NO >> GO TO 2.

2.CHECK HARNESS CONTINUITY BETWEEN BOSE AMP. AND BCM

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

B1F02 DOOR STATUS SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

BOSE amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
B55	76	M13	21	Existed

Is inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK HARNESS CONTINUITY BETWEEN BOSE AMP. AND GROUND

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

BOSE amp.		Ground	Continuity
Connector	Terminal		
B55	76		Not existed

Is inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK VOLTAGE BETWEEN BOSE AMP. AND GROUND

Check the voltage between BOSE amp. harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(−)	
BOSE amp.			
Connector	Terminal		
B55	76	Ground	0 V

Is inspection result normal?

YES >> Replace BOSE amp. Refer to [AV-283, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

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AV

B1F0B, B1F0C, B1F0D, B1F0E ANC MIC1 CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

B1F0B, B1F0C, B1F0D, B1F0E ANC MIC1 CIRCUIT

DTC Description

INFOID:000000009726931

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B1F0B	ANC MIC1 CIRC OPEN (Active noise control microphone1 circuit open)	Display control unit detects front microphone circuit is open.
B1F0C	ANC MIC1 CIRC SHORT (Active noise control microphone1 circuit short)	Display Control unit detects front microphone circuit is short.
B1F0D	ANC MIC1 CIRC SHORT-BAT (Active noise control microphone1 circuit short-battery)	Display control unit detects front microphone circuit is short to power supply.
B1F0E	ANC MIC1 CIRC SHORT-GND (Active noise control microphone1 circuit short-ground)	Display control unit detects front microphone circuit is short to ground.

POSSIBLE CAUSE

Harness or connectors (Front microphone circuit is open or short)

FAIL-SAFE

Active noise control function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC B1F0B, B1F0C, B1F0D or B1F0E detected?

YES >> Proceed to [AV-172, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726932

1.CHECK FRONT MICROPHONE SIGNAL

1. Turn ignition switch ON.
2. Check the signal between BOSE amp. harness connector as per the following condition.

B1F0B, B1F0C, B1F0D, B1F0E ANC MIC1 CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

BOSE amp.			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
B55	72	52	When inputting interior sound	(V) </

Is the inspection result normal?YES >> Replace BOSE amp. Refer to [AV-283, "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK VOLTAGE BETWEEN BOSE AMP. AND GROUND

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

Terminals		(-)	Voltage (Approx.)
(+) BOSE amp.			
Connector	Terminal		
B55	72	Ground	0 V
	52		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK FRONT MICROPHONE SIGNAL CIRCUIT FOR OPEN

1. Disconnect front microphone harness connector.
2. Check the continuity between BOSE amp. harness connector and front microphone harness connector.

BOSE amp.		Front microphone		Continuity
Connector	Terminal	Connector	Terminal	
B55	72	R19	2	Existed
	52		1	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK FRONT MICROPHONE SIGNAL CIRCUIT FOR SHORT

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

BOSE amp.		Ground	Continuity
Connector	Terminal		
B55	72		Not existed
	52		

Is the inspection result normal?

B1F0B, B1F0C, B1F0D, B1F0E ANC MIC1 CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

YES >> Replace front microphone. Refer to [AV-299, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

U1000 CAN COMM CIRCUIT

DTC Description

INFOID:000000009726937

DESCRIPTION

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-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart"](#).

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The system using the CAN communication signal from control unit which cannot communicate does not function

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC U1000 is displayed with DTC U1223, first perform the confirmation procedure (trouble diagnosis) for DTC U1223.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to [AV-179, "DTC Description"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1000 detected?

YES >> Proceed to [AV-175, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726938

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-175, "DTC Description"](#).

Is DTC detected again?

YES >> Perform the trouble diagnosis for CAN communication system. Refer to [LAN-26, "Trouble Diagnosis Flow Chart"](#).

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

NO >> INSPECTION END

U1010 CONTROL UNIT (CAN)

DTC Description

INFOID:000000009726939

DESCRIPTION

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-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart"](#).

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	CAN initial diagnosis internal malfunction is detected.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The system using the CAN communication signal does not function

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

1. Turn ignition switch OFF and wait at least 30 seconds.
2. Turn ignition switch ON.
3. Turn ignition switch OFF and wait at least 30 seconds.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

④With CONSULT

1. Turn ignition switch ON and wait at least 30 seconds or more.
2. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
3. Check DTC.

Is DTC U1010 detected?

YES >> Proceed to [AV-177, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726940

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

④With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-177, "DTC Description"](#).

Is DTC U1010 detected again?

YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).

NO >> INSPECTION END

U121F DISPLAY CONTROL UNIT

DTC Description

INFOID:000000009726941

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U121F	DISPLAY CONTROL UNIT (Display control unit)	Display control unit internal malfunction.

POSSIBLE CAUSE

Display control unit

FAIL-SAFE

As an example:

- Display is not displayed
- Display control unit restart
- Display control unit freezes

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U121F detected?

- YES >> Proceed to [AV-178. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726942

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

⑧With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-178. "DTC Description"](#).

Is DTC U121F detected again?

- YES >> Replace display control unit. Refer to [AV-277. "Removal and Installation"](#).
 NO >> INSPECTION END

U1223 CONFIG UNFINISH

DTC Description

INFOID:000000009726943

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1223	CONFIG UNFINISH (Configuration unfinish)	When a configuration status (complete/incomplete) of display control unit is incongruous with NAVI control unit and AV control unit.

POSSIBLE CAUSE

Configuration is incomplete

FAIL-SAFE

A function of display control unit becomes mismatched with a vehicle specification and destination

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1223 detected?

YES >> Proceed to [AV-179. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726944

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-179. "DTC Description"](#).

Is DTC U1223 detected again?

YES >> Perform configuration of display control unit. Refer to [AV-165. "CONFIGURATION \(DISPLAY CONTROL UNIT\) : Work Procedure"](#).

NO >> INSPECTION END

AV

U1231 BOSE AMP.**DTC Description**

INFOID:000000009726945

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1231	AMP TEMP (Amp temperature)	When BOSE amp. temperature is high.

POSSIBLE CAUSE

- BOSE amp. temperature is high
- BOSE amp.

FAIL-SAFE

BOSE system does not function

DTC CONFIRMATION PROCEDURE**1.PERFORM DTC CONFIRMATION PROCEDURE****Ⓔ With CONSULT**

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1231 detected?YES >> Proceed to [AV-180, "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726946

1.CHECK AROUND BOSE AMP.

Check whether there is any factor which causes a temperature rise near BOSE amp.

Was there any factor?

YES >> GO TO 2.

NO >> Remove a factor.

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-180, "DTC Description"](#).

Is DTC U1231 detected again?YES >> Replace BOSE amp. Refer to [AV-283, "Removal and Installation"](#).

NO >> INSPECTION END

U1232 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1232 STEERING ANGLE SENSOR

DTC Description

INFOID:000000009726947

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1232	ST ANGLE SEN CALIB (Steering angle sensor calibration)	- When calibration an uncarried out signal is received from steering angle sensor - When neutral position adjustment fails in CONSULT

POSSIBLE CAUSE

- Neutral position adjustment of the steering angle sensor is incomplete
- Steering angle sensor

FAIL-SAFE

Predictive course line is not displayed

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④With CONSULT

- Turn ignition switch ON.
- Turn ignition switch OFF and wait at least 30 seconds.
- Turn ignition switch ON and wait at least 30 seconds or more.
- Select "Self diagnostic result" mode of "MULTI AV" using CONSULT.
- Check DTC.

Is DTC U1232 detected?

- YES >> Proceed to [AV-181, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726948

1.AJUST NEUTRAL POSITION OF STEERING ANGLE SENSOR

Adjusts the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to [BRC-70, "Work Procedure"](#).

NOTE:

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

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-181, "DTC Description"](#).

Is DTC U1232 detected again?

- YES >> Replace steering angle sensor. Refer to [AV-468, "Removal and Installation"](#).
NO >> INSPECTION END

U1233 NAVI CONTROL UNIT

DTC Description

INFOID:000000009726949

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1233	NAVI CONTROL UNIT (Navigation control unit)	NAVI control unit internal malfunction.

POSSIBLE CAUSE

NAVI control unit

FAIL-SAFE

As an example:

- Map is not displayed
- Navigation screen does not operate

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self diagnostic result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1233 detected?

- YES >> Proceed to [AV-182, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726950

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

⑧With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-182, "DTC Description"](#).

Is DTC U1233 detected again?

- YES >> Replace NAVI control unit. Refer to [AV-279, "Removal and Installation"](#).
- NO >> INSPECTION END

U1234 AV CONTROL UNIT

DTC Description

INFOID:000000009726951

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1234	AV CONTROL UNIT (AV control unit)	AV control unit is malfunctioning.

POSSIBLE CAUSE

AV control unit

FAIL-SAFE

As an example:

- Sound is not output by a speaker
- CD is not played
- Radio does not operate

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self diagnostic result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1234 detected?

YES >> Proceed to [AV-183. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726952

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

④With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-183. "DTC Description"](#).

Is DTC U1234 detected again?

YES >> Replace AV control unit. Refer to [AV-278. "Removal and Installation"](#).

NO >> INSPECTION END

AV

U1244 GPS ANTENNA CONN

DTC Description

INFOID:000000009726953

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1244	GPS ANTENNA CONN (GPS antenna connection error)	GPS antenna connection is malfunctioning.

POSSIBLE CAUSE

- GPS antenna is not connected
- GPS antenna

FAIL-SAFE

The vehicle positions of a navigation screen differ.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1244 detected?

- YES >> Proceed to [AV-184, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726954

1.CHECK GPS ANTENNA HARNESS CONNECTOR

1. Turn ignition switch OFF.
2. Visually check GPS antenna connection.

Is the inspection result normal?

- YES >> Replace GPS antenna. Refer to [AV-296, "Removal and Installation"](#).
 NO >> Repair connection of GPS antenna to NAVI control unit.

U1249 AUDIO H/U CONN

DTC Description

INFOID:000000009726955

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1249	AUDIO H/U CONN (Audio head unit connection error)	- AV control unit power supply and ground circuits are malfunctioning. - AV communication circuit between display control unit and AV control unit is malfunctioning.

NOTE:

DTC U1249 is displayed with DTC U1300.

POSSIBLE CAUSE

- AV control unit
- AV communication circuit is open

FAIL-SAFE

As an example:

- Sound is not output by a speaker
- CD is not played
- Radio does not operate

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1249 detected?

YES >> Proceed to [AV-185, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726956

1.CHECK AV CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check AV control unit power supply and ground circuit. Refer to [AV-240, "AV CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK AV COMMUNICATION CIRCUIT

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

Display control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M100	16	M9	22	Existed
	28		42	

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-278, "Removal and Installation"](#).
- NO >> Repair or replace malfunctioning parts.

U124E AMP CONN

DTC Description

INFOID:000000009726957

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U124E	AMP CONN (Amp connection error)	- BOSE amp. power supply and ground circuits are malfunctioning. - AV communication circuit between display control unit and BOSE amp. is malfunctioning.

NOTE:

DTC U124E is displayed with DTC U1300.

POSSIBLE CAUSE

- BOSE amp.
- AV communication circuit is open

FAIL-SAFE

Sound is not output by a speaker

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

- Turn ignition switch ON.
- Turn ignition switch OFF and wait at least 30 seconds.
- Turn ignition switch ON and wait at least 30 seconds or more.
- Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
- Check DTC.

Is DTC U124E detected?

- YES >> Proceed to [AV-187, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726958

1.CHECK BOSE AMP. POWER SUPPLY AND GROUND CIRCUIT

Check BOSE amp. power supply and ground circuit. Refer to [AV-243, "BOSE AMP. : Diagnosis Procedure"](#).

Is the inspection result normal?

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

2.CHECK AV COMMUNICATION CIRCUIT

- Turn ignition switch OFF.
- Disconnect display control unit harness connector and BOSE amp. harness connector.
- Check the continuity between display control unit harness connector and BOSE amp. harness connector.

Display control unit		BOSE amp.		Continuity
Connector	Terminal	Connector	Terminal	
M100	16	B55	54	Existed
	28		74	

Is the inspection result normal?

- YES >> Replace BOSE amp. Refer to [AV-283, "Removal and Installation"](#).
- NO >> Repair or replace malfunctioning parts.

U1258 SATELLITE RADIO ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1258 SATELLITE RADIO ANTENNA

DTC Description

INFOID:000000009726959

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1258	XM ANTENNA CONN (Satellite radio antenna connection error)	GND-SHORT (Ground to short circuit)	Satellite radio antenna circuit is short circuit to ground.
		OPEN (Open circuit)	Satellite radio antenna circuit is open.

POSSIBLE CAUSE

- Satellite radio antenna is not connected
- Harness or connector (Satellite radio antenna circuit is open or short)

FAIL-SAFE

Satellite radio is not received

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④ With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1258 detected?

- YES >> Proceed to [AV-188, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726960

1.CHECK SATELLITE RADIO ANTENNA HARNESS CONNECTOR

1. Turn ignition switch OFF.
2. Visually check satellite radio antenna and antenna feeder.

Is the inspection result normal?

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

2.CHECK SATELLITE RADIO ANTENNA HARNESS CIRCUIT

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

Terminals			Continuity
(+)AV control unit		(-)Ground	
Connector	Terminal		
M414	176		
			Not existed

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace malfunctioning parts.

U1258 SATELLITE RADIO ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

3.CHECK AV CONTROL UNIT VOLTAGE

1. Turn ignition switch ON.
2. Check the voltage between AV control unit and ground.

Terminals		Voltage (Approx.)
(+)	(−)	
AV control unit		
Terminal		
176	Ground	5.0 V

Is the inspection result normal?

- YES >> Replace satellite radio antenna. Refer to [AV-294, "Removal and Installation"](#).
NO >> Replace AV control unit. Refer to [AV-278, "Removal and Installation"](#).

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U1259 INTEGRAL SWITCH CONN

DTC Description

INFOID:000000009726961

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1259	2ND DIP CONN (2nd display connection error)	- Integral switch power supply and ground circuits are malfunctioning. - AV communication circuit between display control unit and integral switch is malfunctioning.

NOTE:

DTC U1259 is displayed with DTC U1300.

POSSIBLE CAUSE

- Integral switch
- AV communication circuit is open

FAIL-SAFE

- Integral switch display is not displayed
- Switch operation is invalid
- Touch panel operation is invalid

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE With CONSULT

- Turn ignition switch ON.
- Turn ignition switch OFF and wait at least 30 seconds.
- Turn ignition switch ON and wait at least 30 seconds or more.
- Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
- Check DTC.

Is DTC U1259 detected?

YES >> Proceed to [AV-190, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726962

1.CHECK INTEGRAL SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check integral switch power supply and ground circuit. Refer to [AV-244, "INTEGRAL SWITCH : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK AV COMMUNICATION CIRCUIT

- Turn ignition switch OFF.
- Disconnect display control unit harness connector and integral switch harness connector.
- Check the continuity between display control unit harness connector and integral switch harness connector.

Display control unit		Integral switch		Continuity
Connector	Terminal	Connector	Terminal	
M100	16	M1	3	Existed
	28		4	

Is the inspection result normal?

U1259 INTEGRAL SWITCH CONN

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

YES >> Replace integral switch. Refer to [AV-280, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

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U125B AVM CONN

DTC Description

INFOID:000000009726963

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U125B	AROUND CAMERA CONN (Around camera connection error)	• Around view monitor control unit power supply and ground circuits are malfunctioning. • AV communication circuit between display control unit and around view monitor control unit is malfunctioning.

NOTE:

DTC U125B is displayed with DTC U1300.

POSSIBLE CAUSE

- Around view monitor control unit
- AV communication circuit is open

FAIL-SAFE

Camera image is not displayed

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U125B detected?

- YES >> Proceed to [AV-192, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726964

1.CHECK AROUND VIEW MONITOR CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check around view monitor control unit power supply and ground circuit. Refer to [AV-435, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

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

2.CHECK AV COMMUNICATION CIRCUIT FOR OPEN

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

Display control unit		Around view monitor control unit		Continuity
Connector	Terminal	Connector	Terminal	
M100	16	B50	20	Existed
	28		19	

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

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U125D NAVI CONN

DTC Description

INFOID:000000009726965

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U125D	DVD NAVI CONN (DVD navigation connection error)	• NAVI control unit power supply and ground circuits are malfunctioning. • Communication between display control unit and NAVI control unit is malfunctioning.

POSSIBLE CAUSE

- NAVI control unit
- USB harness is not connected

FAIL-SAFE

A navigation menu cannot be selected (hatching display).

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U125D detected?

- YES >> Proceed to [AV-194, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726966

1.CHECK USB HARNESS CONNECTION

1. Turn ignition switch OFF.
2. Visually check USB harness connector between display control unit and NAVI control unit.

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Replace USB harness.

2.CHECK NAVI CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check NAVI control unit power supply and ground circuit. Refer to [AV-241, "NAVI CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace NAVI control unit. Refer to [AV-279, "Removal and Installation"](#).
- NO >> Repair or replace malfunctioning parts.

U1266 TCU

DTC Description

INFOID:000000009726967

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1266	TCU CONN (TCU connection error)	- TCU power supply and ground circuits are malfunctioning. - Communication between display control unit and TCU is malfunctioning.

POSSIBLE CAUSE

- TCU
- Display control unit
- USB harness is not connected

FAIL-SAFE

Telematics system does not function

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1266 detected?

- YES >> Proceed to [AV-195, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726968

1.CONFIRMATION OF DTC WHICH DETECTED

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-195, "DTC Description"](#).

Is DTC U1266 detected with DTC U1249 and U125D?

- YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).
 NO >> GO TO 2 .

2.CHECK USB HARNESS CONNECTION

1. Turn ignition switch OFF.
2. Visually check USB harness connector between display control unit and TCU.

Is the inspection result normal?

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

3.CHECK TCU UNIT POWER SUPPLY AND GROUND CIRCUIT

Check TCU power supply and ground circuit. Refer to [AV-589, "TCU : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).
 NO >> Repair or replace malfunctioning parts.

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U1267 METER CONN

DTC Description

INFOID:000000009726969

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1267	METER CONN (Combination meter connection error)	- Combination meter power supply and ground circuits are malfunctioning. - AV communication circuit between display control unit and combination meter is malfunctioning.

NOTE:

DTC U1267 is displayed with DTC U1300.

POSSIBLE CAUSE

- Combination meter
- AV communication circuit is open

FAIL-SAFE

- Audio information is not displayed by the information display in the combination meter
- Navigation indicator is not displayed by the information display in the combination meter
- Steering switch does not operate

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

- Turn ignition switch ON.
- Turn ignition switch OFF and wait at least 30 seconds.
- Turn ignition switch ON and wait at least 30 seconds or more.
- Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
- Check DTC.

Is DTC U1267 detected?

- YES >> Proceed to [AV-196, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726970

1.CHECK COMBINATION METER POWER SUPPLY AND GROUND CIRCUIT

Check combination meter power supply and ground circuit. Refer to [MWI-104, "COMBINATION METER : Diagnosis Procedure"](#).

Is the inspection result normal?

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

2.CHECK AV COMMUNICATION CIRCUIT

- Turn ignition switch OFF.
- Disconnect display control unit harness connector and combination meter harness connector.
- Check the continuity between display control unit harness connector and combination meter harness connector.

Display control unit		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
M100	16	M58	48	Existed
	28		47	

Is the inspection result normal?

U1267 METER CONN

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

YES >> Replace combination meter. Refer to [MWI-126, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

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U12B7 USB CONN

DTC Description

INFOID:000000009726971

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U12B7	USB CONN (USB connection error)	When the abnormalities in communication with USB connection apparatus are detected

POSSIBLE CAUSE

- Display control unit
- AV control unit
- USB harness is not connected

FAIL-SAFE

Audio equipment which connected to USB does not operate

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Connect audio apparatuses etc. to USB port.
5. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
6. Check DTC.

Is DTC U12B7 detected?

- YES >> Proceed to [AV-198. "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726972

1.CHECK DTC (1) With CONSULT

1. Remove connected audio apparatus from USB port.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON.
4. Erase DTC.
5. Turn ignition switch OFF and wait at least 30 seconds.
6. Turn ignition switch ON and wait at least 30 seconds or more.
7. Check "Self Diagnostic Result" of "MULTI AV".

Is any DTC detected?

- YES >> Replace AV control unit. Refer to [AV-278. "Removal and Installation"](#).
 NO >> GO TO 2.

2.CHECK DTC (2)

1. Connect audio apparatus to USB port again.
2. Check "Self Diagnostic Result" of "MULTI AV".

Is DTCU12B7 detected?

- YES >> Abnormality of audio apparatus connected to USB port.
 NO >> INSPECTION END

U12B8 REAR CAMERA CONN

DTC Description

INFOID:000000009726973

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U12B8	REAR CAMERA CONN (Rear camera connection error)	When display control unit detected error of image input from rear camera.

POSSIBLE CAUSE

- Rear view camera
- Rear view camera is not connected
- Rear view camera circuit is open

FAIL-SAFE

Rear camera image is not displayed

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Shift the selector lever to R position and then, shift the selector lever to P position again.
5. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
6. Check DTC.

Is DTC U12B8 detected?

- YES >> Proceed to [AV-199, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726974

1.CHECK REAR VIEW CAMERA POWER SUPPLY (1)

1. Turn ignition switch OFF.
2. Disconnect rear view camera harness connector.
3. Turn ignition switch ON.
4. Shift the selector lever to R position.
5. Check the voltage between rear view camera harness connectors.

Rear view camera			Voltage (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
T49	1	2	6.0 V

Is the inspection result normal?

- YES >> Replace rear view camera. Refer to [AV-524, "Removal and Installation"](#).
- NO >> GO TO 2.

2.CHECK REAR VIEW CAMERA POWER SUPPLY (2)

Check the voltage between rear view camera harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(−)	
Rear view camera			
Connector	Terminal		
T49	1	Ground	6.0 V

Is the inspection result normal?

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

3.CHECK REAR VIEW CAMERA POWER SUPPLY CIRCUIT

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

Display control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M101	74	T49	1	Existed

Is the inspection result normal?

- YES >> Replace display control unit. Refer to [AV-277. "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

4.CHECK REAR VIEW CAMERA GROUND CIRCUIT

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

Display control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M101	54	T49	54	Existed

Is the inspection result normal?

- YES >> Check display control unit and rear view camera ground.
NO >> Repair or replace malfunctioning parts.

U12BA MULTIFUNCTION SWITCH CONN

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U12BA MULTIFUNCTION SWITCH CONN

DTC Description

INFOID:000000009726975

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U12BA	MULTIFUNCTION SWITCH CONN (Multifunction switch connection error)	Integral switch detects connection error with multifunction switch.

POSSIBLE CAUSE

- Multifunction switch
- Multifunction switch is not connected

FAIL-SAFE

Multifunction switch operation is invalid

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U12BA detected?

- YES >> Proceed to [AV-201. "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726976

1.PERFORM SELF-DIAGNOSIS OF INTEGRAL SWITCH

1. Turn ignition switch ON.
2. After ignition switch ON, press "RADIO" switch and "MENU" switch at the same time more than 3 seconds within 10 seconds.
3. A beep sounds, and all the air-conditioner switch indicators turn on, and a self-diagnostic mode is started.
4. Press each multifunction switch and check the beep sound.

NOTE:

Self-diagnostic mode is ended when the ignition switch turns OFF.

Does the beep sound by all the switch operations?

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

2.CHECK MULTIFUNCTION SWITCH

Check the multifunction switch. Refer to [AV-201. "Component Inspection"](#).

Is the inspection result normal?

- YES >> Repair or replace harness between integral switch and multifunction switch which does not operate.
- NO >> Replace multifunction switch. Refer to [AV-281. "Removal and Installation"](#).

Component Inspection

INFOID:000000009726977

1.CHECK MULTIFUNCTION SWITCH (1)

1. Turn ignition switch OFF.
2. Disconnect multifunction switch harness connector.

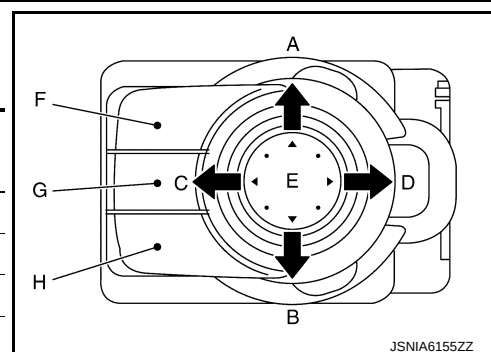
U12BA MULTIFUNCTION SWITCH CONN

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

- Check the resistance between multifunction switch terminals as per the following condition.

Terminal		Switch position	Resistance (Ω)
(+)	(-)		
1	2	All OFF	4632 - 4868
		E	390.1 - 410.1
		F	45.3 - 47.7
4		All OFF	4632 - 4868
		A	605.1 - 636.2
		B	211.2 - 222.0
10		G	45.3 - 47.7
		All OFF	4632 - 4868
		C	605.1 - 636.2
		D	211.2 - 222.0
		H	45.3 - 47.7



Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace multifunction switch. Refer to [AV-281, "Removal and Installation"](#).

2.CHECK MULTIFUNCTION SWITCH (2)

- Reconnect all harness connectors disconnected.
- Turn ignition switch ON.
- Check the voltage between integral switch harness connector terminals as per the following condition.

Integral switch			Condition		Voltage (Approx.)
Connector	Terminals				
	(+)	(-)			
	Terminal				
M3	32	31	Multifunction switch	Rotate	2.0 - 4.3 V
	37				

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace multifunction switch. Refer to [AV-281, "Removal and Installation"](#).

U12BE RADIO ANTENNA CONN

DTC Description

INFOID:000000009726980

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U12BE	RADIO ANTENNA CONN (Radio antenna connection error)	GND-SHORT (Ground to short circuit)	Radio antenna circuit is short circuit to ground.
		OPEN (Open circuit)	Radio antenna circuit is open.

POSSIBLE CAUSE

- Radio antenna is not connected
- Harness or connector (Radio antenna circuit is open or short)

FAIL-SAFE

Radio is not received

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U12BE detected?

- YES >> Proceed to [AV-203, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726981

1.CHECK WINDOW ANTENNA HARNESS CONNECTOR

1. Turn ignition switch OFF.
2. Visually check radio antenna and antenna feeder.

Is the inspection result normal?

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

2.CHECK WINDOW ANTENNA HARNESS CIRCUIT

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

Terminals			Continuity
(+) AV control unit		(–)	
Connector	Terminal		
M394	150		
		Ground	Not existed

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace malfunctioning parts.

3. CHECK DISPLAY CONTROL UNIT VOLTAGE

1. Turn ignition switch ON.
2. Check the voltage between AV control unit and ground.

Terminals		Voltage (Approx.)
(+)	(−)	
AV control unit		
Terminal		
150	Ground	5.0 V

Is the inspection result normal?

- YES >> Replace window antenna. Refer to [AV-293, "Feeder Layout"](#).
- NO >> Replace AV control unit. Refer to [AV-278, "Removal and Installation"](#).

U1300 AV COMM CIRCUIT

DTC Description

INFOID:000000009726982

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1300	AV COMM CIRCUIT (AV communication circuit)	- AV communication signal cannot be transmitted by the abnormalities in display control unit. - AV communication signal cannot receive by the abnormalities of ECU connected to AV communication circuit.

NOTE:

DTC U1300 is simultaneously displayed as one of following DTC(s).

- U1249 AUDIO H/U CONN
- U124E AMP CONN
- U1259 2ND DISP CONN
- U125B AROUND CAMERA CONN
- U1267 METER CONN

POSSIBLE CAUSE

- AV communication circuit
- Display control unit
- AV control unit
- BOSE amp.
- Integral switch
- Around view monitor control unit
- Combination meter

FAIL-SAFE

The system of ECU which detected abnormalities does not operate.

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If U1300 is displayed with DTC U1249, U124E, U1259, U125B or U1267, first perform the confirmation procedure (trouble diagnosis) for DTC U1249, U124E, U1259, U125B or U1267.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable.
- U1249: Refer to [AV-185, "DTC Description"](#).
 - U124E: Refer to [AV-187, "DTC Description"](#).
 - U1259: Refer to [AV-190, "DTC Description"](#).
 - U125B: Refer to [AV-192, "DTC Description"](#).
 - U1267: Refer to [AV-196, "DTC Description"](#).

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1300 detected?

- YES >> Proceed to [AV-206, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726983

1. CHECK SELF DIAGNOSTIC RESULT

Check if any DTC other than "U1300" is detected in "Self diagnostic result" of "MULTI AV".

Is any DTC detected?

- YES >> Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [AV-89, "DTC Index"](#).
- NO >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#)

U1310 DISPLAY CONTROL UNIT

DTC Description

INFOID:000000009726984

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1310	CONTROL UNIT (AV) [Control unit (AV)]	An initial diagnosis error is detected in AV communication circuit.

POSSIBLE CAUSE

Display control unit

FAIL-SAFE

The system which is using AV communication does not operate.

DTC CONFIRMATION PROCEDURE

1. PRECONDITIONING

1. Turn ignition switch OFF and wait at least 30 seconds.
2. Turn ignition switch ON.
3. Turn ignition switch OFF and wait at least 30 seconds.

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

Ⓜ With CONSULT

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
3. Check DTC.

Is DTC U1310 detected?

- YES >> Proceed to [AV-207, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726985

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-207, "DTC Description"](#).

Is DTC U1310 detected again?

- YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).
 NO >> INSPECTION END

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U1601, U1609 FRONT DOOR WOOFER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1601, U1609 FRONT DOOR WOOFER

DTC Description

INFOID:000000009726986

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1601	FL-DOOR WOOFER (Front left-door woofer)	OPEN (Open)	Front door woofer LH circuit is open.
		SHORT (Short)	Front door woofer LH circuit is short.
		GND-SHORT (Ground-short)	Front door woofer LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door woofer LH circuit is short to power supply.
U1609	FR-DOOR WOOFER (Front right-door woofer)	OPEN (Open)	Front door woofer RH circuit is open.
		SHORT (Short)	Front door woofer RH circuit is short.
		GND-SHORT (Ground-short)	Front door woofer RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door woofer RH circuit is short to power supply.

POSSIBLE CAUSE

- Front door woofer LH circuit is malfunction
- Front door woofer RH circuit is malfunction
- Front door woofer LH
- Front door woofer RH

FAIL-SAFE

- No sound from front door woofer LH
- No sound from front door woofer RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1601 or U1609 detected?

YES >> Proceed to [AV-208, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726987

1.CHECK FRONT DOOR WOOFER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. harness connector and front door woofer LH or RH harness connector.
3. Check the continuity between BOSE amp. harness connector and front door woofer LH or RH harness connector.

U1601, U1609 FRONT DOOR WOOFER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Front door woofer LH

BOSE amp.		Front door woofer LH		Continuity
Connector	Terminal	Connector	Terminal	
B53	13	D49	1	Existed
	8		2	

Front door woofer RH

BOSE amp.		Front door woofer RH		Continuity
Connector	Terminal	Connector	Terminal	
B53	3	D51	1	Existed
	4		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT DOOR WOOFER CIRCUIT FOR SHORT TO GROUND

Check the continuity between front door woofer LH or RH harness connector and ground.

Front door woofer LH

Terminals			Continuity
(+) Front door woofer LH		(−)	
Connector	Terminal		
D49	1		
	2		
			Existed

Front door woofer RH

Terminals			Continuity
(+) Front door woofer RH		(-)	
Connector	Terminal		
D51	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK FRONT DOOR WOOFER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between front door woofer LH or RH harness connector and ground.

Front door woofer LH

Terminals			Voltage (Approx.)
(+) Front door woofer LH		(−)	
Connector	Terminal		
D49	1		
	2		

U1601, U1609 FRONT DOOR WOOFER

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

Front door woofer RH

Terminals			Voltage (Approx.)
(+)		(−)	
Front door woofer RH			
Connector	Terminal		
D51	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace front door woofer LH or RH. Refer to [AV-288, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

U1602, U160A FRONT DOOR SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1602, U160A FRONT DOOR SQUAWKER

DTC Description

INFOID:000000009726988

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1602	FL-DOOR SQUAWK (Front left-door squawker)	OPEN (Open)	Front door squawker LH circuit is open.
		SHORT (Short)	Front door squawker LH circuit is short.
		GND-SHORT (Ground-short)	Front door squawker LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door squawker LH circuit is short to power supply.
U160A	FR-DOOR SQUAWK (Front right-door squawker)	OPEN (Open)	Front door squawker RH circuit is open.
		SHORT (Short)	Front door squawker RH circuit is short.
		GND-SHORT (Ground-short)	Front door squawker RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door squawker RH circuit is short to power supply.

POSSIBLE CAUSE

- Front door squawker LH circuit is malfunction
- Front door squawker RH circuit is malfunction
- Front door squawker LH
- Front door squawker RH

FAIL-SAFE

- No sound from front door squawker LH
- No sound from front door squawker RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1602 or U160A detected?

- YES >> Proceed to [AV-211, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726989

1.CHECK FRONT DOOR SQUAWKER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. harness connector and front door squawker LH or RH harness connector.
3. Check the continuity between BOSE amp. harness connector and front door squawker LH or RH harness connector.

U1602, U160A FRONT DOOR SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Front door squawker LH

BOSE amp.		Front door squawker LH		Continuity
Connector	Terminal	Connector	Terminal	
B54	24	D11	1	Existed
	35		2	

Front door squawker RH

BOSE amp.		Front door squawker RH		Continuity
Connector	Terminal	Connector	Terminal	
B54	19	D23	1	Existed
	32		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT DOOR SQUAWKER CIRCUIT FOR SHORT TO GROUND

Check the continuity between front door squawker LH or RH harness connector and ground.

Front door squawker LH

Terminals			Continuity
(+) Front door squawker LH		(-)	
Connector	Terminal		
D11	1		
	2		
			Existed

Front door squawker RH

Terminals			Continuity
(+) Front door squawker RH		(-)	
Connector	Terminal		
D23	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK FRONT DOOR SQUAWKER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between front door squawker LH or RH harness connector and ground.

Front door squawker LH

Terminals			Voltage (Approx.)
(+) Front door squawker LH		(−)	
Connector	Terminal		
D11	1		
	2		

U1602, U160A FRONT DOOR SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Front door squawker RH

Terminals			Voltage (Approx.)
(+)		(−)	
Front door squawker RH			
Connector	Terminal		
D23	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace front door squawker LH or RH. Refer to [AV-287. "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

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U1603, U160B FRONT DOOR TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1603, U160B FRONT DOOR TWEETER

DTC Description

INFOID:000000009726990

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1603	FL-DOOR TWEETER (Front left-door tweeter)	OPEN (Open)	Front door tweeter LH circuit is open.
		SHORT (Short)	Front door tweeter LH circuit is short.
		GND-SHORT (Ground-short)	Front door tweeter LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door tweeter LH circuit is short to power supply.
U160B	FR-DOOR TWEETER (Front right-door tweeter)	OPEN (Open)	Front door tweeter RH circuit is open.
		SHORT (Short)	Front door tweeter RH circuit is short.
		GND-SHORT (Ground-short)	Front door tweeter RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door tweeter RH circuit is short to power supply.

POSSIBLE CAUSE

- Front door tweeter LH circuit is malfunction
- Front door tweeter RH circuit is malfunction
- Front door tweeter LH
- Front door tweeter RH

FAIL-SAFE

- No sound from front door tweeter LH
- No sound from front door tweeter RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1603 or U160B detected?

YES >> Proceed to [AV-214, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726991

1.CHECK FRONT DOOR TWEETER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. harness connector and front door tweeter LH or RH harness connector.
3. Check the continuity between BOSE amp. harness connector and front door tweeter LH or RH harness connector.

U1603, U160B FRONT DOOR TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Front door tweeter LH

BOSE amp.		Front door tweeter LH		Continuity
Connector	Terminal	Connector	Terminal	
B54	24	D50	1	Existed
	35		2	

Front door tweeter RH

BOSE amp.		Front door tweeter RH		Continuity
Connector	Terminal	Connector	Terminal	
B54	19	D52	1	Existed
	32		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT DOOR TWEETER CIRCUIT FOR SHORT TO GROUND

Check the continuity between front door tweeter LH or RH harness connector and ground.

Front door tweeter LH

Terminals			Continuity
(+) Front door tweeter LH		(-)	
Connector	Terminal		
D50	1		
	2		
			Existed

Front door tweeter RH

Terminals			Continuity
(+) Front door tweeter RH		(-)	
Connector	Terminal		
D52	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK FRONT DOOR TWEETER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between front door tweeter LH or RH harness connector and ground.

Front door tweeter LH

Terminals			Voltage (Approx.)
(+) Front door tweeter LH		(−)	
Connector	Terminal		
D50	1		
	2		

U1603, U160B FRONT DOOR TWEETER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Front door tweeter RH

Terminals			Voltage (Approx.)
(+)		(−)	
Front door tweeter RH			
Connector	Terminal		
D52	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace front door tweeter LH or RH. Refer to [AV-286. "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

U1626, U162E FRONT SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1626, U162E FRONT SQUAWKER

DTC Description

INFOID:000000009726992

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1626	F-INST L-SQUAWK (Front instrument panel left squawker)	OPEN (Open)	Front squawker LH circuit is open.
		SHORT (Short)	Front squawker LH circuit is short.
		GND-SHORT (Ground-short)	Front squawker LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front squawker LH circuit is short to power supply.
U162E	F-INST R-SQUAWK (Front instrument panel right squawker)	OPEN (Open)	Front squawker RH circuit is open.
		SHORT (Short)	Front squawker RH circuit is short.
		GND-SHORT (Ground-short)	Front squawker RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front squawker RH circuit is short to power supply.

POSSIBLE CAUSE

- Front squawker LH circuit is malfunction
- Front squawker RH circuit is malfunction
- Front squawker LH
- Front squawker RH

FAIL-SAFE

- No sound from front squawker LH
- No sound from front squawker RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1626 or U162E detected?

- YES >> Proceed to [AV-217, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726993

1.CHECK FRONT SQUAWKER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. harness connector and front squawker LH or RH harness connector.
3. Check the continuity between BOSE amp. harness connector and front squawker LH or RH harness connector.

U1626, U162E FRONT SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Front squawker LH

BOSE amp.		Front squawker LH		Continuity
Connector	Terminal	Connector	Terminal	
B54	16	M115	1	Existed
	29		2	

Front squawker RH

BOSE amp.		Front squawker RH		Continuity
Connector	Terminal	Connector	Terminal	
B54	31	M112	1	Existed
	30		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT SQUAWKER CIRCUIT FOR SHORT TO GROUND

Check the continuity between front squawker LH or RH harness connector and ground.

Front squawker LH

Terminals			Continuity
(+) Front squawker LH		(-)	
Connector	Terminal		
M115	1		
	2		
			Existed

Front squawker RH

Terminals			Continuity
(+) Front squawker RH		(−)	
Connector	Terminal		
M112	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK FRONT SQUAWKER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between front squawker LH or RH harness connector and ground.

Front squawker LH

Terminals			Voltage (Approx.)
(+) Front squawker LH		(−)	
Connector	Terminal		
M115	1		
	2		

U1626, U162E FRONT SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Front squawker RH

Terminals			Voltage (Approx.)
(+)		(−)	
Front squawker RH			
Connector	Terminal		
M112	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace front squawker LH or RH. Refer to [AV-284. "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

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AV

U162A CENTER SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U162A CENTER SQUAWKER

DTC Description

INFOID:000000009726994

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U162A	F-INST C-SQUAWK (Front instrument panel center squawker)	OPEN (Open)	Front center squawker circuit is open.
		SHORT (Short)	Front center squawker circuit is short.
		GND-SHORT (Ground-short)	Front center squawker circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front center squawker circuit is short to power supply.

POSSIBLE CAUSE

- Front center squawker circuit is malfunction
- Front center squawker

FAIL-SAFE

No sound from front center squawker

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U162A detected?

- YES >> Proceed to [AV-220, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726995

1.CHECK FRONT CENTER SQUAWKER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. harness connector and front center squawker harness connector.
3. Check the continuity between BOSE amp. harness connector and front center squawker harness connector.

BOSE amp.		Front center squawker		Continuity
Connector	Terminal	Connector	Terminal	
B54	17	M96	1	Existed
	18		2	

Is the inspection result normal?

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

2.CHECK FRONT CENTER SQUAWKER CIRCUIT FOR SHORT TO GROUND

Check the continuity between front center squawker harness connector and ground.

U162A CENTER SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Terminals			Continuity
(+) Front center squawker		(-)	
Connector	Terminal		
M96	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK FRONT CENTER SQUAWKER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between front center squawker harness connector and ground.

Terminals			Voltage (Approx.)
(+) Front center squawker		(−)	
Connector	Terminal		
M96	1		
	2		

Is the inspection result normal?

YES >> Replace front center squawker. Refer to [AV-285. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

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U1708, U1710 REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1708, U1710 REAR DOOR SPEAKER

DTC Description

INFOID:000000009726996

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1708	RL-DOOR SPEAKER (Rear left-door speaker)	OPEN (Open)	Rear door speaker LH circuit is open.
		SHORT (Short)	Rear door speaker LH circuit is short.
		GND-SHORT (Ground-short)	Rear door speaker LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Rear door speaker LH circuit is short to power supply.
U1710	RR-DOOR SPEAKER (Rear right-door speaker)	OPEN (Open)	Rear door speaker RH circuit is open.
		SHORT (Short)	Rear door speaker RH circuit is short.
		GND-SHORT (Ground-short)	Rear door speaker RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Rear door speaker RH circuit is short to power supply.

POSSIBLE CAUSE

- Rear door speaker LH circuit is malfunction
- Rear door speaker RH circuit is malfunction
- Rear door speaker LH
- Rear door speaker RH

FAIL-SAFE

- No sound from rear door speaker LH
- No sound from rear door speaker RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1708 or U1710 detected?

YES >> Proceed to [AV-222, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726997

1.CHECK REAR DOOR SPEAKER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. harness connector and rear door speaker LH or RH harness connector.
3. Check the continuity between BOSE amp. harness connector and rear door speaker LH or RH harness connector.

U1708, U1710 REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Rear door speaker LH

BOSE amp.		Rear door speaker LH		Continuity
Connector	Terminal	Connector	Terminal	
B53	5	D39	1	Existed
	6		2	

Rear door speaker RH

BOSE amp.		Rear door speaker RH		Continuity
Connector	Terminal	Connector	Terminal	
B53	14	D48	1	Existed
	9		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR DOOR SPEAKER CIRCUIT FOR SHORT TO GROUND

Check the continuity between rear door speaker LH or RH harness connector and ground.

Rear door speaker LH

Terminals			Continuity
(+) Rear door speaker LH		(-)	
Connector	Terminal		
D39	1		
	2		
			Existed

Rear door speaker RH

Terminals			Continuity
(+) Rear door speaker RH		(-)	
Connector	Terminal		
D48	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK REAR DOOR SPEAKER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between rear door speaker LH or RH harness connector and ground.

Rear door speaker LH

Terminals			Voltage (Approx.)
(+) Rear door speaker LH		(−)	
Connector	Terminal		
D39	1		
	2		

U1708, U1710 REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Rear door speaker RH

Terminals			Voltage (Approx.)
(+)		(−)	
Rear door speaker RH			
Connector	Terminal		
D48	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace rear door speaker LH or RH. Refer to [AV-289, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

U1722, U172A REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1722, U172A REAR SPEAKER

DTC Description

INFOID:000000009726998

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1722	R-PSHELF L-SQUAWK (Rear parcel shelf left squawker)	OPEN (Open)	Rear satellite speaker LH circuit is open.
		SHORT (Short)	Rear satellite speaker LH circuit is short.
		GND-SHORT (Ground-short)	Rear satellite speaker LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Rear satellite speaker LH circuit is short to power supply.
U172A	R-PSHELF R-SQUAWK (Rear parcel shelf right squawker)	OPEN (Open)	Rear satellite speaker RH circuit is open.
		SHORT (Short)	Rear satellite speaker RH circuit is short.
		GND-SHORT (Ground-short)	Rear satellite speaker RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Rear satellite speaker RH circuit is short to power supply.

POSSIBLE CAUSE

- Rear satellite speaker LH circuit is malfunction
- Rear satellite speaker RH circuit is malfunction
- Rear satellite speaker LH
- Rear satellite speaker RH

FAIL-SAFE

- No sound from rear satellite speaker LH
- No sound from rear satellite speaker RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1722 or U172A detected?

- YES >> Proceed to [AV-225, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726999

1.CHECK REAR SATELLITE SPEAKER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BOSE amp. harness connector and rear satellite speaker LH or RH harness connector.
3. Check the continuity between BOSE amp. harness connector and rear satellite speaker LH or RH harness connector.

U1722, U172A REAR SPEAKER

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

Rear satellite speaker LH

BOSE amp.		Rear satellite speaker LH		Continuity
Connector	Terminal	Connector	Terminal	
B54	22	T14	1	Existed
	33		2	

Rear satellite speaker RH

BOSE amp.		Rear satellite speaker RH		Continuity
Connector	Terminal	Connector	Terminal	
B54	23	B77	1	Existed
	34		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR SATELLITE SPEAKER CIRCUIT FOR SHORT TO GROUND

Check the continuity between rear satellite speaker LH or RH harness connector and ground.

Rear satellite speaker LH

Terminals			Continuity
(+) Rear satellite speaker LH		(−)	
Connector	Terminal		
T14	1		
	2	Existed	

Rear satellite speaker RH

Terminals			Continuity
(+) Rear satellite speaker RH		(-)	
Connector	Terminal		
B77	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK REAR SATELLITE SPEAKER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between rear satellite speaker LH or RH harness connector and ground.

Rear satellite speaker LH

Terminals			Voltage (Approx.)
(+) Rear satellite speaker LH		(−)	
Connector	Terminal		
T14	1		
	2		

U1722, U172A REAR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Rear satellite speaker RH

Terminals			Voltage (Approx.)
(+)		(−)	
Rear satellite speaker RH			
Connector	Terminal		
B77	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace rear satellite speaker LH or RH. Refer to [AV-290, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

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U1725 REAR WOOFER

DTC Description

INFOID:000000009727000

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1725	R-PSHLELF C-WOOFER (Rear parcel shelf center woofer)	OPEN (Open)	Rear woofer circuit is open.
		SHORT (Short)	Rear woofer circuit is short.
		GND-SHORT (Ground-short)	Rear woofer circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Rear woofer circuit is short to power supply.

POSSIBLE CAUSE

- Rear woofer circuit is malfunction
- Rear woofer

FAIL-SAFE

No sound from rear woofer

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
5. Check DTC.

Is DTC U1725 detected?

- YES >> Proceed to [AV-228, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727001

1.CHECK REAR WOOFER CIRCUIT FOR OPEN

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

BOSE amp.		Rear woofer		Continuity
Connector	Terminal	Connector	Terminal	
B53	1	B79	1	Existed
	2		2	

Is the inspection result normal?

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

2.CHECK REAR WOOFER CIRCUIT FOR SHORT TO GROUND

Check the continuity between rear woofer harness connector and ground.

U1725 REAR WOOFER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Terminals			Continuity
(+) Rear woofer		(-)	
Connector	Terminal		
B79	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK REAR WOOFER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between rear woofer harness connector and ground.

Terminals			Voltage (Approx.)
(+) Rear woofer		(−)	
Connector	Terminal		
B79	1		
	2		
		Ground	0 V

Is the inspection result normal?

YES >> Replace rear woofer. Refer to [AV-291. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

U1901, U1907 FRONT DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1901, U1907 FRONT DOOR SPEAKER

DTC Description

INFOID:000000009727026

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1901	FL-DOOR SPEAKER (Front left-door speaker)	OPEN (Open)	Front door speaker LH circuit is open.
		SHORT (Short)	Front door speaker LH circuit is short.
		GND-SHORT (Ground-short)	Front door speaker LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door speaker LH circuit is short to power supply.
U1907	FR-DOOR SPEAKER (Front right-door speaker)	OPEN (Open)	Front door speaker RH circuit is open.
		SHORT (Short)	Front door speaker RH circuit is short.
		GND-SHORT (Ground-short)	Front door speaker RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door speaker RH circuit is short to power supply.

POSSIBLE CAUSE

- Front door speaker LH circuit is malfunction
- Front door speaker RH circuit is malfunction
- Front door speaker LH
- Front door speaker RH

FAIL-SAFE

- No sound from front door speaker LH
- No sound from front door speaker RH

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

1. Turn ignition switch OFF and wait at least 30 seconds.
2. Turn ignition switch ON.
3. Turn ignition switch OFF and wait at least 30 seconds.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

Ⓔ With CONSULT

1. Turn ignition switch ON and wait at least 30 seconds or more.
2. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
3. Check DTC.

Is DTC U1901 or U1907 detected?

YES >> Proceed to [AV-230, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727027

1.CHECK FRONT DOOR SPEAKER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.

U1901, U1907 FRONT DOOR SPEAKER

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

- Disconnect AV control unit harness connector and front door speaker LH or RH harness connector.
- Check the continuity between AV control unit harness connector and front door speaker LH or RH harness connector.

Front door speaker LH

AV control unit		Front door speaker LH		Continuity
Connector	Terminal	Connector	Terminal	
M8	2	D13	1	Existed
	3		2	

Front door speaker RH

AV control unit		Front door speaker RH		Continuity
Connector	Terminal	Connector	Terminal	
M8	11	D24	1	Existed
	12		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT DOOR SPEAKER CIRCUIT FOR SHORT TO GROUND

Check the continuity between front door speaker LH or RH harness connector and ground.

Front door speaker LH

Terminals			Continuity
(+) Front door speaker LH		(-)	
Connector	Terminal		
D13	1		
	2		
			Existed

Front door speaker RH

Terminals			Continuity
(+) Front door speaker RH		(-)	
Connector	Terminal		
D24	1		
	2	Existed	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK FRONT DOOR SPEAKER CIRCUIT FOR SHORT TO POWER SUPPLY

- Turn ignition switch ON.
- Check the voltage between front door speaker LH or RH harness connector and ground.

Front door speaker LH

Terminals			Voltage (Approx.)
(+) Front door speaker LH		(−)	
Connector	Terminal		
D13	1		
	2		

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U1901, U1907 FRONT DOOR SPEAKER

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

Front door speaker RH

Terminals			Voltage (Approx.)
(+)		(−)	
Front door speaker RH			
Connector	Terminal		
D24	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace front door speaker LH or RH. Refer to [AV-292, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

U1902, U1906 REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U1902, U1906 REAR DOOR SPEAKER

DTC Description

INFOID:000000009727028

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U1902	RR-DOOR SPEAKER (RR-door speaker)	OPEN (Open)	Rear door speaker RH circuit is open.
		SHORT (Short)	Rear door speaker RH circuit is short.
		GND-SHORT (Ground-short)	Rear door speaker RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Rear door speaker RH circuit is short to power supply.
U1906	RL-DOOR SPEAKER (LR-door speaker)	OPEN (Open)	Rear door speaker LH circuit is open.
		SHORT (Short)	Rear door speaker LH circuit is short.
		GND-SHORT (Ground-short)	Rear door speaker LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Rear door speaker LH circuit is short to power supply.

POSSIBLE CAUSE

- Rear door speaker RH circuit is malfunction
- Rear door speaker LH circuit is malfunction
- Rear door speaker RH
- Rear door speaker LH

FAIL-SAFE

- No sound from rear door speaker RH
- No sound from rear door speaker LH

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

1. Turn ignition switch OFF and wait at least 30 seconds.
2. Turn ignition switch ON.
3. Turn ignition switch OFF and wait at least 30 seconds.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

Ⓔ With CONSULT

1. Turn ignition switch ON and wait at least 30 seconds or more.
2. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
3. Check DTC.

Are U1902 or U1906 DTC detected?

YES >> Proceed to [AV-233, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727029

1.CHECK REAR DOOR SPEAKER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.

U1902, U1906 REAR DOOR SPEAKER

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

2. Disconnect AV control unit harness connector and rear door speaker LH or RH harness connector.
3. Check the continuity between AV control unit harness connector and rear door speaker LH or RH harness connector.

Rear door speaker LH

AV control unit		Rear door speaker LH		Continuity
Connector	Terminal	Connector	Terminal	
M8	4	D39	1	Existed
	5		2	

Rear door speaker RH

AV control unit		Rear door speaker RH		Continuity
Connector	Terminal	Connector	Terminal	
M8	13	D48	1	Existed
	14		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR DOOR SPEAKER CIRCUIT FOR SHORT TO GROUND

Check the continuity between rear door speaker LH or RH harness connector and ground.

Rear door speaker LH

Terminals			Continuity
(+) Rear door speaker LH		(-)	
Connector	Terminal		
D39	1		
	2		
			Existed

Rear door speaker RH

Terminals			Continuity
(+) Rear door speaker RH		(−)	
Connector	Terminal		
D48	1		
	2	Existed	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK REAR DOOR SPEAKER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between rear door speaker LH or RH harness connector and ground.

Rear door speaker LH

Terminals			Voltage (Approx.)
(+) Rear door speaker LH		(−)	
Connector	Terminal		
D39	1		
	2		

U1902, U1906 REAR DOOR SPEAKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Rear door speaker RH

Terminals			Voltage (Approx.)
(+)		(−)	
Rear door speaker RH			
Connector	Terminal		
D48	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace rear door speaker LH or RH. Refer to [AV-289, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

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U190D, U190E FRONT SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

U190D, U190E FRONT SQUAWKER

DTC Description

INFOID:000000009727030

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
U190D	FR TWEETER (Front right tweeter)	OPEN (Open)	Front door squawker RH circuit is open.
		SHORT (Short)	Front door squawker RH circuit is short.
		GND-SHORT (Ground-short)	Front door squawker RH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door squawker RH circuit is short to power supply.
U190E	FL TWEETER (Front left tweeter)	OPEN (Open)	Front door squawker LH circuit is open.
		SHORT (Short)	Front door squawker LH circuit is short.
		GND-SHORT (Ground-short)	Front door squawker LH circuit is short circuit to ground.
		VB-SHORT (Power supply-short)	Front door squawker LH circuit is short to power supply.

POSSIBLE CAUSE

- Front door squawker LH circuit is malfunction
- Front door squawker RH circuit is malfunction
- Front door squawker LH
- Front door squawker RH

FAIL-SAFE

- No sound from front door squawker LH
- No sound from front door squawker RH

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

1. Turn ignition switch OFF and wait at least 30 seconds.
2. Turn ignition switch ON.
3. Turn ignition switch OFF and wait at least 30 seconds.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

Ⓔ With CONSULT

1. Turn ignition switch ON and wait at least 30 seconds or more.
2. Select "Self Diagnostic Result" mode of "MULTI AV" using CONSULT.
3. Check DTC.

Is DTC U190D or U190E detected?

YES >> Proceed to [AV-236, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727031

1.CHECK FRONT DOOR SQUAWKER CIRCUIT FOR OPEN

1. Turn ignition switch OFF.

U190D, U190E FRONT SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

2. Disconnect AV control unit harness connector and front door squawker LH or RH harness connector.
3. Check the continuity between AV control unit harness connector and front door squawker LH or RH harness connector.

Front door squawker LH

AV control unit		Front door squawker LH		Continuity
Connector	Terminal	Connector	Terminal	
M8	2	D53	1	Existed
	3		2	

Front door squawker RH

AV control unit		Front door squawker RH		Continuity
Connector	Terminal	Connector	Terminal	
M8	11	D34	1	Existed
	12		2	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT DOOR SQUAWKER CIRCUIT FOR SHORT TO GROUND

Check the continuity between front door squawker LH or RH harness connector and ground.

Front door squawker LH

Terminals			Continuity
(+) Front door squawker LH		(-)	
Connector	Terminal		
D53	1		
	2	Existed	

Front door squawker RH

Terminals			Continuity
(+) Front door squawker RH		(-)	
Connector	Terminal		
D34	1		
	2		
			Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK FRONT DOOR SQUAWKER CIRCUIT FOR SHORT TO POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between front door squawker LH or RH harness connector and ground.

Front door squawker LH

Terminals			Voltage (Approx.)
(+) Front door squawker LH		(−)	
Connector	Terminal		
D53	1		
	2		

AV

U190D, U190E FRONT SQUAWKER

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Front door squawker RH

Terminals			Voltage (Approx.)
(+)		(−)	
Front door squawker RH			
Connector	Terminal		
D34	1	Ground	0 V
	2		

Is the inspection result normal?

- YES >> Replace front door squawker LH or RH. Refer to [AV-287, "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

POWER SUPPLY AND GROUND CIRCUIT DISPLAY CONTROL UNIT

DISPLAY CONTROL UNIT : Diagnosis Procedure

INFOID:000000009727004

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

Power source	Fuse No.	Capacity
Battery	#7	15 A
Ignition switch ACC	#1	10 A
Ignition switch ON	#14	5 A

Is the fuse fusing?

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

2.CHECK DISPLAY CONTROL UNIT BATTERY POWER SUPPLY

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

Terminals			Voltage
(+) Display control unit		(−)	
Connector	Terminal		
M100	34		
		Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Perform trouble diagnosis for battery power supply circuit.

3.CHECK DISPLAY CONTROL UNIT ACCESSORY POWER SUPPLY

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

Terminals			Voltage
(+) Display control unit		(−)	
Connector	Terminal		
M100	33		
		Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 4.
NO >> Perform trouble diagnosis for accessory power supply circuit.

4.CHECK DISPLAY CONTROL UNIT IGNITION POWER SUPPLY

Check the voltage between display control unit harness connector and ground.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Terminals			Voltage
(+) (+)		(-) (-)	
Display control unit			
Connector	Terminal		
M100	30	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> Perform trouble diagnosis of ignition power supply circuit.

5.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check the continuity between display control unit and ground.

Terminals			Continuity
(+) (+)		(-) (-)	
Display control unit			
Connector	Terminal		
M100	22	Ground	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace malfunctioning parts.

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000009727005

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

Power source	Fuse No.	Capacity
Battery	#7	15 A
Ignition switch ACC	#1	10 A

Is the fuse fusing?

YES >> Replace fuse after repairing the applicable circuit.

NO >> GO TO 2.

2.CHECK AV CONTROL UNIT BATTERY POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect AV control unit harness connector.
3. Check the voltage between AV control unit harness connector and ground.

Terminals			Voltage
(+) (+)		(−)	
AV control unit			
Connector	Terminal		
M8	19	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform trouble diagnosis for battery power supply circuit.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

3.CHECK AV CONTROL UNIT ACCESSORY POWER SUPPLY

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

Terminals			Voltage
(+) (+)		(−)	
AV control unit			
Connector	Terminal		
M8	7	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> Perform trouble diagnosis for accessory power supply circuit.

4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check the continuity between AV control unit and ground.

Terminals			Continuity
(+)		(-)	
AV control unit			
Connector	Terminal		
M8	20	Ground	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace malfunctioning parts.

NAVI CONTROL UNIT

NAVI CONTROL UNIT : Diagnosis Procedure

INFOID:0000000009727006

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

Power source	Fuse No.	Capacity
Battery	#7	15 A
Ignition switch ACC	#1	10 A
Ignition switch ON	#12	10 A

Is the fuse fusing?

YES >> Replace fuse after repairing the applicable circuit.

NO >> GO TO 2.

2.CHECK NAVI CONTROL UNIT BATTERY POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect NAVI control unit harness connector.
3. Check the voltage between NAVI control unit harness connector and ground.

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AV

POWER SUPPLY AND GROUND CIRCUIT

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

Terminals			Voltage
(+)		(-)	
NAVI control unit			
Connector	Terminal		
M60	1	Ground	Battery voltage
	15		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform trouble diagnosis for battery power supply circuit.

3.CHECK NAVI CONTROL UNIT ACCESSORY POWER SUPPLY

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

Terminals			Voltage
(+)		(-)	
NAVI control unit			
Connector	Terminal		
M60	5	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> Perform trouble diagnosis for accessory power supply circuit.

4.CHECK NAVI CONTROL UNIT IGNITION POWER SUPPLY

Check the voltage between NAVI control unit harness connector and ground.

Terminals			Voltage
(+)		(-)	
NAVI control unit			
Connector	Terminal		
M60	19	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> Perform trouble diagnosis of ignition power supply circuit.

5.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check the continuity between NAVI control unit and ground.

Terminals			Continuity
(+) NAVI control unit		(-)	
Connector	Terminal		
M60	3		
	17	Existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace malfunctioning parts.

BOSE AMP.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

BOSE AMP. : Diagnosis Procedure

INFOID:000000009727007

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

Power source	Fuse No.	Capacity
Battery	#3	15 A
	#5	15 A
Ignition switch ACC or ON	#1	10 A

Is the fuse fusing?

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

2.CHECK BOSE AMP. BATTERY POWER SUPPLY

Check the voltage between BOSE amp. harness connector and ground.

Terminals			Voltage
(+) BOSE amp.		(-)	
Connector	Terminal		
B53	10		
	11	Battery voltage	

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Perform trouble diagnosis for battery power supply circuit.

3.CHECK BOSE AMP. ACCESSORY POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between BOSE amp. harness connector and ground.

Terminals			Voltage
(+)		(-)	
BOSE amp.			
Connector	Terminal		
B55	56	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 4.
NO >> Perform trouble diagnosis for accessory power supply circuit.

4.CHECK BOSE AMP. GROUND CIRCUIT

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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Terminals			Continuity
(+) BOSE amp.		(-)	
Connector	Terminal		
B53	7		
	28		
			Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace malfunctioning parts.

INTEGRAL SWITCH

INTEGRAL SWITCH : Diagnosis Procedure

INFOID:000000009727008

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

Power source	Fuse No.	Capacity
Battery	#6	10 A
Ignitions switch ACC	#1	10 A
Ignition switch ON	#11	5 A

Is the fuse fusing?

YES >> Replace fuse after repairing the applicable circuit.

NO >> GO TO 2.

2.CHECK INTEGRAL SWITCH BATTERY POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect integral switch harness connector.
3. Check the voltage between integral switch harness connector and ground.

Terminals			Voltage
(+) Integral switch		(-)	
Connector	Terminal		
M1	1		
		Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform trouble diagnosis for battery power supply circuit.

3.CHECK INTEGRAL SWITCH ACCESSORY POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between integral switch harness connector and ground.

Terminals			Voltage
(+) Integral switch		(-)	
Connector	Terminal		
M1	14		
		Ground	Battery voltage

Is the inspection result normal?

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

- YES >> GO TO 4.
NO >> Perform trouble diagnosis for accessory power supply circuit.

4.CHECK INTEGRAL SWITCH IGNITION POWER SUPPLY

Check the voltage between integral switch harness connector and ground.

Terminals			Voltage
(+)		(-)	
Integral switch			
Connector	Terminal		
M1	18	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 5.
NO >> Perform trouble diagnosis of ignition power supply circuit.

5.CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Check the continuity between integral switch and ground.

Terminals			Continuity
(+)		(-)	
Integral switch			
Connector	Terminal		
M1	13	Ground	Existed

Is the inspection result normal?

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

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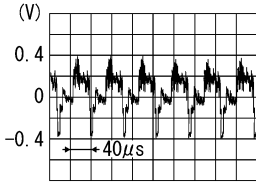
COMPOSITE IMAGE SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000009727009

1.CHECK COMPOSITE IMAGE SIGNAL

1. Turn ignition switch ON.
2. Check the signal between display control unit harness connector as per the following condition.

Display control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M101	56	36	An image is displayed	 SKIB2251J

Is the inspection result normal?

- YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).
 NO >> GO TO 2.

2.CHECK COMPOSITE IMAGE SIGNAL CIRCUIT FOR OPEN

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

Display control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	56	M9	38	Existed
	36		39	

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Repair or replace malfunctioning parts.

3.CHECK COMPOSITE IMAGE SIGNAL CIRCUIT FOR SHORT

Check the continuity between display control unit harness connector and ground.

Terminals			Continuity
(+)		(-)	
Display control unit			
Connector	Terminal		
M101	56	Ground	Not existed

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Repair or replace malfunctioning parts.

4.CHECK COMPOSITE IMAGE SIGNAL GROUND CIRCUIT

Check the continuity between display control unit harness connector and AV control unit harness connector.

COMPOSITE IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Display control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	55	M9	40	Existed

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-278. "Removal and Installation"](#).
NO >> Repair or replace malfunctioning parts.

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AV

DISK EJECT SIGNAL CIRCUIT

Description

INFOID:000000009727010

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

Diagnosis Procedure

INFOID:000000009727011

1.CHECK DISK EJECT SIGNAL

1. Turn ignition switch ON.
2. Check the voltage between AV control unit harness connector terminals.

AV control unit			Condition	Voltage (Approx.)
Connector	Terminals			
	(+)	(-)		
	Terminal			
M8	8	9	Pressing the eject switch	0 - 1.5 V
			Except for above	Battery voltage

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-278. "Removal and Installation"](#).
 NO >> GO TO 2.

2.CHECK DISK EJECT SIGNAL CIRCUIT FOR OPEN

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

AV control unit		Integral switch		Continuity
Connector	Terminal	Connector	Terminal	
M8	8	M1	7	Existed

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Repair or replace malfunctioning parts.

3.CHECK DISK EJECT SIGNAL CIRCUIT FOR SHORT

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

AV control unit		Ground	Continuity
Connector	Terminal		
M8	8		Not existed

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Repair or replace malfunctioning parts.

4.CHECK DISK EJECT SIGNAL GROUND CIRCUIT

Check the continuity between AV control unit harness connector and integral switch harness connector.

AV control unit		Integral switch		Continuity
Connector	Terminal	Connector	Terminal	
M8	9	M1	16	Existed

Is the inspection result normal?

- YES >> Replace integral switch. Refer to [AV-280. "Removal and Installation"](#).

DISK EJECT SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

NO >> Repair or replace malfunctioning parts.

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AV

MICROPHONE SIGNAL CIRCUIT WITHOUT TELEMATICS SYSTEM

WITHOUT TELEMATICS SYSTEM : Description

INFOID:000000009727012

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

WITHOUT TELEMATICS SYSTEM : Diagnosis Procedure

INFOID:000000009727013

1.CHECK MICROPHONE SIGNAL

1. Turn ignition switch ON.
2. Check the signal between display control unit harness connector terminal as per the following condition.

Display control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M101	71	52	Give a voice.	(V) 2.5 2.0 1.5 1.0 0.5 0

Is the inspection result normal?

- YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).
 NO >> GO TO 2.

2.CHECK VOLTAGE MICROPHONE VCC

1. Turn ignition switch OFF.
2. Disconnect microphone harness connector.
3. Turn ignition switch ON.
4. Check the voltage between microphone harness connector.

Microphone			Voltage (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
R12	4	2	5.0 V

Is the inspection result normal?

- YES >> Replace microphone. Refer to [AV-298, "Removal and Installation"](#).
 NO >> GO TO 3.

3.CHECK MICROPHONE CIRCUIT FOR OPEN

1. Disconnect display control unit harness connector.
2. Check continuity between display control unit harness connector and microphone harness connector.

Display control unit		Microphone		Continuity
Connector	Terminals	Connector	Terminals	

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

M101	52	R12	2	Existed
	71		1	
	72		4	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK MICROPHONE CIRCUIT FOR SHORT

Check the continuity between display control unit harness connector and ground.

Terminals			Continuity
(+)		(-)	
Display control unit			
Connector	Terminals		
M101	72	Ground	Not existed
	87		

Is the inspection result normal?

YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

WITH TELEMATICS SYSTEM

WITH TELEMATICS SYSTEM : Description

INFOID:000000009787833

- TCU supplies power to the microphone when receiving a microphone ON signal from the display control unit.
- The microphone transmits an audio signal to TCU.
- TCU transmits a received sound signal to the display control unit.

WITH TELEMATICS SYSTEM : Diagnosis Procedure

INFOID:000000009787834

1.CHECK CONTINUITY BETWEEN DISPLAY CONTROL UNIT AND TCU CIRCUIT

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

Display control unit		TCU		Continuity
Connector	Terminals	Connector	Terminals	
M101	72	M81	21	Existed
	71		22	
	87		23	

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

Display control unit		Ground	Continuity
Connector	Terminals		
M101	72		Not existed
	71		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK VOLTAGE TEL ON SIGNAL

1. Connect display control unit harness connector.

MICROPHONE SIGNAL CIRCUIT

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

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

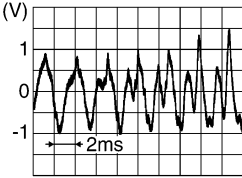
Terminals			Voltage (Approx.)
(+)		(−)	
Display control unit			
Connector	Terminal		
M101	72	Ground	5.0 V

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).

3. CHECK MICROPHONE SIGNAL (DISPLAY CONTROL UNIT TO TCU)

1. Turn ignition switch OFF.
2. Connect TCU harness connector.
3. Turn ignition switch ON.
4. Check the signal between display control unit harness connector.

Display control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M101	71	52	Give a voice.	 SKIB3609E

Is the inspection result normal?

- YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).
 NO >> GO TO 4.

4. CHECK CONTINUITY BETWEEN TCU AND MICROPHONE CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCU harness connector and microphone harness connector.
3. Check the continuity between TCU harness connector and microphone harness connector.

TCU		Microphone		Continuity
Connector	Terminals	Connector	Terminals	
M81	18	R12	4	Existed
	19		1	
	20		2	

4. Check the continuity between TCU harness connector and ground.

TCU		Ground	Continuity
Connector	Terminals		
M81	18		Not existed
	19		

Is the inspection result normal?

- YES >> GO TO 5.

MICROPHONE SIGNAL CIRCUIT

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace malfunctioning parts.

5.CHECK VOLTAGE MICROPHONE POWER SUPPLY

1. Connect TCU harness connector.
2. Turn ignition switch ON.
3. Check the voltage between TCU harness connector ground.

Terminals			Voltage (Approx.)
(+)		(−)	
TCU			
Connector	Terminal		
M81	18	Ground	5.0 V

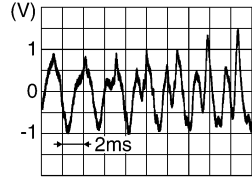
Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

6.CHECK MICROPHONE SIGNAL (TCU TO MICROPHONE)

1. Turn ignition switch OFF.
2. Connect microphone harness connector.
3. Turn ignition switch ON.
4. Check the signal between TCU harness connector.

TCU		Condition	Reference value
Connector	Terminals		
	(+) (-)		
Terminal		When inputting interior sound.	
Connector	Terminal		
M81	19 20	When inputting interior sound.	

Is the inspection result normal?

YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

NO >> Replace microphone. Refer to [AV-598, "Removal and Installation"](#).

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SOUND SIGNAL CIRCUIT WITHOUT BOSE SYSTEM

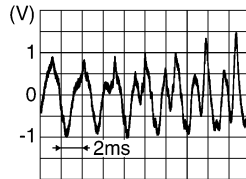
WITHOUT BOSE SYSTEM : Diagnosis Procedure

INFOID:000000009727014

1. CHECK SOUND SIGNAL

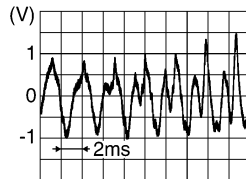
1. Turn ignition switch ON.
2. Check the signal between AV control unit terminal as per the following condition.

Sound signal LH

AV control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M10	61	67	[Ignition switch ON] • Sound output	

SKIB3609E

Sound signal RH

AV control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M10	62	68	[Ignition switch ON] • Sound output	
SKIB3609E				

Is the inspection result normal?

YES >> Replace AV control unit. Refer to [AV-278, "Removal and Installation"](#).

NO >> GO TO 2.

2. CHECK SOUND SIGNAL CIRCUIT FOR OPEN

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

Sound signal LH

Display control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	64	M10	61	Existed
	44		67	

SOUND SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Sound signal RH

Display control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	62	M10	62	Existed
	42		68	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK SOUND SIGNAL CIRCUIT FOR SHORT

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

Sound signal LH

Terminals			Continuity
(+)		(-)	
AV control unit			
Connector	Terminal		
M10	61	Ground	Not existed
	67		

Sound signal RH

Terminals			Continuity
(+)		(-)	
AV control unit			
Connector	Terminal		
M10	62	Ground	Not existed
	68		

Is the inspection result normal?

YES >> Replace display control unit. Refer to [AV-277. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

WITH BOSE SYSTEM

WITH BOSE SYSTEM : Diagnosis Procedure

INFOID:000000009727015

1.CHECK SOUND SIGNAL (1)

1. Turn ignition switch ON.
2. Check the signal between AV control unit terminal as per the following condition.

Sound signal LH

AV control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M10	61	67	[Ignition switch ON] • Sound output	(V)

AV

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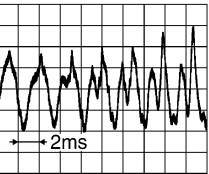
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SOUND SIGNAL CIRCUIT

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

Sound signal RH

AV control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M10	62	68	[Ignition switch ON] • Sound output	(V)  2ms SKIB3609E

Is the inspection result normal?

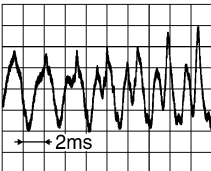
YES >> GO TO 2.

NO >> GO TO 3.

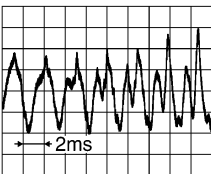
2.CHECK SOUND SIGNAL (2)

Check the signal between BOSE amp. terminal as per the following condition.

Sound signal LH

BOSE amp.			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
B55	65	45	[Ignition switch ON] • Sound output	(V)  SKIB3609E

Sound signal RH

BOSE amp.			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
B55	66	46	[Ignition switch ON] • Sound output	(V)  2ms SKIB3609E

Is the inspection result normal?

YES >> Replace BOSE amp. Refer to [AV-283. "Removal and Installation"](#).

NO >> GO TO 5.

3.CHECK SOUND SIGNAL CIRCUIT FOR OPEN

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

SOUND SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

Sound signal LH

Display control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	64	M10	61	Existed
	44		67	

Sound signal RH

Display control unit		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	62	M10	62	Existed
	42		68	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK SOUND SIGNAL CIRCUIT FOR SHORT

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

Sound signal LH

Terminals			Continuity
(+)		(-)	
AV control unit			
Connector	Terminal		
M10	61	Ground	Not existed
	67		

Sound signal RH

Terminals			Continuity
(+)		(-)	
AV control unit			
Connector	Terminal		
M10	62	Ground	Not existed
	68		

Is the inspection result normal?

YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

5.CHECK SOUND SIGNAL CIRCUIT FOR OPEN

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

Sound signal LH

AV control unit		BOSE amp.		Continuity
Connector	Terminal	Connector	Terminal	
M8	2	B55	65	Existed
	3		45	

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SOUND SIGNAL CIRCUIT

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

Sound signal RH

AV control unit		BOSE amp.		Continuity
Connector	Terminal	Connector	Terminal	
M8	11	B55	66	Existed
	12		46	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace malfunctioning parts.

6.CHECK SOUND SIGNAL CIRCUIT FOR SHORT

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

Sound signal LH

Terminals			Continuity
(+)		(-)	
BOSE amp.			
Connector	Terminal		
B55	65	Ground	Not existed
	45		

Sound signal RH

Terminals			Continuity
(+)		(-)	
BOSE amp.			
Connector	Terminal		
B55	66	Ground	Not existed
	46		

Is the inspection result normal?

YES >> Replace AV control unit. Refer to [AV-278. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

STEERING SWITCH SIGNAL A CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

STEERING SWITCH SIGNAL A CIRCUIT

Component Function Check

INFOID:000000009727016

1.PERFORM COMPONENT FUNCTION CHECK (1)

1. Turn ignition switch ON.
2. Perform On Board Diagnosis Function, and then check steering switch input signal. Refer to [AV-66, "On Board Diagnosis Function"](#).

Is the inspection result normal?

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

2.PERFORM COMPONENT FUNCTION CHECK (2)

 With CONSULT

Check "Self Diagnostic Result" of "MULTI AV".

Is DTC U1300 detected?

- YES >> Refer to [AV-205, "DTC Description"](#).
NO >> Refer to [AV-259, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727017

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter harness connector and spiral cable harness connector.
3. Check the continuity between combination meter harness connector and spiral cable harness connector.

Combination meter		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M57	22	M87	24	Existed

4. Check the continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M57	22		Not existed

Is the inspection result normal?

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

2.CHECK STEERING SWITCH GROUND CIRCUIT

1. Disconnect combination meter harness connector and spiral cable harness connector.
2. Check the continuity between combination meter harness connector and spiral cable harness connector.

Combination meter		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M57	21	M87	33	Existed

3. Check the continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M57	21		Not existed

Is the inspection result normal?

- YES >> GO TO 3.

STEERING SWITCH SIGNAL A CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

NO >> Repair or replace malfunctioning parts.

3.CHECK SPIRAL CABLE

1. Disconnect steering switch connector.
2. Check the continuity between spiral cable harness connectors.

Spiral cable				Continuity
Connector	Terminal	Connector	Terminal	
M87	24	M301	14	Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace spiral cable. Refer to [SR-20. "Removal and Installation"](#).

4.CHECK STEERING SWITCH

Check steering switch. Refer to [AV-260. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering wheel. Refer to following.

- Models with vehicle speed sensitive P/S: [ST-30. "Removal and Installation"](#).
- Models with direct adaptive steering: [ST-86. "Removal and Installation"](#).

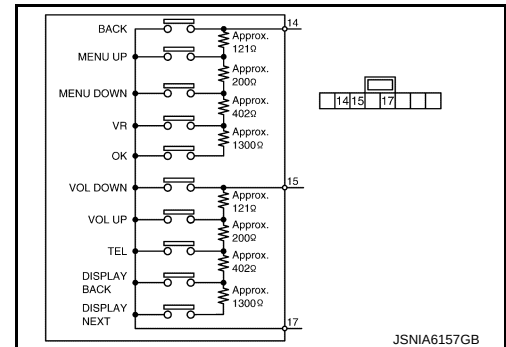
Component Inspection

INFOID:000000009727018

1.CHECK STEERING SWITCH

1. Disconnect steering switch harness connector.
2. Check the resistance between the steering switch connector terminals.

Steering switch		Condition	Resistance (Approx.) Ω
Terminal			
14	17	BACK switch ON	1
		MENU UP switch ON	119 – 123
		MENU DOWN switch ON	315 – 327
		Voice recognition switch ON	709 – 737
		MENU OK switch ON	1983 – 2063
15		VOL DOWN switch ON	1
		VOL UP switch ON	119 – 123
		TEL switch ON	315 – 327
		DISPLAY BACK switch ON	709 – 737
		DISPLAY NEXT switch ON	1983 – 2063



Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering wheel. Refer to following.

- Models with vehicle speed sensitive P/S: [ST-30. "Removal and Installation"](#).
- Models with direct adaptive steering: [ST-86. "Removal and Installation"](#).

STEERING SWITCH SIGNAL B CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

STEERING SWITCH SIGNAL B CIRCUIT

Component Function Check

INFOID:000000009727019

1.PERFORM COMPONENT FUNCTION CHECK (1)

1. Turn ignition switch ON.
2. Perform On Board Diagnosis Function, and then check steering switch input signal. Refer to [AV-66, "On Board Diagnosis Function"](#).

Is the inspection result normal?

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

2.PERFORM COMPONENT FUNCTION CHECK (2)

 With CONSULT

Check "Self Diagnostic Result" of "MULTI AV".

Is DTC U1300 detected?

- YES >> Refer to [AV-205, "DTC Description"](#).
NO >> Refer to [AV-261, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727020

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter harness connector and spiral cable harness connector.
3. Check continuity between combination meter harness connector and spiral cable harness connector.

Combination meter		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M57	23	M87	31	Existed

4. Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M57	23		Not existed

Is the inspection result normal?

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

2.CHECK STEERING SWITCH GROUND CIRCUIT

1. Disconnect combination meter harness connector and spiral cable harness connector.
2. Check continuity between combination meter harness connector and spiral cable harness connector.

Combination meter		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M57	21	M87	33	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M57	21		Not existed

Is the inspection result normal?

- YES >> GO TO 3.

STEERING SWITCH SIGNAL B CIRCUIT

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair harness or connector.

3.CHECK SPIRAL CABLE

1. Disconnect steering switch connector.
2. Check continuity between spiral cable harness connectors.

Spiral cable				Continuity
Connector	Terminal	Connector	Terminal	
M87	31	M301	15	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace spiral cable. Refer to [SR-20. "Removal and Installation"](#).

4.CHECK STEERING SWITCH

Check steering switch. Refer to [AV-262. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering wheel. Refer to following.

- Models with vehicle speed sensitive P/S: [ST-30. "Removal and Installation"](#).
- Models with direct adaptive steering: [ST-86. "Removal and Installation"](#).

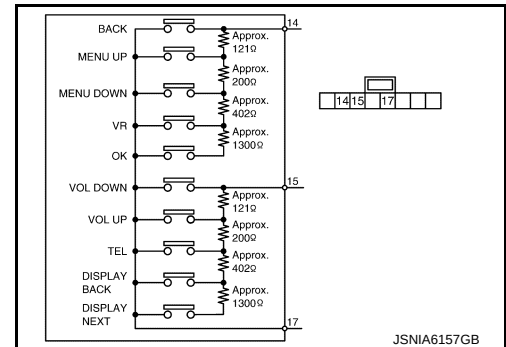
Component Inspection

INFOID:000000009727021

1.CHECK STEERING SWITCH

1. Disconnect steering switch harness connector.
2. Check the resistance between the steering switch connector terminals.

Steering switch		Condition	Resistance (Approx.) Ω
Terminal			
14	17	BACK switch ON	1
		MENU UP switch ON	119 – 123
		MENU DOWN switch ON	315 – 327
		Voice recognition switch ON	709 – 737
		MENU OK switch ON	1983 – 2063
15		VOL DOWN switch ON	1
		VOL UP switch ON	119 – 123
		TEL switch ON	315 – 327
		DISPLAY BACK switch ON	709 – 737
		DISPLAY NEXT switch ON	1983 – 2063



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Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering wheel. Refer to following.

- Models with vehicle speed sensitive P/S: [ST-30. "Removal and Installation"](#).
- Models with direct adaptive steering: [ST-86. "Removal and Installation"](#).

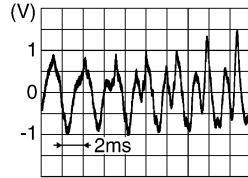
VOICE GUIDANCE SIGNAL CIRCUIT WITHOUT BOSE SYSTEM

WITHOUT BOSE SYSTEM : Diagnosis Procedure

INFOID:000000009727022

1.CHECK VOICE GUIDANCE SIGNAL INPUT

1. Turn ignition switch ON.
2. Check the signal between display control unit terminals as per the following condition.

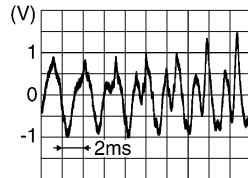
Display control unit			Condition	Continuity
Connector	Terminals			
	(+)	(-)		
	Terminal			
M101	68	48	Sound output	 SKIB3609E

Is the inspection result normal?

- YES >> GO TO 2.
NO >> GO TO 3.

2.CHECK VOICE GUIDANCE SIGNAL OUTPUT

Check the signal between AV control unit terminals as per the following condition.

AV control unit			Condition	Continuity
Connector	Terminals			
	(+)	(-)		
	Terminal			
M11	75	83	Sound output	 SKIB3609E

Is the inspection result normal?

- YES >> Replace AV control unit. Refer to [AV-278, "Removal and Installation"](#).
NO >> GO TO 5.

3.CHECK VOICE GUIDANCE SIGNAL INPUT CIRCUIT FOR OPEN

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

VOICE GUIDANCE SIGNAL CIRCUIT

[INFINITI INTOUCH]

< DTC/CIRCUIT DIAGNOSIS >

Display control unit		NAVI control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	68	M60	14	Existed
	48		28	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK VOICE GUIDANCE INPUT SIGNAL FOR SHORT

Check the continuity between display control unit harness connector and ground.

Terminals			Continuity
(+)		(-)	
Display control unit			
Connector	Terminal		
M101	68	Ground	Not existed
	48		

Is the inspection result normal?

YES >> Replace NAVI control unit. Refer to [AV-279. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

5.CHECK VOICE GUIDANCE OUTPUT SIGNAL CIRCUIT FOR OPEN

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

AV control unit		Display control unit		Continuity
Connector	Terminal	Connector	Terminal	
M11	75	M101	67	Existed
	83		47	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace malfunctioning parts.

6.CHECK VOICE GUIDANCE OUTPUT SIGNAL FOR SHORT

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

Terminals			Continuity
(+)		(-)	
AV control unit			
Connector	Terminal		
M11	75	Ground	Not existed
	83		

Is the inspection result normal?

YES >> Replace display control unit. Refer to [AV-277. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

WITH BOSE SYSTEM

VOICE GUIDANCE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

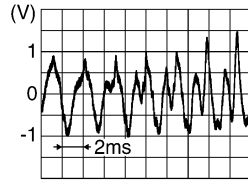
[INFINITI INTOUCH]

WITH BOSE SYSTEM : Diagnosis Procedure

INFOID:000000009727023

1.CHECK VOICE GUIDANCE SIGNAL INPUT

1. Turn ignition switch ON.
2. Check the signal between display control unit terminals as per the following condition.

Display control unit			Condition	Continuity
Connector	Terminals			
	(+)	(-)		
	Terminal			
M101	68	48	Sound output	(V) 

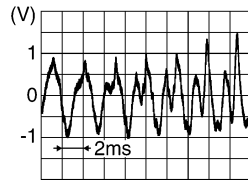
Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK VOICE GUIDANCE SIGNAL OUTPUT

Check the signal between BOSE amp. terminals as per the following condition.

BOSE amp.			Condition	Continuity
Connector	Terminals			
	(+)	(-)		
	Terminal			
M101	67	47	Sound output	

Is the inspection result normal?

YES >> Replace BOSE amp. Refer to [AV-283. "Removal and Installation"](#).

NO >> GO TO 5.

3.CHECK VOICE GUIDANCE INPUT SIGNAL CIRCUIT FOR OPEN

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

Display control unit		NAVI control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	68	M60	14	Existed
	48		28	

Is the inspection result normal?

YES >> GO TO 4.

VOICE GUIDANCE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INFINITI INTOUCH]

NO >> Repair or replace malfunctioning parts.

4.CHECK VOICE GUIDANCE INPUT SIGNAL FOR SHORT

Check the continuity between display control unit harness connector and ground.

Terminals			Continuity
(+)		(-)	
Display control unit			
Connector	Terminal		
M101	68	Ground	Not existed
	48		

Is the inspection result normal?

YES >> Replace NAVI control unit. Refer to [AV-279, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

5.CHECK VOICE GUIDANCE OUTPUT SIGNAL CIRCUIT FOR OPEN

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

BOSE amp.		Display control unit		Continuity
Connector	Terminal	Connector	Terminal	
B55	64	M101	67	Existed
	44		47	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace malfunctioning parts.

6.CHECK VOICE GUIDANCE OUTPUT SIGNAL FOR SHORT

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

Terminals			Continuity
(+)		(-)	
BOSE amp.			
Connector	Terminal		
B55	64	Ground	Not existed
	44		

Is the inspection result normal?

YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SYMPTOM DIAGNOSIS

MULTI AV SYSTEM SYMPTOMS

Symptom Table

INFOID:000000009727024

RELATED TO NAVIGATION

Symptoms	Check items	Probable malfunction location
MAP is not displayed	The navigation system-related operation can be operated.	LVDS signal circuit between display control unit and integral switch malfunction.
	The navigation system-related operation cannot be operated.	NAVI control unit power supply and ground circuit malfunction. Refer to AV-241, "NAVI CONTROL UNIT : Diagnosis Procedure" .
	"Map data cannot be read. Please confirm~" is displayed on the screen.	- Check whether SD card is inserted correctly. - USB harness between external data input box and NAVI control unit.
	Only icons, such as a vehicle mark and a clock, are displayed on the screen of display control unit by the background of the black screen.	LVDS harness between display control unit and NAVI control unit.
Fuel economy display, vehicle setting operation is abnormal.	There is malfunction in the CONSULT "self-diagnosis result" of "MULTI AV". Refer to AV-79, "CONSULT Function" .	Perform detected DTC diagnosis. Refer to AV-89, "DTC Index" .
	There is no malfunction in the CONSULT "self-diagnosis results" of "MULTI AV". Refer to AV-79, "CONSULT Function" .	Ignition signal circuit malfunction. Refer to AV-239, "DISPLAY 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.	Voice guidance signal circuit malfunction. Refer to AV-263, "WITHOUT BOSE SYSTEM : Diagnosis Procedure" . (Without BOSE system.) Refer to AV-265, "WITH BOSE SYSTEM : Diagnosis Procedure" . (With BOSE system.)

RELATED TO HANDS-FREE PHONE (EXCEPT FOR MEXICO)

- 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

- Make sure the customer's Bluetooth[®] related concern is understood.
- Verify the customer's concern.
NOTE:
The customer's phone may be required, depending upon their concern.
- 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.
- Go to "www.nissanusa.com/bluetooth/".
 - Using the website's search engine, find out if the customer's phone is on the approved list.
 - 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.
 - If the feature related to the customer's concern shows as "N" (not compatible):

A

B

C

D

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AV

O

P

MULTI AV SYSTEM SYMPTOMS

[INFINITI INTOUCH]

< SYMPTOM DIAGNOSIS >

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.	Display control unit malfunction. Replace display control unit. Refer to AV-277, "Removal and Installation" .
Hands-free phone cannot be established.	- Hands-free phone operation can be made, but the communication cannot be established. - Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.	
The other party's voice cannot be heard by hands-free phone.	Check the "Voice Microphone Test" in Confirmation/Adjustment mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	Microphone signal circuit malfunction. Refer to AV-250, "WITHOUT TELEMATICS SYSTEM : Diagnosis Procedure" .
	Sound operation function does not work.	
The system cannot be operated.	Steering switch's "VOL UP", "VOL DOWN" and "  switches works, but "  switch does not work.	Steering switch signal A circuit malfunction. Refer to AV-259, "Diagnosis Procedure" .
	- The voice recognition can be controlled. - Steering switch " switch work, but "VOL UP", "VOL DOWN" and " switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-261, "Diagnosis Procedure" .

RELATED TO HANDS-FREE PHONE (FOR MEXICO)

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.	Display control unit malfunction. Replace display control unit. Refer to AV-277, "Removal and Installation" .
Hands-free phone cannot be established.	- Hands-free phone operation can be made, but the communication cannot be established. - Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.	
The other party's voice cannot be heard by hands-free phone.	Check the "Voice Microphone Test" in Confirmation/Adjustment mode if sound is heard.	
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	Microphone signal circuit malfunction. Refer to AV-250, "WITHOUT TELEMATICS SYSTEM : Diagnosis Procedure" .
	Sound operation function does not work.	

MULTI AV SYSTEM SYMPTOMS

[INFINITI INTOUCH]

< SYMPTOM DIAGNOSIS >

Symptoms	Check items	Probable malfunction location
The system cannot be operated.	Steering switch's "VOL UP", "VOL DOWN" and "🔊" switches works, but "🔊" switch does not work.	Steering switch signal A circuit malfunction. Refer to AV-259, "Diagnosis Procedure" .
	- The voice recognition can be controlled. - Steering switch "🔊" switch work, but "VOL UP", "VOL DOWN" and "🔊" switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-261, "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.	Display control unit malfunction. Replace display control unit. Refer to AV-277, "Removal and Installation" .
	Voice does not sound at "Voice Microphone Test" of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-250, "WITHOUT TELEMATICS SYSTEM : Diagnosis Procedure" .
The voice cannot be controlled (Voice control screen is not displayed).	- Hands-free phone system can be operated. - Steering switch's "MENU UP", "MENU DOWN", "🔊" and "OK" switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-259, "Diagnosis Procedure" .

RELATED TO AUDIO

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	—	Disk eject signal circuit malfunction. Refer to AV-248, "Diagnosis Procedure" .
No sound comes out or the level of the sound is low.	No sound from all speakers.	Without BOSE system Sound signal circuit malfunction. Refer to AV-254, "WITHOUT BOSE SYSTEM : Diagnosis Procedure".
		With BOSE system - Sound signal circuit malfunction. Refer to AV-255, "WITH BOSE SYSTEM : Diagnosis Procedure". - BOSE amp. power supply and ground circuit malfunction. Refer to AV-243, "BOSE AMP. : Diagnosis Procedure".
	Sound is not heard from woofer.	Sound signal (woofer) circuit malfunction.

AV

MULTI AV SYSTEM SYMPTOMS

[INFINITI INTOUCH]

< SYMPTOM DIAGNOSIS >

Symptoms	Check items	Probable malfunction location
Noise is mixed with audio.	Noise comes out from all speakers.	Without BOSE system - Malfunction in display control unit. - Malfunction in AV control unit. With BOSE system - Malfunction in display control unit. - 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).	Without BOSE system - Poor connector connection of speaker. - Sound signal circuit malfunction. Refer to AV-254, "WITHOUT BOSE SYSTEM : Diagnosis Procedure". - Malfunction in speaker. - Poor installation of speaker (e.g. backlash and looseness) - Malfunction in display control unit. - Malfunction in AV control unit. With BOSE system - Poor connector connection of speaker. - Sound signal circuit malfunction. Refer to AV-255, "WITH BOSE SYSTEM : Diagnosis Procedure". - Malfunction in speaker. - Poor installation of speaker (e.g. backlash and looseness) - Malfunction in display control unit. - 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.
	- 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 generation external noises).	- Antenna amp. ON signal circuit malfunction. - Poor connector connection of antenna or antenna feeder.

RELATED TO STEERING SWITCH

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch malfunction. Replace steering wheel. Refer to following.
Only specified switch cannot be operated.	- Models with vehicle speed sensitive P/S: ST-30, "Removal and Installation". - Models with direct adaptive steering: ST-86, "Removal and Installation".
Steering switch's "⤴", "MENU UP", "MENU DOWN", "⤵" and "OK" switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-259, "Diagnosis Procedure" .
Steering switch's "VOL UP", "VOL DOWN" and "🔊" switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-261, "Diagnosis Procedure" .

RELATED TO INTEGRAL SWITCH

NOTE:

Check that there is no malfunction of integral switch main body before performing a diagnosis.

MULTI AV SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[INFINITI INTOUCH]

Symptoms	Check items	Probable malfunction location
Integral switch and multifunction switch operation does not work.	- All switches cannot be operated. - Integral switch display screen is displayed "MULTI AV" is displayed on system selection screen when the CONSULT is started.	AV communication circuit between display control unit and integral switch malfunction. Perform CONSULT self-diagnosis. Refer to AV-79, "CONSULT Function" .
	- All switches cannot be operated. - Integral switch display screen is not displayed "MULTI AV" is displayed on system selection screen when the CONSULT is started.	Integral switch power supply and ground circuit malfunction. Refer to AV-244, "INTEGRAL SWITCH : Diagnosis Procedure" .
	- All switches cannot be operated. "MULTI AV" is not displayed on system selection screen when the CONSULT is initialized.	Display control unit power supply and ground circuit malfunction. Refer to AV-239, "DISPLAY CONTROL UNIT : Diagnosis Procedure" .
	Only specified switch cannot be operated.	Integral switch or multifunction switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-66, "On Board Diagnosis Function" .
Integral switch display screen is not displayed	Switches can be operated.	LVDS signal circuit between display control unit and integral switch.
	Switches cannot be operated.	Integral switch power supply and ground circuit malfunction. Refer to AV-244, "INTEGRAL SWITCH : Diagnosis Procedure" .

RELATED TO EXTERNAL DATA INPUT BOX

NOTE:

Check that there is no malfunction of external data input box main body before performing a diagnosis.

Symptoms	Probable malfunction location
No voice sound is heard when AUX mode is selected.	AUX sound signal circuit between external data input box and AV control unit.
Image is not displayed when AUX mode is selected.	- AUX image signal circuit between external data input box and AV control unit. - Composite image signal circuit between AV control unit and display control unit. Refer to AV-246, "Diagnosis Procedure".
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.

AV

NORMAL OPERATING CONDITION

Description

INFOID:000000009727025

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" switch.
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 command can be recognized more easily.

Related to Item Choice

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[INFINITI INTOUCH]

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, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA, AAC, M4A) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[INFINITI INTOUCH]

Symptom	Cause and Counter measure
Cannot play	Check if the CD was inserted correctly.
	Check if the CD is scratched or dirty.
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA/AAC/M4A files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than ".MP3", ".WMA", ".AAC", ".M4A", ".mp3", ".wma", ".aac" or ".m4a" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA/AAC/M4A writing applications or other text editing applications.
	Check if the finalization process, such as session close and disc close, is done for the disc.
	Check if the CD is protected by copyright.
	Disks recorded in live file system format are not supported. (For Microsoft Windows Vista, check the settings.)
Poor sound quality	Check if the CD is scratched or dirty.
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA/AAC/M4A CD, or if it is a multisession disc, some time may be required before the music starts playing.
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.
Move immediately to the next song when playing	When a non-MP3/WMA/AAC/M4A file has been given an extension of ".MP3", ".WMA", ".AAC", ".M4A", ".mp3", ".wma", ".aac" or ".m4a", or when play is prohibited by copyright protection, the player will skip to the next song.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.
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 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.

NORMAL OPERATING CONDITION

[INFINITI INTOUCH]

< SYMPTOM DIAGNOSIS >

Symptom	Possible cause	Possible solution
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <Day/Night> when you turn on the headlights.
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press "MAP".
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press "MAP".
The location of the vehicle icon is misaligned from the actual position.	When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect.	Drive the vehicle for a while [at approximately 30 km/h (19 MPH) for about 30 minutes] to automatically correct the vehicle icon position. If this does not correct the vehicle icon position, contact an INFINITI dealer.
	The map data has a mistake or is incomplete (the vehicle icon position is always misaligned in the same area).	Updated road information will be included in the next version of the map data.

RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not included in the auto reroute calculation.	If you want to go to that waypoint again, you need to edit the route.
Route information is not displayed.	Route calculation has not yet been performed.	Set the destination and perform route calculation.
	You are not driving on the suggested route.	Drive on the suggested route.
	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calculations multiple times as necessary.
The suggested route is not displayed.	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[INFINITI INTOUCH]

Symptom	Possible cause	Possible solution
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
An indirect route is suggested.	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or ordinary road, and recalculate the route.
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map data.	Updated information will be included in the next version of the data.
The suggested route does not exactly connect to the starting point, waypoints, or destination.	There is no data for route calculation closes to these locations.	Set the starting point, waypoints and destination on a main road, and perform route calculation.

RELATED TO VOICE GUIDANCE

Symptom	Possible cause	Possible solution
Voice guidance is not available	Voice guidance is only available at certain intersections marked with In some case, voice guidance is not available even when the vehicle should make a turn.	This is not a malfunction.
	The vehicle has deviated from the suggested route.	Go back to the suggested route or request route calculation again
	Voice guide is set to OFF.	Turn ON voice guidance.
	Route guidance is set to OFF.	Turn ON voice guidance.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

RELATED TO 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

DISPLAY CONTROL UNIT

Removal and Installation

INFOID:000000009587100

REMOVAL

CAUTION:

- Before replacing display control unit, perform “Read/Write Configuration” to save or print current vehicle specification. For details, refer to [AV-164, "ADDITIONAL SERVICE WHEN REPLACING DISPLAY CONTROL UNIT : Description"](#).
- Remove battery terminal and display 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 display control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.
 - Downloaded applications are deleted when display control unit is replaced.
1. Remove the integral switch. Refer to [AV-280, "Removal and Installation"](#).
 2. Remove the bracket screws.
 3. Disconnect the harness connector from the display control unit.
 4. Remove the bracket from display control unit.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to perform “Read/Write Configuration” when replacing display control unit. For details, refer to [AV-164, "ADDITIONAL SERVICE WHEN REPLACING DISPLAY CONTROL UNIT : Description"](#).

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AV

AV CONTROL UNIT

Removal and Installation

INFOID:000000009587101

REMOVAL

CAUTION:

- Before replacing AV control unit, perform “Read/Write Configuration” of display control unit to save or print current vehicle specification. For details, refer to [AV-164, "ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description"](#).
- 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.

1. Remove the integral switch. Refer to [AV-280, "Removal and Installation"](#).
2. Remove the screws.
3. Disconnect the harness connector from the AV control unit.
4. Remove the bracket screws, and then remove the AV control unit.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Be sure to perform “Read/Write Configuration” of display control unit when replacing AV control unit. For details, refer to [AV-164, "ADDITIONAL SERVICE WHEN REPLACING AV CONTROL UNIT : Description"](#).

NAVI CONTROL UNIT

Removal and Installation

INFOID:000000009587102

REMOVAL

CAUTION:

- Before replacing NAVI control unit, perform “Read/Write Configuration” of display control unit to save or print current vehicle specification. For details, refer to [AV-165, "ADDITIONAL SERVICE WHEN REPLACING NAVI CONTROL UNIT : Description"](#).
- Remove battery terminal and NAVI 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 NAVI control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

1. Remove the integral switch. Refer to [AV-280, "Removal and Installation"](#).
2. Remove the screws.
3. Disconnect the harness connector from the NAVI control unit.
4. Remove the bracket screws, and then remove the NAVI control unit.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Be sure to perform “Read/Write Configuration” of display control unit when replacing NAVI control unit. For details, refer to [AV-165, "ADDITIONAL SERVICE WHEN REPLACING NAVI CONTROL UNIT : Description"](#).

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AV

INTEGRAL SWITCH

Removal and Installation

INFOID:000000009587103

REMOVAL

Remove integral switch. Refer to [IP-12. "Removal and Installation"](#).

INSTALLATION

Install in the reverse order of removal.

MULTIFUNCTION SWITCH

Removal and Installation

INFOID:000000009587104

REMOVAL

1. Remove the console finisher assembly. Refer to [IP-23. "Removal and Installation"](#).
2. Remove the screws.
3. Remove the multifunction switch.

INSTALLATION

Installation is in the reverse order of removal.

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EXTERNAL DATA INPUT BOX

Removal and Installation

INFOID:000000009587105

REMOVAL

1. Remove the console center finisher. Refer to [IP-23, "Removal and Installation"](#).
2. Release the pawls and remove the external data input box from the console upper finisher.

INSTALLATION

Installation is in the reverse order of removal.

BOSE AMP.

Removal and Installation

INFOID:000000009587106

REMOVAL

1. Remove the trunk front finisher. Refer to [INT-49, "TRUNK FRONT FINISHER : Removal and Installation"](#).
2. Remove the rear parcel shelf finisher. Refer to [INT-33, "Removal and Installation"](#).
3. Remove the BOSE amp. mounting bolts.
4. Disconnect the connectors to remove the BOSE amp. from the rear parcel shelf (trunk room side).

INSTALLATION

Install in the reverse order of removal.

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FRONT SQUAWKER

Removal and Installation

INFOID:000000009587107

REMOVAL

1. Remove the upper ventilator grille. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the screws and disconnect the connector to remove the front squawker.

INSTALLATION

Installation is in the reverse order of removal.

CENTER SQUAWKER

Removal and Installation

INFOID:000000009587108

REMOVAL

1. Remove the front speaker grille. Refer to [IP-12, "Removal and Installation"](#).
2. Remove the screws and disconnect the connector to remove the center squawker.

INSTALLATION

Installation is in the reverse order of removal.

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AV

TWEETER**Removal and Installation**

INFOID:000000009587109

REMOVAL

1. Remove the front door sash inner cover. Refer to [INT-16. "FRONT DOOR SASH INNER COVER : Removal and Installation"](#).
2. Remove the screws to remove the tweeter from the front door sash inner cover.

INSTALLATION

Installation is the reverse order of removal.

FRONT DOOR SQUAWKER

Removal and Installation

INFOID:000000009587110

REMOVAL

1. Remove the front door finisher. Refer to [INT-13, "FRONT DOOR FINISHER : Removal and Installation"](#).
2. Remove the screws and remove the front door squawker from front door finisher.

INSTALLATION

Install in the reverse order of removal.

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AV

FRONT DOOR WOOFER

Removal and Installation

INFOID:000000009587111

REMOVAL

1. Remove the front door finisher. Refer to [INT-13, "FRONT DOOR FINISHER : Removal and Installation"](#).
2. Disconnect the connector and remove the screws and remove the front door woofer.

INSTALLATION

Install in the reverse order of removal.

REAR DOOR SPEAKER

Removal and Installation

INFOID:000000009587112

REMOVAL

1. Remove the rear door finisher. Refer to [INT-18, "REAR DOOR FINISHER : Removal and Installation"](#).
2. Disconnect the connector and remove the screws to remove the rear door speaker.

INSTALLATION

Install in the reverse order of removal.

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AV

SATELLITE SPEAKER

Removal and Installation

INFOID:000000009587113

REMOVAL

1. Remove the trunk upper finisher. Refer to [INT-50, "TRUNK UPPER FINISHER : Removal and Installation"](#).
2. Remove the rear parcel shelf finisher. Refer to [INT-33, "Removal and Installation"](#).
3. Remove the satellite speaker mounting screws.
4. Disconnect the connector to remove the satellite speaker from the rear parcel shelf.

INSTALLATION

Install in the reverse order of removal.

REAR WOOFER

Removal and Installation

INFOID:000000009587114

REMOVAL

1. Remove the trunk upper finisher. Refer to [INT-50. "TRUNK UPPER FINISHER : Removal and Installation"](#).
2. Remove the rear parcel shelf finisher. Refer to [INT-33. "Removal and Installation"](#).
3. Remove the rear woofer mounting screws.
4. Disconnect the connector to remove the rear woofer from the rear parcel shelf.

INSTALLATION

Install in the reverse order of removal.

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AV

FRONT DOOR SPEAKER

Removal and Installation

INFOID:000000009587115

REMOVAL

1. Remove the front door finisher. Refer to [INT-13, "FRONT DOOR FINISHER : Removal and Installation"](#).
2. Disconnect the connector and remove the screws to remove the front door speaker.

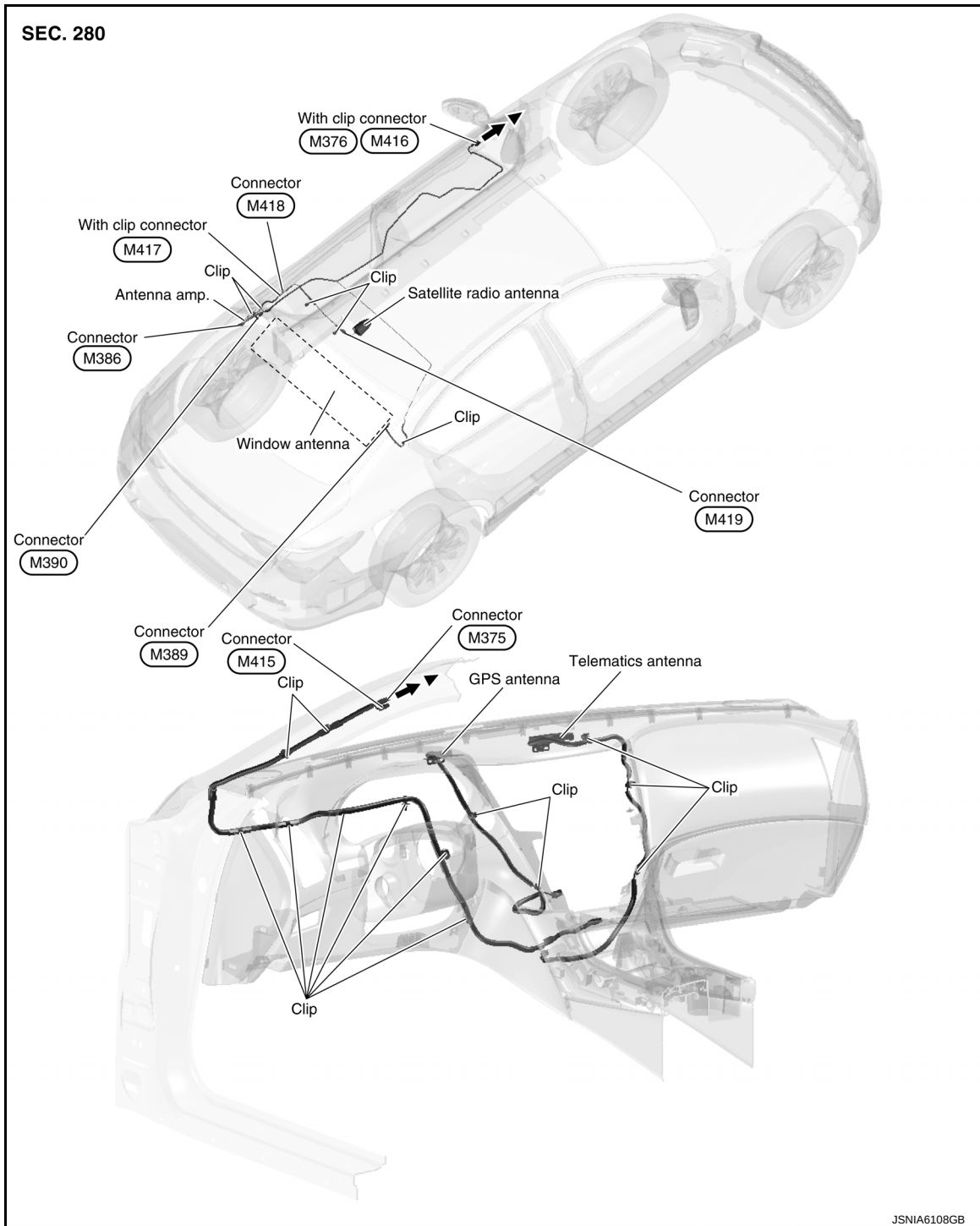
INSTALLATION

Install in the reverse order of removal.

ANTENNA FEEDER

Feeder Layout

INFOID:000000009587118



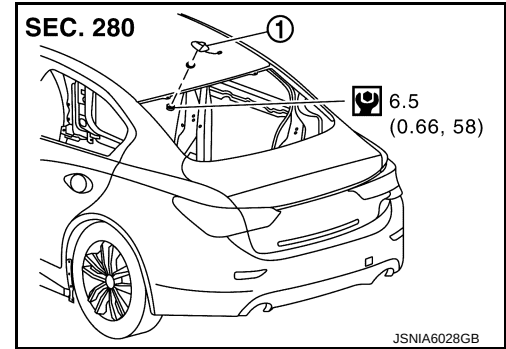
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SATELLITE RADIO ANTENNA

Exploded View

INFOID:000000009587119

- ① Satellite radio antenna



Removal and Installation

INFOID:000000009587120

REMOVAL

1. Remove the headlining assembly. Refer to [INT-42, "Removal and Installation"](#).
2. Remove the nut and disconnect the connector to remove the satellite radio antenna from the roof panel.

INSTALLATION

Installation is the reverse order of removal.

CAUTION:

Be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, roof panel may be deformed, when satellite radio antenna mounting nut tightening torque is loose.

ANTENNA AMP.

Removal and Installation

INFOID:000000009587121

REMOVAL

1. Remove the rear pillar finisher (LH). Refer to [INT-31, "REAR PILLAR FINISHER : Removal and Installation"](#).
2. Remove the screw and disconnect the connector to remove the antenna amp.

INSTALLATION

Installation is the reverse order of removal.

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GPS ANTENNA

Removal and Installation

INFOID:000000009587123

REMOVAL

1. Remove the instrument panel assembly. Refer to [IP-12, "Removal and Installation"](#).
2. Remove the screw to remove the GPS antenna from the instrument panel.

INSTALLATION

Install in the reverse order of removal.

STEERING SWITCH

Removal and Installation

INFOID:000000009587137

Refer to [ST-30. "Removal and Installation"](#) (vehicle speed sensitive P/S), or [ST-86. "Removal and Installation"](#) (direct adaptive steering).

NOTE:

Always remove steering switch together with steering wheel.

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MICROPHONE**Removal and Installation**

INFOID:000000009587139

REMOVAL

1. Remove the map lamp assembly. Refer to [INL-63, "MAP LAMP : Removal and Installation"](#).
2. Disconnect the microphone connector from the map lamp assembly.
3. Release the microphone pawls, then remove the microphone.

INSTALLATION

Installation is in the reverse order of removal.

FRONT MICROPHONE (AUDIOMPILOT)

Removal and Installation

INFOID:000000009587140

REMOVAL

- 1. Remove the map lamp assembly. Refer to [INL-63, "MAP LAMP : Removal and Installation"](#).
- 2. Disconnect connectors and remove screws and connectors clip, then remove front microphone with the map lamp assembly finisher.
- 3. Remove the front microphone, stretching pawls of map lamp assembly finisher.

INSTALLATION

Installation is the reverse order of removal.

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PRECAUTION

PRECAUTIONS

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

INFOID:000000009728690

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.

Cautions in Removing Battery Terminal, Display Control Unit, and AV Control Unit

INFOID:000000009728691

CAUTION:

Remove battery terminal, display control unit, 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 display control unit, and the AV control unit continues operating for approximately 30 seconds.

Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:000000009728692

AV COMMUNICATION SYSTEM

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

Precaution for Harness Repair

INFOID:000000009728693

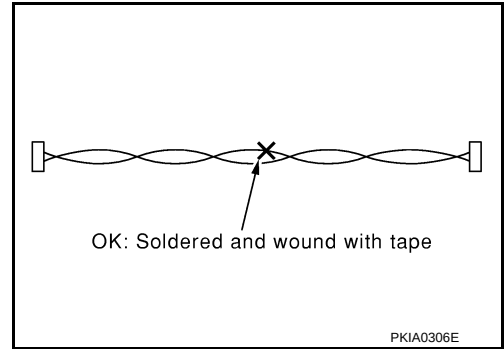
AV COMMUNICATION SYSTEM

PRECAUTIONS

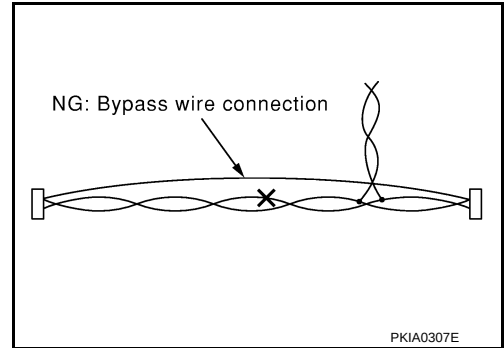
< PRECAUTION >

[AROUND VIEW MONITOR 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.)



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PREPARATION

< PREPARATION >

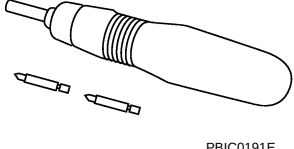
[AROUND VIEW MONITOR SYSTEM]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000009728706

Tool	Description
Power tool  PBIC0191E	Loosening screws

Lubricant or/and Sealant

INFOID:000000009728080

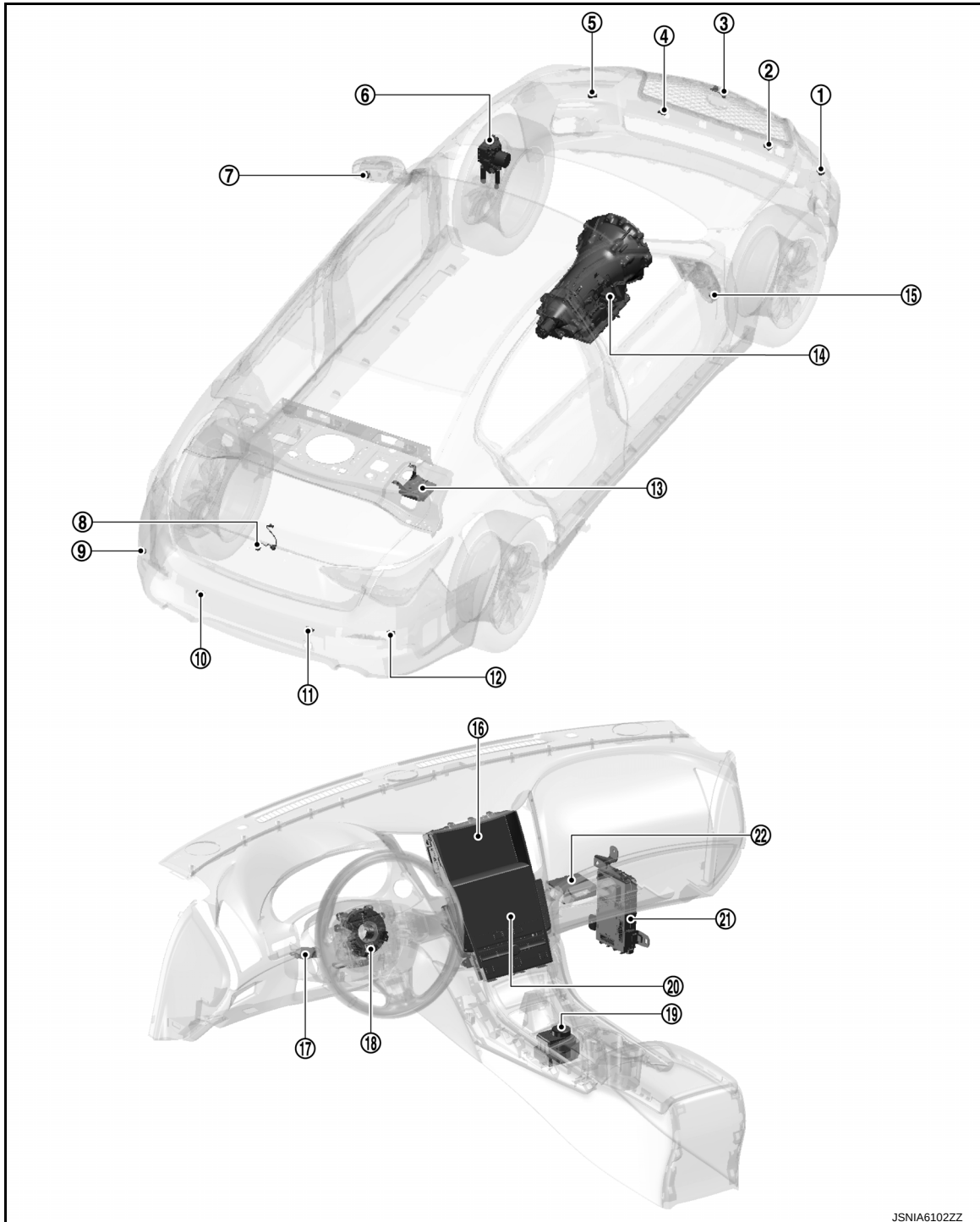
Name	Description	Note
Primer (Sumitomo 3M K520 or equivalent)	Primer for attaching sonar sensor holder to bumper	Sumitomo 3M Limited

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000009693919



JSNIA6102ZZ

No.	Component	Function
①	Corner sensor front RH	Refer to AV-306, "Sonar Sensor" .
②	Center sensor front RH	Refer to AV-306, "Sonar Sensor" .
③	Front camera	Refer to AV-305, "Front Camera" .

COMPONENT PARTS

< SYSTEM DESCRIPTION >

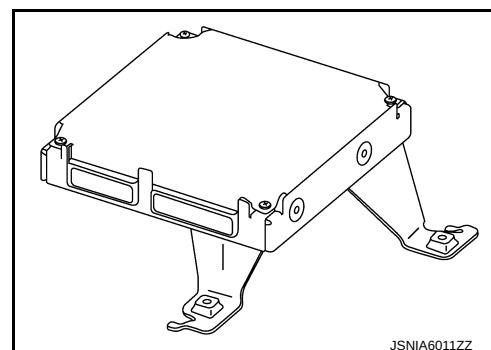
[AROUND VIEW MONITOR SYSTEM]

No.	Component	Function
④	Center sensor front LH	Refer to AV-306, "Sonar Sensor" .
⑤	Corner sensor front LH	Refer to AV-306, "Sonar Sensor" .
⑥	ABS actuator and electric unit (control unit)	Transmits the following signals to the display control unit. • Vehicle speed signal • Rear LH wheel speed signal • Rear RH wheel speed signal Refer to BRC-9, "Component Parts Location" , for detailed installation location.
⑦	Side camera LH	Refer to AV-305, "Side Camera" .
⑧	Rear camera	Refer to AV-305, "Rear Camera" .
⑨	Corner sensor rear LH	Refer to AV-306, "Sonar Sensor" .
⑩	Center sensor rear LH	Refer to AV-306, "Sonar Sensor" .
⑪	Center sensor rear RH	Refer to AV-306, "Sonar Sensor" .
⑫	Corner sensor rear RH	Refer to AV-306, "Sonar Sensor" .
⑬	Around view monitor control unit	Refer to AV-304, "Around View Monitor Control Unit" .
⑭	TCM	Transmits the following signals to the around view monitor control unit. • Shift position signal Refer to TM-12, "A/T CONTROL SYSTEM : Component Parts Location" , for detailed installation location.
⑮	Side camera RH	Refer to AV-305, "Side Camera" .
⑯	Display control unit	• Camera image signal that is received from around view monitor control unit is displayed in the display. • Transmits the following signals to the around view monitor control unit. - Camera switch signal
⑰	Buzzer	Refer to AV-306, "Buzzer" .
⑱	Steering angle sensor	Refer to AV-307, "Steering Angle Sensor" .
⑲	Multifunction switch	When the "CAMERA" switch is pressed, the push switch B signal is transmitted to integral switch.
⑳	Integral switch	Push switch B signal and camera switch signal are transmitted from integral switch to the display control unit.
㉑	BCM	Transmits the following signals to the around view monitor control unit. • Door switch signal • Trunk switch signal Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location" , for detailed installation location.
㉒	Sonar control unit	Refer to AV-306, "Sonar Control Unit" .

Around View Monitor Control Unit

INFOID:000000009693920

- The around view monitor control unit is installed at the trunk room.
- Necessary signals are transmitted/received to/from control unit via CAN communication.
- Necessary signals are transmitted/received to/from display control unit via AV communication.
- Camera image signals received from each camera are converted/synthesized in the around view monitor control unit and transmitted to the display control unit.
- Vehicle width guide lines, predicted course line, vehicle front guiding line and vehicle side line, tire icon, and vehicle icon are rendered with the around view monitor control unit and combined with camera image.



COMPONENT PARTS

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

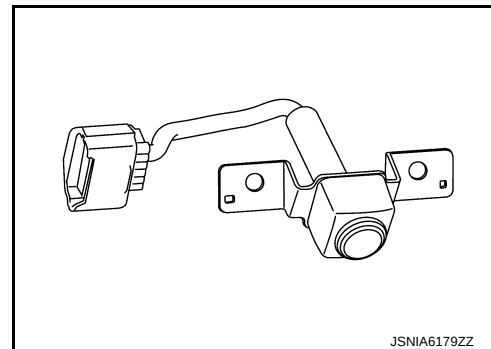
Front Camera

INFOID:000000009693921

- The front camera is installed to the front grille.
- Super-small CMOS camera (color) using CMOS* for the image pickup element is adopted.
- Power for the camera is supplied from the around view monitor control unit, and the image at the front of the vehicle is sent to the around view monitor control unit.

NOTE:

*: "CMOS" is abbreviation of Complementary Metal Oxide Semiconductor, and features low power consumption and high speed reading rate of electric charge.



Specification

Image pickup element	1/3.8-inch CMOS image sensor
Effective number of pixels	Approx. 1280,000 pixels (1296 × 985)
Minimum brightness	2 lx
Angle of view	H: 154° V: 96°

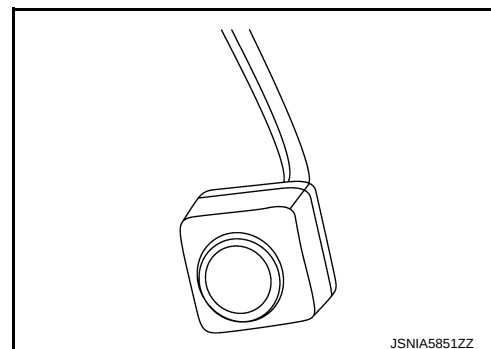
Side Camera

INFOID:000000009693922

- The side camera is installed to the door mirror.
- Super-small CMOS camera (color) using CMOS* for the image pickup element is adopted.
- Power for the camera is supplied from the around view monitor control unit, and the image at the side of the vehicle is sent to the around view monitor control unit.

NOTE:

*: "CMOS" is abbreviation of Complementary Metal Oxide Semiconductor, and features low power consumption and high speed reading rate of electric charge.



Specification

Image pickup element	1/3.8-inch CMOS image sensor
Effective number of pixels	Approx. 1280,000 pixels (1296 × 985)
Minimum brightness	2 lx
Angle of view	H: 154° V: 96°

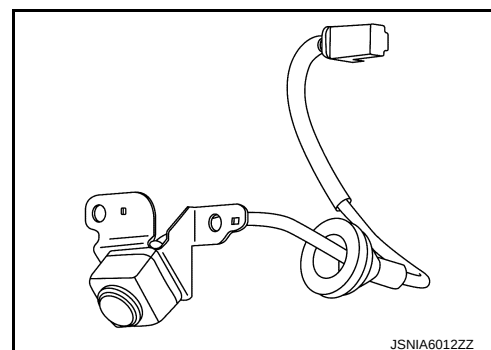
Rear Camera

INFOID:000000009693923

- The rear camera is installed to the trunk finisher.
- Super-small CMOS camera (color) using CMOS* for the image pickup element is adopted.
- With the mirror processing function, a mirror image is sent as if it is viewed by a rear view mirror.
- Power for the camera is supplied from the around view monitor control unit, and the image at the rear of the vehicle is sent to the around view monitor control unit.

NOTE:

*: "CMOS" is abbreviation of Complementary Metal Oxide Semiconductor, and features low power consumption and high speed reading rate of electric charge.



Specification

COMPONENT PARTS

< SYSTEM DESCRIPTION >

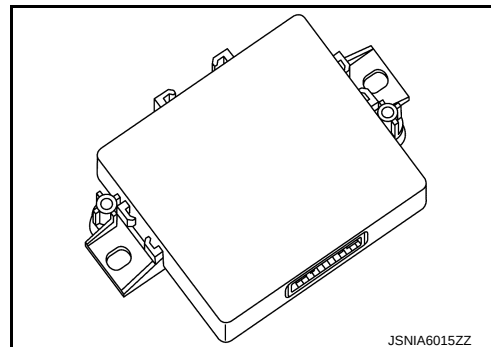
[AROUND VIEW MONITOR SYSTEM]

Image pickup element	1/3.8-inch CMOS image sensor
Effective number of pixels	Approx. 1280,000 pixels (1296 × 985)
Minimum brightness	2 lx
Angle of view	H: 154° V: 96°
Image	With the mirror processing function

Sonar Control Unit

INFOID:000000009693924

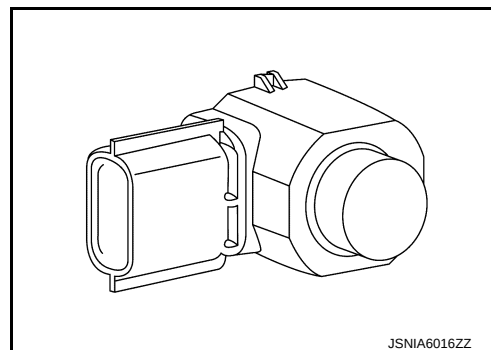
- Sonar control unit is located on the passenger instrument lower panel.
- Necessary signals are transmitted/received to/from control unit via CAN communication.
- The tone outputs by inputting the sensor signal from sonar sensors. The tone outputs the each speaker.
- Sensor signal that corresponds to the detected distance to an obstacle is transmitted to around view monitor control unit via CAN communication, and the sonar indicator is displayed on display control unit. Refer to [AV-308, "System Description"](#).



Sonar Sensor

INFOID:000000009693925

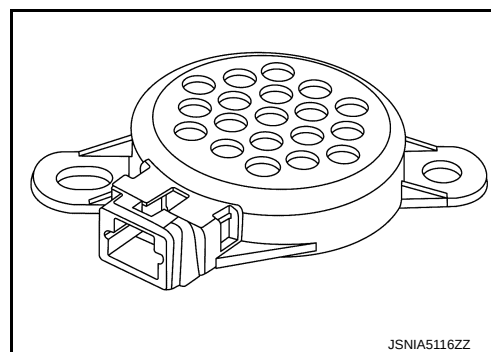
When a distance from an obstacle is detected, a distance signal is transmitted to the sonar control unit.



Buzzer

INFOID:000000009693926

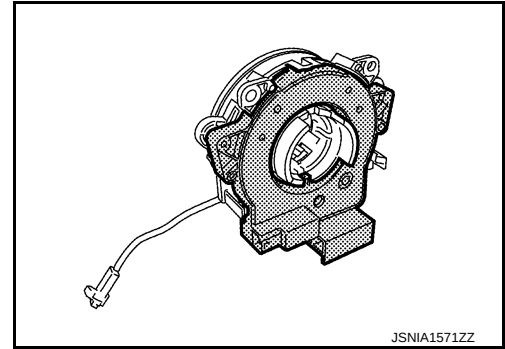
The MOD buzzer sounds with the signal from the sonar control unit.



Steering Angle Sensor

INFOID:000000009693927

- Steering angle sensor is installed to the spiral cable.
- Steering angle sends the steering signal necessary for predictive course line of the front or rear view monitor to the around view monitor control unit via CAN communication.



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AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

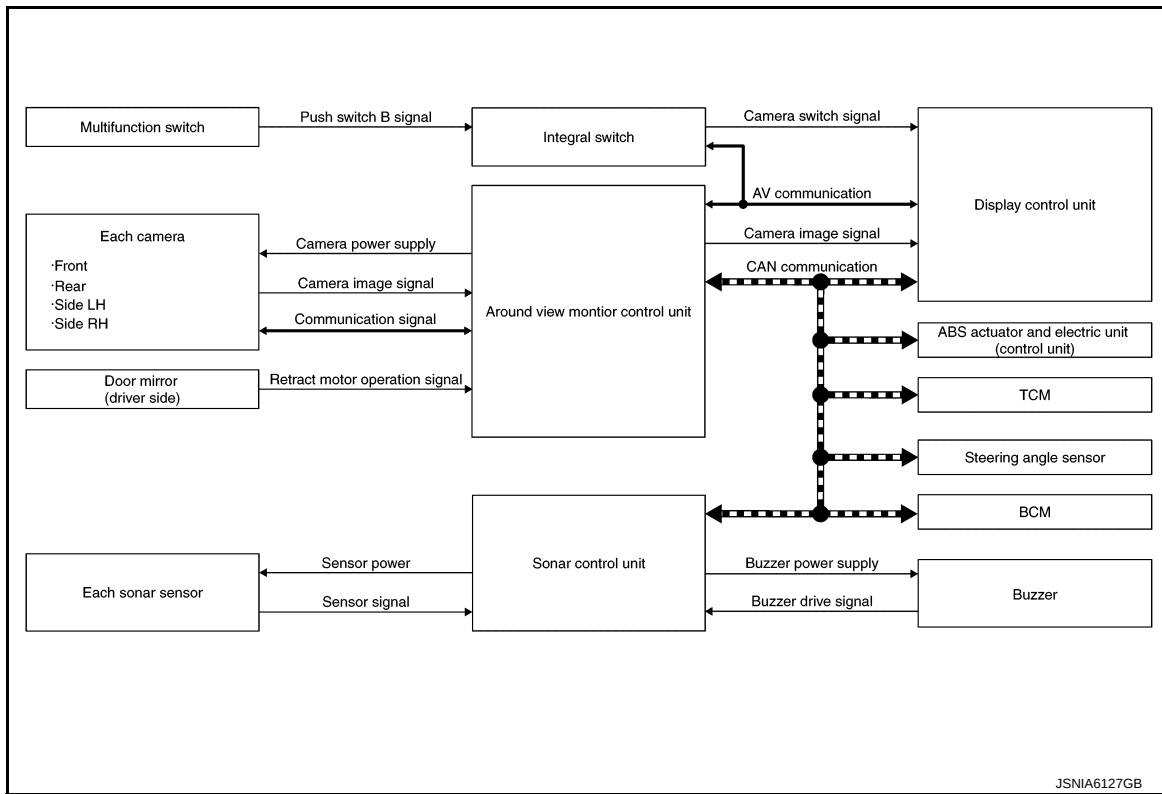
[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR SYSTEM

System Description

INFOID:000000009693928

SYSTEM DIAGRAM



Around View Monitor Control Unit Input Signal (CAN Communication)

Transmit unit	Signal name
Steering angle sensor	Steering angle sensor signal
TCM	Shift position signal
ABS actuator and electric unit (control unit)	Vehicle speed signal
	Rear LH wheel speed signal
	Rear RH wheel speed signal
BCM	Door switch signal
	Trunk switch signal
Sonar control unit	Sonar status signal
Display control unit	Camera switch signal

Around View Monitor Control Unit Output Signal (CAN Communication)

Transmit unit	Signal name
Display control unit	View change signal
Sonar control unit	MOD beep sound output request signal

Sonar Control Unit Input Signal (CAN Communication)

Transmit unit	Signal name
TCM	Shift position signal
ABS actuator and electric unit (control unit)	Vehicle speed signal

AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

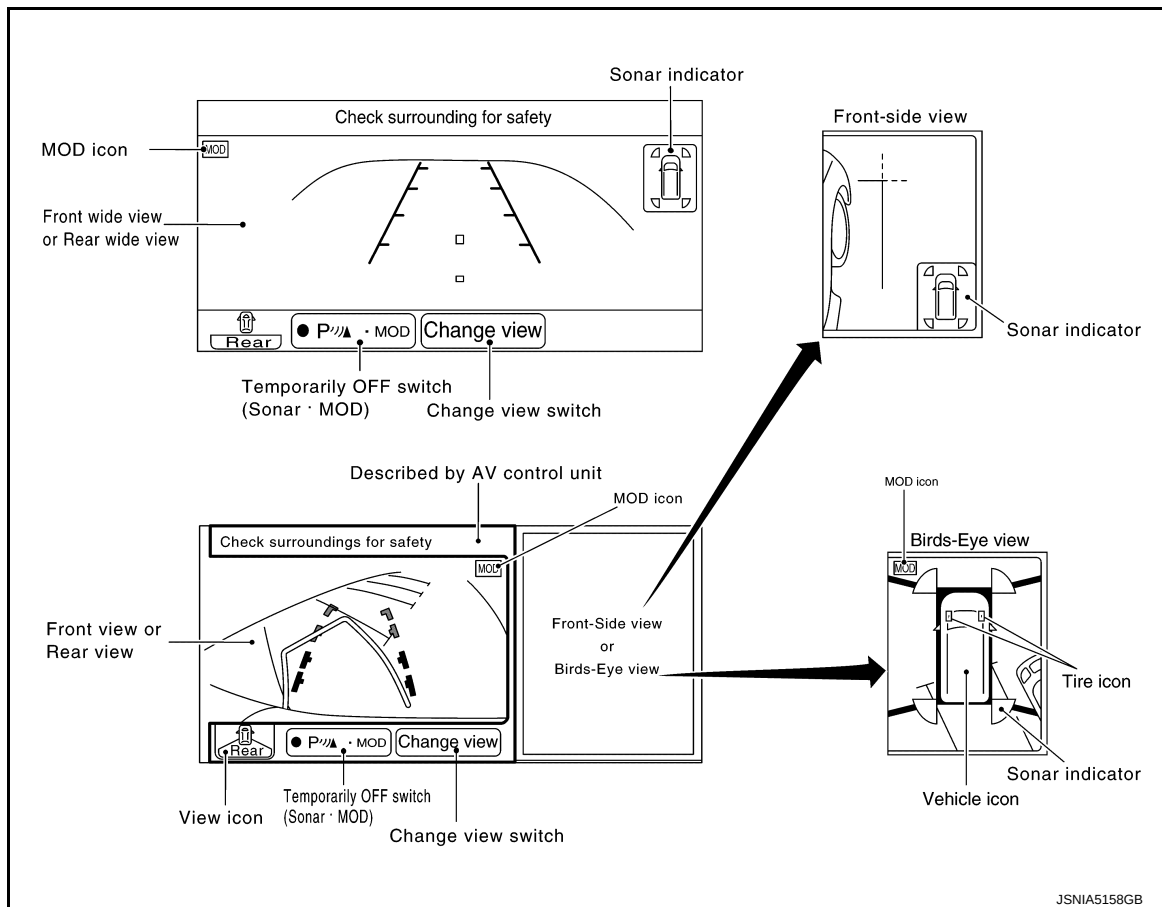
DESCRIPTION

- This system is equipped with wide-angle high-resolution cameras on the front and rear of the vehicle and on both right and left door mirrors. The images from front view, rear view, front-side view RH side, and birds-eye view that shows the view from the top of the vehicle are displayed to monitor the vehicle surroundings.
- Around view monitor control unit cuts out and expands the image received from each camera to create each view.
- The sonar indicator is displayed on display (superimposed on the camera image) in combination with the camera assistance sonar system to warn of the approach of an obstacle.
- Camera image is displayed on the display when an obstacle is detected by sonar system.
- In front view and rear view, the vehicle width, distance lines and predictive course lines are superimposed and displayed. In front-side view, the vehicle distance guiding line and vehicle width guiding line are displayed.
- The Birds-Eye view converts the images from 4 cameras into the overhead view and displays the status of the vehicle on display. The vehicle icon and sonar indicator that are displayed on the Birds-Eye view display are rendered by around view monitor control unit.
- Moving Object Detection (MOD) is adopted that detects moving objects according to camera image and notifies the detection result to the driver.
- Tire icon is adopted for Birds-Eye view image.
- Front/rear wide view function is adopted. Visibility for the left and right that contains invisible area is improved.

AROUND VIEW MONITOR SCREEN

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

Screen constitution



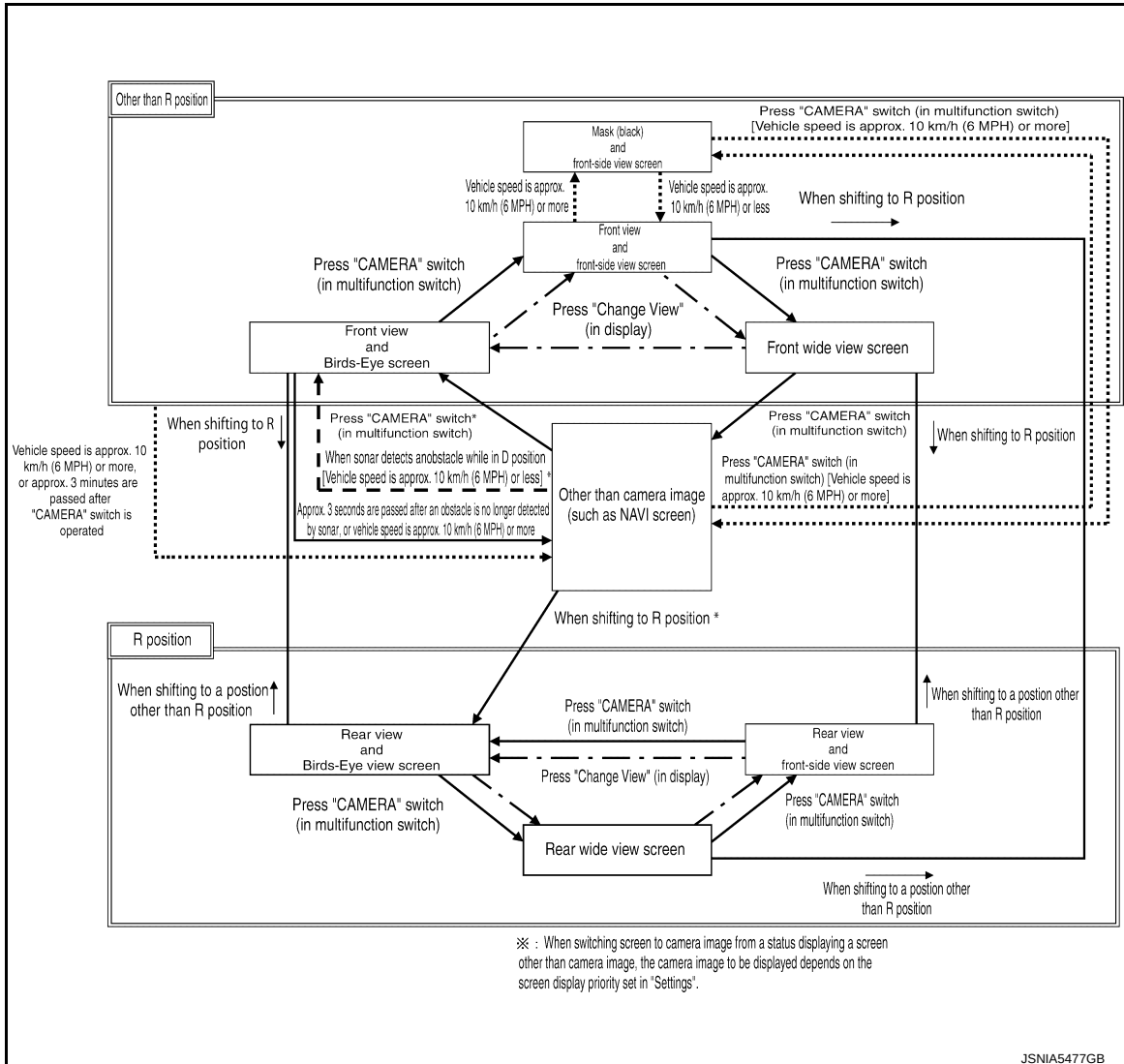
OPERATION DESCRIPTION

AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

Around view monitor screen transition



- Around view monitor is displayed on the display when "CAMERA" switch is pressed, when shifting position is reverse, or when an obstacle is detected by sonar system.
- Birds-Eye view, Front-side view, and front/rear wide view can be switched by "Change View" switch (touch switch) or "CAMERA" switch, while around view monitor is displayed.
- Priority of view to be displayed can be set by "Settings" screen.
- While shift position is other than reverse, around view monitor is cancelled when approximately 3 minutes are passed after "CAMERA" switch is pressed, or when vehicle speed is approximately 10 km/h (6 MPH) or more. The screen returns to the screen before displaying around view monitor.
- Setting of Moving Object Detection (MOD) and sonar can be switched ON/OFF by temporary OFF switch of display control unit. (Temporary OFF)
- In temporary OFF, around view monitor is cancelled. Temporary OFF is cancelled when around view monitor is displayed once again. Sonar and MOD are switched to operation-ready status
- In permanent OFF, MOD and sonar are not operative until MOD and sonar are switched to ON by "Settings" screen.
- In Birds-Eye view, an enhanced boundary is displayed on the image indicating the invisible area and clearly indicating the boundary of the 4 cameras. The invisible area is displayed in yellow when Birds-Eye view is displayed after the ignition switch is turned ON.
- In D position, front sonar can detect an obstacle while camera image is not displayed on display control unit. Screen is switched to camera image when an obstacle is detected.
- If information of camera and information written to around view monitor control unit are not the same, error indicator of applicable camera position is displayed when Birds-Eye view is displayed.
- When "CAMERA" switch of multifunction switch is pressed, it receives camera switch signal from display control unit via AV communication.

AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

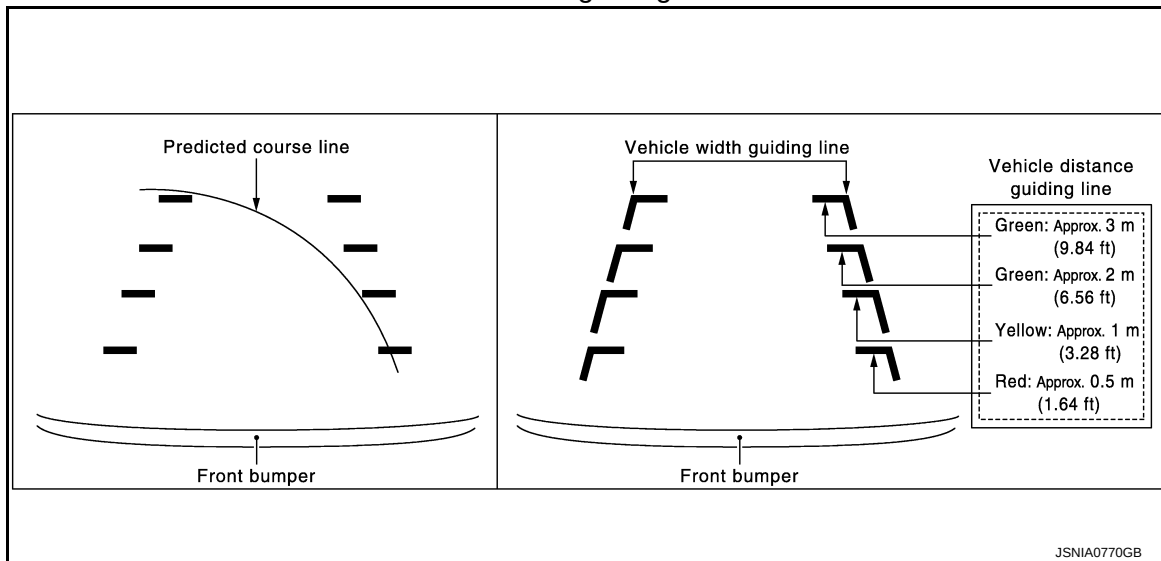
[AROUND VIEW MONITOR SYSTEM]

- When around view monitor control unit receives camera switch signal, around view monitor control unit reads the image signal from each camera.
- When around view monitor control unit receives reverse signal, while shift position is R position, around view monitor control unit reads image signal from each camera.
- When around view monitor control unit reads image signal from each camera, it cuts out the required screen for each view, superimposes camera image, vehicle icon, guiding lines, predicted course line, "MOD" icon, and sonar indicator, and then outputs them to display control unit.

Front View

- The front view image is from the front camera.
- When the selector lever is in any position other than the reverse position, the front view is displayed by pressing the "CAMERA" switch. It improves the visibility of obstacles in front of the vehicle and helps driving by the images displayed from Birds-Eye view and Front-Side view. The front wide view function allows the display of an image with a 180° horizontal angle.
- Display the vehicle width guiding line and vehicle distance guiding line in front view and display the predictive course line according to the steering angle.
- If the steering angle is within approximately 90 degrees, the predictive course lines on the left/right side are displayed. If the steering angle is exceeding approximately 90 degrees, only the predictive course line on the outside (in the opposite side of steering direction) is displayed.
- Around view monitor control unit is connected to the steering angle sensor and receives the steering angle signal via CAN communication.
- Around view monitor control unit controls the direction and distance of the predictive course line according to the sensor signal from steering angle sensor.

Front view guiding lines



Rear View

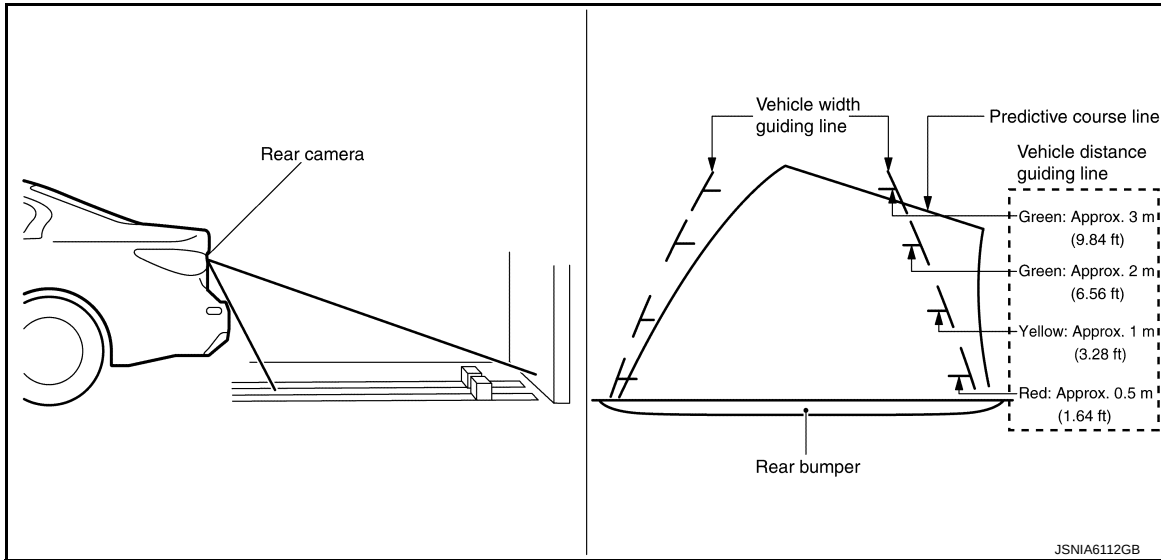
- The rear view image is from the rear camera.
- When the selector lever is in the reverse position, the rear view is displayed. Backing and parking are improved by the images from Birds-Eye view and Front-Side view. The rear wide view function allows the display of an image with a 180° horizontal angle.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

AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

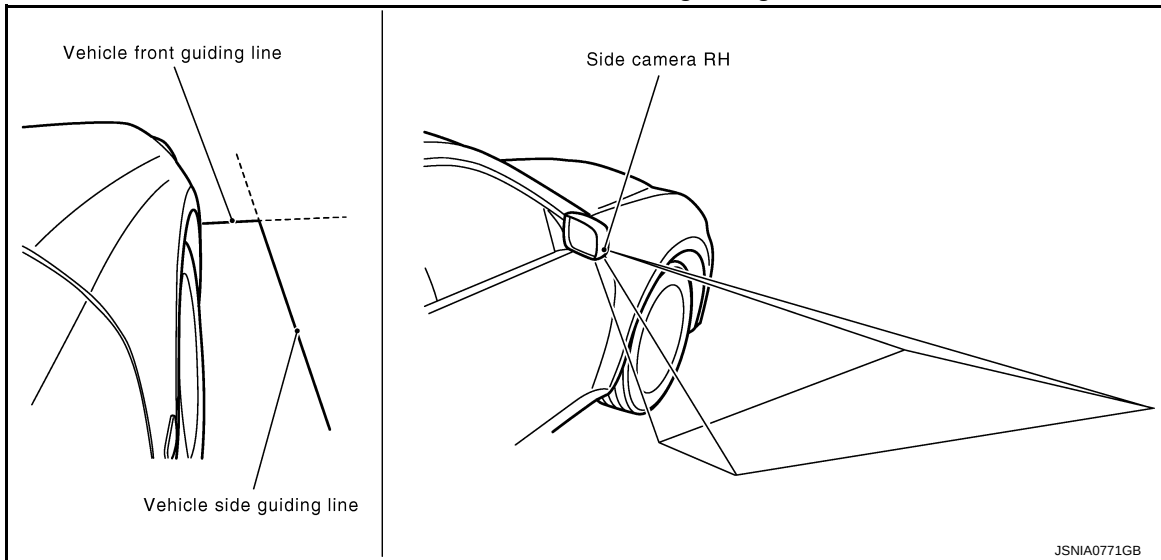
Rear view guiding lines



Front-side View

- The front-side view image is from the side camera RH.
- In Front-Side view, display the vehicle distance guiding line and vehicle width guiding line.

Front-side view area and guiding line



Birds-eye View

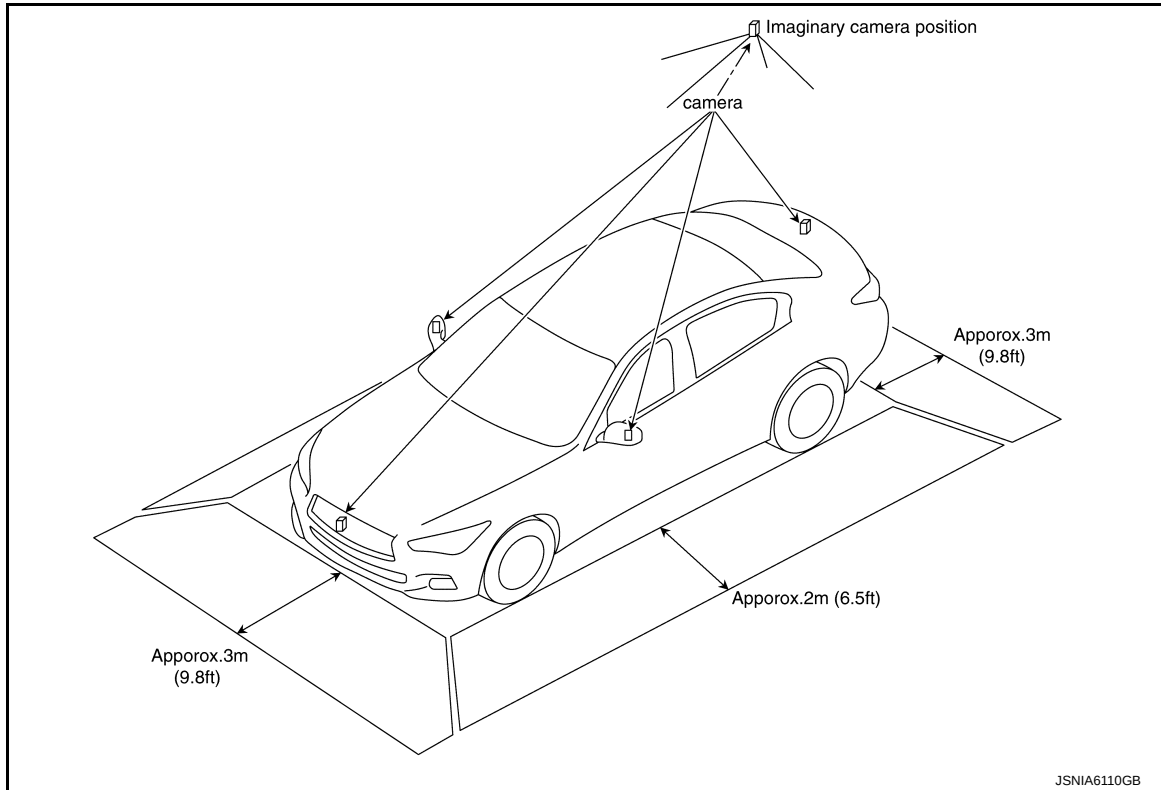
- The image from the 4 cameras is cut out and converted into the overhead view, and the surroundings of the vehicle is displayed in birds-eye view.
- In Birds-Eye view, the invisible area is displayed on the image to specify the boundary of the 4 cameras.
- The invisible area is displayed in yellow in the Birds-Eye view after turning the ignition switch ON as an information for the user. (OFF setting can be performed)

AROUND VIEW MONITOR SYSTEM

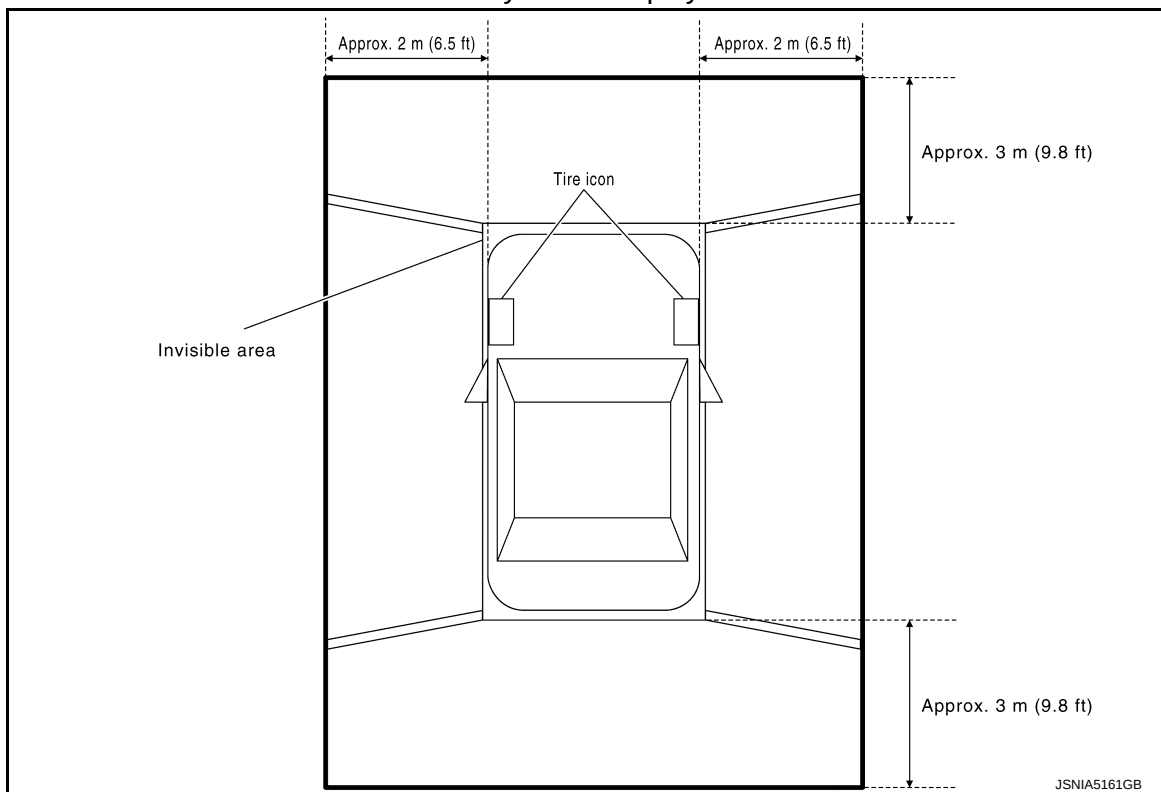
< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

Birds-Eye view display image



Birds-Eye view display area



Moving Object Detection (MOD)

- Moving Object Detection (MOD) is a function that notifies the driver of the presence of moving objects in the area around the vehicle. MOD detects moving objects from camera image, illuminates frame of view in yellow whenever "MOD" icon is displayed in blue, and sounds buzzer connected to sonar control unit.
- MOD detects moving objects while camera image is displayed on display control unit.
- Around view monitor control unit performs the following process when moving objects are detected.
 - Superimposes yellow frame line on camera image signal and outputs them to display control unit.

AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

- Transmits MOD beep sound output request signal to sonar control unit via CAN communication.
- Sonar control unit that receives the MOD beep sound output request signal from around view monitor control unit, and outputs buzzer drive signal to buzzer.
- Around view monitor control unit detects moving objects from camera image according to an image recognition method called optical flow.
- MOD does not detect a background as a moving object when the vehicle moves (when whole screen moves), but detects a moving object when an actual moving object is displayed on screen.
- MOD can be set to temporary OFF or permanent OFF by the following operation.
- temporary off: MOD is switched to off with a switch on the display control unit (touch switch) while camera image is displayed on display control unit.
- permanent off: MOD is switched to off by “Settings”.
- Color of “MOD” icon indicates whether or not MOD is operative. “MOD” icon is displayed as shown in the following table. when MOD is operative, “MOD” icon is displayed in blue. when MOD is not operative, “MOD” icon is displayed in gray. MOD icon is not displayed when MOD is off (permanent off) by “Settings”, or when MOD is off (temporary off) by switch of display control unit (touch switch).

View		Shift position		
		P or N position	D position	R position
		“MOD” icon display		
Birds-Eye view and rear view	Birds-Eye view	Blue	—	Gray
	Rear view	Gray		Blue
Birds-Eye view and front view	Birds-Eye view	Blue	Gray	—
	Front view	Gray	Blue	
Side view and rear view	Side view	×	—	×
	Rear view	Gray		Blue
Side view and front view	Side view	×	×	—
	Front view	Gray	Blue	
Rear wide view		Gray	—	Blue
Front wide view		Gray	Blue	—

×: icon is not displayed.

—: view is not displayed in each shift position (D position and R position).

- MOD illuminates frame of view in yellow and sounds buzzer, when any of the conditions in the following table are satisfied.

Operation Condition		View where MOD is operative
Shift position	Vehicle speed	
P or N position	0 km/h	Birds-Eye view
D position	0 km/h (0 MPH) or more - less than 8 km/h (5 MPH)	• Front view • Front wide view
R position	0 km/h (0 MPH) or more - less than 8 km/h (5 MPH)	• Rear view • Rear wide view

- MOD does not operate or stops operation when any of the conditions in the following table are satisfied.

Operation stop condition	Note
Door open	• MOD does not stop operation for front view and front wide view. • Operation stops for rear view and rear wide view while back door is open. • Operation stops for Birds-Eye view when any door is open.
Door mirror expanding/retracting	Expanding/retracting status of door mirror is judged according to operation signal of door mirror motor transmitted from door mirror (driver side) to around view monitor control unit.

Tire Icon

AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

- Tire icon is adopted for Birds-Eye view screen.
- Tire icon is a function that notifies the steered direction of front tire to the driver and assists the driving.
- In tire icon, around view monitor control unit superimposes steering angle information to camera image and outputs camera image signal to display control unit.
- Around view monitor control unit judges steering angle according to steering signal received from steering angle sensor via CAN communication.

CAMERA IMAGE OPERATION PRINCIPLE

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

CAMERA ASSISTANCE SONAR FUNCTION

- Sonar sensors are installed on front bumper and rear bumper. When an obstacle is detected while around view monitor is displayed, a sonar indicator display and buzzer sound notify the driver of the proximity of an obstacle. When an obstacle is detected while around view monitor is not displayed, around view monitor screen is displayed automatically, and then notification is similarly as per the display and buzzer sound.
- Approaching distance between bumper and obstacle is displayed in 3 stages according to the color of the sonar indicator in display and blinking cycle of indicator.
- Warning by buzzer sound notifies distance to obstacle according to a 3-stage cycle.

System Operation Description

- Sonar control unit receives shift position signal from TCM and vehicle speed signal from ABS actuator control unit via CAN communication, and controls ON/OFF of sonar system.
- Sonar control unit transmits detection signal and detection distance signal to around view monitor via CAN communication, according to signal from corner sensor depending on conditions as shown in the following table. Around view monitor displays the applicable sonar indicator.

Sonar system operation condition			Sonar operation	
Shift position	Vehicle speed	Obstacle	Sonar indicator	Buzzer
R position	Less than 10 km/h (6 MPH)	Yes	Detection status is displayed	Yes
D position	Less than 10 km/h (6 MPH)	Yes	Detection status is displayed	Yes
P or N position	Less than 10 km/h (6 MPH)	Yes	Detection status is displayed*	None
—	10 km/h (6 MPH) or more	Yes	Not displayed	None

*: Only when camera image is displayed.

- When sonar is OFF in “Settings”, sonar OFF display is displayed. Sonar OFF display is a function that displays frame in orange on the 4 corners of vehicle icon on Birds-Eye view to notify user of sonar OFF status. When sonar is switched to OFF by “Settings”, sonar OFF display is only displayed for rear side of vehicle icon
- Sonar control unit is equipped with diagnosis function. Corner sensor malfunction and sensor harness open circuit can be detected. Malfunction status is transmitted to around view monitor control unit. Sonar OFF status is displayed and notified to the user.

Obstacle Detection Distance

- Sonar control unit switches output of sonar indicator and buzzer in 3 stages according to obstacle detection distance from corner sensor.
- Sonar control unit can change setting of obstacle detection distance in 3 stages.

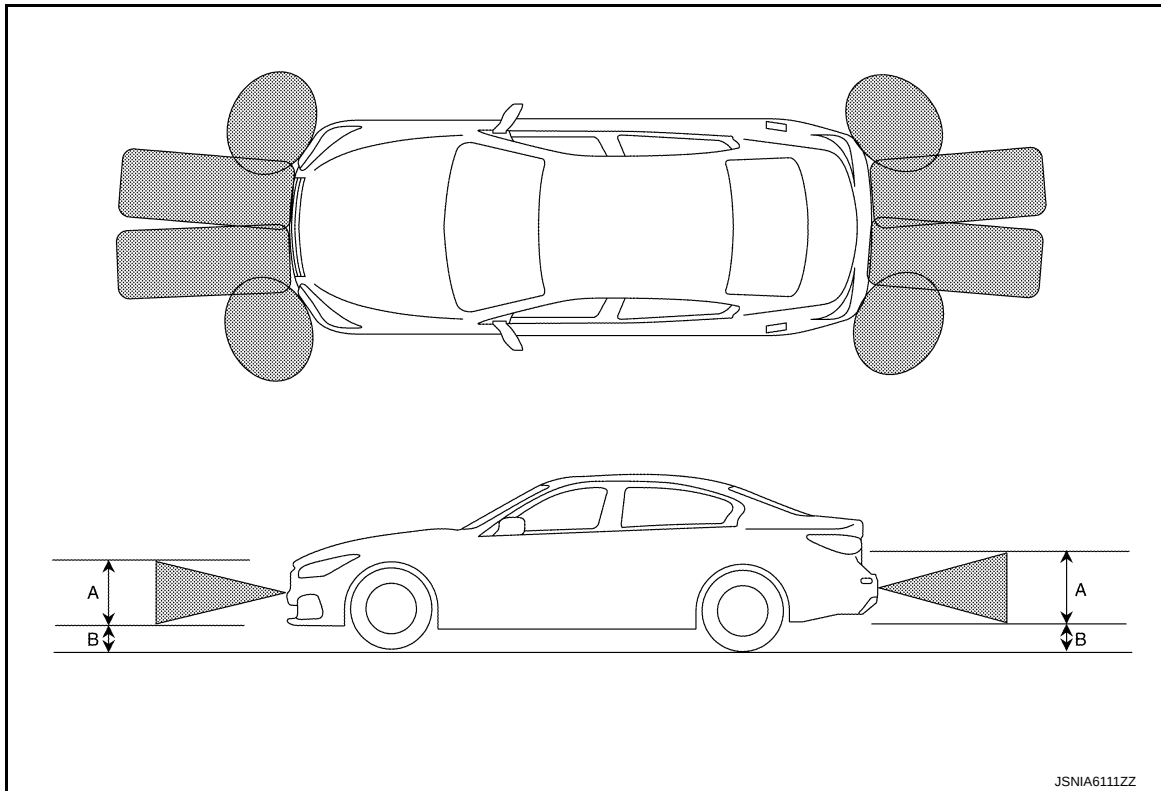
AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

- Sonar control unit can change setting of buzzer volume in 3 stages.

Obstacle detection image



A. Approx. 50 cm (19.69 in)

B. Approx. 15 cm (5.91 in)

Detection distance (default value)

Warning item	Corner sensor	Center sensor
First warning	—	60 – 100 cm (23.6 – 39.3 in)
Second warning	50 – 60 cm (19.6 – 23.6 in)	50 – 60 cm (19.6 – 23.6 in)
Third warning	30 – 50 cm (11.8 – 19.6 in)	30 – 50 cm (11.8 – 19.6 in)
Fourth warning	Less than 30 cm (11.8 in)	Less than 30 cm (11.8 in)

Sonar Indicator Display

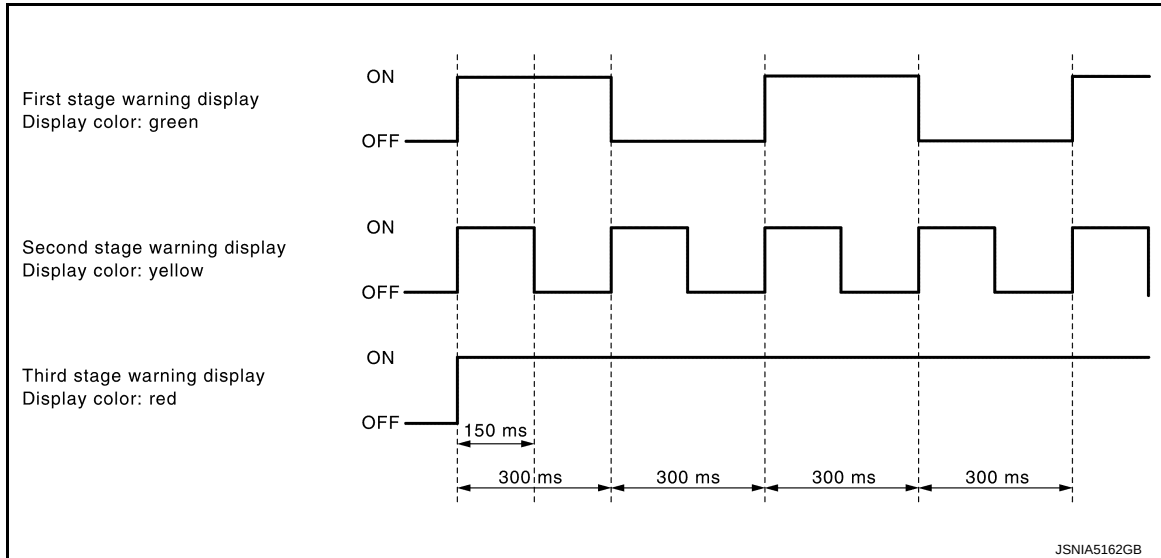
- When around view monitor control unit receives detection signal and detection distance signal from sonar control unit, the around view monitor control unit displays the sonar indicator on display control unit.
- Around view monitor control unit changes display color and indicator blinking cycle according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

AROUND VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

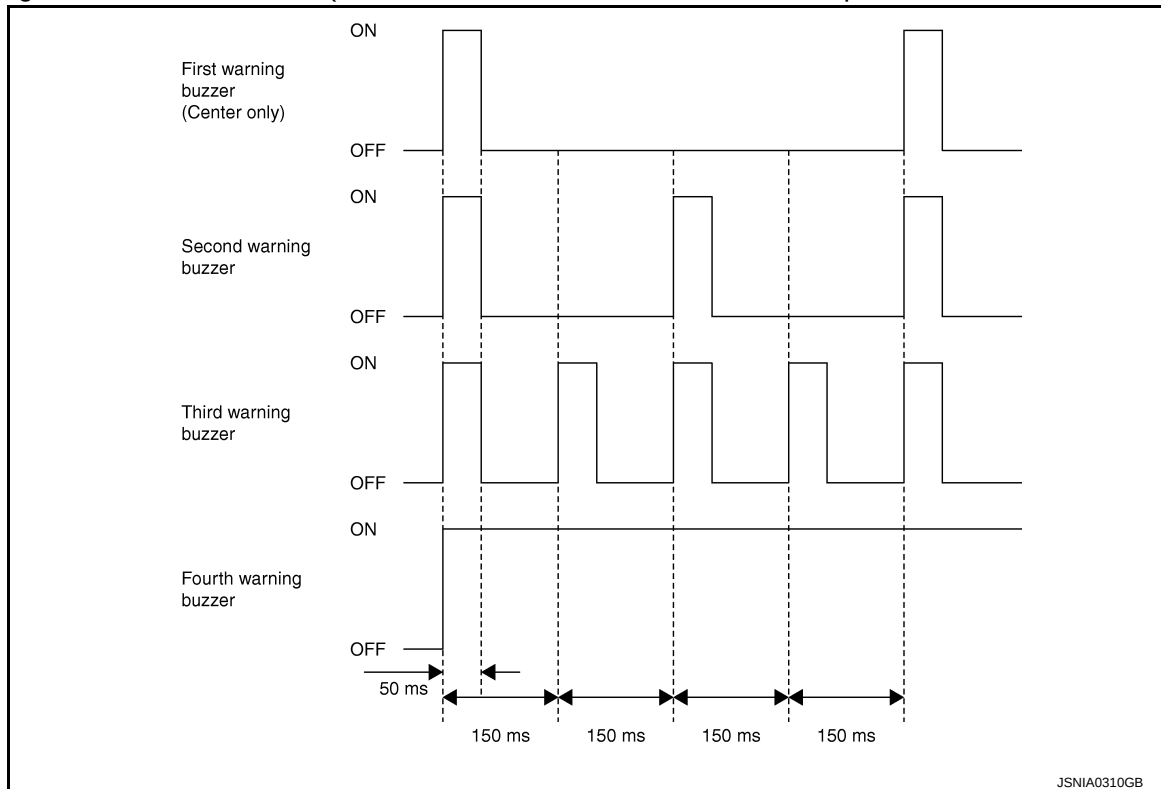
[AROUND VIEW MONITOR SYSTEM]

Sonar indicator display color and blinking cycle



Warning Buzzer Frequency

- The warning buzzer cycle changes between 4 levels (for front center and rear center) and 3 levels (for corner) according to the detection distance.
- The nearest sensor from the detected obstacle determines the buzzer cycle if plural sensors detect any obstacle simultaneously detected obstacles.
- If both the front and the rear sensor detect different objects simultaneously, the sensor which detects the closer object is prior to another sensor. If the detection distance is equal between the front and the rear, warning buzzer of rear sounds. (The front and the rear buzzers do not output the sounds simultaneously.)



NOTE:

The warning buzzer of the corner sensor sounds as follows:

- As for the first, second and third stages, the warning buzzer sound for 3 seconds at maximum.
- As for the fourth stage, the warning buzzer does not stop even after a lapse of 3 seconds.
- Buzzer stops when the vehicle moves away from an obstacle and the warning level decreases.

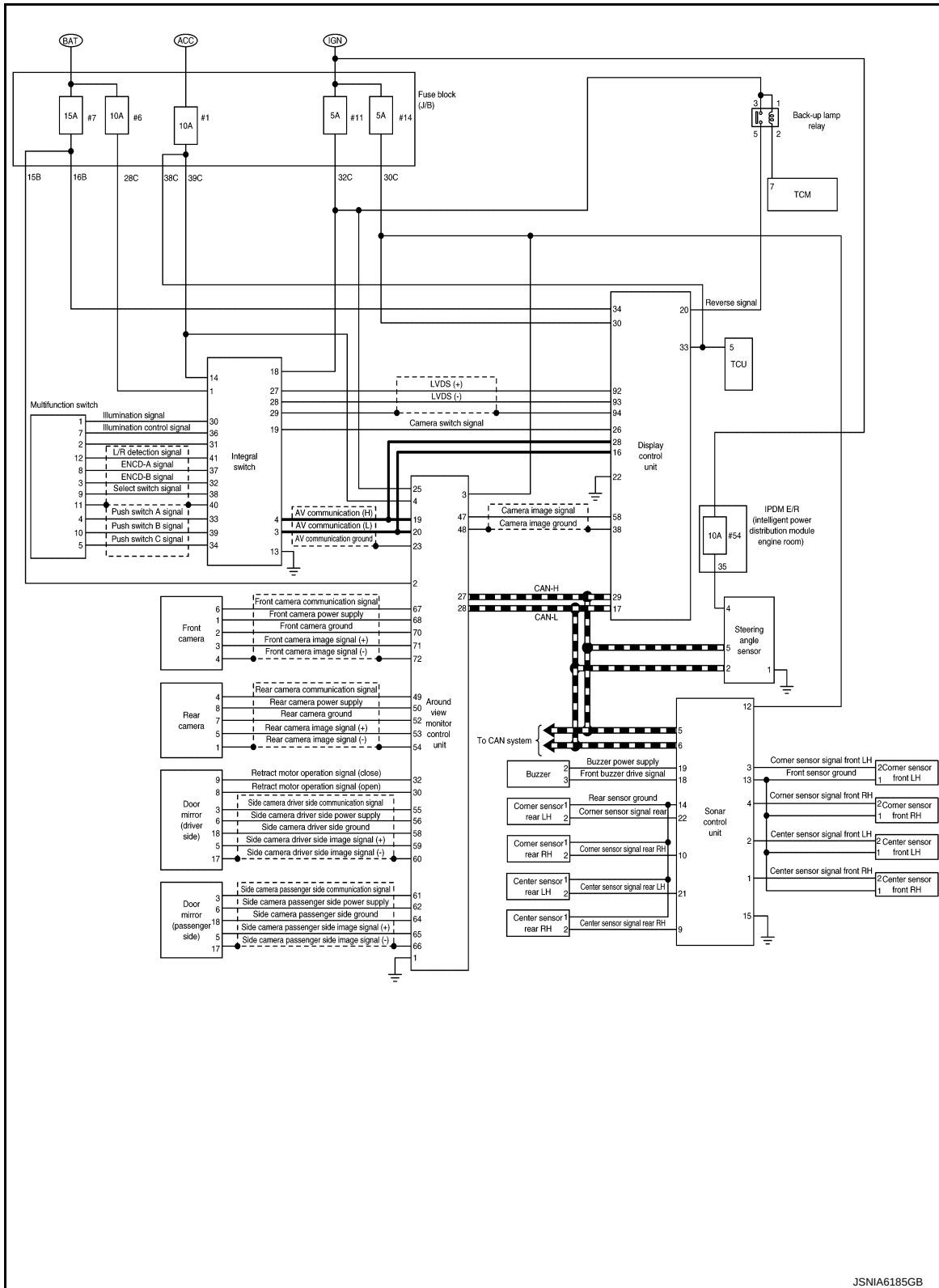
AROUND VIEW MONITOR SYSTEM

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[AROUND VIEW MONITOR SYSTEM]

Circuit Diagram

INFOID:000000009693929

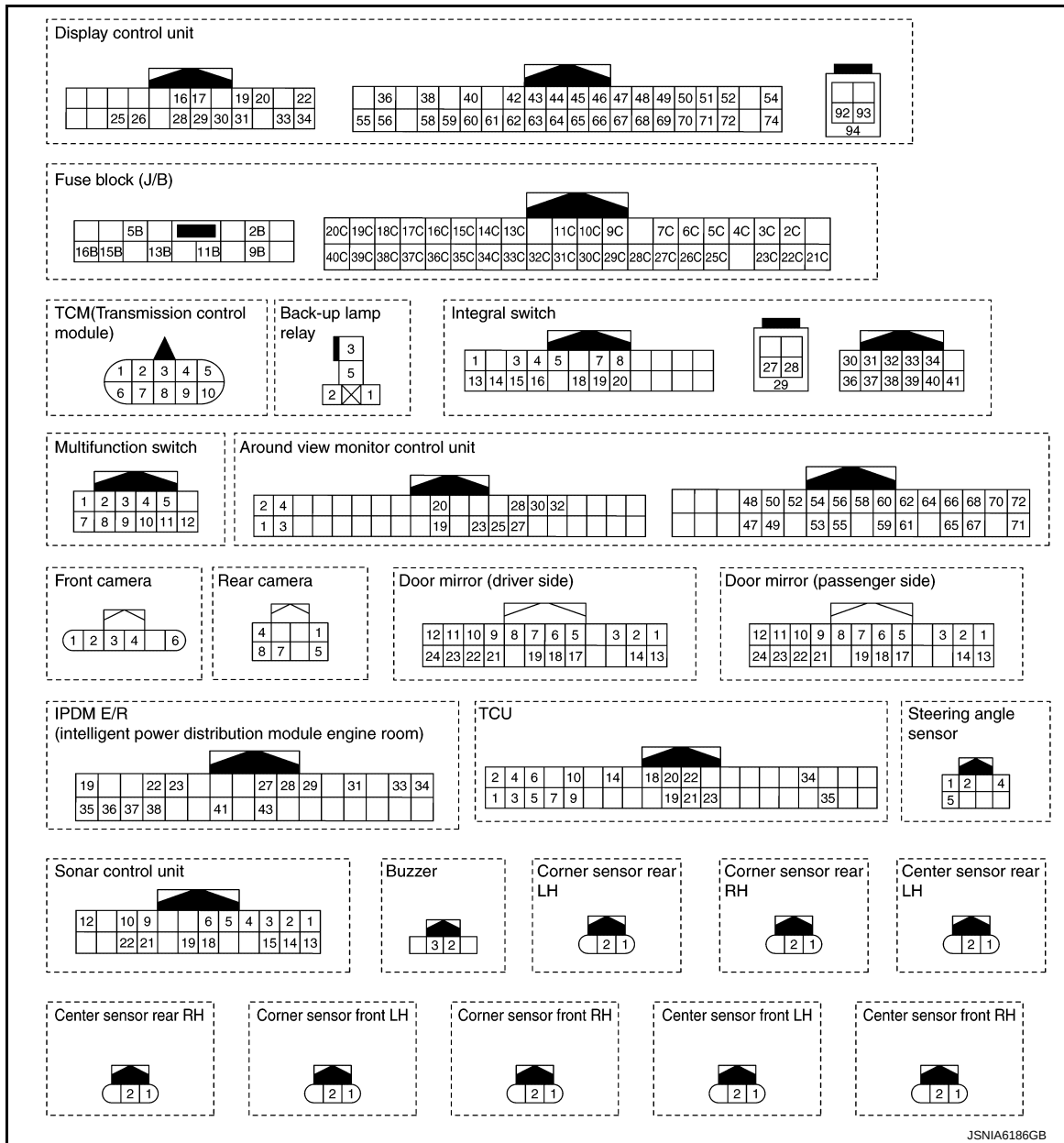


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AROUND VIEW MONITOR SYSTEM

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[AROUND VIEW MONITOR SYSTEM]



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[AROUND VIEW MONITOR SYSTEM]

Fail-Safe

INFOID:000000009728925

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U0428: ST ANGLE SENSOR CALIBRATION	Neutral position adjustment of steering angle sensor is not complete.	• Predicted course line is not displayed. • MOD (Moving Object Detection) function is stopped. • Front tire angle display is stopped. • Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed.
U1000: CAN COMM CIRCUIT	When around view monitor control unit cannot transmit/receive CAN communication signal continuously for 2 seconds or more.	The following functions are stopped • When communication of steering angle sensor signal is not normal - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - Front tire angle display is stopped. - Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed. • When communication of vehicle signal, wheel speed sensor signal, and shift signal is not normal - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed • When communication of sonar signal is not normal - Predicted course line is not displayed.

AROUND VIEW MONITOR SYSTEM

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[AROUND VIEW MONITOR SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U111A: REAR CAMERA IMAGE SIGNAL	No-signal status of rear camera image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U111B: SIDE CAMERA RH IMAGE SIGNAL	No-signal status of side camera RH image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	
U111C: FRONT CAMERA IMAGE SIGNAL	No-signal status of rear camera image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	
U111D: SIDE CAMERA LH IMAGE SIGNAL	No-signal status of side camera LH image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	
U1232: ST ANGLE SEN CALIB	Neutral position adjustment of steering angle sensor is performed. NG signal from steering angle sensor is received.	- Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - Tire icon is stopped. - Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed.
U1302: CAMERA POWER VOLT	Camera power supply voltage does not satisfy the following conditions for 2 seconds or more when ignition switch is turned ON. - When supplemental lighting power supply output is ON: 5.9 – 6.5 V. - When OFF: 0 V by camera power supply measurement.	Camera power output is stopped.
U1304: CAMERA IMAGE CALIB	- When camera calibration is incomplete. - When camera information in around view monitor control unit and information read from camera are not the same. NOTE: Current malfunction is displayed only and is not saved.	Unmatched icon  display (red) is displayed (applicable for unmatched camera only).
U1305: CONFIG UNFINISH	The vehicle setting of around view monitor control unit is incomplete. NOTE: Current malfunction is displayed only and is not saved.	Operation is according to the vehicle setting value as default value.

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[AROUND VIEW MONITOR SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
Other	When around view monitor control unit is not normal.	Switch to camera screen is not allowed.
	When communication between around view monitor control unit and each camera is not normal.	On applicable camera screen  marking (Red) is displayed.
	When communication line between around view monitor control unit and each camera image line are affected by electromagnetic noises.	On applicable camera image screen,  display (Blue) is displayed.

HANDLING PRECAUTION

Display

INFOID:000000009693930

- When the compartment temperature is low, the display images may look slower because the LCD response is deteriorated. The system will recover its normal operation when the cabin temperature increases to an appropriate level.
- When the compartment temperature is low [0°C (32°F) or less], the display images may look slower. It is characteristic of the LCD monitor and should not be considered to be a malfunction. When the temperature is at the operating temperature [0°C (32°F) to 50°C (122°F)], the display returns to normal.
- There may be small dark or bright dots in the screen or remaining display content may be found (image lag). These are inherent symptoms to any LCD monitor and should not be considered to be a malfunction.
- The image may look bright or dark when viewed obliquely from the rear. It is inherent to any LCD monitor and should not be considered to be a malfunction.
- Do not apply pressure on the LCD monitor. Doing so may cause irregularities in the screen image or render it inoperative.
- Do not use hard cloth, organic solvent (alcohol, benzene, and thinner), or chemical wipe to clean the LCD monitor. Doing so may affect the panel surface. When cleaning the LCD monitor, always wipe it with a soft cloth after shutting off the power. For severe contamination, use a soft cloth dampened with mild detergent (no droplets can be present).

Around View Monitor

INFOID:000000009693931

PRECAUTIONS FOR THE HANDLING OF CAMERA SYSTEM

- The camera system assists the detection of obstacles. When operating the vehicle, the safety must be confirmed and ensured directly by sight, using the mirrors.
- Distance shown by vehicle width guiding lines and predicted course lines may differ from actual distance depending on the number of passengers and fuel capacity. For this reason, these lines must be used only as a guide.
- With the camera lens characteristics, a distance shown on the screen may look different from actual distance or obstacles may look deformed.
- The camera is a precision instrument. Always prevent a strong impact, such as high-pressure car wash. Failure to do this results in a malfunction.
- Adhesion of dirt, rain drops, and snow to the camera lens may lower the sharpness of camera image or cause an improper operation in MOD (Moving Object Detection) function or parking frame recognition function. These adherents must be removed with a soft wet cloth first, then with a dry soft cloth.
- Never damage the camera. Failure to do this may affect camera images.

PRECAUTIONS FOR THE HANDLING OF MOD (MOVING OBJECT DETECTION)

- MOD (Moving Object Detection) does not inform the driver of stationary objects.
- MOD (Moving Object Detection) detects a moving object by processing image data of an image shown on the display. The detection performance of a moving object is limited.
- MOD (Moving Object Detection) may not operate properly when any of the following conditions is satisfied:
 - Color and brightness of a moving object are similar to those of its background.
 - Existence of blinking light, such as turn signal lamp
 - Reflection of a strong light, such as head lamp light from other vehicles or sun light.
 - Inappropriate orientation of camera due to folded mirror.
 - Non-moving objects, such as water droplets dripping on the camera lens, white smoke from the muffler or moving shadow may be detected.
- Detection may not be performed properly depending on the speed, direction, distance, and shape of moving object.

PRECAUTIONS FOR THE HANDLING OF SONAR SYSTEM

- Ultrasonic sensors detect an obstacle by using strong reflected waves (echo) reflected from the obstacle. For this reason, an obstacle may not be detected properly if any of the following item applies:
 - Soft and air-containing object, such as cloth, cotton, glass wool, dust, and snow.
 - Slanted slick object.
 - Angle of an angular object.
 - Thin object, such as rope, chain, and wire
 - Fast-moving small animal
- The detection may be unstable due to irregular reflection when any of the following conditions is satisfied:
 - Object with rough surface, such as rock, stone, and gravel.

HANDLING PRECAUTION

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

- Close to an object emitting sonic waves or electromagnetic waves.
- The surface of sensor is frozen, snow-covered, dirty, or wet.
- Extremely close to an obstacle [Approximately 20 cm (7.87 in) or less is the physical limit of obstacle detection by supersonic waves.]
- Under severe weather conditions, such as heavy snow, heavy rain, and strong wind.
- The vehicle is left stand under the hot sun or in a cold climate area for a long time.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

CONSULT Function

INFOID:000000009727353

CONSULT FUNCTIONS

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

Diagnosis mode	Description
Self Diagnostic Result	Around view monitor control unit and AV communication circuit connection diagnosis is performed. Current and previous malfunctions are displayed collectively.
Data Monitor	Diagnosis of vehicle signal that is received by around view monitor control unit can be performed.
Work support	• Calibration and initialization of each camera can be performed. • Fine tuning of Birds-Eye view can be performed. • Target line calibration of front wide view and rear wide view can be performed. • Display of predicted course line can be switched to ON/OFF. • Language of warning message can be selected. • Neutral position adjustment of steering angle sensor can be performed. • Camera screen activation enhancing display can be switched to ON/OFF. • Calibration of turning radius display can be performed. • Setting change can be performed depending on the vehicle specification with/without door mirror automatic retracting function. • "SONAR OFF" display can be switched to ON/OFF. • Camera zoom ratio can be changed and used for fine tuning.
ECU Identification	Around view monitor control unit part number, software version, and hardware version can be identified.
Configuration	• The vehicle specification that is written in around view monitor control unit can be displayed or stored. • The vehicle specification can be written when around view monitor control unit is replaced.

SELF DIAGNOSTIC RESULT

Refer to [AV-351, "DTC Index"](#).

- In CONSULT self-diagnosis, self-diagnosis results and error history are displayed collectively.
- The current malfunction indicates "CRNT". The past malfunction indicates "PAST".

Freeze Frame Data (FFD)

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

Item name	Display content
IGN COUNTER (0 to 39)	Numerical value is displayed indicating the number of times that ignition switch is turned ON after the DTC is detected. • When "0" is displayed, it indicates that the system is presently malfunctioning. • When any numerical number other than "0" is displayed, it indicates that system malfunction in the past is detected, but the system is presently normal. NOTE: Each time when ignition switch turns OFF→ON, numerical number increases from 1→2→3...38→39. When number of times exceeds 39, numeric display does not increase and 39 is displayed until self-diagnosis is erased.

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.

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

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

Display Item	Remarks
ST ANGLE SENSOR SIGNAL [On/Off]	Receiving status of steering angle signal received from steering angle sensor is switched to ON/OFF.
REVERSE SIGNAL [On/Off]	Receiving status of reverse signal received from display control unit is displayed by ON/OFF.
VEHICLE SPEED SIGNAL [On/Off]	Receiving status of vehicle speed signal received from ABS actuator control unit is displayed by ON/OFF.
CAMERA SWITCH SIGNAL [On/Off]	Receiving status of camera switch signal received from display control unit is displayed by ON/OFF.
CAMERA OFF SIGNAL [On/Off]	Receiving status of camera OFF signal received from display control unit is displayed by ON/OFF.
ST ANGLE SENSOR TYPE [Absolute]	Input type of steering angle sensor is displayed. NOTE: For this vehicle, "Absolute" is displayed.
STEERING GEAR RATIO TYPE [TYPE1]	Type of steering gear ratio is displayed. NOTE: For this vehicle, "TYPE 1" is displayed.
STEERING POSITION [LHD/RHD]	Steering position is displayed.
REAR CAMERA IMAGE SIGNAL [OK/NG]	Input status of rear view camera image signal is displayed by OK/NG in real time.
R-CAMERA COMM STATUS [OK/NG]	Communication status with rear camera is displayed by OK/NG in real time.
R-CAMERA COMM LINE [OK/NG]	Status of communication line with rear camera is displayed by OK/NG in real time.
F-CAMERA IMAGE SIGNAL [OK/NG]	Input status of front view camera image signal is displayed by OK/NG in real time.
F-CAMERA COMM STATUS [OK/NG]	Communication status with front camera is displayed by OK/NG in real time.
F-CAMERA COMM LINE [OK/NG]	Status of communication line with front camera is displayed by OK/NG in real time.
DR-SIDE CAMERA IMAGE SIG [OK/NG]	Input status of side camera LH image signal is displayed by OK/NG in real time.
DR CAMERA COMM STATUS [OK/NG]	Communication status with side camera LH is displayed by OK/NG in real time.
DR-SIDE CAMERA COMM LINE [OK/NG]	Status of communication line with side camera LH is displayed by OK/NG in real time.
PA-SIDE CAMERA IMAGE SIG [OK/NG]	Input status of side camera RH image signal is displayed by OK/NG in real time.
PA CAMERA COMM STATUS [OK/NG]	Communication status with side camera RH is displayed by OK/NG in real time.
PA-SIDE CAMERA COMM LINE [OK/NG]	Status of communication line with side camera RH is displayed by OK/NG in real time.
ACC [OK/NG]	Input status of ACC signal input to around view monitor control unit is displayed by ON/OFF in real time.
FOLDING MOTOR VOLT 1 [ON/OFF]	Input status of retractable power door mirror LH operation signal input to around view monitor control unit is displayed by ON/OFF in real time.
FOLDING MOTOR VOLT 2 [ON/OFF]	Input status of retractable power door mirror LH operation signal input to around view monitor control unit is displayed by ON/OFF in real time.

WORK SUPPORT

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

Work support items	Description
NON-VIEWABLE AREA REMINDER	ON/OFF setting of the non-viewable area reminder can be performed.
INITIALIZE CAMERA IMAGE CALIBRATION	The calibration can be initialized to factory shipment condition. NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
STEERING ANGLE SENSOR ADJUSTMENT	Steering angle sensor neutral position can be adjusted and registered. CAUTION: For vehicles with VDC, adjust the steering angle sensor neutral position on the ABS actuator control unit side. Refer to BRC-70, "Work Procedure" .
CALIBRATING CAMERA IMAGE (FRONT CAMERA)	Performs the calibration of front camera. NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)	Performs the calibration of side camera RH. NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)	Performs the calibration of side camera LH. NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
CALIBRATING CAMERA IMAGE (REAR CAMERA)	Performs the calibration of rear camera. NOTE: Calibration of camera image caused by misalignment of the camera installation position is performed.
FINE TUNING OF BIRDS-EYE VIEW	The confirmation and adjustment of the difference between each camera can be performed. The fine adjustment function of camera calibration can check and adjust the difference between each camera.
REAR WIDE-VIEW FIXED GUIDE LINE CORRECTION	The position of rear wide view guiding line can be changed.
TURNING RADIUS CORRECTION	Corrects the length of the turning radius used for parking guidance. NOTE: Not used under normal conditions.
PARTS WITH DOOR MIRROR AUTO FOLD FUNCTION SETTING	Item is displayed, but it is not used.
SONAR Off POP-UP DISPLAY SETTING CHANGE	"SONAR OFF" display can be switched to ON/OFF.
FRONT WIDE-VIEW FIXED GUIDE LINE CORRECTION	The position of front wide view guiding line can be changed.
ZOOM FUNCTION	Zoom ratio of each camera can be changed. NOTE: When the position cannot be aligned using "FINE TUNING OF BIRDS-EYE VIEW", the adjustment may be performed using this "ZOOM FUNCTION".

ECU IDENTIFICATION

Around view monitor control unit part number, software version, and hardware version can be identified.

CONFIGURATION

Configuration includes functions as follows.

DIAGNOSIS SYSTEM (AROUND VIEW MONITOR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

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

CAUTION:

- When replacing around view monitor control unit, you must perform “Read / Write Configuration” or “Manual Configuration” with CONSULT.
- Complete the procedure of “Read / Write Configuration” or “Manual Configuration” in order.
- If you set incorrect “Read / Write Configuration” or “Manual Configuration”, incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform “Read / Write Configuration” or “Manual Configuration” except for new around view monitor control unit.

DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

CONSULT Function

INFOID:000000009727354

CONSULT FUNCTIONS

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

Diagnosis mode	Description
Self Diagnostic Result	The malfunctions recorded in the memory of sonar control unit are displayed.
Data Monitor	Sonar control unit input/output signal data is displayed in real time.
Work support	Performs volume adjustment of sonar buzzer.
Active Test	Performs operation check of sonar buzzer.
Ecu Identification	Displays the sonar control unit part number.
Configuration	- The vehicle specification that is written in sonar control unit can be displayed and stored. - The vehicle specification can be written when sonar control unit is replaced.

SELF DIAGNOSTIC RESULT

Refer to [AV-356, "DTC Index"](#).

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.

Monitor item	Description
VEHICLE SPEED [km/h]	Vehicle speed that is calculated by vehicle speed signal received from the ABS actuator control unit is displayed.
SONAR C/U POWER SUPPLY [V]	Ignition power supply voltage received by sonar control unit is displayed.
SENSOR VOLTAGE [V]	Drive voltage transmitted to each corner sensor is displayed.
DETECTION MODE [Mode 1/Mode 2]	Indicates condition of display detection mode.
SW OPRT AFTR IGN ON [Yes/No]	Indicates condition of switch operation after ignition ON signal.
SONAR TEMPORARY OFF [Yes/No]	Indicates condition of sonar system.
SONAR PERMANENT OFF [Yes/No]	Indicates condition of sonar system.
P N RANGE [On/Off]	Status of P or N position received from TCM is displayed.
LED [On/Off]	Indicates condition of LED.
TRAILER CONNECT [N CON/CON]	Indicates condition of trailer connector.
REVERSE RANGE [On/Off]	Status of R position received from TCM is displayed.
SHRT DST FRM RR SENS [cm]	Indicates distance to obstacle.
SHRT DST FRM FR SENS [cm]	Indicates distance to obstacle.
COR[RL] [cm]	Indicates distance to obstacle.
COR[FL] [cm]	Indicates distance to obstacle.

DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

Monitor item	Description
COR[RR] [cm]	Indicates distance to obstacle.
COR[FR] [cm]	Indicates distance to obstacle.
CEN[RL]/CEN[R] [cm]	Indicates distance to obstacle.
CEN[FL]/CEN[F] [cm]	Indicates distance to obstacle.
CEN[RR] [cm]	Indicates distance to obstacle.
CEN[FR] [cm]	Indicates distance to obstacle.
RVRB TIME COR[RL] [ms]	Indicates distance to obstacle.
RVRB TIME COR[RR] [ms]	Indicates distance to obstacle.
RVRB TIME COR[FL] [ms]	Indicates distance to obstacle.
RVRB TIME COR[FR] [ms]	Indicates distance to obstacle.
RVRB TIME CEN[RL] [ms]	Indicates distance to obstacle.
RVRB TIME CEN[RR] [ms]	Indicates distance to obstacle.
RVRB TIME CEN[FL] [ms]	Indicates distance to obstacle.
RVRB TIME CEN[FR] [ms]	Indicates distance to obstacle.

WORK SUPPORT

Work support items	Description
VOLUME SETTING	Volume of sonar buzzer can be adjusted in 3 stages.
TRAILER HITCH DETECTION RANGE ADJUSTMENT	Allows to adjust rear sonar sensors for trailer towing.

ACTIVE TEST

Test item	Function
REAR BUZZER	Sonar buzzer (rear) can be operated.
FRONT BUZZER	Sonar buzzer (front) can be operated.
LED	LED can be operated.

ECU IDENTIFICATION INFORMATION

Displays sonar control unit part number.

CONFIGURATION

Configuration includes functions as follows.

DIAGNOSIS SYSTEM (SONAR CONTROL UNIT)

< SYSTEM DESCRIPTION >

[AROUND VIEW MONITOR SYSTEM]

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

CAUTION:

- When replacing sonar control unit, you must perform “Read / Write Configuration” or “Manual Configuration” with CONSULT.
- Complete the procedure of “Read / Write Configuration” or “Manual Configuration” in order.
- If you set incorrect “Read / Write Configuration” or “Manual Configuration”, incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform “Read / Write Configuration” or “Manual Configuration” except for new sonar control unit.

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

ECU DIAGNOSIS INFORMATION

DISPLAY CONTROL UNIT

Reference Value

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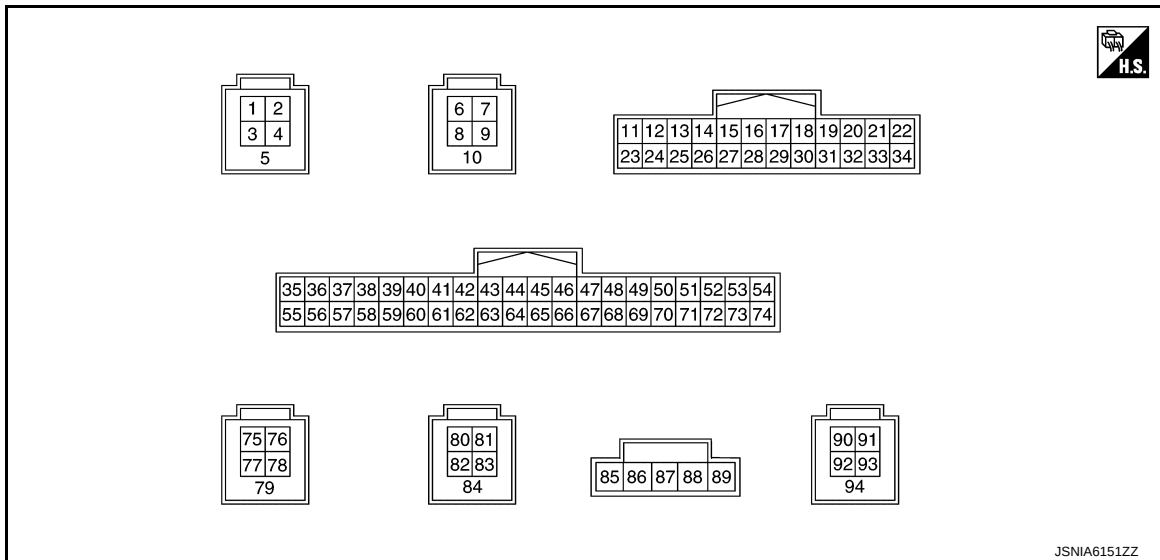
VALUES ON THE DIAGNOSIS TOOL

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
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	Block the light beam from the auto light optical sensor when the light switch is ON.	On
		Expose the auto light optical sensor to light when the light switch is OFF or ON.	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

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
1 (G)	—	USB ground	—	—	—
2 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

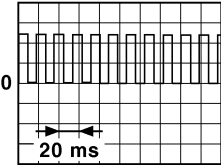
[AROUND VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)	
+	—	Signal name	Input/ Output			
3 (R)	—	USB D- signal	Input/ Output	—	—	A
4 (L)	—	USB D+ signal	Input/ Output	—	—	B
5 (—)	—	Shield	—	—	—	C
6 (G)	—	USB ground	—	—	—	D
7 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V	E
8 (R)	—	USB D- signal	Input/ Output	—	—	F
9 (L)	—	USB D+ signal	Input/ Output	—	—	G
10 (—)	—	Shield	—	—	—	H
16 (SB)	—	AV communication signal (L)	Input/ Output	—	—	I
17 (P)	—	CAN-L	Input/ Output	—	—	J
19 (R)	22 (B)	Dimmer signal	Input	[Ignition switch ON] • Either of the following conditions - Lighting switch OFF - Expose the auto light optical sensor to light when the light switch is ON.	0 V	K
				[Ignition switch ON] • Block the light beam from the auto light optical sensor when the light switch is ON.	12.0 V	L
20 (BR)	22 (B)	Reverse signal	Input	[Ignition switch ON] • R position	12.0 V	M
				[Ignition switch ON] • Other than R position	0 V	N
22 (B)	—	Ground	—	[Ignition switch ON]	0 V	O
25 (SB)	—	—	—	—	—	P
26 (BR)	22 (B)	Camera switch signal	Input	[Ignition switch ON] • Camera switch: ON	0 - 2.5 V	AV
				[Ignition switch ON] • Camera switch: OFF	3.0 V	AV
28 (LG)	—	AV communication signal (H)	Input/ Output	—	—	O
29 (L)	—	CAN-H	Input/ Output	—	—	P
30 (R)	22 (B)	Ignition signal	Input	[Ignition switch ON]	Battery voltage	

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

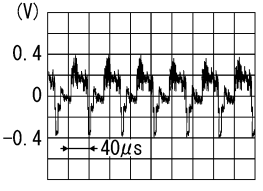
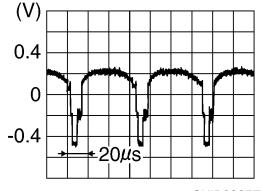
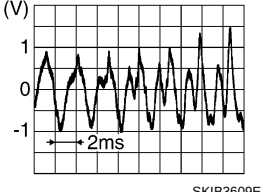
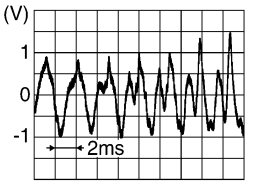
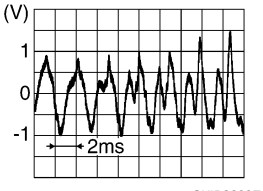
[AROUND VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
31 (R)	22 (B)	Vehicle speed signal (8-pulse)	Input	[Ignition switch ON] • When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
33 (SB)	22 (B)	ACC power supply	Input	[Ignition switch ACC]	Battery voltage
34 (Y)	22 (B)	Battery power supply	Input	[Ignition switch OFF]	Battery voltage
36 (LG)	—	Composite image signal (-)	—	—	—
38 (—)	—	Shield	—	—	—
40* (—)	—	Manufacturer specific signal	—	—	—
42 (G)	—	Sound signal RH (-)	—	—	—
43 (—)	—	Shield	—	—	—
44 (L)	—	Sound signal LH (-)	—	—	—
45 (W)	—	TEL voice signal (-)	—	—	—
46 (—)	—	Shield	—	—	—
47 (R)	—	Voice guidance signal output (-)	—	—	—
48 (B)	—	Voice guidance signal input (-)	—	—	—
49 (W)	—	NS ON/OFF signal	—	—	—
50 (R)	—	Microphone signal ground	—	[Ignition switch ON]	0 V
51 (—)	—	Shield	—	—	—
52 (—)	22 (B)	Microphone signal ground (NAVI)	—	[Ignition switch ON]	0 V
54 (W)	22 (B)	Camera power supply ground	—	[Ignition switch ON]	0 V
55 (—)	—	Shield	—	—	—

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
56 (BR)	36 (LG)	Composite image signal (+)	Input	[Ignition switch ON] • Image is displayed.	
58 (B)	22 (B)	Camera image signal	Input	[Ignition switch ON] • Image is displayed.	
59 (R)	—	U-VOICE signal	Output	—	—
60 (W)	—	VOICE signal ground	—	—	—
61 (B)	—	D-VOICE signal	Input	—	—
62 (R)	42 (G)	Sound signal RH (+)	Output	[Ignition switch ON] • Sound output	
63 (—)	—	Shield	—	—	—
64 (V)	44 (L)	Sound signal LH (+)	Output	[Ignition switch ON] • Sound output	
65 (B)	45 (W)	TEL voice signal (+)	Input	[Ignition switch ON] • During voice guide output with the switch pressed	
66 (—)	—	Shield	—	—	—

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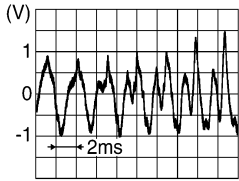
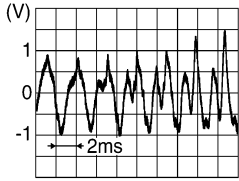
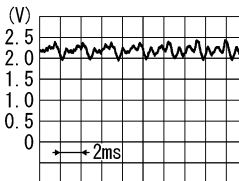
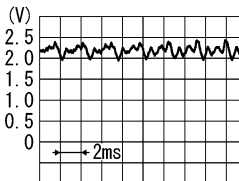
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P

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
67 (G)	47 (R)	Voice guidance signal out- put (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
68 (W)	48 (B)	Voice guidance signal input (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
69 (—)	—	Shield	—	—	—
70 (G)	52 (—)	Microphone signal (NAVI)	Output	[Ignition switch ON] • Give a voice	 PKIB5037J
71 (G)	50 (R)	Microphone signal	Output	[Ignition switch ON] • Give a voice	 PKIB5037J
72 (L)	22 (B)	Microphone VCC	Output	[Ignition switch ON]	5.0 V
74 (R)	54 (W)	Camera power supply	Output	[Ignition switch ON] • At rear view camera image is dis- played	6.0 V
				[Ignition switch ON] • Except for above	0 V
77 (W)	78 (B)	LVDS (+)	Input/ Output	—	—
78 (B)	—	LVDS (—)	Input/ Output	—	—
79 (—)	—	Shield	—	—	—
80 (G)	—	USB ground	—	—	—
81 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
82 (R)	—	USB D- signal	Input/ Output	—	—

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
83 (L)	—	USB D+ signal	Input/ Output	—	—
84 (—)	—	Shield	—	—	—
85 (R)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
86 (P)	—	USB D- signal	Input/ Output	—	—
87 (W)	—	USB D+ signal	Input/ Output	—	—
88 (—)	—	Shield	—	—	—
89 (Y)	—	USB ground	—	—	—
92 (W)	—	LVDS (+)	Input/ Output	—	—
93 (B)	—	LVDS (—)	Input/ Output	—	—
94 (—)	—	Shield	—	—	—

*: Not used

Fail-Safe

INFOID:000000009803903

If a malfunction occurs in the Infiniti InTouch, display control unit performs fail-safe activation according to the detected malfunction.

Detection item	Infiniti InTouch operation in fail-safe mode	DTC
Engine speed signal	Active noise control and active sound control function are deactivated.	B1F01
Step lamp signal		B1F02
Front microphone	Active noise control function is deactivated.	B1F0B B1F0C B1F0D B1F0E
CAN communication	The system using the CAN communication signal from control unit which cannot communicate does not function.	U1000
	The system using the CAN communication signal does not function.	U1010
Display control unit	- Display is not displayed. - Display control unit restart. - Display control unit freezes. NOTE: Symptom other than an item may occur.	U121F
Configuration	A function of display control unit becomes mismatched with a vehicle specification and destination.	U1223
BOSE amp.	BOSE system does not function.	U1231
Steering angle sensor	Predictive course line is not displayed.	U1232
NAVI control unit	- Map is not displayed. - Navigation screen does not operate. NOTE: Symptom other than an item may occur.	U1233

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
AV control unit	• Sound is not output by a speaker. • CD is not played. • Radio does not operate. NOTE: Symptom other than an item may occur.		U1234
GPS antenna	The vehicle positions of a navigation screen differ.		U1244
AV communication	AV control unit	• Sound is not output by a speaker. • CD is not played. • Radio does not operate. NOTE: Symptom other than an item may occur.	U1249
	BOSE amp.	Sound is not output by a speaker.	U124E
	Integral switch	• Integral switch display is not displayed. • Switch operation does not operate. • Touch panel operation does not operate. NOTE: Symptom other than an item may occur.	U1259
	Around view monitor control unit	Camera image is not displayed.	U125B
	Combination meter	• Audio information is not displayed by the information display in the combination meter. • Navigation indicator is not displayed by the information display in the combination meter. • Steering switch does not operate.	U1267
	Display control unit	The system of ECU which detected abnormalities does not operate.	U1300
		The system which is using AV communication does not operate.	U1310
Satellite radio antenna	Satellite radio is not received.		U1258
USB communication	NAVI control unit	A navigation menu cannot be selected (hatching display).	U125D
	TCU	Telematics system does not function.	U1266
	External data input box	Audio equipment which connected to USB does not operate.	U12B7
Rear view camera	Rear camera image is not displayed.		U12B8
Multifunction switch	Multifunction switch operation does not operate.		U12BA
Radio antenna	Radio is not received.		U12BE

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Speaker/squawker/tweeter/ woofer	With BOSE system		
	Front door woofer	No sound from front door woofer LH or RH.	U1601 U1609
	Front door squawker	No sound from front door squawker LH or RH.	U1602 U160A
	Front door tweeter	No sound from front door tweeter LH or RH.	U1603 U160B
	Front squawker	No sound from front squawker LH or RH.	U1626 U162E
	Front center squawker	No sound from front center squawker.	U162A
	Rear door speaker	No sound from rear door speaker LH or RH.	U1708 U1710
	Rear satellite speaker	No sound from rear satellite speaker LH or RH.	U1722 U172A
	Rear woofer	No sound from rear woofer.	U1725
	Without BOSE system		
	Front door speaker	No sound from front door speaker LH or RH.	U1901 U1907
	Rear door speaker	No sound from rear door speaker LH or RH.	U1902 U1906
	Front door squawker	No sound from front door squawker LH or RH.	U190D U190E

DTC Inspection Priority Chart

INFOID:0000000009803904

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1223: CONFIG UNFINISH
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- B1F01: ENG SPEED SIG ERROR - B1F02: DOOR STATUS SIG ERROR - U1249: AUDIO H/U CONN - U124E: AMP CONN - U1259: 2ND DISP CONN - U125B: AROUND CAMERA CONN - U1267: METER CONN

AV

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Priority	Detected items (DTC)
4	• U121F: DISPLAY CONTROL UNIT • U1233: NAVI CONTROL UNIT • U1234: AV CONTROL UNIT • U1300: AV COMM CIRCUIT • U1310: CONTROL UNIT(AV)
5	• B1F0B: ANC MIC1 CIRC OPEN • B1F0C: ANC MIC1 CIRC SHORT • B1F0D: ANC MIC1 CIRC SHORT-BAT • B1F0E: ANC MIC1 CIRC SHORT-GND • U1232: ST ANGLE SEN CALIB • U1244: GPS ANTENNA CONN • U1258: XM ANTENNA CONN • U125D: DVD NAVI CONN • U1266: TCU CONN • U12B7: USB CONN • U12B8: REAR CAMERA CONN • U12BA: MULTIFUNCTION SWITCH CONN • U12BE: RADIO ANTENA CONN • U1231: AMP TEMP • U1601: FL-DOOR WOOFER • U1602: FL-DOOR SQUAWK • U1603: FL-DOOR TWEETER • U1609: FR-DOOR WOOFER • U160A: FR-DOOR SQUAWK • U160B: FR-DOOR TWEETER • U1626: F-INST L-SQUAWK • U162A: F-INST C-SQUAWK • U162E: F-INST R-SQUAWK • U1708: RL-DOOR SPEAKER • U1710: RR-DOOR SPEAKER • U1722: R-PSHELF L-SQUAWK • U1725: R-PSHELF C-WOOFER • U172A: R-PSHELF R-SQUAWK • U1901: FL-DOOR SPEAKER • U1902: RR-DOOR SPEAKER • U1906: RL-DOOR SPEAKER • U1907: FR-DOOR SPEAKER • U190D: FR TWEETER • U190E: FL TWEETER

DTC Index

INFOID:000000009803905

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	CONSULT display	Reference
B1F01	ENG SPEED SIG ERROR	AV-168, "DTC Description"
B1F02	DOOR STATUS SIG ERROR	AV-170, "DTC Description"
B1F0B	ANC MIC1 CIRC OPEN	AV-172, "DTC Description"
B1F0C	ANC MIC1 CIRC SHORT	AV-172, "DTC Description"
B1F0D	ANC MIC1 CIRC SHORT-BAT	AV-172, "DTC Description"
B1F0E	ANC MIC1 CIRC SHORT-GND	AV-172, "DTC Description"
U1000	CAN COMM CIRCUIT	AV-175, "DTC Description"
U1010	CONTROL UNIT (CAN)	AV-177, "DTC Description"
U121F	DISPLAY CONTROL UNIT	AV-178, "DTC Description"
U1223	CONFIG UNFINISH	AV-179, "DTC Description"
U1231	AMP TEMP	AV-180, "DTC Description"
U1232	ST ANGLE SEN CALIB	AV-181, "DTC Description"

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

DTC	CONSULT display		Reference	
U1233	NAVI CONTROL UNIT		AV-182, "DTC Description"	A
U1234	AV CONTROL UNIT		AV-183, "DTC Description"	
U1244	GPS ANTENNA CONN		AV-184, "DTC Description"	B
U1249	AUDIO H/U CONN		AV-185, "DTC Description"	
U124E	AMP CONN		AV-187, "DTC Description"	
U1258	XM ANTENNA CONN	GND-SHORT	AV-188, "DTC Description"	C
		OPEN		
U1259	2ND DISP CONN		AV-190, "DTC Description"	D
U125B	AROUND CAMERA CONN		AV-192, "DTC Description"	
U125D	DVD NAVI CONN		AV-194, "DTC Description"	
U1266	TCU CONN		AV-195, "DTC Description"	E
U1267	METER CONN		AV-196, "DTC Description"	
U12B7	USB CONN		AV-198, "DTC Description"	F
U12B8	REAR CAMERA CONN		AV-199, "DTC Description"	
U12BA	MULTIFUNCTION SWITCH CONN		AV-201, "DTC Description"	
U12BE	RADIO ANTENNA CONN	GND-SHORT	AV-203, "DTC Description"	G
		OPEN		
U1300	AV COMM CIRCUIT		AV-205, "DTC Description"	H
U1310	CONTROL UNIT(AV)		AV-207, "DTC Description"	
U1601	FL-DOOR WOOFER	OPEN	AV-208, "DTC Description"	I
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1602	FL-DOOR SQUAWK	OPEN	AV-211, "DTC Description"	J
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1603	FL-DOOR TWEETER	OPEN	AV-214, "DTC Description"	L
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1609	FR-DOOR WOOFER	OPEN	AV-208, "DTC Description"	M
		SHORT		
		GND-SHORT		
		VB-SHORT		
U160A	FR-DOOR SQUAWK	OPEN	AV-211, "DTC Description"	O
		SHORT		
		GND-SHORT		
		VB-SHORT		
U160B	FR-DOOR TWEETER	OPEN	AV-214, "DTC Description"	P
		SHORT		
		GND-SHORT		
		VB-SHORT		

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

DTC	CONSULT display		Reference
U1626	F-INST L-SQUAWK	OPEN	AV-217, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U162A	F-INST C-SQUAWK	OPEN	AV-220, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U162E	F-INST R-SQUAWK	OPEN	AV-217, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1708	RL-DOOR SPEAKER	OPEN	AV-222, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1710	RR-DOOR SPEAKER	OPEN	AV-222, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1722	R-PSHELF L-SQUAWK	OPEN	AV-225, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1725	R-PSHELF C-WOOFER	OPEN	AV-228, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U172A	R-PSHELF R-SQUAWK	OPEN	AV-225, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1901	FL-DOOR SPEAKER	OPEN	AV-230, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1902	RR-DOOR SPEAKER	OPEN	AV-233, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1906	RL-DOOR SPEAKER	OPEN	AV-233, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

DTC	CONSULT display		Reference
U1907	FR-DOOR SPEAKER	OPEN	AV-230, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U190D	FR TWEETER	OPEN	AV-236, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U190E	FL TWEETER	OPEN	AV-236, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR CONTROL UNIT

Reference Value

INFOID:000000009727356

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
ST ANGLE SENSOR SIGNAL [On/Off]	Ignition switch ON	When steering angle sensor signal is input	On
		Other than the above	Off
REVERSE SIGNAL [On/Off]	Ignition switch ON	R position	On
		Other than R position	Off
VEHICLE SPEED SIGNAL [On/Off]	Ignition switch ON	When vehicle speed is input	On
		Other than the above	Off
CAMERA SWITCH SIGNAL [On/Off]	Ignition switch ON	When camera switch signal is input	On
		Other than the above	Off
CAMERA OFF SIGNAL [On/Off]	Ignition switch ON	When camera OFF signal is input	On
		Other than the above	Off
ST ANGLE SENSOR TYPE [Absolute]	Ignition switch ON	—	Absolute
STEERING GEAR RATIO TYPE [TYPE1]	Ignition switch ON	—	TYPE1
STEERING POSITION [LHD]	Ignition switch ON	LHD models	LHD
REAR CAMERA IMAGE SIGNAL [OK/NG]	Ignition switch ON	When rear camera image signal input status is normal	OK
		When rear view camera image signal input status is not normal	NG
R-CAMERA COMM STATUS [OK/NG]	Ignition switch ON	When communication status with rear camera is normal	OK
		When communication status with rear camera is not normal	NG
R-CAMERA COMM LINE [OK/NG]	Ignition switch ON	When communication line with rear camera is normal	OK
		When communication line with rear camera is not normal	NG
F-CAMERA IMAGE SIGNAL [OK/NG]	Ignition switch ON	When front camera image signal input status is normal	OK
		When front camera image signal input status is not normal	NG
F-CAMERA COMM STATUS [OK/NG]	Ignition switch ON	When communication status with front camera is normal	OK
		When communication status with front camera is not normal	NG
F-CAMERA COMM LINE [OK/NG]	Ignition switch ON	When communication line with front camera is normal	OK
		When communication line with front camera is not normal	NG
DR-SIDE CAMERA IMAGE SIG [OK/NG]	Ignition switch ON	When side camera LH image signal input status is normal	OK
		When side camera LH image signal input status is not normal	NG

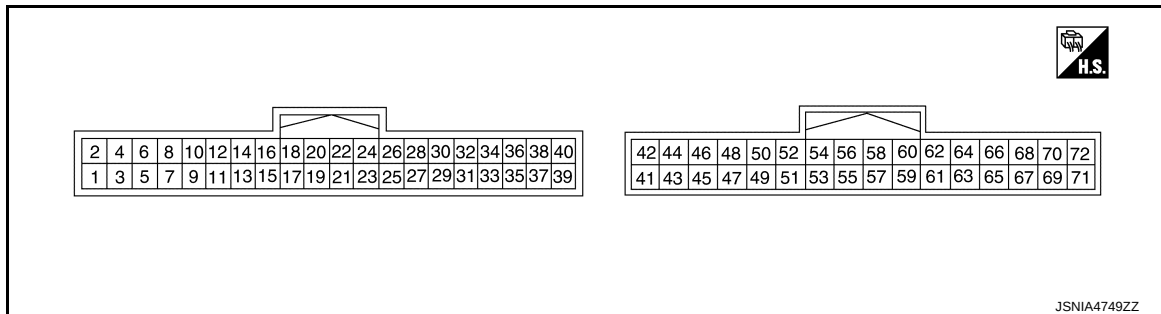
AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Monitor Item	Condition		Value/Status
DR CAMERA COMM STATUS [OK/NG]	Ignition switch ON	When communication status with side camera LH is normal	OK
		When communication status with side camera LH is not normal	NG
DR-SIDE CAMERA COMM LINE [OK/NG]	Ignition switch ON	When communication line with side camera LH is normal	OK
		When communication line with side camera LH is not normal	NG
PA-SIDE CAMERA IMAGE SIG [OK/NG]	Ignition switch ON	When side camera RH image signal input status is normal	OK
		When side camera RH image signal input status is not normal	NG
PA CAMERA COMM STATUS [OK/NG]	Ignition switch ON	When communication status with side camera RH is normal	OK
		When communication status with side camera RH is not normal	NG
PA-SIDE CAMERA COMM LINE [OK/NG]	Ignition switch ON	When communication line with side camera RH is normal	OK
		When communication line with side camera RH is not normal	NG
ACC	Ignition switch ACC		On
	Ignition switch OFF		Off
FOLDING MOTOR VOLT 1 [On/Off]	Ignition switch ON	Driver side door mirror is in expanded status	On
		Driver side door mirror is in retracted status	Off
FOLDING MOTOR VOLT 2 [On/Off]	Ignition switch ON	Driver side door mirror is in expanded status	Off
		Driver side door mirror is in retracted status	On

TERMINAL LAYOUT



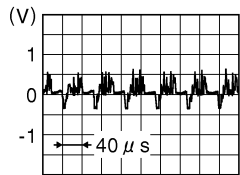
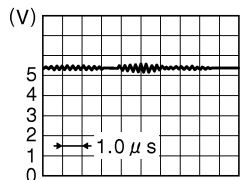
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	–	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	[Ignition switch ON]	0 V
2 (Y)	1 (B)	Battery power supply	Input	[Ignition switch OFF]	Battery voltage
3 (LG)	1 (B)	Ignition signal	Input	[Ignition switch ON]	Battery voltage
4 (P)	1 (B)	ACC power supply	Input	[Ignition switch ACC]	Battery voltage

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

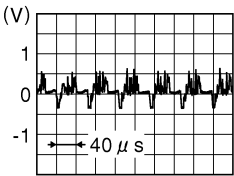
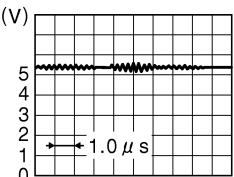
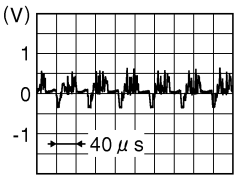
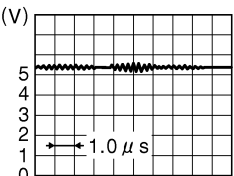
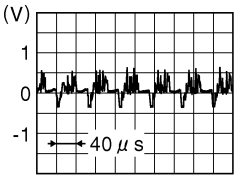
[AROUND VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
19 (LG)	—	AV communication signal (H)	Input/ Output	—	—
20 (P)	—	AV communication signal (L)	Input/ Output	—	—
23 (—)	—	AV communication signal ground	—	—	—
25 (BG)	1 (B)	Reverse signal	Input	[Ignition switch ON] • R position	12.0 V
				[Ignition switch ON] • Other than R position	0 V
27 (L)	—	CAN-H	Input/ Output	—	—
28 (P) ^{*1} (R) ^{*2}	—	CAN-L	Input/ Output	—	—
30 (W)	1 (B)	Retract motor opera- tion signal (open)	Input	[Ignition switch ON] • Driver side door mirror is in retracted status	0 V
				[Ignition switch ON] • Driver side door mirror is in expanded status	12.0 V
32 (G)	1 (B)	Retract motor opera- tion signal (close)	Input	[Ignition switch ON] • Driver side door mirror is in retracted status	12.0 V
				[Ignition switch ON] • Driver side door mirror is in expanded status	0 V
47 (B)	48 (—)	Camera image signal	Output	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	 JSNIA0834GB
48 (—)	Ground	Camera image signal ground	—	[Ignition switch ON]	0 V
49 (W)	52 (R)	Rear camera commu- nication signal	Input/ Output	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	 JSNIA0836GB
50 (B)	52 (R)	Rear camera power supply	Output	[Ignition switch ON]	6.0 V
52 (R)	Ground	Rear camera ground	—	[Ignition switch ON]	0 V

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
53 (G)	54 (—)	Rear camera image signal (+)	Input	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	
54 (—)	Ground	Rear camera image signal (—)	—	[Ignition switch ON]	0 V
55 (GR)	58 (P)	Side camera driver side communication signal	Input/ Output	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	
56 (V)	58 (P)	Side camera driver side power supply	Output	[Ignition switch ON]	6.0 V
58 (P)	Ground	Side camera driver side ground	—	[Ignition switch ON]	0 V
59 (LG)	60 (—)	Side camera driver side image signal (+)	Input	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	
60 (—)	Ground	Side camera driver side image signal (—)	—	[Ignition switch ON]	0 V
61 (W)	64 (R)	Side camera passen- ger side communica- tion signal	Input/ Output	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	
62 (L)	64 (R)	Side camera passen- ger side power supply	Output	[Ignition switch ON]	6.0 V
64 (R)	Ground	Side camera passen- ger side ground	—	[Ignition switch ON]	0 V
65 (G)	66 (—)	Side camera passen- ger side image signal (+)	Input	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	

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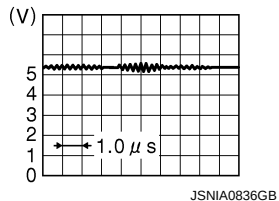
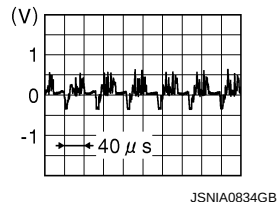
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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
66 (—)	Ground	Side camera passenger side image signal (—)	—	[Ignition switch ON]	0 V
67 (B)	70 (G)	Front camera communication signal	Input/ Output	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	
68 (W)	70 (G)	Front camera power supply	Output	[Ignition switch ON]	6.0 V
70 (G)	Ground	Front camera ground	—	[Ignition switch ON]	0 V
71 (R)	72 (—)	Front camera image signal (+)	Input	[Ignition switch ON] • CAMERA switch is ON or shift position is R position	
72 (—)	Ground	Front camera image signal (—)	—	[Ignition switch ON]	0 V

*1: Models with ICC

*2: Models without ICC

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Fail-Safe

INFOID:000000009727357

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U0428: ST ANGLE SENSOR CALIBRATION	Neutral position adjustment of steering angle sensor is not complete.	• Predicted course line is not displayed. • MOD (Moving Object Detection) function is stopped. • Front tire angle display is stopped. • Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed.
U1000: CAN COMM CIRCUIT	When around view monitor control unit cannot transmit/receive CAN communication signal continuously for 2 seconds or more.	The following functions are stopped • When communication of steering angle sensor signal is not normal - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - Front tire angle display is stopped. - Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed. • When communication of vehicle signal, wheel speed sensor signal, and shift signal is not normal - Predicted course line is not displayed. - MOD (Moving Object Detection) function is stopped. - Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed • When communication of sonar signal is not normal - Predicted course line is not displayed.

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AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
U111A: REAR CAMERA IMAGE SIGNAL	No-signal status of rear camera image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	Camera image is not displayed (Gray screen display).
U111B: SIDE CAMERA RH IMAGE SIGNAL	No-signal status of side camera RH image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	
U111C: FRONT CAMERA IMAGE SIGNAL	No-signal status of rear camera image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	
U111D: SIDE CAMERA LH IMAGE SIGNAL	No-signal status of side camera LH image signal is continued for 500 ms or more while ignition switch is ON. NOTE: Current malfunction is displayed only and is not saved.	
U1232: ST ANGLE SEN CALIB	Neutral position adjustment of steering angle sensor is performed. NG signal from steering angle sensor is received.	• Predicted course line is not displayed. • MOD (Moving Object Detection) function is stopped. • Tire icon is stopped. • Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed.
U1302: CAMERA POWER VOLT	Camera power supply voltage does not satisfy the following conditions for 2 seconds or more when ignition switch is turned ON. • When supplemental lighting power supply output is ON: 5.9 – 6.5 V. • When OFF: 0 V by camera power supply measurement.	Camera power output is stopped.
U1304: CAMERA IMAGE CALIB	• When camera calibration is incomplete. • When camera information in around view monitor control unit and information read from camera are not the same. NOTE: Current malfunction is displayed only and is not saved.	Unmatched icon  display (red) is displayed (applicable for unmatched camera only).
U1305: CONFIG UNFINISH	The vehicle setting of around view monitor control unit is incomplete. NOTE: Current malfunction is displayed only and is not saved.	Operation is according to the vehicle setting value as default value.

AROUND VIEW MONITOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

DTC Display contents of CONSULT	Malfunction detection condition	Fail-safe condition
Other	When around view monitor control unit is not normal.	Switch to camera screen is not allowed.
	When communication between around view monitor control unit and each camera is not normal.	On applicable camera screen  marking (Red) is displayed.
	When communication line between around view monitor control unit and each camera image line are affected by electromagnetic noises.	On applicable camera image screen,  display (Blue) is displayed.

DTC Inspection Priority Chart

INFOID:000000009802215

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1305: CONFIG UNFINISH
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- U0428: ST ANGLE SENSOR CALIBRATION - U111A: REAR CAMERA IMAGE SIGNAL - U111B: SIDE CAMERA RH IMAGE SIGNAL - U111C: FRONT CAMERA IMAGE SIGNAL - U111D: SIDE CAMERA LH IMAGE SIGNAL - U1232: ST ANGLE SEN CALIB - U1302: CAMERA POWER VOLT - U1303: LED POWER SUPPLY VOLT - U1304: CAMERA IMAGE CALIB

DTC Index

INFOID:000000009727358

DTC	CONSULT display	Refer to
U0428	ST ANGLE SENSOR CALIBRATION	AV-409, "DTC Description"
U1000	CAN COMM CIRCUIT	AV-410, "AROUND VIEW MONITOR CONTROL UNIT : DTC Description"
U1010	CONTROL UNIT (CAN)	AV-413, "AROUND VIEW MONITOR CONTROL UNIT : DTC Description"
U111A	REAR CAMERA IMAGE SIGNAL	AV-415, "DTC Description"
U111B	SIDE CAMERA RH IMAGE SIGNAL	AV-418, "DTC Description"
U111C	FRONT CAMERA IMAGE SIGNAL	AV-421, "DTC Description"
U111D	SIDE CAMERA LH IMAGE SIGNAL	AV-424, "DTC Description"
U1232	ST ANGLE SEN CALIB	AV-427, "DTC Description"
U1302	CAMERA POWER VOLT	AV-428, "DTC Description"
U1303	LED POWER SUPPLY VOLT	AV-432, "DTC Description"
U1304	CAMERA IMAGE CALIB	AV-433, "DTC Description"
U1305	CONFIG UNFINISH	AV-434, "DTC Description"

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

SONAR CONTROL UNIT

Reference Value

INFOID:000000009727359

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
VEHICLE SPEED	While driving		Input value of vehicle speed signal
SONAR C/U POWER SUPPLY	Ignition switch ON		Battery voltage
SENSOR VOLTAGE	Ignition switch ON		Approx. 8 V
DETECTION MODE	Ignition switch ON		Mode 1
			Mode 2
SW OPRT AFTR IGN ON	Switch operation after ignition ON.		Yes
			No
SONAR TEMPORARY OFF	Ignition switch ON, selector lever in R (reverse) position.		No
	When selector lever is in any position other than R (reverse).		Yes
SONAR PERMANENT OFF	Ignition switch ON, selector lever in R (reverse) position.		No
	When selector lever is in any position other than R (reverse).		Yes
P N RANGE	Ignition switch ON	Selector lever P or N position	On
		Other than the above	Off
LED	When LED is OFF.		Off
	When LED is ON.		On
TRAILER CONNECT	No trailer connected to trailer hitch.		N CON
	Trailer connected to trailer hitch.		CON
REVERSE RANGE	Ignition switch ON	Selector lever R position	On
		Other than the above	Off
SHRT DST FRM RR SENS	Ignition switch ON	An obstacle exists in the vicinity of rear corner/ center sensor. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from the closest obstacle to rear bumper. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of rear corner/ center sensor.	255 cm
SHRT DST FRM FR SENS	Ignition switch ON	An obstacle exists in the vicinity of front corner/ center sensor. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from the closest obstacle to front bumper. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of front corner/ center sensor.	255 cm
COR[RL]	Ignition switch ON	An obstacle exists in the vicinity of rear corner sensor LH. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from an obstacle to rear corner sensor LH. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of rear corner sensor LH.	255 cm
COR[FL]	Ignition switch ON	An obstacle exists in the vicinity of front corner sensor LH. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from an obstacle to front corner sensor LH. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of front corner sensor LH.	255 cm

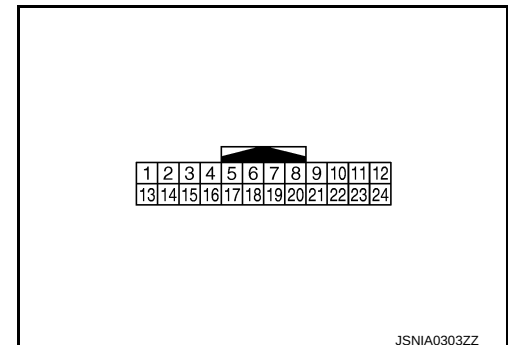
SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Monitor item	Condition		Value/Status
COR[RR]	Ignition switch ON	An obstacle exists in the vicinity of rear corner sensor RH. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from an obstacle to rear corner sensor RH. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of rear corner sensor RH.	255 cm
COR[FR]	Ignition switch ON	An obstacle exists in the vicinity of front corner sensor RH. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from an obstacle to front corner sensor RH. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of front corner sensor RH.	255 cm
CEN[RL]/CEN[R]	Ignition switch ON	An obstacle exists in the vicinity of rear center sensor LH. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from an obstacle to rear center sensor LH. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of rear center sensor LH.	255 cm
CEN[FL]/CEN[F]	Ignition switch ON	An obstacle exists in the vicinity of front center sensor LH. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from an obstacle to front center sensor LH. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of front center sensor LH.	255 cm
CEN[RR]	Ignition switch ON	An obstacle exists in the vicinity of rear center sensor RH. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from an obstacle to rear center sensor RH. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of rear center sensor RH.	255 cm
CEN[FR]	Ignition switch ON	An obstacle exists in the vicinity of front center sensor RH. [Approx. 27 cm - 70 cm (10.63 in - 27.56 in)]	Almost agree with the distance from an obstacle to front center sensor RH. (27 cm ~ 70 cm)
		No obstacle exists in the vicinity of front center sensor RH.	255 cm
RVRB TIME COR[RL]	Ignition switch ON		Approx. 1.60 ms
RVRB TIME COR[RR]	Ignition switch ON		Approx. 1.60 ms
RVRB TIME COR[FL]	Ignition switch ON		Approx. 1.60 ms
RVRB TIME COR[FR]	Ignition switch ON		Approx. 1.60 ms
RVRB TIME CEN[RL]	Ignition switch ON		Approx. 1.60 ms
RVRB TIME CEN[RR]	Ignition switch ON		Approx. 1.60 ms
RVRB TIME CEN[FL]	Ignition switch ON		Approx. 1.60 ms
RVRB TIME CEN[FR]	Ignition switch ON		Approx. 1.60 ms

TERMINAL LAYOUT

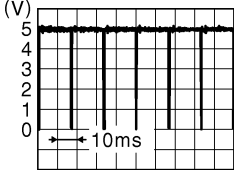
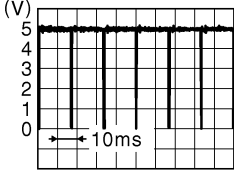
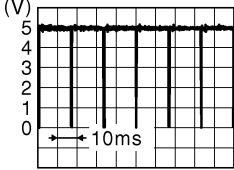
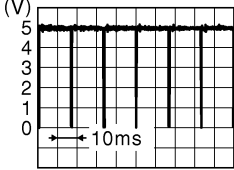
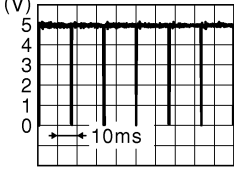


SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

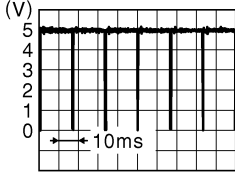
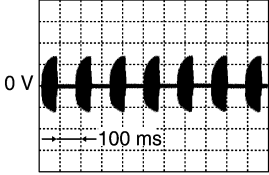
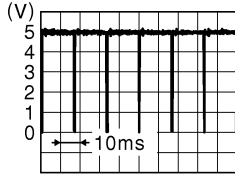
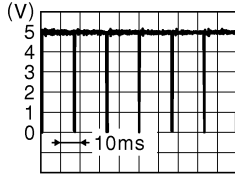
PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	—	Signal name	Input/ Output		
1 (SB)	13 (B)	Center sensor signal front RH	Input	[Ignition switch ON]	 JSNIA0837GB
2 (LG)	13 (B)	Center sensor signal front LH	Input	[Ignition switch ON]	 JSNIA0837GB
3 (W)	13 (B)	Corner sensor signal front LH	Input	[Ignition switch ON]	 JSNIA0837GB
4 (GR)	13 (B)	Corner sensor signal front RH	Input	[Ignition switch ON]	 JSNIA0837GB
5 (L)	—	CAN-H	Input/ Output	—	—
6 (R)*1 (P)*2	—	CAN-L	Input/ Output	—	—
9 (G)	14 (B)	Center sensor signal rear RH	Input	[Ignition switch ON]	 JSNIA0837GB

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	—	Signal name	Input/ Output		
10 (BG)	14 (B)	Corner sensor signal rear RH	Input	[Ignition switch ON]	 JSNIA0837GB
12 (R)	15 (B)	Ignition power supply	Input	[Ignition switch ON]	Battery voltage
13 (B)	Ground	Front sensor ground	—	—	0 V
14 (B)	Ground	Rear sensor ground	—	—	0 V
15 (B)	Ground	Ground	—	—	0 V
18 (GR)	15 (B)	Front buzzer drive signal	Input	[Ignition switch ON] • When the distance between the sensor and obstacle is approx 60 cm (23.62 in).	NOTE: - Voltage depends on volume. - Cycle depends on distance between sensor and obstacle.  JSNIA5232GB
19 (P)	15 (B)	Buzzer power supply	Output	[Ignition switch ON]	0 V
21 (BR)	14 (B)	Center sensor signal rear LH	Input	[Ignition switch ON]	 JSNIA0837GB
22 (W)	14 (B)	Corner sensor signal rear LH	Input	[Ignition switch ON]	 JSNIA0837GB

*1: With automatic drive positioner

*2: Without automatic drive positioner

Fail-Safe

INFOID:000000009802217

The warning buzzer function is deactivated when a sensor system error is detected.

SONAR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[AROUND VIEW MONITOR SYSTEM]

DTC Inspection Priority Chart

INFOID:000000009802216

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	B2724: SONAR CONTROL UNIT
3	• B2720: CORNER SENSOR [RL] • B2721: CENTER SENSOR [RL] • B2722: CENTER SENSOR [RR] • B2723: CORNER SENSOR [RR] • B2729: CORNER SENSOR [FL] • B272A: CENTER SENSOR [FL] • B272B: CENTER SENSOR [FR] • B272C: LED POWER SUPPLY VOLT • U1304: CORNER SENSOR [FR]

DTC Index

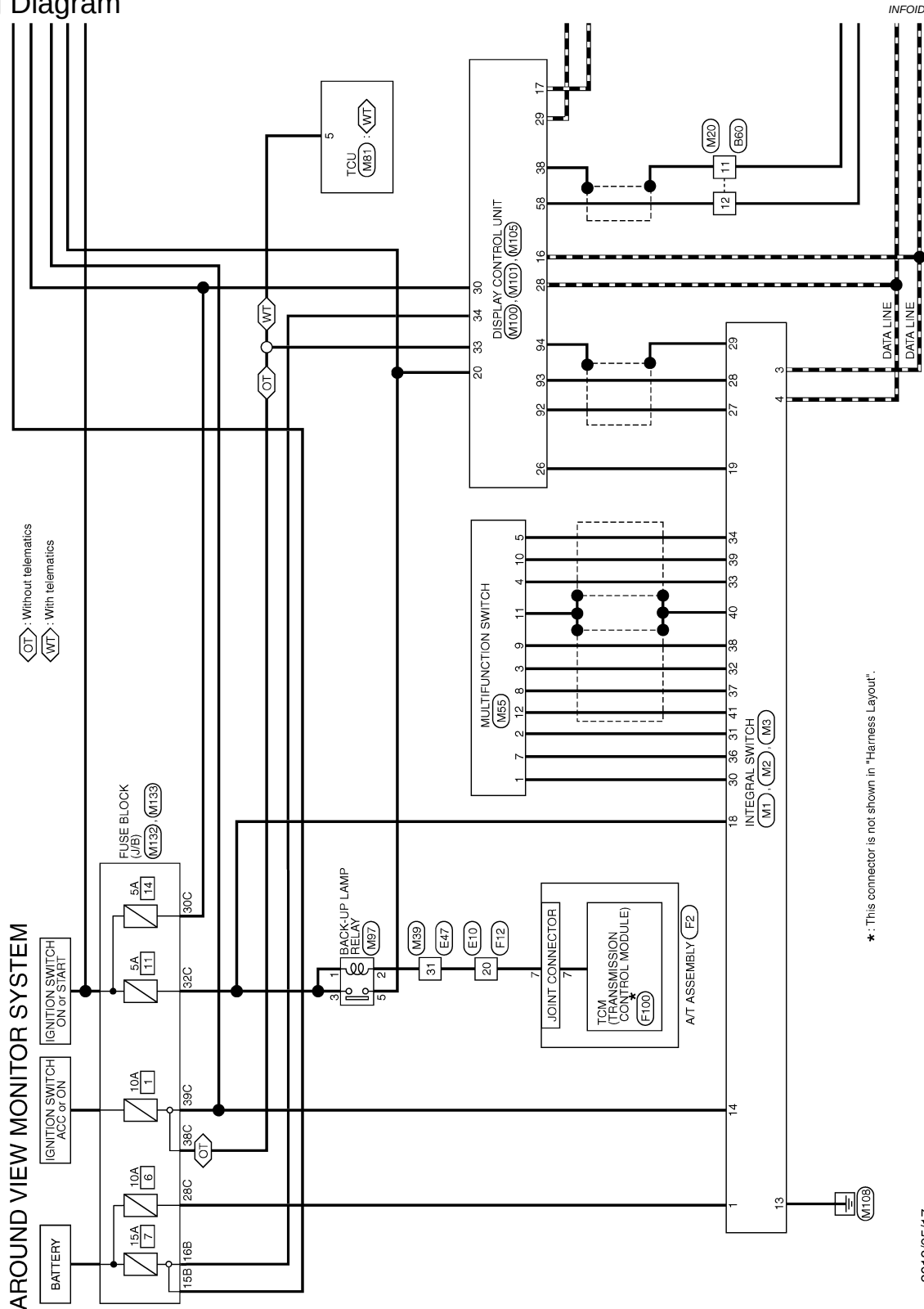
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DTC	CONSULT display	Reference
B2720	CORNER SENSOR [RL]	AV-384, "DTC Description"
B2721	CENTER SENSOR [RL]	AV-387, "DTC Description"
B2722	CENTER SENSOR [RR]	AV-390, "DTC Description"
B2723	CORNER SENSOR [RR]	AV-393, "DTC Description"
B2724	SONAR CONTROL UNIT	AV-396, "DTC Description"
B2729	CORNER SENSOR [FL]	AV-397, "DTC Description"
B272A	CENTER SENSOR [FL]	AV-400, "DTC Description"
B272B	CENTER SENSOR [FR]	AV-403, "DTC Description"
B272C	CORNER SENSOR [FR]	AV-406, "DTC Description"
U1000	CAN COMM CIRCUIT	AV-411, "SONAR CONTROL UNIT : DTC Description"
U1010	CONTROL UNIT (CAN)	AV-413, "SONAR CONTROL UNIT : DTC Description"

WIRING DIAGRAM

AROUND VIEW MONITOR SYSTEM

Wiring Diagram



JRNWC4789GB

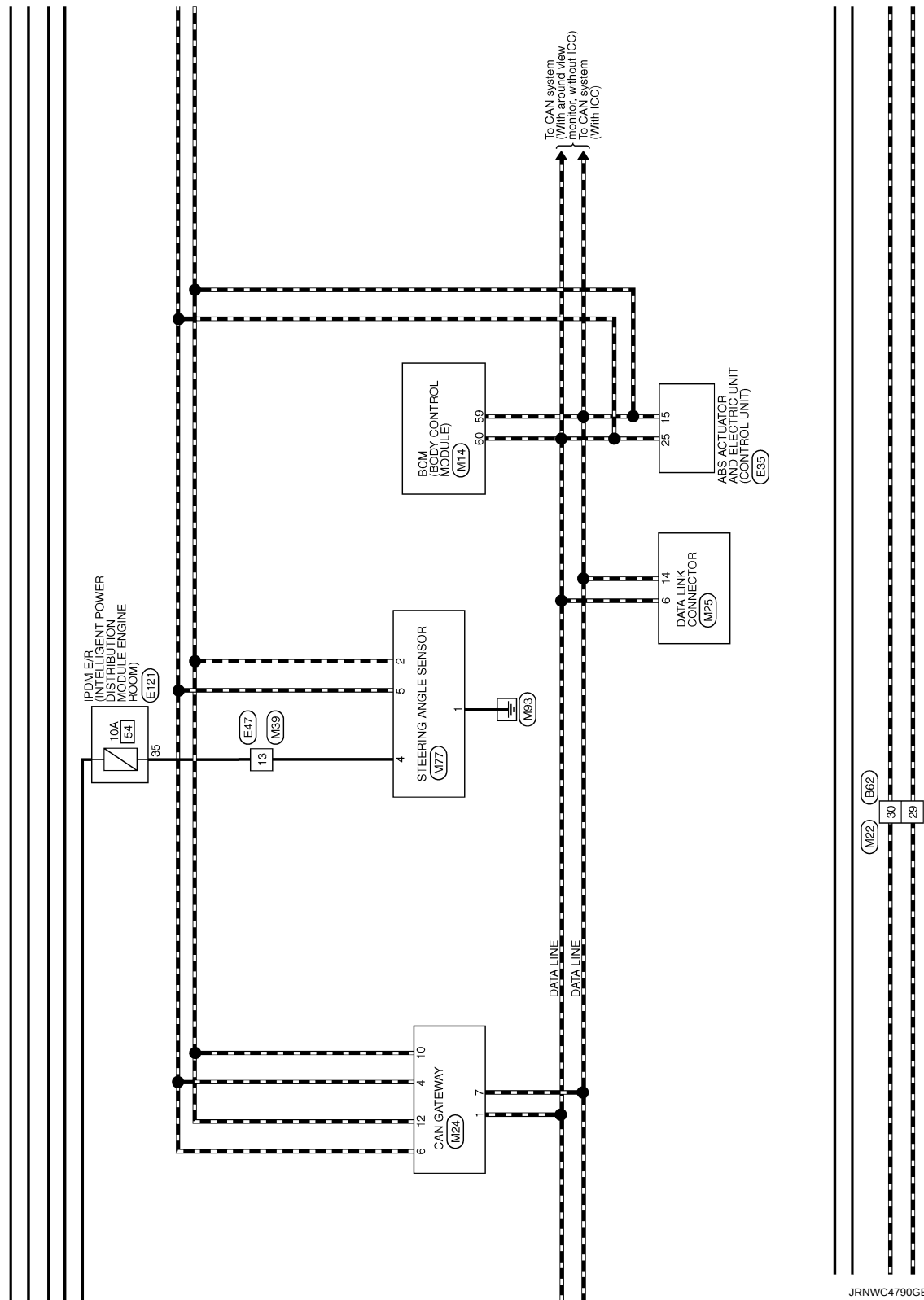
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★: This connector is not shown in "Harness Layout".

AROUND VIEW MONITOR SYSTEM

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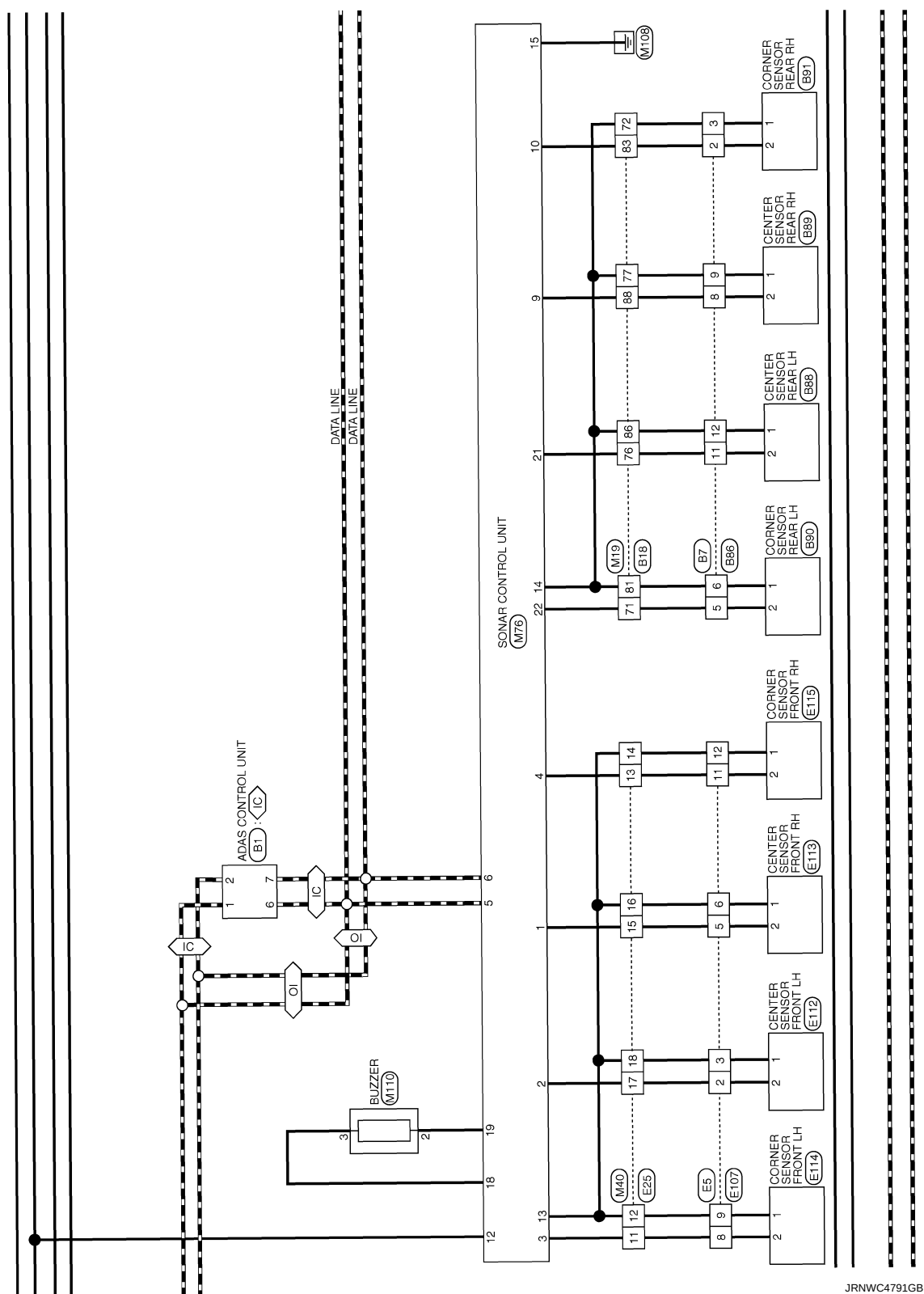
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JRNWC4790GB

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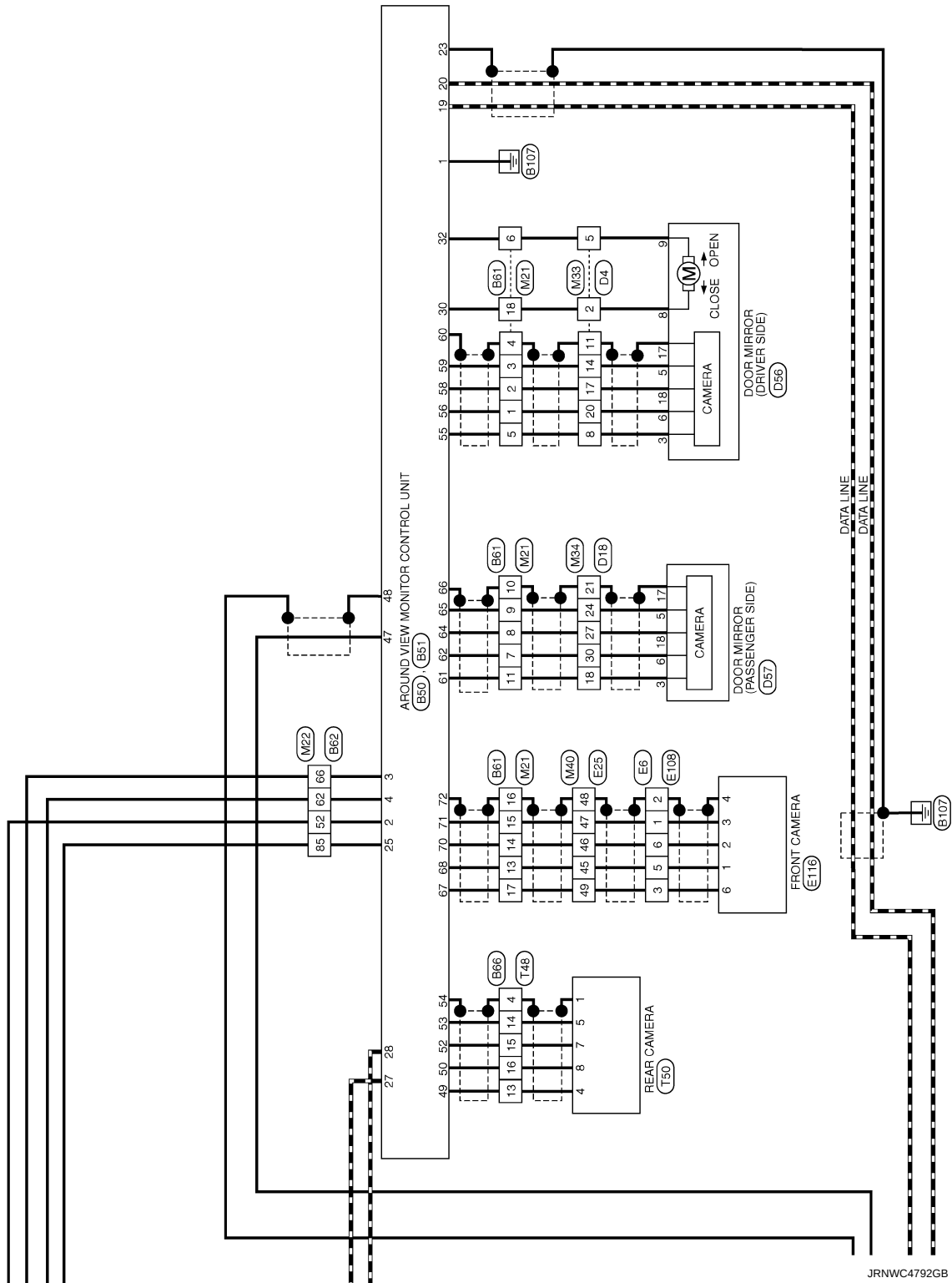


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AROUND VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[AROUND VIEW MONITOR SYSTEM]



JRNWC4792GB

[AROUND VIEW MONITOR SYSTEM]

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Terminal No.	Color of Wire	Signal Name (Specification)
47	B	CAMERA IMAGE SIGNAL
48	SHIELD	
49	W	REAR CAMERA COMMUNICATION SIGNAL
50	B	REAR CAMERA POWER SUPPLY
52	R	REAR CAMERA GND
53	G	REAR CAMERA IMAGE SIGNAL (+)
54	SHIELD	REAR CAMERA IMAGE SIGNAL (-)
55	GR	SIZE CAMERA DRIVER SIDE COMMUNICATION SIGNAL
56	V	SIZE CAMERA DRIVER SIDE POWER SUPPLY
58	L	SIZE CAMERA DRIVER SIDE GND
59	R	SIZE CAMERA DRIVER SIDE IMAGE SIGNAL (+)
60	SHIELD	SIZE CAMERA DRIVER SIDE IMAGE SIGNAL (-)
61	W	SIZE CAMERA PASSENGER SIDE COMMUNICATION SIGNAL
62	L	SIZE CAMERA PASSENGER SIDE POWER SUPPLY
64	R	SIZE CAMERA PASSENGER SIDE GND
65	G	SIZE CAMERA PASSENGER SIDE IMAGE SIGNAL (+)
66	SHIELD	SIZE CAMERA PASSENGER SIDE IMAGE SIGNAL (-)
67	B	FRONT CAMERA COMMUNICATION SIGNAL
68	W	FRONT CAMERA POWER SUPPLY
70	G	FRONT CAMERA GND
71	SHIELD	FRONT CAMERA IMAGE SIGNAL (+)
72	SHIELD	FRONT CAMERA IMAGE SIGNAL (-)

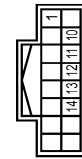
AROUND VIEW MONITOR SYSTEM

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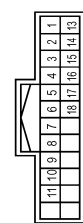
AROUND VIEW MONITOR SYSTEM

Connector No.	BB9
Connector Name	WIRE TO WIRE
Connector Type	TH18FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
10	GR	-
11	SHIELD	-
12	B	-
13	W	-
14	R	-

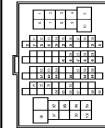
Connector No.	BB1
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	P	-
3	LG	-
4	SHIELD	-
5	GR	-
6	G	-
7	B	-
8	W	-
9	G	-
10	SHIELD	-
11	W	-
13	W	-
14	G	-
15	R	-

16	SHIELD	-
17	B	-
18	W	-

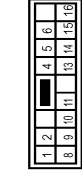
Connector No.	BB2
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS18-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	L	-
3	R	- [With BOSE system]
4	SHIELD	- [Without BOSE system]
5	G	-
6	W	-
7	BR	- [Without BOSE system]
8	W	- [With BOSE system]
9	Y	- [Without BOSE system]
10	SHIELD	-
11	GR	-
12	Y	-
13	R	-
14	BG	-
15	GR	-
16	V	-
17	P	-
18	L	-
19	R	-
20	GR	-
21	GR	-
22	P	-
23	W	-
24	V	-
25	SB	-
26	G	-
29	P	-
30	LG	-

38	R	-
39	R	-
40	W	-
41	G	-
42	W	-
43	G	-
44	SHIELD	-
45	G	-
46	SHIELD	-
47	G	-
48	BG	-
49	G	-
50	Y	-
51	R	-
52	GR	-
53	R	-
54	GR	-
55	R	-
56	P	-
57	L	-
58	P	-
59	P	-
60	L	-
61	W	-
62	W	-
63	L	-
64	W	-
65	LG	-
66	LG	-
67	L	-
68	B	-
69	P	-
70	R	-
71	R	-
72	G	-
73	SHIELD	-
74	GR	-
75	GR	-
76	BR	-
77	BG	-
78	W	-
79	W	-
80	LG	-
81	LG	-
82	V	-
83	W	-
84	R	-
85	R	-
86	Y	-
87	Y	-
88	Y	-
89	V	-
90	V	-
91	W	-
92	W	-
93	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
98	BR	-
99	BR	-
100	BR	-

Connector No.	BB8
Connector Name	WIRE TO WIRE
Connector Type	NS18MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	BG	-
3	SHIELD	-
4	W	-
5	W	-
6	GR	-
7	B	-
8	B	-
9	R	-
10	P	-
11	B	-
12	SHIELD	- [With back view monitor]
13	W	- [With around view monitor]
14	B	- [With back view monitor]
15	G	- [With around view monitor]
16	R	- [With back view monitor]
17	W	- [With around view monitor]
18	B	- [With back view monitor]
19	R	- [With around view monitor]

Connector No.	BB8
Connector Name	WIRE TO WIRE
Connector Type	TH18FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	BG	-
3	B	-
4	R	-

[AROUND VIEW MONITOR SYSTEM]

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Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	P	-
4	SB	-
5	BR	-
6	Y	-
3	LC	

AROUND VIEW MONITOR SYSTEM

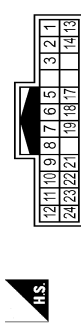
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AROUND VIEW MONITOR SYSTEM

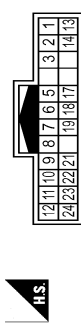
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9	L	-
10	L	-
11	GR	-
13	Y	-
14	R	-
16	R	-
17	B	-
18	W	-
19	IB	-
20	G	-
21	SHIELD	-
22	GR	-
23	GR	-
24	BR	-
25	BR	-
26	V	-
27	G	-
28	V	-
29	Y	-
30	R	-
49	LG	-
52	P	-
55	L	-
56	Y	-
57	R	-
58	SB	-
59	R	-
60	G	-
62	B	-
64	Y	-
65	BR	-
66	GR	-
69	W	-
70	L	-
71	EG	-
72	Y	-

Connector No.	D58
Connector Name	DOOR MIRROR (DRIVER SIDE)
Connector Type	TH24MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	R	-
3	G	-
4	B	-
5	B	-
6	W	-
7	L	-
8	SB	-
9	P	-
10	Y	-
11	GR	-
12	EG	-
13	V	-
14	B	-
17	SHIELD	-
18	R	-
19	B	-
21	BR	-
22	LG	-
23	W	-
24	G	-

Connector No.	D57
Connector Name	DOOR MIRROR (PASSENGER SIDE)
Connector Type	TH24MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	R	-
3	W	-
4	B	-
5	B	-
6	R	-
7	EG	-
8	LG	-
9	SB	-
10	G	-
11	V	-
12	Y	-
13	Y	-
14	B	-
17	SHIELD	-
18	G	-
19	P	-
21	BR	-
22	W	-
23	W	-
24	GR	-

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Type	RH12MB



Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	-
3	R	-
5	SB	-
6	Y	-
8	L	-
9	GR	-
11	W	-
12	B	-

Connector No.	E6
Connector Name	WIRE TO WIRE
Connector Type	PSDM6B



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

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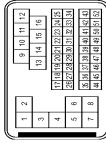
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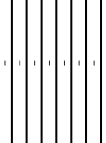
Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Type	SAA30MB-FS3-SUZ3



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

AROUND VIEW MONITOR SYSTEM

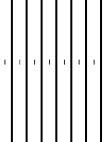
Connector No.	-
Connector Name	SHIELD
Connector Type	-



Terminal No.	Color Of Wire	Signal Name [Specification]
37	SHIELD	-
38	L	-
39	P	-
40	R	-
41	W	-
42	LG	-
43	G	-
44	V	-
45	Y	-
46	SHIELD	-
47	W	-
48	BR	-
49	G	-
50	B	-
51	SB	-
52	R	-

AROUND VIEW MONITOR SYSTEM

Connector No.	E35
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	SAA20FB-SLZ4-U



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	B	GROUND
3	G	VALVE BATTERY
4	Y	MOTOR BATTERY
5	LG	STOP LAMP SW SIGNAL [With IG3]
6	V	STOP LAMP SW SIGNAL [With ASD]
7	GR	RR LH WHEEL SENSOR SIGNAL
8	G	RR LH WHEEL SENSOR POWER SUPPLY
9	BR	FR RH WHEEL SENSOR SIGNAL
10	GR	FR RH WHEEL SENSOR POWER SUPPLY
13	R	VACUUM SENSOR SIGNAL
15	P	CAN-L [Without Gateway]
17	Y	CAN-L [With Gateway]
18	V	RR RH WHEEL SENSOR SIGNAL
19	V	RR RH WHEEL SENSOR POWER SUPPLY
20	SB	FR LH WHEEL SENSOR SIGNAL
25	B	FR LH WHEEL SENSOR POWER SUPPLY
28	G	CAN-H
30	R	VDC OFF SW SIGNAL
32	SHIELD	VACUUM SENSOR GROUND
34	G	IGN

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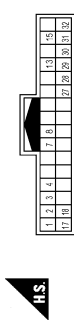
AROUND VIEW MONITOR SYSTEM

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[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR SYSTEM

Connector No.	E47
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	G	-
3	Y	-
4	P	-
5	L	-
6	P	-
7	R	-
8	L	-
9	W	-
10	G	-
11	BR	-
12	W	-
13	EG	-
14	LG	-
15	BR	-
16	W	-
17	Y	-
18	G	-
19	LG	-
20	BR	-
21	W	-
22	Y	-
23	G	-
24	LG	-
25	BR	-
26	W	-
27	Y	-
28	G	-
29	LG	-
30	BR	-
31	W	-
32	Y	-

Connector No.	E107
Connector Name	WIRE TO WIRE
Connector Type	RH12FB



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	P	-
3	SB	-
4	Y	-

8	L	-
9	GR	-
10	W	-
11	B	-
12	B	-

Connector No.	E108
Connector Name	WIRE TO WIRE
Connector Type	HS0MF8-PR



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

Connector No.	E112
Connector Name	CENTER SENSOR FRONT LH
Connector Type	RH03FB



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

Connector No.	E113
Connector Name	CENTER SENSOR FRONT RH
Connector Type	RH03FB



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

Connector No.	E114
Connector Name	CORNER SENSOR FRONT LH
Connector Type	RH03FB



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

Connector No.	E115
Connector Name	CORNER SENSOR FRONT RH
Connector Type	RH03FB



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

Connector No.	E116
Connector Name	FRONT CAMERA
Connector Type	RH06MB



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

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AROUND VIEW MONITOR SYSTEM

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[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR SYSTEM

Connector No.	E121
Connector Name	FOR INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	1132FW-NH

49				22	23			27	28	29		31			33	34
35	36	37	38					41	43							

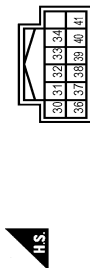
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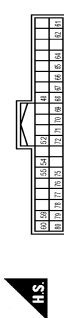
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Connector No.	M3
Connector Name	INTEGRAL SWITCH
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
30	W	ILL
31	R	END-B SIGNAL
32	R	END-B SIGNAL
33	R	PUSH SWITCH A SIGNAL
34	W	PUSH SWITCH C SIGNAL
36	V	ILLUMINATION CONTROL SIGNAL
37	W	END-A SIGNAL
38	G	SELECT SWITCH SIGNAL
39	B	PUSH SWITCH B SIGNAL
40	B	SHIELD
41	L	L/R DETECTION SIGNAL

Connector No.	M4
Connector Name	BDM (BODY CONTROL MODULE)
Connector Type	TH44FB-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
8	R	PUSH-BTN IGN SW ILL PWR
12	G	IGN SW ILL PWR
13	V	IGN SW ILL PWR
14	R	IGN SW ILL PWR
15	R	IGN SW ILL PWR
16	P	IGN SW ILL PWR
17	L	IGN SW ILL PWR
18	G	IGN SW ILL PWR
19	B	IGN SW ILL PWR
20	W	IGN SW ILL PWR
21	W	IGN SW ILL PWR
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218	W	IGN SW ILL PWR
219	W	IGN SW ILL PWR
220	W	IGN SW ILL PWR
221	W	IGN SW ILL PWR
222	W	IGN SW ILL PWR
223	W	IGN SW ILL PWR
224	W	IGN SW ILL PWR
225	W	IGN SW ILL PWR
226	W	IGN SW ILL PWR
227	W	IGN SW ILL PWR
228	W	IGN SW ILL PWR
229	W	IGN SW ILL PWR</

AROUND VIEW MONITOR SYSTEM

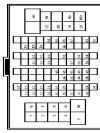
< WIRING DIAGRAM >

[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR SYSTEM

16	SHIELD	-
17	B	-
18	W	-

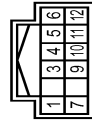
Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH8MM-CSI1P-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	L	-
3	R	-
4	SHIELD	-
5	G	-
6	B	-
7	LG	-
8	P	-
9	SHIELD	-
10	V	-
11	GR	-
12	Y	-
13	LG	-
14	LG	-
15	P	-
16	SB	- [With DCM]
17	V	- [Without DCM]
18	L	-
19	G	-
20	GR	-
21	R	-
22	W	-
23	L	-
24	V	-
25	LG	-
26	GR	-
29	SB	-
30	LG	-
36	R	-
37	R	-

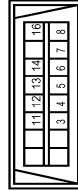
38	W	-
39	V	-
40	G	-
41	SHIELD	-
47	G	-
48	BR	-
49	SB	-
52	Y	-
53	R	-
54	GR	-
57	R	-
58	SB	-
59	LG	-
62	V	-
63	L	-
64	W	-
66	R	-
68	L	-
69	P	-
71	R	-
72	G	-
73	SHIELD	-
76	V	-
84	BR	-
85	BR	-
86	V	-
87	LG	-
89	BR	-
90	V	-
91	W	-
92	R	-
94	R	-
95	Y	-
96	W	-
97	L	-
99	BR	-
100	BR	-

Connector No.	M24
Connector Name	CAN GATEWAY
Connector Type	TH12PW-M4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	Y	ECU-TRY
3	V	CAN-R
4	B	GND
5	L	CAN-H
6	L	CAN-H
7	P	CAN-L
9	R	IGN
10	R	CAN-L
11	B	GND
12	R	CAN-L

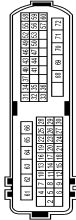
Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	AV COMM (L)
4	B	EARTH
5	B	EARTH
6	V	CAN-H
7	V	IGNE
8	W	IGN SW
11	LG	AV COMM (H)
12	R	CAN-L
13	L	CAN-H
14	P	CAN-L

16	W	POWER

Connector No.	M33
Connector Name	WIRE TO WIRE
Connector Type	NH6MM-TS12



Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
4	G	- [With DRPO]
4	SB	- [Without DRPO]
5	G	-
6	R	-
7	R	-
8	GR	-
9	GR	-
10	W	-
11	SHIELD	-
12	P	-
13	SB	-
14	LG	-
15	Y	-
16	Y	-
17	P	-
18	W/B	-
19	LG	- [With DRPO]
19	Y	- [Without DRPO]
20	V	-
21	B	-
22	B	- [Without DRPO]
22	G	- [With DRPO]
23	L	-
24	Y	-
25	B	- [Without DRPO]
25	Y	- [With DRPO]
26	Y	-
27	GR	-
28	V	-
29	B	-
30	W	-
31	B	-

JRNWC4801GB

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AROUND VIEW MONITOR SYSTEM

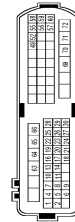
< WIRING DIAGRAM >

[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR SYSTEM

Terminal No.	Color Of Wire	Signal Name [Specification]
32	SB	-
33	BR	-
34	BR	-
35	LG	-
36	W	-
37	B	-
40	P	-
41	SB	-
43	Y	-
44	EG	-
46	BR	-
47	G	-
49	V	-
50	B	-
52	BR	-
53	B	-
55	EG	-
56	LG	-
57	V	-
58	R	-
59	G	-
60	L	-
61	G	-
62	R	-
63	V	-
64	B	-
65	R	-
66	BR	-
68	V	-
69	V	-
70	W	-
71	LG	-
72	V	-

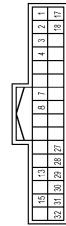
Connector No.	Connector Name	Connector Type
M34	WIRE TO WIRE	
M34	WIRE TO WIRE	



H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	R	-
4	G	-
5	SB	-
6	L	-
7	R	-
8	W	-
9	GR	-
10	V	-
11	Y	-
13	LG	-
14	V	-
16	G	-
17	B	-
18	W	-
19	B	-
20	SB	-
21	SHIELD	-
22	B	-
23	EG	-
24	P	-
25	LG	-
26	BR	-
27	BR	-
28	BR	-
29	BR	-
30	W/B	-
31	W	-
32	LG	-
33	BR	-
34	BR	-
35	B	-
36	SB	-
37	G	-
38	G	-
39	LG	-
40	R	-
41	Y	-
42	Y	-
43	Y	-
44	Y	-
45	Y	-
46	Y	-
47	Y	-
48	Y	-
49	Y	-
50	Y	-
51	Y	-
52	Y	-
53	Y	-
54	Y	-
55	Y	-
56	Y	-
57	Y	-
58	Y	-
59	Y	-
60	Y	-
61	Y	-
62	Y	-
63	Y	-
64	Y	-
65	Y	-
66	Y	-
67	Y	-
68	Y	-
69	Y	-
70	Y	-
71	SB	-
72	W	-

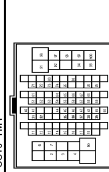
Connector No.	Connector Name	Connector Type
M39	WIRE TO WIRE	
M39	WIRE TO WIRE	



H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W/B	-
2	SB	-
3	L	-
4	P	-
7	L	-
8	W	-
13	G	-
15	R	-
17	BR	-
18	EG	-
27	LG	-
28	BR	-
29	W/B	-
31	W	-
32	LG	-

Connector No.	Connector Name	Connector Type
M40	WIRE TO WIRE	
M40	WIRE TO WIRE	



H.S.

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

Terminal No.	Color Of Wire	Signal Name [Specification]
6	W/B	-
7	Y	-
10	W	-
11	W	-
12	B	-
13	GR	-
14	B	-
15	SB	-
16	B	-
17	LG	-
18	B	-
31	W	-
32	V	-
35	EG	-
37	G	-
38	B	-
39	L	-
39	Y	-
40	GR	-
41	L	-
44	BR	-
45	W	-
46	G	-
47	R	-
48	SHIELD	-
49	B	-
50	BR	-
51	L	-
52	W	-
53	G	-
54	Y	-
55	P	-
56	EG	-
57	GR	-
58	B	-
59	SB	-
61	W/B	-
64	Y	-
65	R	-
66	V	-
67	LG	-
68	EG	-
69	V	-
72	LG	-
73	BR	-
74	BR	-
75	B	-
78	G	-
79	R	-
83	R	-

AROUND VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR SYSTEM

Connector No.	M76
Connector Name	SONAR CONTROL UNIT
Connector Type	TH124FW-NH1



12	14	9	6	5	4	3	2	1
22	21	19	18	15	14	13		

Connector No.	M65
Connector Name	MULTIFUNCTION SWITCH
Connector Type	TH12FW-NH



1	2	3	4	5
7	8	9	10	11
12				

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	ILL
2	W	GND
3	R	END-B SIGNAL
4	B	PUSH SWITCH A SIGNAL
5	W	PUSH SWITCH C SIGNAL
7	V	ILLUMINATION CONTROL SIGNAL
8	W	END-A SIGNAL
9	G	SELECT SWITCH B SIGNAL
10	B	PUSH SWITCH B SIGNAL
11	B	SHIELD
12	L	L/R DETECTION SIGNAL

Connector No.	M76
Connector Name	SONAR CONTROL UNIT
Connector Type	TH124FW-NH1



12	14	9	6	5	4	3	2	1
22	21	19	18	15	14	13		

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	CENTER SENSOR SIGNAL FRONT RH
2	G	CORNER SENSOR SIGNAL FRONT LH
3	W	CORNER SENSOR SIGNAL FRONT RH
4	GR	CORNER SENSOR SIGNAL FRONT RH
5	L	CAN-H [With Gateway]
6	R	CAN-L [Without Gateway]
9	G	CENTER SENSOR SIGNAL REAR RH
10	BG	CORNER SENSOR SIGNAL REAR RH
12	R	IGN
13	B	FRONT SENSOR GND
14	B	REAR SENSOR GND
15	B	GND
18	GR	FRONT BUZZER DRIVE SIGNAL
19	GR	BUZZER POWER SUPPLY LG LH
21	BR	CORNER SENSOR SIGNAL REAR LH
22	W	CORNER SENSOR SIGNAL REAR LH



1	2	4
5		

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	P	CAN-L [Without Gateway]
4	G	CAN-L [With Gateway]
		IGN

Connector No.	M87
Connector Name	BACK-UP LAMP RELAY
Connector Type	MS02EL-M2-LG



3	5
2	1

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	W	-
3	B	-
5	BR	-

Connector No.	M100
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH124FW-NH



25	26	28	29	30	31	33	34
16	17	19	20	22			

Terminal No.	Color Of Wire	Signal Name [Specification]
16	SB	AV COMM (L)
17	P	CAN-L
19	R	DIMMER SIGNAL
20	BR	REVERSE SIGNAL
22	B	GND
25	SB	-
26	BR	CAMERA SWITCH SIGNAL
28	LG	AV COMM (H)
29	L	CAN-H
30	R	VEHICLE SPEED SIGNAL (P-PULSE)
33	SB	ACC
34	Y	BAT

JRNWC4803GB

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AROUND VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR SYSTEM

Connector No.	M101
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH46FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
37	LG	COMPOSITE IMAGE SIGNAL (-)
38	SHIELD	SHIELD
39	SHIELD	SHIELD
40	SHIELD	MANUFACTURER SPECIFIC SIGNAL
42	G	SOUND SIGNAL RH (-)
43	SHIELD	SHIELD
44	L	SOUND SIGNAL LH (-)
45	W	TEL VOICE SIGNAL (-)
46	SHIELD	SHIELD
47	R	VOICE GUIDANCE SIGNAL OUTPUT (-)
48	B	VOICE GUIDANCE SIGNAL INPUT (-)
49	W	NS ON/OFF SIGNAL
50	R	MICROPHONE SIGNAL GND
51	SHIELD	SHIELD
52	SHIELD	MICROPHONE SIGNAL GND
53	SHIELD	SHIELD
54	SHIELD	SHIELD
55	SHIELD	SHIELD
56	BR	COMPOSITE IMAGE SIGNAL (+)
58	R	CAMERA IMAGE SIGNAL
59	B	U-VOICE SIGNAL
60	W	VOICE SIGNAL GND
61	B	D-VOICE SIGNAL
62	R	SOUND SIGNAL RH (+)
63	SHIELD	SHIELD
64	V	SOUND SIGNAL LH (+)
65	B	TEL VOICE SIGNAL (+)
66	SHIELD	SHIELD
67	G	VOICE GUIDANCE SIGNAL OUTPUT (+)
68	W	VOICE GUIDANCE SIGNAL INPUT (+)
69	SHIELD	SHIELD
70	SHIELD	SHIELD
71	G	MICROPHONE SIGNAL
72	L	MICROPHONE VCC
74	R	CAMERA POWER SUPPLY



Connector No.	M105
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH46FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
82	W	LIDS (-)
83	B	LIDS (-)
84	SHIELD	SHIELD

Connector No.	M110
Connector Name	BUZZER
Connector Type	TH46FW-NH



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

Connector No.	M132
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS18FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
100	V	-
110	V	-
130	L	-
140	Y	-
150	R	-
160	L	-
180	B	-
190	P	-
200	W	-
210	L	-
220	L	-

Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH46FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
100	V	-
110	V	-
130	L	-
140	Y	-
150	R	-
160	L	-
180	B	-
190	P	-
200	W	-
210	L	-
220	L	-

230	L	-
240	LG	-
250	SB	-
270	P	-
280	W	-
290	W	-
300	R	-
310	W	-
320	R	-
330	B	-
340	W/B	-
350	SB	-
360	R	-
370	W	-
380	SB	-
390	V	-
400	G	-
410	P	-
50	P	-
60	G	-
70	G	-
80	V	-

Connector No.	T48
Connector Name	WIRE TO WIRE
Connector Type	NS18FW-CS



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

JRNWC4804GB

AROUND VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[AROUND VIEW MONITOR SYSTEM]

AROUND VIEW MONITOR SYSTEM

13	L	- [With back view monitor]
14	B	- [With back view monitor]
14	G	- [With around view monitor]
15	B	- [With around view monitor]
15	W	- [With back view monitor]
16	R	- [With back view monitor]
16	W	- [With around view monitor]

Connector No.	T50
Connector Name	REAR CAMERA
Connector Type	TH03MP-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	-
4	G	-
5	R	-
7	B	-
8	W	-

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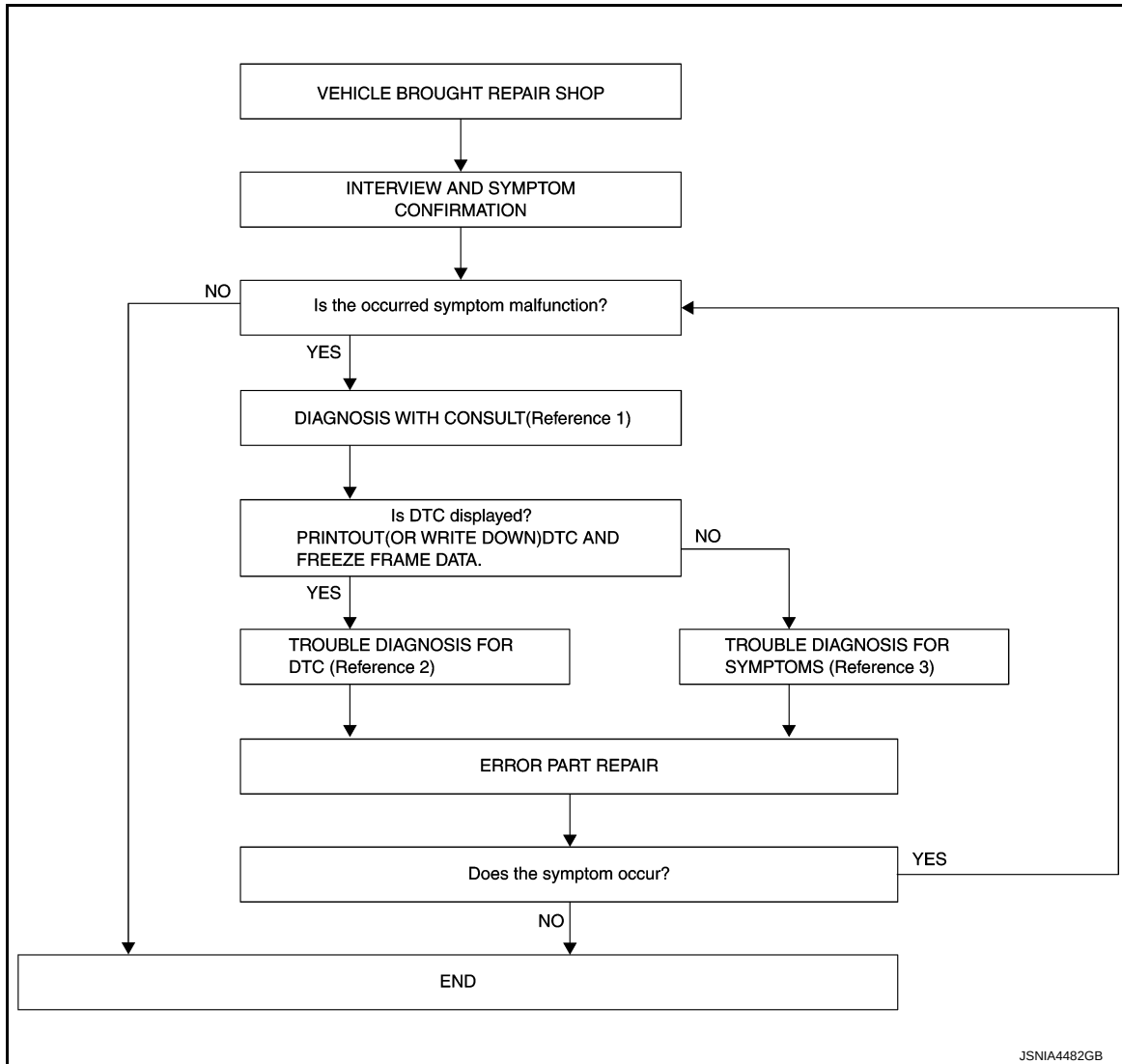
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000009727361

OVERALL SEQUENCE



- Reference 1... Refer to [AV-325, "CONSULT Function"](#).
- Reference 2... Refer to [AV-351, "DTC Index"](#).
- Reference 3... Refer to [AV-455, "Symptom Table"](#).

DETAILED FLOW

1. INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

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

Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2. DIAGNOSIS WITH CONSULT

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[AROUND VIEW MONITOR SYSTEM]

1. Connect CONSULT and perform a self-diagnosis for "MULTI AV". Refer to [AV-325. "CONSULT Function"](#).

NOTE:

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

2. When DTC is detected, follow the instructions below:
 - Record DTC and Freeze Frame Data.

Is DTC displayed?

YES >> GO TO 3.

NO >> GO TO 4.

3. TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the "Self-Diagnosis Results".
2. Perform the relevant diagnosis referring to the DTC Index. Refer to [AV-351. "DTC Index"](#).

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-455. "Symptom Table"](#).

>> GO TO 5.

5. ERROR PART REPAIR

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

NOTE:

Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the "Self-Diagnosis Results".

3. Check that the symptom does not occur.

Does the symptom occur?

YES >> GO TO 1.

NO >> INSPECTION END

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INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Description

INFOID:000000009728859

Perform the following operations when replacing around view monitor control unit.

1. Configuration, refer to [AV-376, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Work Procedure"](#).
2. Calibrating camera image, refer to [AV-379, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT : Description

INFOID:000000009728860

Perform the following operations when replacing sonar control unit.

Configuration, refer to [AV-377, "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT)

CONFIGURATION (AROUND VIEW MONITOR CONTROL UNIT) : Work Procedure

INFOID:000000009728861

1. SAVING VEHICLE SPECIFICATION

ⒺCONSULT Configuration

Perform "Before Replace ECU", and save the current vehicle specification in CONSULT.

Is the vehicle specification saved normally?

YES >> GO TO 2.

NO >> GO TO 4.

2. REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

ⒺCONSULT Configuration

Select "Configuration" or "After Replace ECU", and write the vehicle specification saved in CONSULT to around view monitor control unit.

>> GO TO 6.

4. REPLACE AROUND VIEW MONITOR CONTROL UNIT

Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

>> GO TO 5.

5. WRITE VEHICLE SPECIFICATION

ⒺCONSULT Configuration

Select "Manual Configuration", and write the vehicle specification to around view monitor control unit.

NOTE:

Around view monitor control unit does not have any setting items. Selection of items on "Manual Configuration" screen is not required.

>> GO TO 6.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[AROUND VIEW MONITOR SYSTEM]

6.PERFORM SELF-DIAGNOSIS

CONSULT Self Diagnostic Result

Perform self-diagnosis of CONSULT, and check whether or not DTC U1305 is detected.

Is DTC U1305 detected?

>> GO TO 5.

>> GO TO 7.

7.OPERATION CHECK

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

>> WORK END

CONFIGURATION (SONAR CONTROL UNIT)

CONFIGURATION (SONAR CONTROL UNIT) : Work Procedure

INFOID:000000009728862

1.SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform "Before Replace ECU", and save the current vehicle specification in CONSULT.

Is the vehicle specification saved normally?

YES >> GO TO 2.

NO >> GO TO 4.

2.REPLACE SONAR CONTROL UNIT

Replace sonar control unit. Refer to [AV-462. "Removal and Installation"](#).

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Select "Configuration" or "After Replace ECU", and write the vehicle specification saved in CONSULT to sonar control unit.

>> GO TO 6.

4.REPLACE SONAR CONTROL UNIT

Replace sonar control unit. Refer to [AV-462. "Removal and Installation"](#).

>> GO TO 5.

5.WRITE VEHICLE SPECIFICATION

CONSULT Configuration

Select "Manual Configuration", and write the vehicle specification to sonar control unit.

NOTE:

Sonar monitor control unit does not have any setting items. Selection of items on "Manual Configuration" screen is not required.

>> GO TO 6.

6.PERFORM SELF-DIAGNOSIS

CONSULT Self Diagnostic Result

Perform self-diagnosis of CONSULT, and check whether or not DTC B2724 is detected.

Is DTC B2724 detected?

>> GO TO 5.

>> GO TO 7.

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7. OPERATION CHECK

Check that the operation of the sonar control unit is normal.

>> WORK END

PREDICTIVE COURSE LINE CENTER POSITION ADJUSTMENT

PREDICTIVE COURSE LINE CENTER POSITION ADJUSTMENT : Description

INFOID:000000009728863

Adjust the center position of the predictive course line of the front view and rear view monitor.

PREDICTIVE COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure

INFOID:000000009728864

1. DRIVING

Drive the vehicle straight ahead 100 m (328.1 ft) or more at a speed of 30 km/h (18.6 MPH) or more.

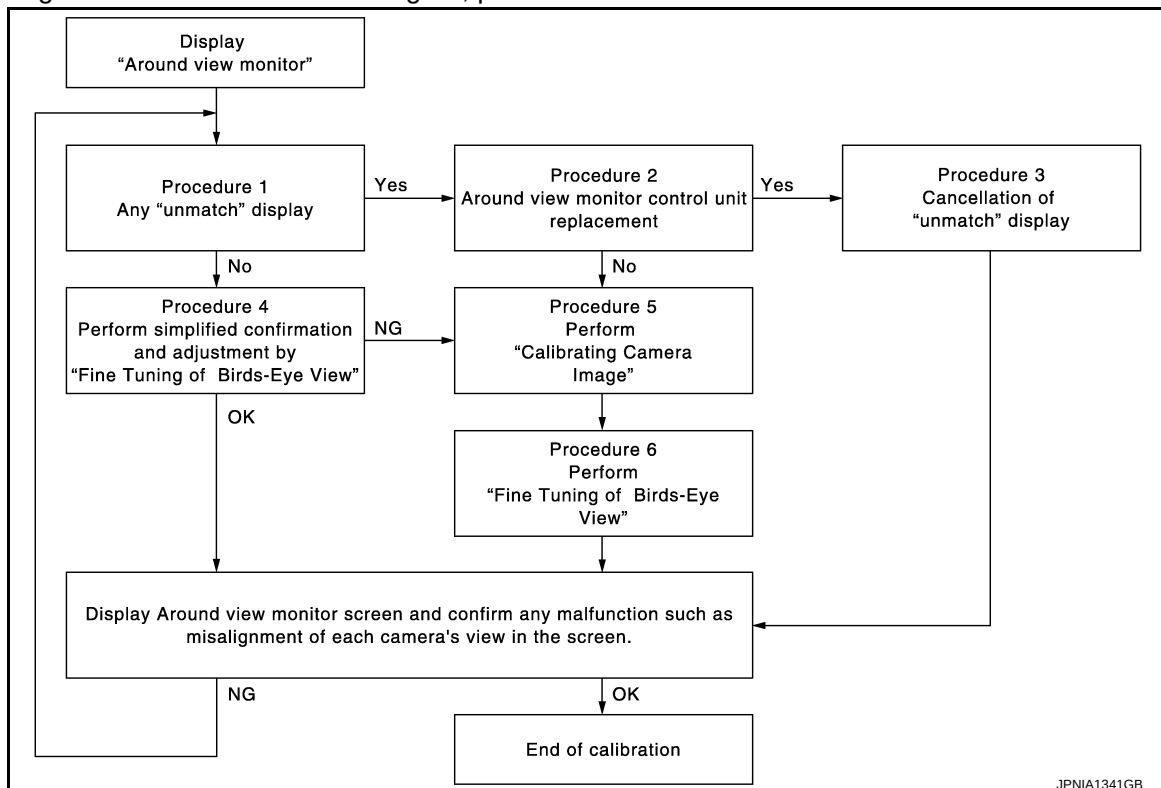
>> END

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR)

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Description

INFOID:000000009728865

- Perform camera calibration and perform writing to the around view monitor control unit, after removal/installation or replacement of each camera or camera mounting parts (front grille, door mirror, or others), or replacement of around view monitor control unit.
- By performing this camera calibration procedure, the boundary of each camera image is aligned to the white lines on the road near the vehicle. The boundary of each camera image may not be aligned to the white lines far from the vehicle. The farther the line, the greater the difference is.
- Following the flowchart shown in the figure, perform calibration.



- For details of calibration operation, refer to [AV-379. "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

CALIBRATING CAMERA IMAGE (AROUND VIEW MONITOR) : Work Procedure

INFOID:000000009728866

CAUTION:

When around view monitor control unit is replaced, perform the control unit setting before performing this calibration. Refer to [AV-378, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Description"](#).

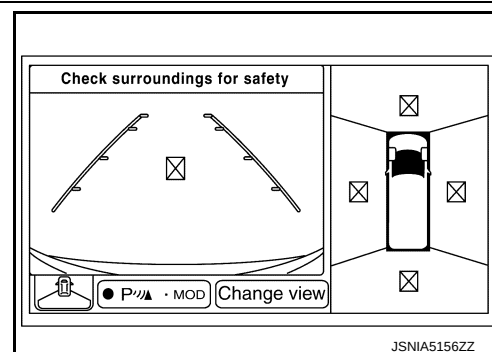
1. CHECK AROUND VIEW MONITOR SCREEN

Check whether or not un-match display "⊠" is on screen.

Is un-match display on screen?

YES >> GO TO 2.

NO >> GO TO 4.

**2. CHECK WHETHER OR NOT AROUND VIEW MONITOR CONTROL UNIT IS REPLACED**

Check whether or not around view monitor control unit is replaced.

Is around view monitor control unit replaced?

YES >> GO TO 3.

NO >> GO TO 5.

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

⑧ CONSULT work support

- Select "CALIBRATING CAMERA IMAGE".

NOTE:

In random order, perform the operation for all cameras for which un-match display ⊠ appears.

- Front camera: "CALIBRATING CAMERA IMAGE (FRONT CAMERA)"
 - Passenger side camera: "CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)"
 - Driver side camera: "CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)"
 - Rear camera: "CALIBRATING CAMERA IMAGE (REAR CAMERA)"
- On each camera calibration screen, press "APPLY" button, and then press "OK" button.

CAUTION:

• **Never perform any operation other than selecting "APPLY" button.**

• **Never perform "INITIALIZE CAMERA IMAGE CALIBRATION".**

- Display the around view monitor screen. Check that images are displayed normally without any difference between images for each camera.

Is there a malfunction such as a difference between camera images?

YES >> Calibration end

NO >> GO TO 1.

4. PERFORM SIMPLIFIED CONFIRMATION/ADJUSTMENT BY "FINE TUNING OF BIRDS-EYE VIEW"

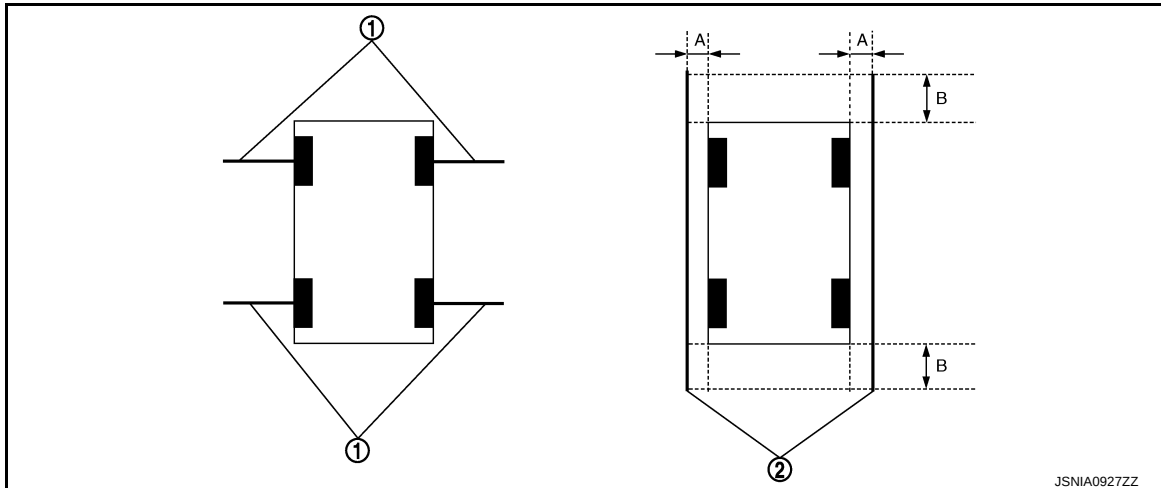
- Put target line 1 beside each axle using packing tape, etc.
- Put target line 2 at a position approximately 30 cm (11.81 in) away from each side of the vehicle (the left and right). Check that the target line is a length equivalent to the vehicle length, plus an additional approximate length of 1.0 m (39.37 in) (in parallel with the vehicle as much as possible).

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[AROUND VIEW MONITOR SYSTEM]

Preparation of simplified target line



- ① Target lines 1
A. Approx. 30 cm (11.81 in)
- ② Target lines 2
B. Approx. 1.0 m (39.37 in)

3. CONSULT work support
Select "FINE TUNING OF BIRDS-EYE VIEW".
4. Select the left and right cameras on CONSULT screen. Perform the following calibration.
 - Check that target line 1 and marker are aligned normally on screen. If difference is detected, align marker using "+" and "-" of "AXIS X" and "AXIS Y" on CONSULT screen.
 - Check that target line 2 is aligned normally on screen without difference between images of each camera. If difference is detected, align images so that line 2 is displayed in a straight line using "+" and "-" of "AXIS X", "AXIS Y", and "ROTATE" on CONSULT screen.

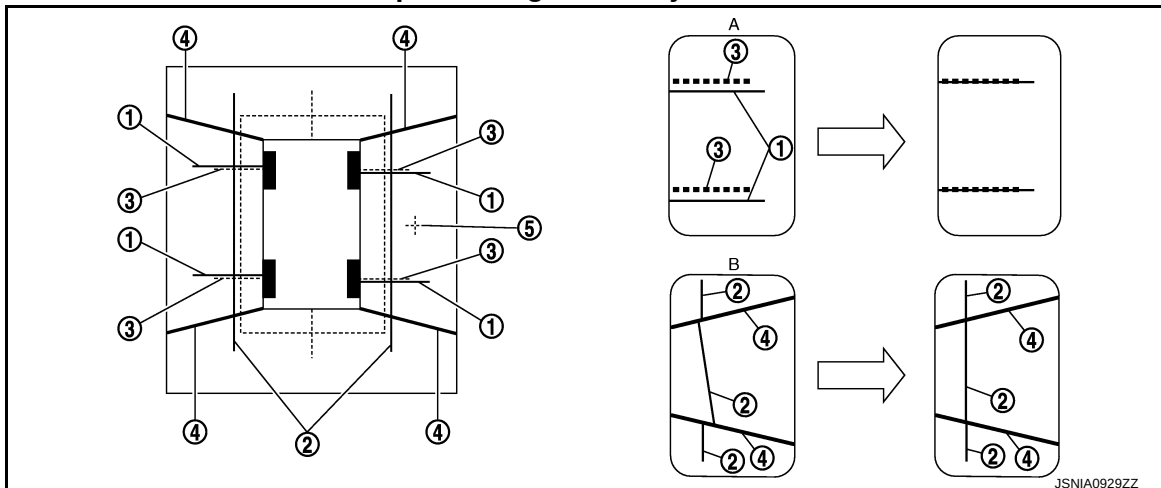
NOTE:

Press "SELECT" button on CONSULT screen and select camera position for adjustment.

CAUTION:

- Never adjust the front camera and rear camera. Only adjust the side cameras LH/RH.
- Perform adjustment operation slowly because approximately 1 second is required for changing image on screen.

Simplified target line adjustment method



- ① Target lines 1
② Target lines 2
③ Marker for target line 1
④ Boundary between cameras
⑤ Crosshair cursor (mark indicated the selected camera)
- A. Adjustment method for target lines 1 (right)
B. Adjustment method for target lines 2 (right)

5. Adjust the left and right cameras. Check that difference of images on screen between target line 1 and marker, and between target lines 2 are solved. Press "APPLY".

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[AROUND VIEW MONITOR SYSTEM]

NOTE:

- The setting can be initialized to factory default condition using “CALIBRATING CAMERA IMAGE” of work support.
- The adjustment value on this mode is cancelled when “INITIALIZE CAMERA IMAGE CALIBRATION” is performed.

Is the difference corrected?

YES >> • Select “OK” to end calibration.

CAUTION:

After selecting “OK”, never perform any operation other than “BACK” on CONSULT.

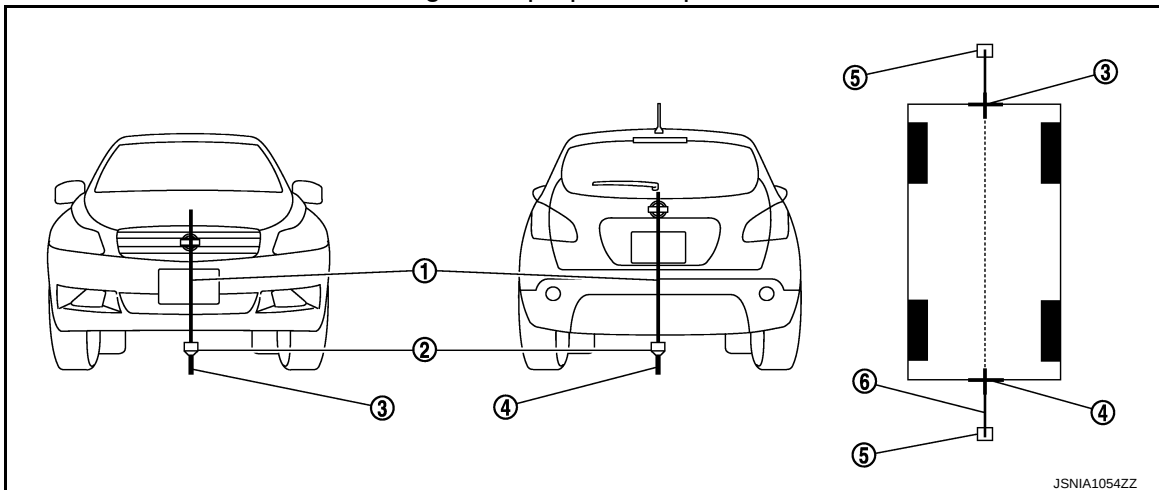
NO >> GO TO 5.

5.PERFORM “CALIBRATING CAMERA IMAGE”

Preparation of target line

1. Hang a string with a weight as shown in the figure. Put the points FM0, RM0 (mark) on the ground at the center of the vehicle front end and rear end using white packing tape or a pen.
2. Route the vinyl string under the vehicle, and then pull and fix the vinyl string at a point approximately 1.0 m (39.37 in) at the front and rear of the vehicle through points FM0 and RM0 using packing tape.

Target line preparation procedure 1



① Thread	② Weight	③ Point FM0 (mark)
④ Point RM0 (mark)	⑤ Packing tape (to fix the vinyl string)	⑥ Vinyl string

3. Put points FM and RM (mark) 75 cm (29.53 in) from the points FM0 and RM0 individually.
4. Route the vinyl string through points FM and RM using a triangle scale, and then fix it at approximately 1.5 m (59.06 in) on both sides with packing tape.
5. Put points FL, FR, RL, and RR (mark) at distance of a half the vehicle width, plus 30 cm (11.81 in) to the left and right from points FM and RM.

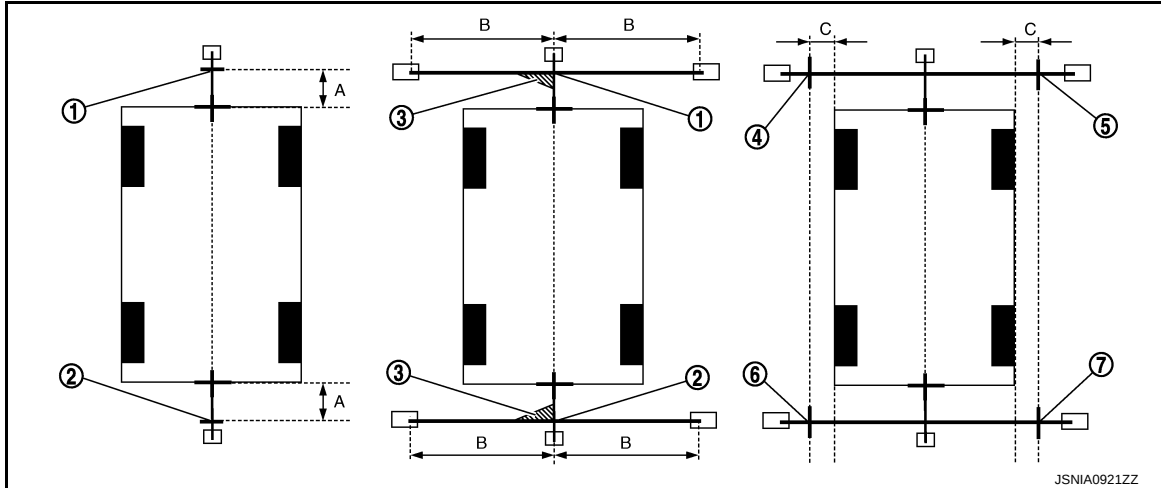
AV

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[AROUND VIEW MONITOR SYSTEM]

Target line preparation procedure 2



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

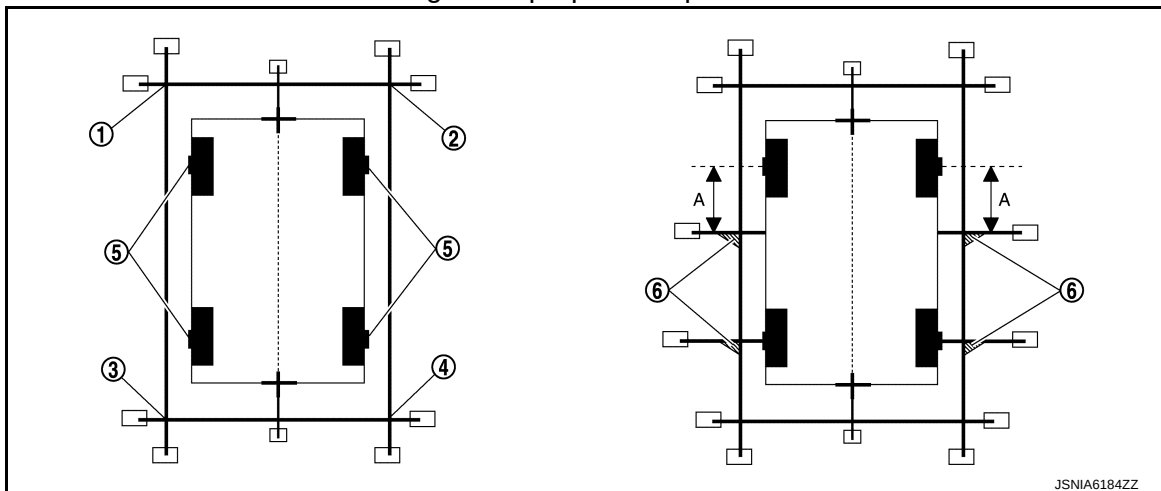
A. 75 cm (29.53 in)

B. Approximately 1.5 m (59.06 in)

C. 30 cm (11.81 in)
[A half of the vehicle width plus 30 cm (11.81 in) from the points FM and RM]

- Draw the lines of the points FL – RL and FR – RR with the vinyl string, and fix it with packing tape.
- Put a mark at the center of front axle. Use a triangle ruler to draw a line at the position 1 m (39.37 in) backward from the mark placed at the center of front axle so that the line becomes perpendicular to the line drawn between point FL-RL and point FR-RR and fix with packing tape.
- Put a mark at the center of rear axle. Use a triangle ruler to draw a line at the position 1 m backward from the mark placed at the center of front axle so that the line becomes perpendicular to the line drawn between point FL-RL and point FR-RR and fix with packing tape.

Target line preparation procedure 3



① Point FL	② Point FR	③ Point RL
④ Point RR	⑤ Center position of axle	⑥ Triangle scale
- A. 1 m (39.37 in)

Perform “CALIBRATING CAMERA IMAGE”

CONSULT work support

- Select “CALIBRATING CAMERA IMAGE”.

NOTE:

In random order, perform the operation for all cameras.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[AROUND VIEW MONITOR SYSTEM]

- Front camera: "CALIBRATING CAMERA IMAGE (FRONT CAMERA)"
 - Passenger side camera: "CALIBRATING CAMERA IMAGE (PASS-SIDE CAMERA)"
 - Driver side camera: "CALIBRATING CAMERA IMAGE (DR-SIDE CAMERA)"
 - Rear camera: "CALIBRATING CAMERA IMAGE (REAR CAMERA)"
2. On each calibration screen of "REAR CAMERA", "FRONT CAMERA", "DR-SIDE CAMERA", and "PASS-SIDE CAMERA", operate "+" and "-" of "AXIS X", "AXIS Y", and "ROTATE", so that images on screen of target line and calibration maker are aligned.
 3. Press "APPLY" button on CONSULT screen. "Writing..." is displayed, and then the adjustment result is displayed on the display.
CAUTION:
Check that "Writing..." is displayed. Never perform other operations while "Writing..." is displayed.
 4. Press "APPLY" button on CONSULT screen. "Writing..." is displayed, and then the adjustment result is written to around view monitor control unit.
CAUTION:
Check that "Writing..." is displayed. Never perform other operations while "Writing..." is displayed.

>> GO TO 6.

6.PERFORM "FINE TUNING OF BIRDS-EYE VIEW"

This mode is designed to align the boundary between each camera image that cannot be aligned in the "CALIBRATING CAMERA IMAGE" mode.

CONSULT work support

1. Select "FINE TUNING OF BIRDS-EYE VIEW".
2. Operate "+" and "-" of "AXIS X", "AXIS Y", and "ROTATE", so that images on screen of target line on the ground and marker are aligned between each camera.

CAUTION:

Perform adjustment operation slowly because approximately 1 second is required for changing image on screen.

NOTE:

Press "SELECT" button on CONSULT screen and select camera position for adjustment.

3. Press "APPLY" button on CONSULT screen. "Writing..." is displayed, and then the adjustment result is displayed on the display.

CAUTION:

Check that "Writing..." is displayed. Never perform other operations while "Writing..." is displayed.

4. Press "APPLY" button on CONSULT screen. "Writing..." is displayed, and then the adjustment result is written to around view monitor control unit.

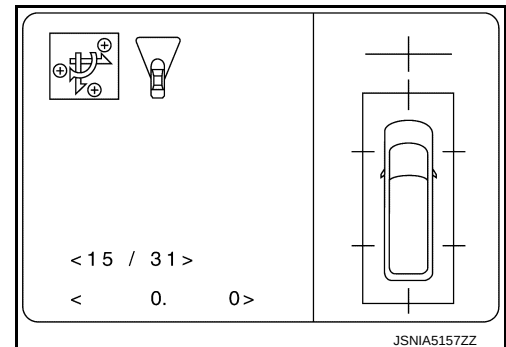
CAUTION:

- Check that "Writing..." is displayed. Never perform other operations while "Writing..." is displayed.
- After selecting "OK", never perform any operation other than "BACK" on CONSULT.

NOTE:

- The setting can be initialized to the factory default setting using "CALIBRATING CAMERA IMAGE" of work support.
- The adjustment value on this mode is cancelled when "INITIALIZE CAMERA IMAGE CALIBRATION" is performed.

>> Calibration end



DTC/CIRCUIT DIAGNOSIS**B2720 CORNER SENSOR [RL]****DTC Description**

INFOID:000000009727362

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
B2720	CORNER SENSOR [RL] (Corner sensor rear-left)	SHORT-BAT (Short to battery)	Short circuit to power supply is detected in harness between sonar control unit and rear corner sensor LH when ignition switch is turned ON.
		OPEN/SHORT-GND (Open/Short to ground)	Short circuit to ground or open circuit is detected in harness between sonar control unit and rear corner sensor LH when ignition switch is turned ON.
		SENSOR (Sensor)	Rear corner sensor LH malfunction is detected when ignition switch is turned ON.
		CONFIG ERROR (Configuration error)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

- Harness or connectors (Rear corner sensor LH circuit)
- Rear corner sensor LH
- Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE**1.PERFORM DTC CONFIRMATION PROCEDURE** With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B2720 detected?YES (SHORT-BAT)>>Proceed to [AV-384, "SHORT-BAT : Diagnosis Procedure"](#).YES (OPEN/SHORT-GND)>>Proceed to [AV-385, "OPEN/SHORT-GND : Diagnosis Procedure"](#).YES (SENSOR)>>Proceed to [AV-386, "SENSOR : Diagnosis Procedure"](#).YES (CONFIG ERROR)>>Proceed to [AV-386, "CONFIG ERROR : Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SHORT-BAT**SHORT-BAT : Diagnosis Procedure**

INFOID:000000009727363

1.CHECK REAR CORNER SENSOR LH SIGNAL CIRCUIT FOR SHORT (1)

1. Turn ignition switch OFF.
2. Disconnect sonar control unit harness connector and rear corner sensor LH harness connector.
3. Turn ignition switch ON.
4. Check the voltage between sonar control unit harness connector and ground.

B2720 CORNER SENSOR [RL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
Sonar control unit			
Connector	Terminal		
M76	22	Ground	0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR CORNER SENSOR LH SIGNAL CIRCUIT FOR SHORT (2)

Check the continuity between rear corner sensor LH harness connector and ground.

Terminals			Continuity
(+)		(-)	
Rear corner sensor LH			
Connector	Terminal		
B90	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace rear corner sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

OPEN/SHORT-GND

OPEN/SHORT-GND : Diagnosis Procedure

INFOID:0000000009727364

1.CHECK REAR CORNER SENSOR LH SIGNAL CIRCUIT FOR OPEN

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

Sonar control unit		Rear corner sensor LH		Continuity
Connector	Terminal	Connector	Terminal	
M76	22	B90	2	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR CORNER SENSOR LH SIGNAL CIRCUIT FOR SHORT

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

Terminals			Continuity
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	22	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

B2720 CORNER SENSOR [RL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3. CHECK REAR CORNER SENSOR LH GROUND CIRCUIT

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

Sonar control unit		Rear corner sensor LH		Continuity
Connector	Terminal	Connector	Terminal	
M76	14	B90	1	Existed

Is the inspection result normal?

YES >> Replace rear corner sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SENSOR

SENSOR : Diagnosis Procedure

INFOID:000000009727365

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-384. "DTC Description"](#).

Is DTC B2720 detected again?

YES >> Replace rear corner sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END

CONFIG ERROR

CONFIG ERROR : Diagnosis Procedure

INFOID:000000009727366

1. PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377. "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-384. "DTC Description"](#).

Is DTC B2720 detected again?

YES >> Replace rear corner sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END.

B2721 CENTER SENSOR [RL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

B2721 CENTER SENSOR [RL]

DTC Description

INFOID:000000009727367

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
B2721	CENTER SENSOR [RL] (Center sensor rear-left)	SHORT-BAT (Short to battery)	Short circuit to power supply is detected in harness between sonar control unit and rear center sensor LH when ignition switch is turned ON.
		OPEN/SHORT-GND (Open/Short to ground)	Short circuit to ground or open circuit is detected in harness between sonar control unit and rear center sensor LH when ignition switch is turned ON.
		SENSOR (Sensor)	Rear center sensor LH malfunction is detected when ignition switch is turned ON.
		CONFIG ERROR (Configuration error)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

- Harness or connectors (Rear center sensor LH circuit)
- Rear center sensor LH
- Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B2721 detected?

YES (SHORT-BAT)>>Proceed to [AV-387, "SHORT-BAT : Diagnosis Procedure"](#).

YES (OPEN/SHORT-GND)>>Proceed to [AV-388, "OPEN/SHORT-GND : Diagnosis Procedure"](#).

YES (SENSOR)>>Proceed to [AV-389, "SENSOR : Diagnosis Procedure"](#).

YES (CONFIG ERROR)>>Proceed to [AV-389, "CONFIG ERROR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SHORT-BAT

SHORT-BAT : Diagnosis Procedure

INFOID:000000009727368

1.CHECK REAR CENTER SENSOR LH SIGNAL CIRCUIT FOR SHORT (1)

1. Turn ignition switch OFF.
2. Disconnect sonar control unit harness connector and rear center sensor LH harness connector.
3. Turn ignition switch ON.
4. Check the voltage between sonar control unit harness connector and ground.

B2721 CENTER SENSOR [RL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
Sonar control unit			
Connector	Terminal		
M76	21	Ground	0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR CENTER SENSOR LH SIGNAL CIRCUIT FOR SHORT (2)

Check the continuity between rear center sensor LH harness connector and ground.

Terminals			Continuity
(+)		(-)	
Rear center sensor LH			
Connector	Terminal		
B88	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace rear center sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

OPEN/SHORT-GND

OPEN/SHORT-GND : Diagnosis Procedure

INFOID:0000000009727369

1.CHECK REAR CENTER SENSOR LH SIGNAL CIRCUIT FOR OPEN

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

Sonar control unit		Rear center sensor LH		Continuity
Connector	Terminal	Connector	Terminal	
M76	21	B88	2	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR CENTER SENSOR LH SIGNAL CIRCUIT FOR SHORT

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

Terminals			Continuity
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	21	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

B2721 CENTER SENSOR [RL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3.CHECK REAR CENTER SENSOR LH GROUND CIRCUIT

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

Sonar control unit		Rear center sensor LH		Continuity
Connector	Terminal	Connector	Terminal	
M76	14	B88	1	Existed

Is the inspection result normal?

YES >> Replace rear center sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SENSOR

SENSOR : Diagnosis Procedure

INFOID:000000009727370

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-387. "DTC Description"](#).

Is DTC B2721 detected again?

YES >> Replace rear center sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END

CONFIG ERROR

CONFIG ERROR : Diagnosis Procedure

INFOID:000000009727371

1.PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377. "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-387. "DTC Description"](#).

Is DTC B2721 detected again?

YES >> Replace rear center sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END.

AV

B2722 CENTER SENSOR [RR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

B2722 CENTER SENSOR [RR]

DTC Description

INFOID:000000009727372

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
B2722	CENTER SENSOR [RL] (Center sensor rear-left)	SHORT-BAT (Short to battery)	Short circuit to power supply is detected in harness between sonar control unit and rear center sensor RH when ignition switch is turned ON.
		OPEN/SHORT-GND (Open/Short to ground)	Short circuit to ground or open circuit is detected in harness between sonar control unit and rear center sensor RH when ignition switch is turned ON.
		SENSOR (Sensor)	Rear center sensor RH malfunction is detected when ignition switch is turned ON.
		CONFIG ERROR (Configuration error)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

- Harness or connectors (Rear center sensor RH circuit)
- Rear center sensor RH
- Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧ With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B2722 detected?

YES (SHORT-BAT)>>Proceed to [AV-390, "SHORT-BAT : Diagnosis Procedure"](#).

YES (OPEN/SHORT-GND)>>Proceed to [AV-391, "OPEN/SHORT-GND : Diagnosis Procedure"](#).

YES (SENSOR)>>Proceed to [AV-392, "SENSOR : Diagnosis Procedure"](#).

YES (CONFIG ERROR)>>Proceed to [AV-392, "CONFIG ERROR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SHORT-BAT

SHORT-BAT : Diagnosis Procedure

INFOID:000000009727373

1.CHECK REAR CENTER SENSOR RH SIGNAL CIRCUIT FOR SHORT (1)

1. Turn ignition switch OFF.
2. Disconnect sonar control unit harness connector and rear center sensor RH connector.
3. Turn ignition switch ON.
4. Check the voltage between sonar control unit harness connector and ground.

B2722 CENTER SENSOR [RR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
Sonar control unit			
Connector	Terminal		
M76	9	Ground	0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR CENTER SENSOR RH SIGNAL CIRCUIT FOR SHORT (2)

Check the continuity between rear center sensor RH harness connector and ground.

Terminals			Continuity
(+)		(-)	
Rear center sensor RH			
Connector	Terminal		
B89	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace rear center sensor RH . Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

OPEN/SHORT-GND

OPEN/SHORT-GND : Diagnosis Procedure

INFOID:0000000009727374

1.CHECK REAR CENTER SENSOR RH SIGNAL CIRCUIT FOR OPEN

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

Sonar control unit		Rear center sensor RH		Continuity
Connector	Terminal	Connector	Terminal	
M76	9	B89	2	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR CENTER SENSOR RH SIGNAL CIRCUIT FOR SHORT

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

Terminals			Continuity
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	9	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

B2722 CENTER SENSOR [RR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3. CHECK REAR CENTER SENSOR RH GROUND CIRCUIT

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

Sonar control unit		Rear center sensor RH		Continuity
Connector	Terminal	Connector	Terminal	
M76	14	B89	1	Existed

Is the inspection result normal?

YES >> Replace rear center sensor RH . Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SENSOR

SENSOR : Diagnosis Procedure

INFOID:000000009727375

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-390. "DTC Description"](#).

Is DTC B2722 detected again?

YES >> Replace rear center sensor RH . Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END

CONFIG ERROR

CONFIG ERROR : Diagnosis Procedure

INFOID:000000009727376

1. PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377. "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-390. "DTC Description"](#).

Is DTC B2722 detected again?

YES >> Replace rear center sensor RH . Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END.

B2723 CORNER SENSOR [RR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

B2723 CORNER SENSOR [RR]

DTC Description

INFOID:000000009727377

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
B2723	CORNER SENSOR [RR] (Corner sensor rear-right)	SHORT-BAT (Short to battery)	Short circuit to power supply is detected in harness between sonar control unit and rear corner sensor RH when ignition switch is turned ON.
		OPEN/SHORT-GND (Open/Short to ground)	Short circuit to ground or open circuit is detected in harness between sonar control unit and rear corner sensor RH when ignition switch is turned ON.
		SENSOR (Sensor)	Rear corner sensor RH malfunction is detected when ignition switch is turned ON.
		CONFIG ERROR (Configuration error)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

- Harness or connectors (Rear corner sensor RH circuit)
- Rear corner sensor RH
- Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B2723 detected?

YES (SHORT-BAT)>>Proceed to [AV-393, "SHORT-BAT : Diagnosis Procedure"](#).

YES (OPEN/SHORT-GND)>>Proceed to [AV-394, "OPEN/SHORT-GND : Diagnosis Procedure"](#).

YES (SENSOR)>>Proceed to [AV-395, "SENSOR : Diagnosis Procedure"](#).

YES (CONFIG ERROR)>>Proceed to [AV-395, "CONFIG ERROR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SHORT-BAT

SHORT-BAT : Diagnosis Procedure

INFOID:000000009727378

1.CHECK REAR CORNER SENSOR RH SIGNAL CIRCUIT FOR SHORT (1)

1. Turn ignition switch OFF.
2. Disconnect sonar control unit harness connector and rear corner sensor RH harness connector.
3. Turn ignition switch ON.
4. Check the voltage between sonar control unit harness connector and ground.

B2723 CORNER SENSOR [RR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
Sonar control unit			
Connector	Terminal		
M76	10	Ground	0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR CORNER SENSOR RH SIGNAL CIRCUIT FOR SHORT (2)

Check the continuity between rear corner sensor RH harness connector and ground.

Terminals			Continuity
(+)		(-)	
Rear corner sensor RH			
Connector	Terminal		
B91	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace rear corner sensor RH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

OPEN/SHORT-GND

OPEN/SHORT-GND : Diagnosis Procedure

INFOID:000000009727379

1.CHECK REAR CORNER SENSOR RH SIGNAL CIRCUIT FOR OPEN

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

Sonar control unit		Rear corner sensor RH		Continuity
Connector	Terminal	Connector	Terminal	
M76	10	B91	2	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK REAR CORNER SENSOR RH SIGNAL CIRCUIT FOR SHORT

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

Terminals			Continuity
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	10	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

B2723 CORNER SENSOR [RR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3. CHECK REAR CORNER SENSOR RH GROUND CIRCUIT

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

Sonar control unit		Rear corner sensor RH		Continuity
Connector	Terminal	Connector	Terminal	
M76	14	B91	1	Existed

Is the inspection result normal?

YES >> Replace rear corner sensor RH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SENSOR

SENSOR : Diagnosis Procedure

INFOID:000000009727380

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-393. "DTC Description"](#).

Is DTC B2723 detected again?

YES >> Replace rear corner sensor RH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END

CONFIG ERROR

CONFIG ERROR : Diagnosis Procedure

INFOID:000000009727381

1. PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377. "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-393. "DTC Description"](#).

Is DTC B2723 detected again?

YES >> Replace rear corner sensor RH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END.

AV

B2724 SONAR CONTROL UNIT

DTC Description

INFOID:000000009727382

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B2724	SONAR CONTROL UNIT (Sonar control unit)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

ⓅWith CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B2724 detected?

YES >> Proceed to [AV-396, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727383

1.PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377, "CONFIGURATION \(SONAR CONTROL UNIT\): Work Procedure"](#).

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-396, "DTC Description"](#).

Is DTC B2724 detected again?

YES >> Replace sonar control unit. Refer to [AV-462, "Removal and Installation"](#).

NO >> INSPECTION END

B2729 CORNER SENSOR [FL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

B2729 CORNER SENSOR [FL]

DTC Description

INFOID:000000009727384

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
B2729	CORNER SENSOR [FL] (Corner sensor front-left)	SHORT-BAT (Short to battery)	Short circuit to power supply is detected in harness between sonar control unit and front corner sensor LH when ignition switch is turned ON.
		OPEN/SHORT-GND (Open/Short to ground)	Short circuit to ground or open circuit is detected in harness between sonar control unit and front corner sensor LH when ignition switch is turned ON.
		SENSOR (Sensor)	Front corner sensor LH malfunction is detected when ignition switch is turned ON.
		CONFIG ERROR (Configuration error)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

- Harness or connectors (Front corner sensor LH circuit)
- Front corner sensor LH
- Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B2729 detected?

YES (SHORT-BAT)>>Proceed to [AV-397, "SHORT-BAT : Diagnosis Procedure"](#).

YES (OPEN/SHORT-GND)>>Proceed to [AV-398, "OPEN/SHORT-GND : Diagnosis Procedure"](#).

YES (SENSOR)>>Proceed to [AV-399, "SENSOR : Diagnosis Procedure"](#).

YES (CONFIG ERROR)>>Proceed to [AV-399, "CONFIG ERROR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SHORT-BAT

SHORT-BAT : Diagnosis Procedure

INFOID:000000009727385

1.CHECK FRONT CORNER SENSOR LH SIGNAL CIRCUIT FOR SHORT (1)

1. Turn ignition switch OFF.
2. Disconnect sonar control unit harness connector and front corner sensor LH harness connector.
3. Turn ignition switch ON.
4. Check the voltage between sonar control unit harness connector and ground.

B2729 CORNER SENSOR [FL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
Sonar control unit			
Connector	Terminal		
M76	3	Ground	0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT CORNER SENSOR LH SIGNAL CIRCUIT FOR SHORT (2)

Check the continuity between front corner sensor LH harness connector ground.

Terminals			Continuity
(+)		(−)	
Front corner sensor LH			
Connector	Terminal		
E114	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace front corner sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

OPEN/SHORT-GND

OPEN/SHORT-GND : Diagnosis Procedure

INFOID:000000009727386

1.CHECK FRONT CORNER SENSOR LH SIGNAL CIRCUIT FOR OPEN

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

Sonar control unit		Front corner sensor LH		Continuity
Connector	Terminal	Connector	Terminal	
M76	3	E114	2	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT CORNER SENSOR LH SIGNAL CIRCUIT FOR SHORT

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

Terminals			Continuity
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	3	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

B2729 CORNER SENSOR [FL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3.CHECK FRONT CORNER SENSOR LH GROUND CIRCUIT

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

Sonar control unit		Front corner sensor LH		Continuity
Connector	Terminal	Connector	Terminal	
M76	13	E114	1	Existed

Is the inspection result normal?

YES >> Replace front corner sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SENSOR

SENSOR : Diagnosis Procedure

INFOID:000000009727387

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

④ With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-397. "DTC Description"](#).

Is DTC B2729 detected again?

YES >> Replace front corner sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END

CONFIG ERROR

CONFIG ERROR : Diagnosis Procedure

INFOID:000000009727388

1.PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377. "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-397. "DTC Description"](#).

Is DTC B2729 detected again?

YES >> Replace front corner sensor LH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END.

AV

B272A CENTER SENSOR [FL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

B272A CENTER SENSOR [FL]

DTC Description

INFOID:000000009727389

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
B272A	CENTER SENSOR [FL] (Center sensor front-left)	SHORT-BAT (Short to battery)	Short circuit to power supply is detected in harness between sonar control unit and front center sensor LH when ignition switch is turned ON.
		OPEN/SHORT-GND (Open/Short to ground)	Short circuit to ground or open circuit is detected in harness between sonar control unit and front center sensor LH when ignition switch is turned ON.
		SENSOR (Sensor)	Front center sensor LH malfunction is detected when ignition switch is turned ON.
		CONFIG ERROR (Configuration error)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

- Harness or connectors (Front center sensor LH circuit)
- Front center sensor LH
- Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧ With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B272A detected?

YES (SHORT-BAT)>>Proceed to [AV-400, "SHORT-BAT : Diagnosis Procedure"](#).

YES (OPEN/SHORT-GND)>>Proceed to [AV-401, "OPEN/SHORT-GND : Diagnosis Procedure"](#).

YES (SENSOR)>>Proceed to [AV-402, "SENSOR : Diagnosis Procedure"](#).

YES (CONFIG ERROR)>>Proceed to [AV-402, "CONFIG ERROR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SHORT-BAT

SHORT-BAT : Diagnosis Procedure

INFOID:000000009727390

1.CHECK FRONT CENTER SENSOR LH SIGNAL CIRCUIT FOR SHORT (1)

1. Turn ignition switch OFF.
2. Disconnect sonar control unit harness connector and front center sensor LH harness connector.
3. Turn ignition switch ON.
4. Check the voltage between sonar control unit harness connector and ground.

B272A CENTER SENSOR [FL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
Sonar control unit			
Connector	Terminal		
M76	2	Ground	0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT CENTER SENSOR LH SIGNAL CIRCUIT FOR SHORT (2)

Check the continuity between front center sensor LH harness connector and ground.

Terminals			Continuity
(+)		(-)	
Front center sensor LH			
Connector	Terminal		
E112	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace front center sensor LH. Refer to [AV-463. "FRONT CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

OPEN/SHORT-GND

OPEN/SHORT-GND : Diagnosis Procedure

INFOID:0000000009727391

1.CHECK FRONT CENTER SENSOR LH SIGNAL CIRCUIT FOR OPEN

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

Sonar control unit		Front center sensor LH		Continuity
Connector	Terminal	Connector	Terminal	
M76	2	E112	2	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT CENTER SENSOR LH SIGNAL CIRCUIT FOR SHORT

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

Terminals			Continuity
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	2	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

B272A CENTER SENSOR [FL]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3.CHECK FRONT CENTER SENSOR LH GROUND CIRCUIT

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

Sonar control unit		Front center sensor LH		Continuity
Connector	Terminal	Connector	Terminal	
M76	13	E112	1	Existed

Is the inspection result normal?

YES >> Replace front center sensor LH. Refer to [AV-463, "FRONT CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SENSOR

SENSOR : Diagnosis Procedure

INFOID:0000000009727392

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-400, "DTC Description"](#).

Is DTC B272A detected again?

YES >> Replace front center sensor LH. Refer to [AV-463, "FRONT CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END

CONFIG ERROR

CONFIG ERROR : Diagnosis Procedure

INFOID:0000000009727393

1.PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377, "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-400, "DTC Description"](#).

Is DTC B272A detected again?

YES >> Replace front center sensor LH. Refer to [AV-463, "FRONT CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END.

B272B CENTER SENSOR [FR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

B272B CENTER SENSOR [FR]

DTC Description

INFOID:000000009727394

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
B272B	CENTER SENSOR [FR] (Center sensor front-right)	SHORT-BAT (Short to battery)	Short circuit to power supply is detected in harness between sonar control unit and front center sensor RH when ignition switch is turned ON.
		OPEN/SHORT-GND (Open/Short to ground)	Short circuit to ground or open circuit is detected in harness between sonar control unit and front center sensor RH when ignition switch is turned ON.
		SENSOR (Sensor)	Front center sensor RH malfunction is detected when ignition switch is turned ON.
		CONFIG ERROR (Configuration error)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

- Harness or connectors (Front center sensor RH circuit)
- Front center sensor RH
- Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B272B detected?

YES (SHORT-BAT)>>Proceed to [AV-403, "SHORT-BAT : Diagnosis Procedure"](#).

YES (OPEN/SHORT-GND)>>Proceed to [AV-404, "OPEN/SHORT-GND : Diagnosis Procedure"](#).

YES (SENSOR)>>Proceed to [AV-405, "SENSOR : Diagnosis Procedure"](#).

YES (CONFIG ERROR)>>Proceed to [AV-405, "CONFIG ERROR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SHORT-BAT

SHORT-BAT : Diagnosis Procedure

INFOID:000000009727395

1.CHECK FRONT CENTER SENSOR RH SIGNAL CIRCUIT FOR SHORT (1)

1. Turn ignition switch OFF.
2. Disconnect sonar control unit harness connector and front center sensor RH harness connector.
3. Turn ignition switch ON.
4. Check the voltage between sonar control unit harness connector and ground.

B272B CENTER SENSOR [FR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	1	Ground	0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT CENTER SENSOR RH SIGNAL CIRCUIT FOR SHORT (2)

Check the continuity between front center sensor RH harness connector and ground.

Terminals			Continuity
(+)		(-)	
Front center sensor RH			
Connector	Terminal		
E113	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace front center sensor RH. Refer to [AV-463. "FRONT CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

OPEN/SHORT-GND

OPEN/SHORT-GND : Diagnosis Procedure

INFOID:0000000009727396

1.CHECK FRONT CENTER SENSOR RH SIGNAL CIRCUIT FOR OPEN

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

Sonar control unit		Front center sensor RH		Continuity
Connector	Terminal	Connector	Terminal	
M76	1	E113	2	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT CENTER SENSOR RH SIGNAL CIRCUIT FOR SHORT

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

Terminals			Continuity
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	1	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

B272B CENTER SENSOR [FR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3. CHECK FRONT CENTER SENSOR RH GROUND CIRCUIT

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

Sonar control unit		Front center sensor RH		Continuity
Connector	Terminal	Connector	Terminal	
M76	13	E113	1	Existed

Is the inspection result normal?

YES >> Replace front center sensor RH. Refer to [AV-463. "FRONT CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SENSOR

SENSOR : Diagnosis Procedure

INFOID:000000009727397

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-403. "DTC Description"](#).

Is DTC B272B detected again?

YES >> Replace front center sensor RH. Refer to [AV-463. "FRONT CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END

CONFIG ERROR

CONFIG ERROR : Diagnosis Procedure

INFOID:000000009727398

1. PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377. "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-403. "DTC Description"](#).

Is DTC B272B detected again?

YES >> Replace front center sensor RH. Refer to [AV-463. "FRONT CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END.

AV

B272C CORNER SENSOR [FR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

B272C CORNER SENSOR [FR]

DTC Description

INFOID:000000009727399

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)		Detecting condition
B272C	CORNER SENSOR [FR] (Corner sensor front-right)	SHORT-BAT (Short to battery)	Short circuit to power supply is detected in harness between sonar control unit and front corner sensor RH when ignition switch is turned ON.
		OPEN/SHORT-GND (Open/Short to ground)	Short circuit to ground or open circuit is detected in harness between sonar control unit and front corner sensor RH when ignition switch is turned ON.
		SENSOR (Sensor)	Front corner sensor RH malfunction is detected when ignition switch is turned ON.
		CONFIG ERROR (Configuration error)	Control unit setting of sonar control unit is incomplete or is not set normally.

POSSIBLE CAUSE

- Harness or connectors (front corner sensor RH circuit)
- front corner sensor RH
- Control unit setting of sonar control unit is incomplete

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④ With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
5. Check DTC.

Is DTC B272C detected?

YES (SHORT-BAT)>>Proceed to [AV-406, "SHORT-BAT : Diagnosis Procedure"](#).

YES (OPEN/SHORT-GND)>>Proceed to [AV-407, "OPEN/SHORT-GND : Diagnosis Procedure"](#).

YES (SENSOR)>>Proceed to [AV-408, "SENSOR : Diagnosis Procedure"](#).

YES (CONFIG ERROR)>>Proceed to [AV-408, "CONFIG ERROR : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SHORT-BAT

SHORT-BAT : Diagnosis Procedure

INFOID:000000009727400

1.CHECK FRONT CORNER SENSOR RH SIGNAL CIRCUIT FOR SHORT (1)

1. Turn ignition switch OFF.
2. Disconnect sonar control unit harness connector and front corner sensor RH harness connector.
3. Turn ignition switch ON.
4. Check the voltage between sonar control unit harness connector and ground.

B272C CORNER SENSOR [FR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
Sonar control unit			
Connector	Terminal		
M76	4	Ground	0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT CORNER SENSOR RH SIGNAL CIRCUIT FOR SHORT (2)

Check the continuity between front corner sensor RH harness connector and ground.

Terminals			Continuity
(+)		(-)	
Front corner sensor RH			
Connector	Terminal		
E115	2	Ground	Not existed

Is the inspection result normal?

YES >> Replace front corner sensor RH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

OPEN/SHORT-GND

OPEN/SHORT-GND : Diagnosis Procedure

INFOID:0000000009727401

1.CHECK FRONT CORNER SENSOR RH SIGNAL CIRCUIT FOR OPEN

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

Sonar control unit		Front corner sensor RH		Continuity
Connector	Terminal	Connector	Terminal	
M76	4	E115	2	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK FRONT CORNER SENSOR RH SIGNAL CIRCUIT FOR SHORT

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

Terminals			Continuity
(+)		(-)	
Sonar control unit			
Connector	Terminal		
M76	4	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

B272C CORNER SENSOR [FR]

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3. CHECK FRONT CORNER SENSOR RH GROUND CIRCUIT

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

Sonar control unit		Front corner sensor RH		Continuity
Connector	Terminal	Connector	Terminal	
M76	13	E115	1	Existed

Is the inspection result normal?

YES >> Replace front corner sensor RH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SENSOR

SENSOR : Diagnosis Procedure

INFOID:0000000009727402

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-406. "DTC Description"](#).

Is DTC B272C detected again?

YES >> Replace front corner sensor RH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END

CONFIG ERROR

CONFIG ERROR : Diagnosis Procedure

INFOID:0000000009727403

1. PERFORM CONFIGURATION OF SONAR CONTROL UNIT

Perform configuration of sonar control unit. Refer to [AV-377. "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-406. "DTC Description"](#).

Is DTC B272C detected again?

YES >> Replace front corner sensor RH. Refer to [AV-465. "CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation"](#).

NO >> INSPECTION END.

U0428 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U0428 STEERING ANGLE SENSOR

DTC Description

INFOID:000000009727404

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U0428	ST ANGLE SENSOR CALIBRATION (Steering angle sensor calibration)	The neutral position adjustment of the steering angle sensor is incomplete.

POSSIBLE CAUSE

Neutral position adjustment of steering angle sensor is not complete

FAIL-SAFE

- Predicted course line is not displayed
- MOD (Moving Object Detection) function is stopped
- Front tire angle display is stopped
- Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC U0428 is displayed with DTC U1232, first perform the confirmation procedure (trouble diagnosis) for DTC U1232.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. Refer to [AV-427, "DTC Description"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U0428 detected?

- YES >> Proceed to [AV-409, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727405

1.ADJUST THE NEUTRAL POSITION OF THE STEERING ANGLE SENSOR

When U0428 is detected, adjust the neutral position of the steering angle sensor.
Perform adjustment of the neutral position of the steering angle sensor. Refer to [BRC-70, "Work Procedure"](#).

CAUTION:

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

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-409, "DTC Description"](#).

Is DTC U0428 detected again?

- YES >> Replace steering angle sensor. Refer to [AV-468, "Removal and Installation"](#).
NO >> INSPECTION END

U1000 CAN COMM CIRCUIT**AROUND VIEW MONITOR CONTROL UNIT****AROUND VIEW MONITOR CONTROL UNIT : DTC Description**

INFOID:000000009727406

DESCRIPTION

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-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart"](#).

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	Around view monitor control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following functions are stopped

- When communication of steering angle sensor signal is not normal
 - Predicted course line is not displayed
 - MOD (Moving Object Detection) function is stopped
 - Front tire angle display is stopped
 - Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed
- When communication of vehicle signal, wheel speed sensor signal, and shift signal is not normal
 - Predicted course line is not displayed
 - MOD (Moving Object Detection) function is stopped.
 - Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed
- When communication of sonar signal is not normal
 - Predicted course line is not displayed

DTC CONFIRMATION PROCEDURE**1.PERFORM DTC CONFIRMATION PROCEDURE****ⒺWith CONSULT**

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 2 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U1000 detected?

- YES >> Proceed to [AV-410, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:000000009727407

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN**ⒺWith CONSULT**

1. Turn ignition switch ON.

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

- Erase DTC.
- Perform DTC confirmation procedure again. Refer to [AV-410, "AROUND VIEW MONITOR CONTROL UNIT : DTC Description"](#).

Is DTC U1000 detected again?

YES >> Perform the trouble diagnosis for CAN communication system. Refer to [LAN-26, "Trouble Diagnosis Flow Chart"](#).

NO >> INSPECTION END

SONAR CONTROL UNIT

SONAR CONTROL UNIT : DTC Description

INFOID:000000009727408

DESCRIPTION

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-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart"](#).

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	Sonar control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④With CONSULT

- Turn ignition switch ON.
- Turn ignition switch OFF and wait at least 30 seconds.
- Turn ignition switch ON and wait at least 2 seconds or more.
- Select "Self Diagnostic Result" mode of "SONAR" using CONSULT.
- Check DTC.

Is DTC U1000 detected?

YES >> Proceed to [AV-411, "SONAR CONTROL UNIT : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SONAR CONTROL UNIT : Diagnosis Procedure

INFOID:000000009727409

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

④With CONSULT

- Turn ignition switch ON.
- Erase DTC.
- Perform DTC confirmation procedure again. Refer to [AV-411, "SONAR CONTROL UNIT : DTC Description"](#).

Is DTC U1000 detected again?

YES >> Perform the trouble diagnosis for CAN communication system. Refer to [LAN-26, "Trouble Diagnosis Flow Chart"](#).

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

NO >> INSPECTION END

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U1010 CONTROL UNIT (CAN)

AROUND VIEW MONITOR CONTROL UNIT

AROUND VIEW MONITOR CONTROL UNIT : DTC Description

INFOID:0000000009727410

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	Malfunction is detected during initial diagnosis of the around view monitor control unit CAN controller.

POSSIBLE CAUSE

Around view monitor control unit

FAIL-SAFE

Around view monitor system does not function

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 2 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U1010 detected?

YES >> Proceed to [AV-413, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:0000000009727411

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-413, "AROUND VIEW MONITOR CONTROL UNIT : DTC Description"](#).

Is DTC U1010 detected again?

YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

NO >> INSPECTION END

SONAR CONTROL UNIT

SONAR CONTROL UNIT : DTC Description

INFOID:0000000009727412

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	Malfunction is detected during initial diagnosis of the sonar control unit CAN controller.

POSSIBLE CAUSE

Sonar control unit

FAIL-SAFE

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Warning buzzer function is deactivated

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

⑧ With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 2 seconds or more.
4. Select "Self Diagnostic Result" mode of "SONAR using CONSULT.
5. Check DTC.

Is DTC U1010 detected?

YES >> Proceed to [AV-414, "SONAR CONTROL UNIT : Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

SONAR CONTROL UNIT : Diagnosis Procedure

INFOID:000000009727413

1. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

⑧ With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-413, "SONAR CONTROL UNIT : DTC Description"](#).

Is DTC U1010 detected again?

YES >> Replace sonar control unit. Refer to [AV-462, "Removal and Installation"](#).

NO >> INSPECTION END

U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

DTC Description

INFOID:000000009727414

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U111A	REAR CAMERA IMAGE SIGNAL (Rear camera image signal)	Rear camera image signal circuit is open or shorted.

POSSIBLE CAUSE

Rear camera image signal circuit

FAIL-SAFE

Camera image is not displayed (Gray screen display)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U111A detected?

YES >> Proceed to [AV-415. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727415

1.CHECK CONTINUITY REAR CAMERA POWER SUPPLY AND GROUND CIRCUIT

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

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
B51	50	T50	8	Existed
	52		7	

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	50		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK VOLTAGE REAR CAMERA POWER SUPPLY

1. Connect around view monitor control unit connector and rear camera connector.

U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

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

Terminals			Condition	Voltage (Approx.)
(+)		(−)		
Around view monitor control unit				
Connector	Terminal			
B51	50	Ground	"CAMERA" switch is ON or shift position is "R".	6.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

3.CHECK CONTINUITY REAR CAMERA IMAGE SIGNAL CIRCUIT

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

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
B51	53	T51	5	Existed
	54		1	

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	53		Not existed
	54		

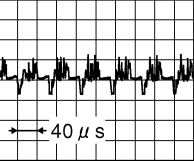
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK REAR CAMERA IMAGE SIGNAL

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

Around view monitor control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
B51	53	54	“CAMERA” switch is ON or shift position is “R”.	(V)  JSNIA0834GB

Is the inspection result normal?

U111A REAR CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).
NO >> Replace rear camera. Refer to [AV-461, "Removal and Installation"](#).

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U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

DTC Description

INFOID:000000009727416

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U111B	SIDE CAMERA RH IMAGE SIGNAL (Side camera right image signal)	Side camera RH image signal circuit is open or shorted.

POSSIBLE CAUSE

Side camera RH image signal circuit

FAIL-SAFE

Camera image is not displayed (Gray screen display)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U111B detected?

YES >> Proceed to [AV-418. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727417

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

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

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B51	62	D57	6	Existed
	64		18	

4. Check continuity between door mirror (passenger side) connector harness connector and ground.

Door mirror (passenger side)		Ground	Continuity
Connector	Terminal		
D57	6		Not existed
	18		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK VOLTAGE SIDE CAMERA RH POWER SUPPLY

U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

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

Terminals			Condition	Voltage (Approx.)
(+)		(-)		
Around view monitor control unit				
Connector	Terminal			
B51	62	Ground	“CAMERA” switch is ON or shift position is “R”.	6.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

3.CHECK CONTINUITY SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

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

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B51	65	D57	5	Existed
	66		17	

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	65		Not existed
	66		

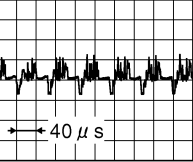
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK SIDE CAMERA RH IMAGE SIGNAL

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

Around view monitor control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
B51	65	66	“CAMERA” switch is ON or shift position is “R”.	(V)  JSNIA0834GB

U111B SIDE CAMERA RH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Is the inspection result normal?

- YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).
- NO >> Replace side camera RH. Refer to [AV-460, "Removal and Installation"](#).

U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

DTC Description

INFOID:000000009727418

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U111C	FRONT CAMERA IMAGE SIGNAL (Front camera image signal)	Front camera image signal circuit is open or shorted.

POSSIBLE CAUSE

Front camera image signal circuit

FAIL-SAFE

Camera image is not displayed (Gray screen display)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U111C detected?

YES >> Proceed to [AV-421. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: [GI-43. "Intermittent Incident"](#)

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727419

1.CHECK CONTINUITY FRONT CAMERA POWER SUPPLY AND GROUND CIRCUIT

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

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
B51	68	E116	1	Existed
	70		2	

4. Check continuity between front camera harness connector and ground.

Front camera		Ground	Continuity
Connector	Terminal		
E116	1		Not existed
	2		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK VOLTAGE FRONT CAMERA POWER SUPPLY

1. Connect around view monitor control unit connector and front camera connector.

U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

- Turn ignition switch ON.
- Check voltage between around view monitor control unit harness connector.

Around view monitor control unit			Condition	Voltage (Approx.)
Connector	Terminals			
	(+)	(-)		
	Terminal			
B51	68	70	“CAMERA” switch is ON or shift position is “R”.	6.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

3.CHECK CONTINUITY FRONT CAMERA IMAGE SIGNAL CIRCUIT

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

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
B51	71	E116	3	Existed
	72		4	

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	71		Not existed
	72		

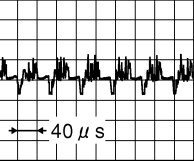
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK FRONT CAMERA IMAGE SIGNAL

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

Around view monitor control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
B51	71	72	“CAMERA” switch is ON or shift position is “R”.	(V)  40 μs JSNIA0834GB

Is the inspection result normal?

U111C FRONT CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

- YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).
NO >> Replace front camera. Refer to [AV-459, "Removal and Installation"](#).

A

B

C

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U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

DTC Description

INFOID:000000009727420

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U111D	SIDE CAMERA LH IMAGE SIGNAL (Side camera left image signal)	Side camera LH image signal circuit is open or shorted.

POSSIBLE CAUSE

Side camera LH image signal circuit

FAIL-SAFE

Camera image is not displayed (Gray screen display).

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U111D detected?

YES >> Proceed to [AV-424. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727421

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

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

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
B51	56	D56	6	Existed
	58		18	

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

Door mirror (driver side)		Ground	Continuity
Connector	Terminal		
D56	6		Not existed
	18		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK VOLTAGE SIDE CAMERA LH POWER SUPPLY

1. Connect around view monitor control unit connector and door mirror (driver side) connector.

U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

- Turn ignition switch ON.
- Check voltage between around view monitor control unit harness connector and ground.

Around view monitor control unit			Condition	Voltage (Approx.)
Connector	Terminals			
	(+)	(-)		
	Terminal			
B51	56	58	"CAMERA" switch is ON or shift position is "R".	6.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

3.CHECK CONTINUITY SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

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

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminals	Connector	Terminals	
B51	59	D56	5	Existed
	60		17	

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

Door mirror (driver side)		Ground	Continuity
Connector	Terminals		
D56	5		Not existed
	17		

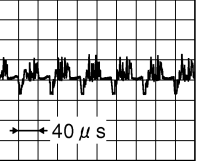
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK SIDE CAMERA LH IMAGE SIGNAL

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

Around view monitor control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
B268	59	60	“CAMERA” switch is ON or shift position is “R”.	(V)  JSNIA0834GB

Is the inspection result normal?

U111D SIDE CAMERA LH IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

- YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).
NO >> Replace side camera LH. Refer to [AV-460, "Removal and Installation"](#).

U1232 STEERING ANGLE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U1232 STEERING ANGLE SENSOR

DTC Description

INFOID:000000009727422

DESCRIPTION

Steering angle sensor is connected to the display control unit and transmits the steering angle signal via CAN communication.

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1232	ST ANGLE SEN CALIB (Steering angle sensor calibration)	Predictive course line center position adjustment of the steering angle sensor is incomplete.

POSSIBLE CAUSE

Predictive course line center position adjustment of the steering angle sensor is incomplete

FAIL-SAFE

- Predicted course line is not displayed
- MOD (Moving Object Detection) function is stopped
- Tire icon is stopped
- Using "SETTING" menu display, switch each indicator of predicted course line display and MOD switch to "OFF" (turn OFF) so that switch operation cannot be performed

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U1232 detected?

- YES >> Proceed to [AV-427, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727423

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

Adjusts the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to [BRC-70, "Work Procedure"](#).

NOTE:

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

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-427, "DTC Description"](#).

Is DTC U1232 detected again?

- YES >> Replace steering angle sensor. Refer to [AV-468, "Removal and Installation"](#).
NO >> INSPECTION END

U1302 CAMERA POWER VOLT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U1302 CAMERA POWER VOLT

DTC Description

INFOID:000000009727424

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1302	CAMERA POWER VOLT (Camera power voltage)	Camera power supply voltage does not satisfy the following conditions for 2 seconds or more when ignition switch is turned ON. - When camera power supply output is ON: 5.9 – 6.5 V. - When OFF: 0 V by camera power supply measurement.

POSSIBLE CAUSE

- Short circuit to battery or short circuit to ground of camera power supply output circuit.
- Around view monitor control unit

FAIL-SAFE

Camera power output is stopped

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U1302 detected?

- YES >> Proceed to [AV-428, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727425

1.CHECK AROUND VIEW MONITOR CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check around view monitor control unit power supply and ground circuit. Refer to [AV-435, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

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

2.CHECK REAR CAMERA POWER SUPPLY OUTPUT CIRCUIT (CHECK FOR SHORT CIRCUIT)

1. Disconnect around view monitor control unit connector and rear camera connector.
2. Check whether or not continuity between around view monitor control unit harness connector and ground is normal.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	50		Not existed

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Repair the harnesses or connectors.

3.CHECK REAR CAMERA POWER SUPPLY 1

1. Connect around view monitor control unit connector.
2. Turn ignition switch ON.

U1302 CAMERA POWER VOLT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3. Check whether or not voltage between around view monitor control unit harness connectors is normal.

Around view monitor control unit			Reference value (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
B51	50	52	6.0 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

4.CHECK REAR CAMERA POWER SUPPLY 2

1. Turn ignition switch OFF.
2. Connect rear camera connector.
3. Turn ignition switch ON.
4. Check whether or not voltage between around view monitor control unit harness connectors is normal.

Around view monitor control unit			Reference value (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
B51	50	52	6.0 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace rear camera. Refer to [AV-461, "Removal and Installation"](#).

5.CHECK FRONT CAMERA POWER SUPPLY OUTPUT CIRCUIT (CHECK FOR SHORT CIRCUIT)

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and front camera connector.
3. Check whether or not continuity between around view monitor control unit harness connector and ground is normal.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	68		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

6.CHECK FRONT CAMERA POWER SUPPLY 1

1. Connect around view monitor control unit connector.
2. Turn ignition switch ON.
3. Check whether or not voltage between around view monitor control unit harness connectors is normal.

Around view monitor control unit			Reference value (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
B51	68	70	6.0 V

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

U1302 CAMERA POWER VOLT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

7. CHECK FRONT CAMERA POWER SUPPLY 2.

1. Turn ignition switch OFF.
2. Connect front camera connector.
3. Turn ignition switch ON.
4. Check whether or not voltage between around view monitor control unit harness connectors is normal.

Around view monitor control unit			Reference value (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
B51	68	70	6.0 V

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace front camera. Refer to [AV-459, "Removal and Installation"](#).

8. CHECK SIDE CAMERA RH POWER SUPPLY OUTPUT CIRCUIT (CHECK FOR SHORT CIRCUIT)

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and door mirror (driver side) connector.
3. Check whether or not continuity between around view monitor control unit harness connector and ground is normal.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	62		Not existed

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair the harnesses or connectors.

9. CHECK SIDE CAMERA RH POWER SUPPLY 1

1. Connect around view monitor control unit connector.
2. Turn ignition switch ON.
3. Check whether or not voltage between around view monitor control unit harness connectors is normal.

Around view monitor control unit			Reference value (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
B51	62	64	6.0 V

Is the inspection result normal?

YES >> GO TO 10.

NO >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

10. CHECK SIDE CAMERA RH POWER SUPPLY 2

1. Turn ignition switch OFF.
2. Connect door mirror (driver side) connector.
3. Turn ignition switch ON.
4. Check whether or not voltage between around view monitor control unit harness connectors is normal.

U1302 CAMERA POWER VOLT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Around view monitor control unit			Reference value (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
B51	62	64	6.0 V

Is the inspection result normal?

YES >> GO TO 11.

NO >> Replace side camera RH. Refer to [AV-460, "Removal and Installation"](#).

11.CHECK SIDE CAMERA LH POWER SUPPLY OUTPUT CIRCUIT (CHECK FOR SHORT CIRCUIT)

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit connector and door mirror (passenger side) connector.
3. Check whether or not continuity between around view monitor control unit harness connector and ground is normal.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	56		Not existed

Is the inspection result normal?

YES >> GO TO 12.

NO >> Repair the harnesses or connectors.

12.CHECK SIDE CAMERA LH POWER SUPPLY 1

1. Connect around view monitor control unit connector.
2. Turn ignition switch ON.
3. Check whether or not voltage between around view monitor control unit harness connectors is normal.

Around view monitor control unit			Reference value (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
B51	56	58	6.0 V

Is the inspection result normal?

YES >> GO TO 13.

NO >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

13.CHECK SIDE CAMERA LH POWER SUPPLY 2

1. Turn ignition switch OFF.
2. Connect door mirror (passenger side) connector.
3. Turn ignition switch ON.
4. Check whether or not voltage between around view monitor control unit harness connectors is normal.

Around view monitor control unit			Reference value (Approx.)
Connector	Terminals		
	(+)	(-)	
	Terminal		
B51	56	58	6.0 V

Is the inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

NO >> Replace side camera LH. Refer to [AV-460, "Removal and Installation"](#).

U1303 LED POWER SUPPLY VOLT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U1303 LED POWER SUPPLY VOLT

DTC Description

INFOID:000000009727426

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1303	LED POWER SUPPLY VOLT (LED power supply voltage)	The following condition of the supplemental lighting supply voltage is not satisfied for continuously 2 seconds or more when turning the ignition switch ON. • Supplemental lighting supply output ON: 5.2 - 5.8 V

NOTE:

This vehicle is equipped with a supplemental lighting supply output circuit but not a supplemental light

POSSIBLE CAUSE

- Short circuit to battery or short circuit to ground of supplemental lighting output circuit
- Around view monitor control unit

FAIL-SAFE

None

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U1303 detected?

- YES >> Proceed to [AV-432, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727427

1.DTC CONFIRMATION PROCEDURE AGAIN

With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-432, "DTC Description"](#).

Is DTC U1303 detected again?

- YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).
- NO >> INSPECTION END

U1304 CAMERA IMAGE CALIBRATION

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

U1304 CAMERA IMAGE CALIBRATION

DTC Description

INFOID:000000009727428

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1304	CAMERA IMAGE CALIB (Camera image calibration)	Camera calibration is incomplete. NOTE: Current malfunction is displayed only and is not saved.

POSSIBLE CAUSE

Camera calibration is incomplete

FAIL-SAFE

Unmatched icon  display (red) is displayed (applicable for unmatched camera only)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U1304 detected?

- YES >> Proceed to [AV-433, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727429

1.PERFORM CALIBRATING CAMERA IMAGE

Perform camera calibration. Refer to [AV-378, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Description"](#).

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-433, "DTC Description"](#).

Is DTC U1304 detected again?

- YES >> Replace malfunctioning camera.
NO >> INSPECTION END

AV

U1305 CONFIG UNFINISH

DTC Description

INFOID:000000009727430

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1305	CONFIG UNFINISH (Configuration unfinish)	The vehicle setting of around view monitor control unit is incomplete. NOTE: Current malfunction is displayed only and is not saved.

POSSIBLE CAUSE

The vehicle setting of around view monitor control unit is incomplete

FAIL-SAFE

Operation is according to the vehicle setting value as default value

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "AVM" using CONSULT.
5. Check DTC.

Is DTC U1305 detected?

- YES >> Proceed to [AV-434, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009727431

1.PERFORM CONFIGURATION OF AROUND VIEW MONITOR CONTROL UNIT

Perform configuration of around view monitor control unit. Refer to [AV-376, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Work Procedure"](#).

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

Perform DTC confirmation procedure again. Refer to [AV-434, "DTC Description"](#).

Is DTC U1305 detected again?

- YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).
 NO >> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

AROUND VIEW MONITOR CONTROL UNIT

AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure

INFOID:000000009755023

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

Power source	Fuse No.	Capacity
Battery	#7	15 A
Ignitions switch ACC	#1	10 A
Ignition switch ON	#14	5 A

Is the fuse fusing?

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

2.CHECK POWER SUPPLY CIRCUITS

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

Signal name	Terminals		Ignition switch position	Value (Approx.)	
	(+)				(−)
	Around view monitor control unit				
	Connector	Terminal			
Battery power supply	B50	2	Ground	OFF	Battery voltage
ACC power supply		4		ACC	
Ignition signal		3		ON	

Is inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Terminals			Continuity
(+)		(−)	
Around view monitor control unit			
Connector	Terminal		
B50	1	Ground	Existed

Is inspection result normal?

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

SONAR CONTROL UNIT

SONAR CONTROL UNIT : Diagnosis Procedure

INFOID:000000009755022

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Power source	Fuse No.	Capacity
Ignition switch ON	#14	5 A

Is the fuse fusing?

YES >> Replace fuse after repairing the applicable circuit.

NO >> GO TO 2.

2.CHECK IGNITION POWER SUPPLY CIRCUIT

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

Terminals			Voltage
(+) Sonar control unit		(-)	
Connector	Terminal		
M76	12		
		Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair sonar control unit power supply harness.

3.CHECK GROUND CIRCUIT

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

Terminals			Continuity
(+) Sonar control unit		(−)	
Connector	Terminal		
M76	15		
		Ground	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair sonar control unit ground harness.

CAMERA IMAGE SIGNAL CIRCUIT (WITH AROUND VIEW MONITOR)

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

CAMERA IMAGE SIGNAL CIRCUIT (WITH AROUND VIEW MONITOR)

Description

INFOID:000000009727432

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

Diagnosis Procedure

INFOID:000000009727433

1.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT FOR OPEN

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

Display control unit		Around view monitor control unit		Continuity
Connector	Terminal	Connector	Terminal	
M101	38	B51	47	Existed
	58		48	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT FOR SHORT

Check continuity between display control unit harness connector and ground.

Display control unit		Ground	Continuity
Connector	Terminal		
M101	58		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK CAMERA IMAGE SIGNAL

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

Terminals		(-)	Condition	Reference value
(+)				
Display control unit				
Connector	Terminal			
M101	58	Ground	At camera image is displayed.	(V)

Is the inspection result normal?

YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).

CAMERA IMAGE SIGNAL CIRCUIT (WITH AROUND VIEW MONITOR)

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

NO >> Replace around view monitor control unit. Refer to [AV-458. "Removal and Installation"](#).

CAMERA SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

CAMERA SWITCH SIGNAL CIRCUIT

Description

INFOID:000000009727434

- The camera switch signal is output to integral switch when the camera switch of multifunction switch is pressed.
- The integral switch transmits camera switch signal to the display control unit.
- The display control unit transmits camera switch signal via AV communication to the around view monitor control unit.

Component Function Check

INFOID:000000009727435

1.CHECK CAMERA SWITCH SIGNAL

 With CONSULT

1. Turn ignition ON.
2. Select "CAMERA SWITCH SIGNAL" in "DATA MONITOR" mode of "AVM" using CONSULT.
3. Check "CAMERA SWITCH SIGNAL" indication as per the following condition.

Monitor item	Condition		Indication
CAMERA SWITCH SIGNAL	Camera switch	Press	On
		Except above	Off

Is the inspection result normal?

YES >> INSPECTION END

NO >> Proceed to [AV-439, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727436

1.CHECK CAMERA SWITCH INPUT SIGNAL OF DISPLAY CONTROL UNIT

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

Terminals			Condition		Voltage (Approx.)
(+)		(-)			
Display control unit					
Connector	Terminal				
M100	26	Ground	Camera switch	ON	0 – 2.5 V
				OFF	3.0 V

Is the inspection result normal?

YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK CAMERA SWITCH INPUT SIGNAL OF INTEGRAL SWITCH

Check the voltage between integral switch harness connector and ground.

Terminals		(-)	Condition		Voltage (Approx.)
(+)					
Integral switch					
Connector	Terminal				
M1	19	Ground	Camera switch	ON	0 – 2.5 V
				OFF	3.0 V

Is the inspection result normal?

YES >> GO TO 3.

CAMERA SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

NO >> GO TO 5.

3. CHECK CAMERA SWITCH INPUT SIGNAL CIRCUIT OF DISPLAY CONTROL UNIT FOR OPEN

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

Display control unit		Integral switch		Continuity
Connector	Terminal	Connector	Terminal	
M100	26	M1	19	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4. CHECK CAMERA SWITCH INPUT SIGNAL CIRCUIT OF DISPLAY CONTROL UNIT FOR SHORT

Check the continuity between display control unit harness connector and ground.

Display control unit		Ground	Continuity
Connector	Terminal		
M100	26		Not existed

Is the inspection result normal?

YES >> Replace integral switch. Refer to [AV-280. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

5. CHECK CAMERA SWITCH INPUT SIGNAL CIRCUIT OF INTEGRAL SWITCH FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect integral switch harness connector and multifunction switch harness connector.
3. Check the continuity between integral switch harness connector and multifunction switch harness connector.

Integral switch		Multifunction switch		Continuity
Connector	Terminal	Connector	Terminal	
M3	39	M55	10	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace malfunctioning parts.

6. CHECK CAMERA SWITCH INPUT SIGNAL CIRCUIT OF INTEGRAL SWITCH FOR SHORT

Check the continuity between integral switch harness connector and ground.

Integral switch		Ground	Continuity
Connector	Terminal		
M3	39		Not existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace malfunctioning parts.

7. CHECK MULTIFUNCTION SWITCH

Check multifunction switch. Refer to [AV-441. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace multifunction switch. Refer to [AV-281. "Removal and Installation"](#).

CAMERA SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

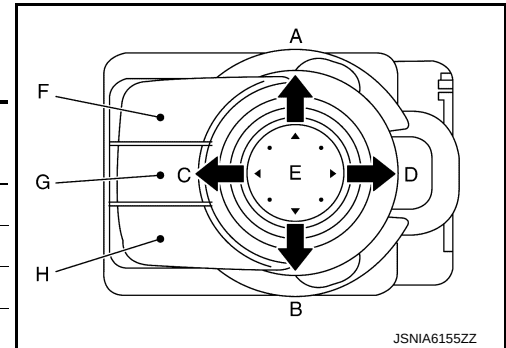
Component Inspection

INFOID:000000009759618

1.CHECK MULTIFUNCTION SWITCH (1)

1. Turn ignition switch OFF.
2. Disconnect multifunction switch harness connector.
3. Check the resistance between multifunction switch terminals as per the following condition.

Terminal		Switch position	Resistance (Ω)
(+)	(-)		
1	2	All OFF	4632 - 4868
		E	390.1 - 410.1
		F	45.3 - 47.7
4		All OFF	4632 - 4868
		A	605.1 - 636.2
		B	211.2 - 222.0
10		G	45.3 - 47.7
		All OFF	4632 - 4868
		C	605.1 - 636.2
		D	211.2 - 222.0
		H	45.3 - 47.7



Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace multifunction switch. Refer to [AV-281, "Removal and Installation"](#).

2.CHECK MULTIFUNCTION SWITCH (2)

1. Reconnect all harness connectors disconnected.
2. Turn ignition switch ON.
3. Check the voltage between integral switch harness connector terminals as per the following condition.

Integral switch			Condition		Voltage (Approx.)
Connector	Terminals				
	(+)	(-)			
	Terminal				
M3	32	31	Multifunction switch	Rotate	2.0 - 4.3 V
	37				

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace multifunction switch. Refer to [AV-281, "Removal and Installation"](#).

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AV

FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:000000009727441

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

Component Function Check

INFOID:000000009727442

1.CHECK FRONT CAMERA COMMUNICATION STATUS

Ⓢ WITH CONSULT

1. Turn ignition switch ON.
2. Select "F-CAMERA COMM STATUS" in "DATA MONITOR" mode of "AVM" using CONSULT.
3. Check "F-CAMERA COMM STATUS" indication as per the following condition.

Monitor item	Condition	Indication
F-CAMERA COMM STATUS	Front camera image is displayed	OK

NOTE:

Refer to [AV-308. "System Description"](#) for around view monitor operation.

Is the inspection result normal?

YES >> INSPECTION END

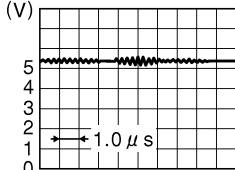
NO >> Proceed to [AV-442. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727443

1.CHECK COMMUNICATION SIGNAL

1. Turn ignition switch ON.
2. Check the signal between around view monitor control unit harness connector and ground.

Terminals		(-)	Condition	Reference value
(+)				
Around view monitor control unit				
Connector	Terminal			
B51	67	Ground	“CAMERA” switch is ON or shift position is “R”.	(V) 

JSNIA0836GB

JSNIA0836GB

Is the inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-458. "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT FOR OPEN

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

FRONT CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Around view monitor control unit		Front camera		Continuity
Connector	Terminal	Connector	Terminal	
B51	67	E116	6	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT FOR SHORT

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	67		Not existed

Is inspection result normal?

YES >> Replace front camera. Refer to [AV-459, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

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AV

SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:000000009727444

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

Component Function Check

INFOID:000000009727445

1.CHECK SIDE CAMERA LH COMMUNICATION STATUS

Ⓐ WITH CONSULT

1. Turn ignition switch ON.
2. Select "DR-SIDE CAMERA COMM STATUS" in "DATA MONITOR" mode of "AVM" using CONSULT.
3. Check "DR-SIDE CAMERA COMM STATUS" indication as per the following condition.

Monitor item	Condition	Indication
DR-SIDE CAMERA COMM STATUS	Side camera LH image is displayed	OK

NOTE:

Refer to [AV-308. "System Description"](#) for around view monitor operation.

Is the inspection result normal?

YES >> INSPECTION END

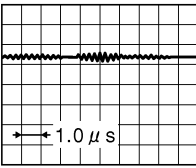
NO >> Proceed to [AV-444. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727446

1.CHECK COMMUNICATION SIGNAL

1. Turn ignition switch ON.
2. Check the signal between around view monitor control unit harness connector and ground.

Terminals		(-)	Condition	Reference value
(+)				
Around view monitor control unit				
Connector	Terminal			
B51	55	Ground	“CAMERA” switch is ON or shift position is “R”.	(V)  JSNIA0836GB

Is the inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-458. "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT FOR OPEN

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

SIDE CAMERA LH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3. Check the continuity between around view monitor control unit harness connector and door mirror (driver side) harness connector.

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
B51	55	D56	3	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT FOR SHORT

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	55		Not existed

Is the inspection result normal?

YES >> Replace side camera LH. Refer to [AV-460. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

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SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:000000009727450

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

Component Function Check

INFOID:000000009727451

1.CHECK SIDE CAMERA RH COMMUNICATION STATUS

Ⓐ WITH CONSULT

1. Turn ignition switch ON.
2. Select "PA-SIDE CAMERA COMM STATUS" in "DATA MONITOR" mode of "AVM" using CONSULT.
3. Check "PA-SIDE CAMERA COMM STATUS" indication as per the following condition.

Monitor item	Condition	Indication
PA-SIDE CAMERA COMM STATUS	Side camera RH image is displayed	OK

NOTE:

Refer to [AV-308. "System Description"](#) for around view monitor operation.

Is the inspection result normal?

YES >> INSPECTION END

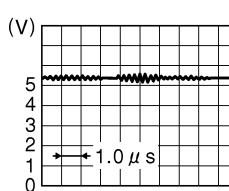
NO >> Proceed to [AV-446. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727452

1.CHECK COMMUNICATION SIGNAL

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

Terminals		(-)	Condition	Reference value
(+)				
Around view monitor control unit				
Connector	Terminal			
B51	61	Ground	“CAMERA” switch is ON or shift position is “R”.	(V)  JSNIA0836GB

Is the inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-458. "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

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

SIDE CAMERA RH COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

3. Check the continuity between around view monitor control unit harness connector and door mirror (passenger side) harness connector.

Around view monitor control unit		Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
B51	61	D57	3	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	61		Not existed

Is the inspection result normal?

YES >> Replace side camera RH. Refer to [AV-460. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

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AV

REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:000000009727456

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

Component Function Check

INFOID:000000009727457

1.CHECK REAR CAMERA COMMUNICATION STATUS

ⓈWITH CONSULT

1. Turn ignition switch ON.
2. Select "R-CAMERA COMM STATUS" in "DATA MONITOR" mode of "AVM" using CONSULT.
3. Check "R-CAMERA COMM STATUS" indication as per the following condition.

Monitor item	Condition	Indication
R-CAMERA COMM STATUS	Rear camera image is displayed	OK

NOTE:

Refer to [AV-308. "System Description"](#) for around view monitor operation.

Is the inspection result normal?

YES >> INSPECTION END

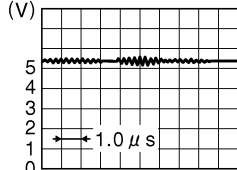
NO >> Proceed to [AV-448. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727458

1.CHECK COMMUNICATION SIGNAL

1. Turn ignition switch ON.
2. Check the signal between around view monitor control unit harness connector and ground.

Terminals		(-)	Condition	Reference value
(+)				
Around view monitor control unit				
Connector	Terminal			
B51	49	Ground	"CAMERA" switch is ON or shift position is "R".	(V)  JSNIA0836GB

Is the inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-458. "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT FOR OPEN

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

REAR CAMERA COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Around view monitor control unit		Rear camera		Continuity
Connector	Terminal	Connector	Terminal	
B51	49	T50	4	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK CONTINUITY COMMUNICATION SIGNAL CIRCUIT FOR SHORT

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

Around view monitor control unit		Ground	Continuity
Connector	Terminal		
B51	49		Not existed

Is inspection result normal?

YES >> Replace rear camera. Refer to [AV-461, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

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AV

RETRACT MOTOR OPERATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

RETRACT MOTOR OPERATION SIGNAL CIRCUIT

Component Function Check

INFOID:000000009727459

1.CHECK FRONT CAMERA COMMUNICATION STATUS

ⓘ WITH CONSULT

1. Turn ignition switch ON.
2. Select "FOLDING MOTOR VOLT 1" and "FOLDING MOTOR VOLT 2" in "DATA MONITOR" mode of "AVM" using CONSULT.
3. Check "FOLDING MOTOR VOLT 1" and "FOLDING MOTOR VOLT 2" indication as per the following condition.

Monitor item	Condition		Indication
FOLDING MOTOR VOLT 1	Driver side door mirror	Open	On
		Close	Off
FOLDING MOTOR VOLT 2		Open	Off
		Close	On

Is the inspection result normal?

YES >> INSPECTION END

NO >> Proceed to [AV-450, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727460

1.CHECK RETRACT MOTOR OPERATION SIGNAL CIRCUIT FOR OPEN

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

Around view monitor control unit		Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
B50	30	D56	8	Existed
	32		9	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK RETRACT MOTOR OPERATION SIGNAL CIRCUIT FOR SHORT

Check whether or not continuity between around view monitor control unit harness connector and ground is normal.

Around view monitor control unit		Ground	Continuity
Connector	Terminal		Not existed
B50	30		
	32		

Is the inspection result normal?

YES >> Perform diagnosis of door mirror (driver side) retract motor operation signal circuit. Refer to [MIR-15, "Wiring Diagram"](#).

NO >> Repair or replace malfunctioning parts.

REVERSE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

REVERSE SIGNAL CIRCUIT

Component Function Check

INFOID:000000009727461

1.CHECK REVERSE SIGNAL

 With CONSULT

1. Turn ignition ON.
2. Select "REVERSE SIGNAL" in "DATA MONITOR" mode of "AVM" using CONSULT.
3. Check "REVERSE SIGNAL" indication as per the following condition.

Monitor item	Condition		Indication
REVERSE SIGNAL	Selector lever position	R position	On
		Other than R position	Off

Is the inspection result normal?

YES >> INSPECTION END

NO >> Proceed to [AV-451, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727462

1.CHECK REVERSE RANGE SIGNAL

1. Turn ignition switch ON.
2. Check the voltage between around view monitor control unit harness connector and ground as per the following condition.

Terminals			Condition	Voltage (Approx.)
(+)		(−)		
Around View Monitor control unit				
Connector	Terminal			
B50	25	Ground	Shift the selector lever to R position.	12.0 V
			Shift the selector lever other than R position.	0 V

Is the inspection result normal?

YES >> Replace around view monitor control unit. Refer to [AV-458, "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK REVERSE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect around view monitor control unit harness connector.
3. Remove back-up lamp relay.
4. Check the continuity between around view monitor harness connector and back-up lamp relay harness connector.

Around view monitor		Back-up lamp relay		Continuity
Connector	Terminal	Connector	Terminal	
B50	25	M97	5	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK BACK-UP LAMP POWER SUPPLY

1. Turn ignition switch ON.

REVERSE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

- Check the voltage between back-up lamp relay harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(–)	
Back-up lamp relay			
Connector	Terminal		
M97	1	Ground	Battery voltage
	3		

Is the inspection result normal?

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

4.CHECK BACK-UP LAMP RELAY

- Turn ignition switch OFF.
- Check the back-up lamp relay. Refer to [AV-452, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Perform "Self Diagnostic Result" in "TRANSMISSION". Refer to [TM-69, "CONSULT Function"](#).
NO >> Replace back-up lamp relay.

Component Inspection

INFOID:000000009727463

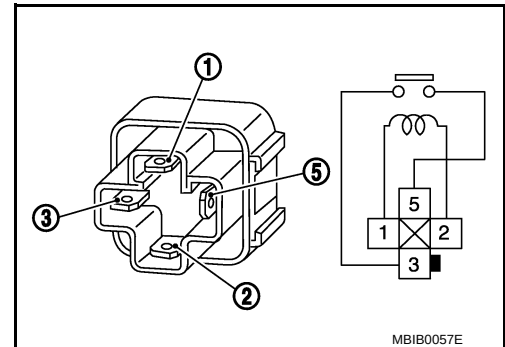
1.CHECK BACK-UP LAMP RELAY

- Turn ignition switch OFF.
- Remove back-up lamp relay.
- Check the continuity between back-up lamp relay terminals as per the following condition.

Back-up lamp relay		Condition	Continuity
Terminal			
3	5	12 V direct current supply between terminals 1 and 2	Existed
		No current supply	Not existed

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Replace back-up lamp relay.



BUZZER SIGNAL CIRCUIT

Component Function Check

INFOID:000000009727464

1.CHECK SONAR BUZZER FUNCTION

 With CONSULT

1. Turn ignition ON.
2. Select "FRONT BUZZER" in "ACTIVE TEST" mode of "SONAR" using CONSULT.
3. Perform "FRONT BUZZER", and check that the buzzer operation.

Test item		Sonar buzzer operation
FRONT BUZZER	On	Operate
	Off	Non operation

Is the inspection result normal?

YES >> INSPECTION END

NO >> Proceed to [AV-453, "Diagnosis Procedure"](#).

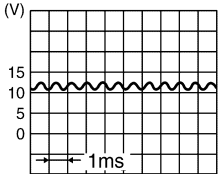
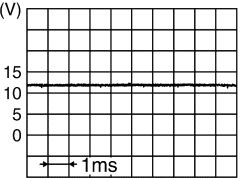
Diagnosis Procedure

INFOID:000000009727465

1.CHECK BUZZER SIGNAL

 With CONSULT

1. Turn ignition ON.
2. Select "FRONT BUZZER" in "ACTIVE TEST" mode of "SONAR" using CONSULT.
3. Perform "FRONT BUZZER", and check the signal between sonar control unit harness connector and ground.

Sonar control unit			Test item		Reference value
Connector	Terminals				
	(+)	(-)			
	Terminal				
M76	18	19	FRONT BUZZER	On	 JSNIA5722ZZ
				Off	 JSNIA5721ZZ

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace sonar control unit. Refer to [AV-462, "Removal and Installation"](#).

2.CHECK BUZZER SIGNAL CIRCUIT FOR OPEN

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

BUZZER SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Sonar control unit		Sonar buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M76	18	M110	3	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK BUZZER SIGNAL CIRCUIT FOR SHORT

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

Sonar control unit		Ground	Continuity
Connector	Terminal		
M76	18		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK BUZZER SIGNAL GROUND CIRCUIT

Check the continuity between sonar control unit harness connector and sonar buzzer harness connector.

Sonar control unit		Sonar buzzer		Continuity
Connector	Terminal	Connector	Terminal	
M76	19	M110	2	Existed

Is the inspection result normal?

YES >> Replace sonar buzzer. Refer to [AV-467. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

SYMPTOM DIAGNOSIS

AROUND VIEW MONITOR SYSTEM

Symptom Table

INFOID:000000009727466

AROUND VIEW MONITOR SYSTEM

Symptoms	Check items		Probable malfunction location
Screen is not switched to camera image, when camera switch is pressed and when shift position is shifted to the reverse position.	"AVM" is not displayed on the system selection screen of CONSULT.		Around view monitor control unit power supply circuit • BAT power supply circuit • Ignition power supply circuit • ACC power supply circuit
	Check that the following data monitor items operate normally using CONSULT • Camera switch signal	Camera switch signal and reverse signal are normal	Around view monitor control unit
	• Reverse signal	Camera switch signal or reverse signal is not normal	AV communication circuit
Screen is switched when pressing camera switch or shifting selector lever to the reverse position, however, all views are not displayed.	Only superimposing is displayed (only images that AV control unit plots are displayed).		Camera image signal circuit Refer to AV-437, "Diagnosis Procedure" .
	Superimposing is not displayed.		Display control unit Refer to AV-79, "CONSULT Function"
The screen is not switched to the rear view image even if the selector is shifted to the reverse position.	The front view is displayed normally.		Reverse signal circuit. Refer to AV-451, "Diagnosis Procedure" .
- Front view screen is not displayed. - Front of top view screen is displayed.	Check the following data monitor items using CONSULT. • Front camera image signal • Front view camera communication status • Front camera communication line	- Image signal: NG - Communication status: NG - Communication line: NG	Front camera power supply circuit and image signal circuit Refer to AV-421, "Diagnosis Procedure" .
		- Image signal: OK - Communication status: NG - Communication line: NG	Front camera communication circuit Refer to AV-442, "Diagnosis Procedure" .
- The rear view screen is not displayed. - Rear of top view screen is not displayed.	Check the following data monitor items using CONSULT. • Rear camera image signal • Rear camera communication status • Rear camera communication line	- Image signal: NG - Communication status: NG - Communication line: NG	Rear camera power supply circuit and image signal circuit Refer to AV-415, "Diagnosis Procedure" .
		- Image signal: OK - Communication status: NG - Communication line: NG	Rear camera communication signal circuit Refer to AV-448, "Diagnosis Procedure" .
- The side view screen is not displayed. - Left side of top view screen is not displayed.	Check the following data monitor items using CONSULT. • Side camera LH image signal • Side camera LH communication status • Side camera LH communication line	- Image signal: NG - Communication status: NG - Communication line: NG	Side camera LH power supply circuit and image signal circuit Refer to AV-424, "Diagnosis Procedure" .
		- Image signal: OK - Communication status: NG - Communication line: NG	Side camera LH communication circuit Refer to AV-444, "Diagnosis Procedure" .

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AROUND VIEW MONITOR SYSTEM

< SYMPTOM DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

Symptoms	Check items		Probable malfunction location
Right side of top view image is not displayed.	Check the following data monitor items using CONSULT. • Side camera RH image signal • Side camera RH communication status • Side camera RH communication line	• Image signal: NG • Communication status: NG • Communication line: NG	Side camera RH power supply circuit and image signal circuit. Refer to AV-418, "Diagnosis Procedure" .
		• Image signal: OK • Communication status: NG • Communication line: NG	Side camera RH communication circuit. Refer to AV-446, "Diagnosis Procedure" .
MOD warning operates while door mirror is in retracting operation.	—		Retract motor operation signal circuit. Refer to AV-450, "Diagnosis Procedure" .

CAMERA ASSISTANCE SONAR

Symptoms	Check items	Possible malfunction location/Action to take
Sonar indicator is not displayed normally (always displayed in red).	Only 1 indicator is not displayed normally (always displayed in red).	• Corner sensor or center sensor of applicable position is not normal. • Corner sensor or center sensor harness circuit of applicable position Perform self-diagnosis of "SONAR" using CONSULT. Refer to AV-329, "CONSULT Function" .
	Display of all 8 indicators is not normal (always displayed in red).	• Corner sensor or center sensor ground circuit Perform self-diagnosis of "SONAR" using CONSULT. Refer to AV-329, "CONSULT Function" . • Sonar control unit power supply and ground circuit. Refer to AV-435, "SONAR CONTROL UNIT : Diagnosis Procedure" . • AV communication circuit. Perform self-diagnosis of "MULTI AV" using CONSULT. Refer to AV-79, "CONSULT Function" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[AROUND VIEW MONITOR SYSTEM]

NORMAL OPERATING CONDITION

Description

INFOID:000000009727467

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 SONAR

Symptom	Possible cause
Unstable object detection	- The vehicle is on a rough surface, such as stone or gravel. - When used in poor weather conditions, such as heavy snow/rain or strong wind. - When subjected to an ultrasonic noise generated from exhaust muffler or brakes. - When left standing in the hot sun or in a cold climate. - When the surface of the sensor is frozen or covered with snow/dirt/moisture. - When a retrofitted xenon lamp, lighted license plate, or harness is close to the sensor body or sensor harness. - When subjected to loop coil noises generated from a vehicle detector placed at an intersection or coin parking area.
Object undetectable	- Air-containing objects, such as cloth, cotton, glass wool, dust, and snow. - Thin objects, such as rope, chain, and wire. - Smooth-faced objects placed in a slanting direction. - Fast-moving small animals. - A corner of an angular object. NOTE: If the sensor detection part is scratched, obstacles cannot be detected.

REMOVAL AND INSTALLATION

AROUND VIEW MONITOR CONTROL UNIT

Removal and Installation

INFOID:000000009693932

REMOVAL

CAUTION:

Before replacing around view monitor control unit, perform "Read/Write Configuration" to save or print current vehicle specification. For details, refer to [AV-376, "ADDITIONAL SERVICE WHEN REPLACING AROUND VIEW MONITOR CONTROL UNIT : Description"](#).

1. Remove the trunk front finisher. Refer to [INT-49, "TRUNK FRONT FINISHER : Removal and Installation"](#).
2. Remove the rear parcel shelf finisher. Refer to [INT-33, "Removal and Installation"](#).
3. Remove the around view monitor control unit mounting bolts.
4. Disconnect the connectors to remove the around view monitor control unit from the rear parcel shelf (trunk room side).

INSTALLATION

1. Installation is the reverse order of removal.
2. Perform camera image calibration. Refer to [AV-379, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).
3. Perform predictive course line center position adjustment. Refer to [AV-378, "PREDICTIVE COURSE LINE CENTER POSITION ADJUSTMENT : Work Procedure"](#).

CAUTION:

- Be sure to perform "Read/Write Configuration" when replacing around view monitor control unit. For details, refer to [AV-376, "CONFIGURATION \(AROUND VIEW MONITOR CONTROL UNIT\) : Work Procedure"](#).
- Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

FRONT CAMERA

Removal and Installation

INFOID:000000009705601

REMOVAL

1. Remove front bumper fascia assembly. Refer to [EXT-14, "Removal and Installation"](#).
2. Disconnect the front camera harness connector.
3. Remove the front grill.
4. Remove the front camera mounting screws, then remove front camera.

INSTALLATION

1. Install in the reverse order of removal.
2. Perform camera image calibration. Refer to [AV-379, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

CAUTION:

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

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SIDE CAMERA

Removal and Installation

INFOID:000000009705602

REMOVAL

Remove the side camera. Refer to [MIR-50, "DOOR MIRROR : Disassembly and Assembly"](#) (WITH ADP), or [MIR-85, "DOOR MIRROR : Disassembly and Assembly"](#) (WITHOUT ADP).

INSTALLATION

1. Install in the reverse order of removal.
2. Perform camera image calibration. Refer to [AV-379, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

CAUTION:

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

REAR CAMERA

Removal and Installation

INFOID:000000009705603

REMOVAL

1. Remove the trunk lid finisher outer. Refer to [EXT-55, "TRUNK LID FINISHER : Removal and Installation"](#).
2. Remove the rear camera mounting screws, then remove rear camera.

INSTALLATION

1. Install in the reverse order of removal.
2. Perform camera image calibration. Refer to [AV-379, "CALIBRATING CAMERA IMAGE \(AROUND VIEW MONITOR\) : Work Procedure"](#).

CAUTION:

Perform the calibration and perform the writing to the around view monitor control unit when removing and replacing each camera, removing the camera mounting parts (front grille, door mirror, etc.) and replacing the around view monitor control unit.

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AV

SONAR CONTROL UNIT

Removal and Installation

INFOID:000000009693933

REMOVAL

CAUTION:

Before replacing sonar control unit, perform “Read/Write Configuration” to save or print current vehicle specification. For details, refer to [AV-376, "ADDITIONAL SERVICE WHEN REPLACING SONAR CONTROL UNIT : Description"](#).

1. Remove the instrument lower panel RH. Refer to [IP-12, "Removal and Installation"](#).
2. Remove screws and connector, and then remove sonar control unit.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to perform “Read/Write Configuration” when replacing sonar control unit. For details, refer to [AV-377, "CONFIGURATION \(SONAR CONTROL UNIT\) : Work Procedure"](#).

SONAR SENSOR

< REMOVAL AND INSTALLATION >

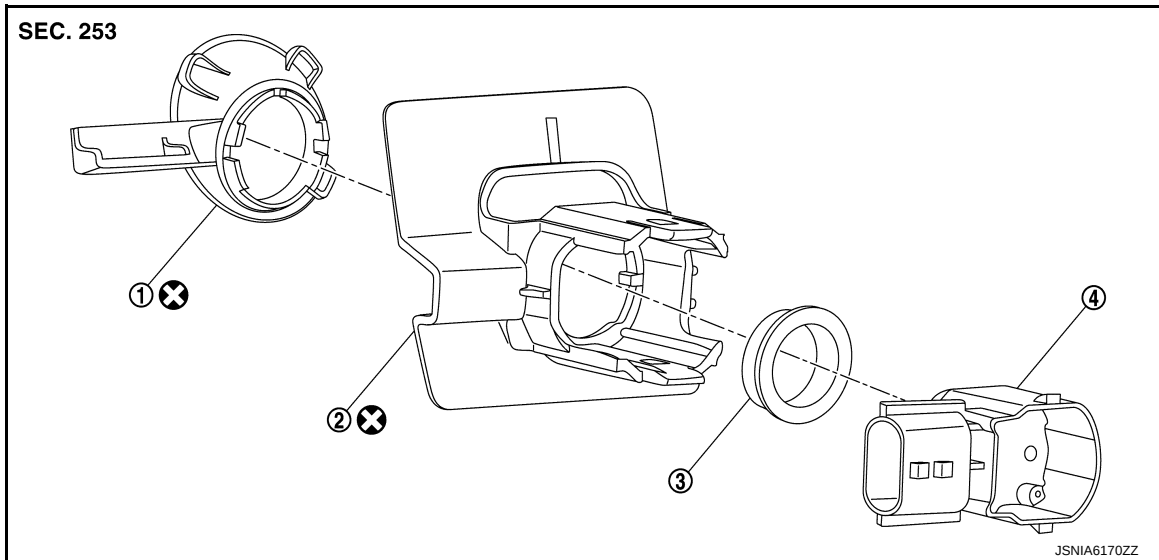
[AROUND VIEW MONITOR SYSTEM]

SONAR SENSOR

FRONT CENTER SENSOR

FRONT CENTER SENSOR : Exploded View

INFOID:000000009728078



① Sensor finisher

② Sensor holder

③ Sensor vibration proof rubber

④ Sonar sensor

⊗ :Always replace after every disassembly.

FRONT CENTER SENSOR : Removal and Installation

INFOID:000000009728076

REMOVAL

1. Remove front bumper fascia assembly. Refer to [EXT-14, "Removal and Installation"](#).
2. Disconnect sensor connector.
3. Unhook the pawl to remove sonar sensor and sensor vibration proof rubber with these in assembled condition.
4. Remove sensor vibration proof rubber from sonar sensor.

INSTALLATION

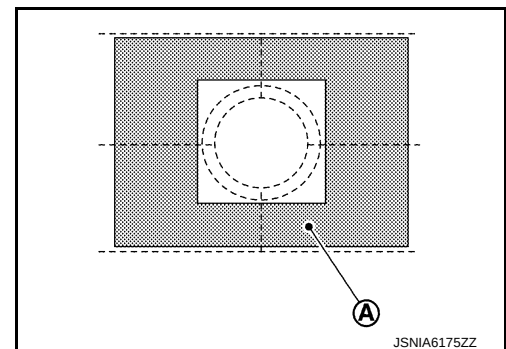
NOTE:

For the method of punching a hole in bumper, refer to [EXT-14, "Removal and Installation"](#).

1. Apply primer to sensor mounting part ① of bumper.

CAUTION:

Never apply two coats of primer. Applying two coats or more of primer results in excessively thick film and this may allow the sensor holder to come off from primer under exfoliation.

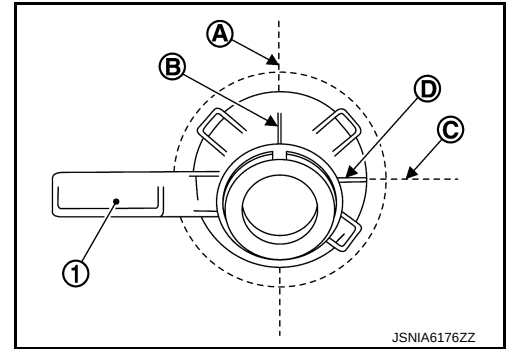


SONAR SENSOR

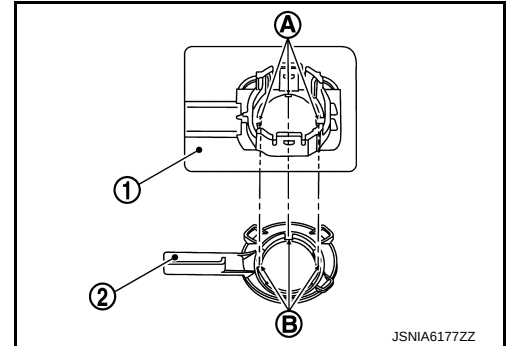
< REMOVAL AND INSTALLATION >

[AROUND VIEW MONITOR SYSTEM]

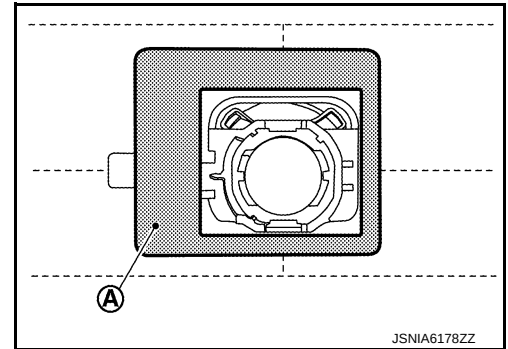
2. Remove the film of double-sided tape and align reference line (A) of the bumper side with (B) of sensor finisher, and (C) with (D) to paste sensor finisher ① to bumper.



3. Remove the film of double-sided tape and fit portion (A) of sensor holder ① to portion (B) of sensor finisher ②.



4. Press portion (A) of sensor holder to paste the sensor holder to bumper as shown in the figure.



5. Install sensor vibration proof rubber to sonar sensor and install this to sensor holder.
6. Connect the connector to sonar sensor.
7. Install front bumper fascia assembly. Refer to [EXT-14, "Removal and Installation"](#).

CORNER SENSOR AND REAR CENTER SENSOR

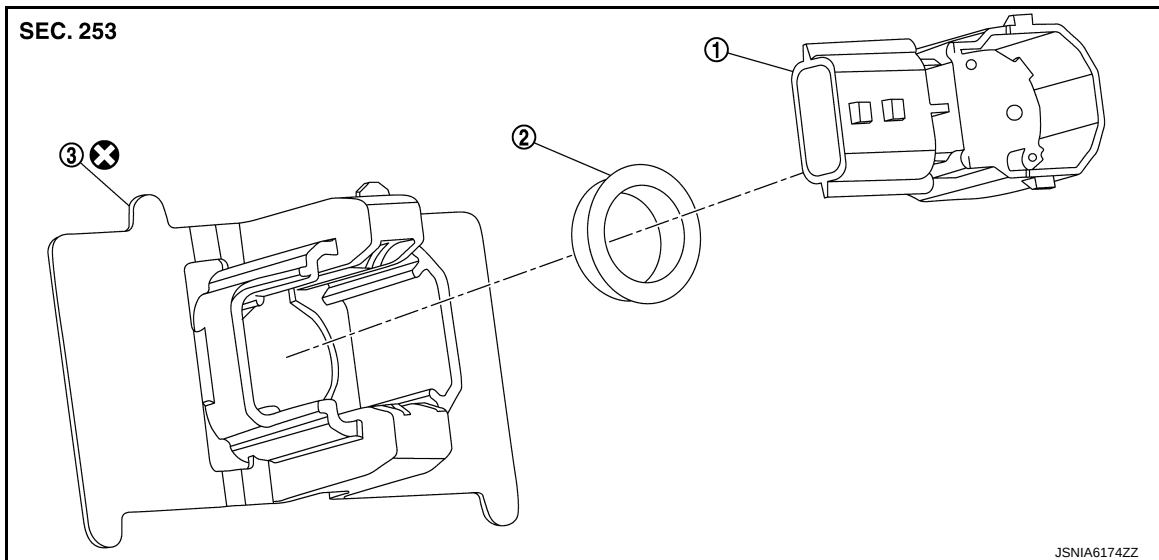
SONAR SENSOR

< REMOVAL AND INSTALLATION >

[AROUND VIEW MONITOR SYSTEM]

CORNER SENSOR AND REAR CENTER SENSOR : Exploded View

INFOID:000000009728079



- ① Sonar sensor ② Sensor vibration proof rubber ③ Sensor holder

⊗ : Always replace after every disassembly.

CORNER SENSOR AND REAR CENTER SENSOR : Removal and Installation

INFOID:000000009728077

REMOVAL

1. Remove front bumper fascia assembly, or rear bumper fascia assembly. Refer to [EXT-14, "Removal and Installation"](#) (front bumper fascia assembly), or [EXT-21, "Removal and Installation"](#) (rear bumper fascia assembly).
2. Disconnect sonar sensor connector.
3. Unhook the pawl to remove sonar sensor and sensor vibration proof rubber with these in assembled condition.
4. Remove sensor vibration proof rubber from sonar sensor.

INSTALLATION

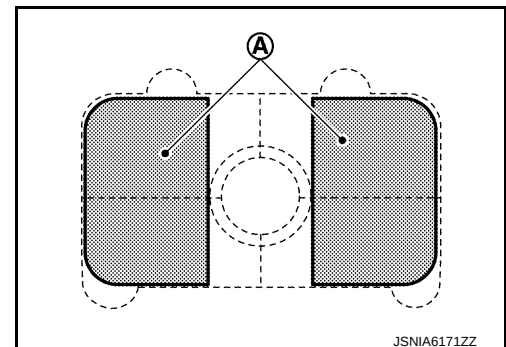
NOTE:

For the method of punching a hole in bumper, refer to [EXT-14, "Removal and Installation"](#) (front bumper), or [EXT-21, "Removal and Installation"](#) (rear bumper).

1. Install sonar sensor and sensor vibration proof rubber to sensor holder.
2. Apply primer to sensor mounting part ① of bumper.

CAUTION:

Never apply two coats of primer. Applying two coats or more of primer results in excessively thick film and this may allow the sensor holder to come off from primer under exfoliation.

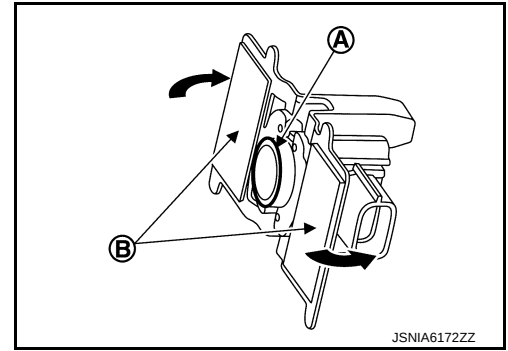


SONAR SENSOR

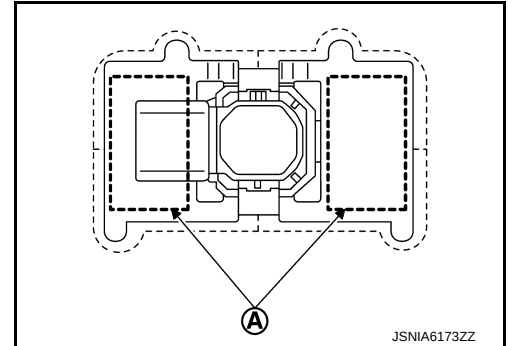
< REMOVAL AND INSTALLATION >

[AROUND VIEW MONITOR SYSTEM]

3. Remove the film of double-sided tape, bend sensor holder in the direction shown by arrow so that double-sided tape ② does not contact bumper, and align portion ① of sonar sensor with the bumper hole.



4. Press portion ① of sensor holder to paste the sensor holder to bumper as shown in the figure.



5. Install connector to sonar sensor.
6. Install front bumper fascia assembly, or rear bumper fascia assembly. Refer to [EXT-14. "Removal and Installation"](#) (front bumper fascia assembly), or [EXT-21. "Removal and Installation"](#) (rear bumper fascia assembly).

BUZZER

Removal and Installation

INFOID:000000009693935

REMOVAL

1. Remove instrument lower panel LH. Refer to [IP-12, "Removal and Installation"](#).
2. Remove the buzzer mounting screws.
3. Disconnect the connector to remove the buzzer from the instrument lower panel LH.

INSTALLATION

Install in the reverse order of removal.

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STEERING ANGLE SENSOR

< REMOVAL AND INSTALLATION >

[AROUND VIEW MONITOR SYSTEM]

STEERING ANGLE SENSOR

Removal and Installation

INFOID:000000009693937

REMOVAL

1. Remove the spiral cable. Refer to [SR-20, "Removal and Installation"](#).
2. Remove the steering angle sensor from spiral cable.

INSTALLATION

Install in the reverse order of removal.

PRECAUTION

PRECAUTIONS

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

INFOID:000000009728709

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.

Cautions in Removing Battery Terminal, Display Control Unit, and AV Control Unit

INFOID:000000009728710

CAUTION:

Remove battery terminal, display control unit, 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 display control unit, and the AV control unit continues operating for approximately 30 seconds.

Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:000000009728711

AV COMMUNICATION SYSTEM

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

Precaution for Harness Repair

INFOID:000000009728712

AV COMMUNICATION SYSTEM

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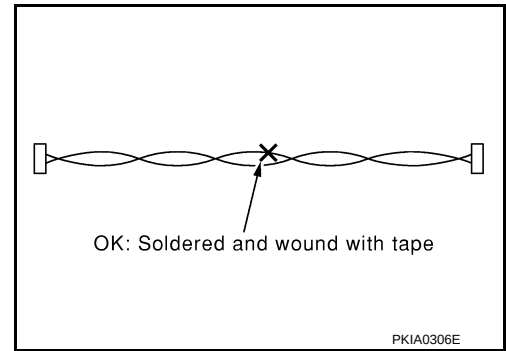
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PRECAUTIONS

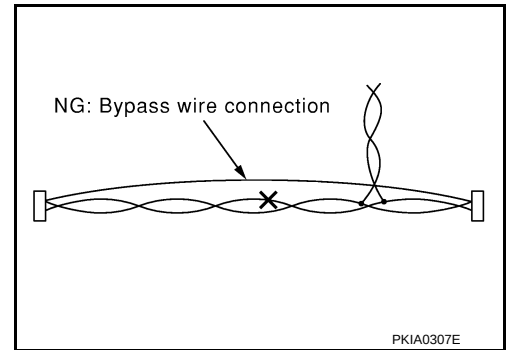
[REAR VIEW MONITOR SYSTEM]

< PRECAUTION >

- 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 >

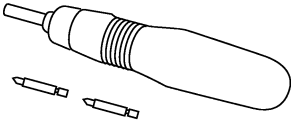
[REAR VIEW MONITOR SYSTEM]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000009728527

Tool	Description
Power tool  PBIC0191E	Loosening screws

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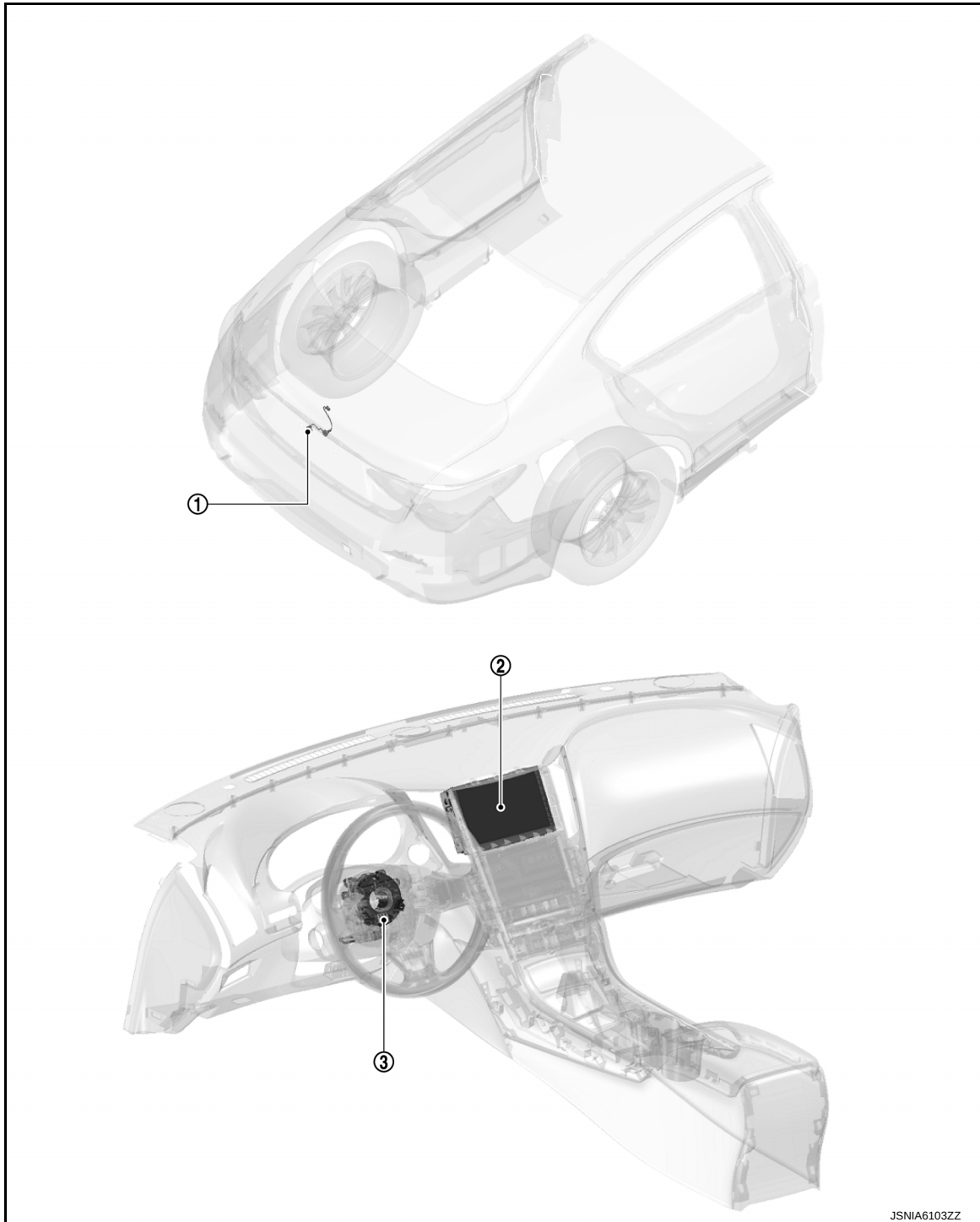
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000009693938



No.	Component	Function
①	Rear view camera	Refer to AV-473, "Rear View Camera" .
②	Display control unit	Refer to AV-473, "Display Control Unit" .
③	Steering angle sensor	Refer to AV-473, "Steering Angle Sensor" .

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

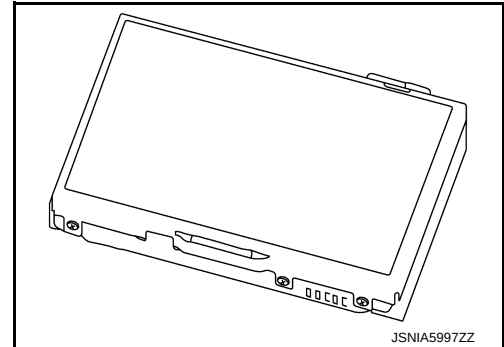
Display Control Unit

INFOID:000000009693939

DESCRIPTION

- Display control unit is located in the center of the instrument panel assembly.
- Display control unit integrates the following functions, and controls the rear view monitor system.

Unit equipped
Display
Camera controller



SPECIFICATION

Camera controller	Guideline display function	Vehicle width guide lines
		Predictive course lines
	Steering signal input method	CAN communication

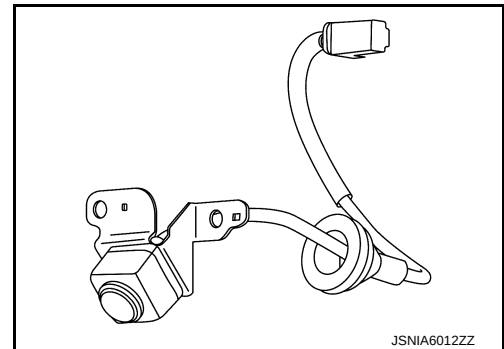
Rear View Camera

INFOID:000000009693940

- The rear view camera is installed at the center of the trunk lid finisher.
- Super-small CCD camera (color) using CCD* for the image pickup element is adopted.
- With the mirror processing function, a mirror image is sent as if it is viewed by a rear view mirror.
- Power for the camera is supplied from the display control unit, and the image at the rear of the vehicle is sent to the display control unit.

NOTE:

*: Abbreviation of Charge Coupled Device. CCD can turn incident light from the lens into electrons and memorize the image like a photo.



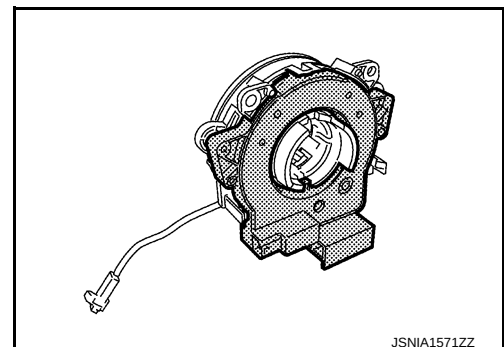
Specification

Image pickup element	1/4-inch interline CCD color
Effective number of pixels	Approx. 250,000 pixels (504 × 485)
Minimum brightness	1 lx
Angle of view	H: 130.5° V: 92°
Image	With the mirror processing function

Steering Angle Sensor

INFOID:000000009693941

- Steering angle sensor is installed to the spiral cable.
- Steering angle sends the steering signal necessary for predictive course line of the rear view monitor to the display control unit via CAN communication.



REAR VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

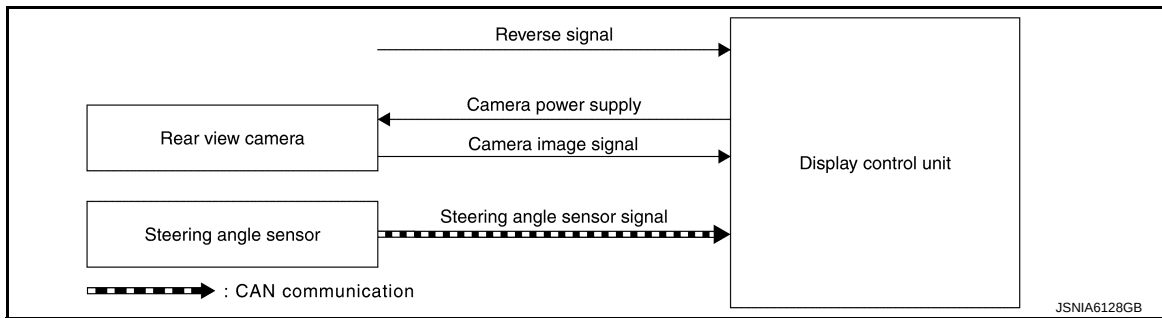
[REAR VIEW MONITOR SYSTEM]

REAR VIEW MONITOR SYSTEM

System Description

INFOID:000000009693942

SYSTEM DIAGRAM



Display Control Unit Input Signal (CAN Communication)

Transmit unit	Signal name
Steering angle sensor	Steering angle signal

DESCRIPTION

Operation Description

- When the selector lever is shifted to the reverse position, the rear view monitor image is displayed.
- When the selector lever is shifted to any position other than the reverse position, the original image (the image displayed before the rear view monitor image) is displayed.

Camera Image Operation Principle

- The display control unit that receives the reverse signal input supplies power to the rear view camera and gives input of image signal.
- The display control unit outputs the rear view camera image to the display when the reverse signal is inputted.
- The display control unit generates the warning message, vehicle width guide lines and the predicted course lines on the image from the rear view camera, and transmits the rear view camera image signal to the front display unit.

Vehicle Width Guide Lines and Predicted Course Lines Display Function at Rear View Monitor Display

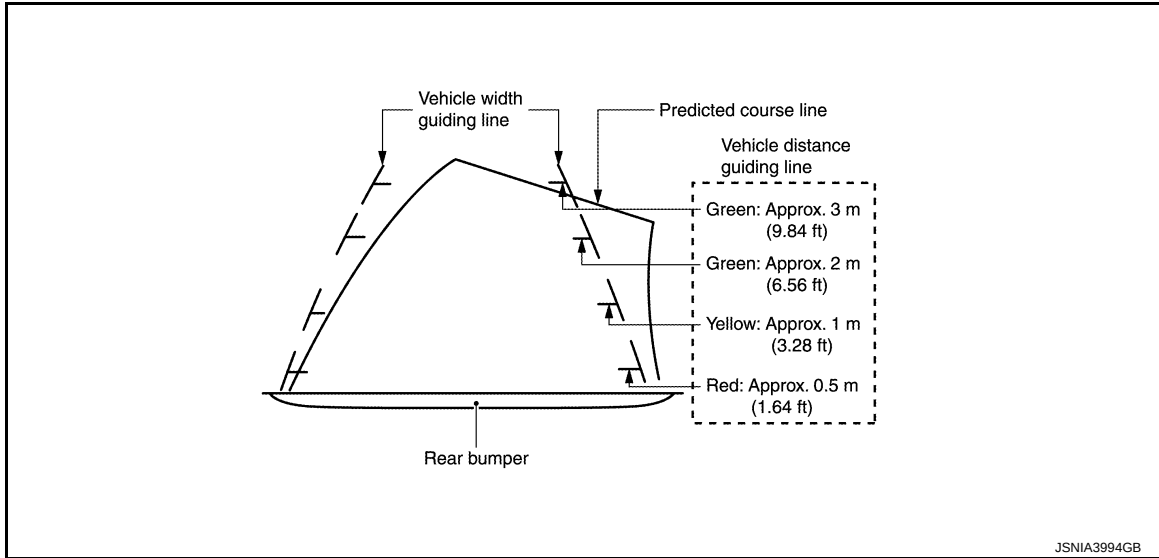
- The vehicle width guide lines and the predicted course lines that indicate the vehicle route according to the steering angle are displayed at the rear view monitor display to allow the driver to more easily judge distances between the vehicle and objects and help the driver back into a parking space.
- The display control unit receives the steering signal from the steering sensor via CAN communication and draws a vehicle width guide line according to the steering angle.
- When the vehicle width guide lines are displayed, the vehicle width guide lines are displayed translucently.

REAR VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

- The predicted course lines are not displayed when the steering is in the neutral position.



Precautions for Vehicle Width Guide Lines and Predicted Course Lines Display on the Rear View Monitor Display
Vehicle width guide lines and predicted course lines on the display may be different from actual lines depending on vehicle conditions and road conditions.

Precautions for road conditions

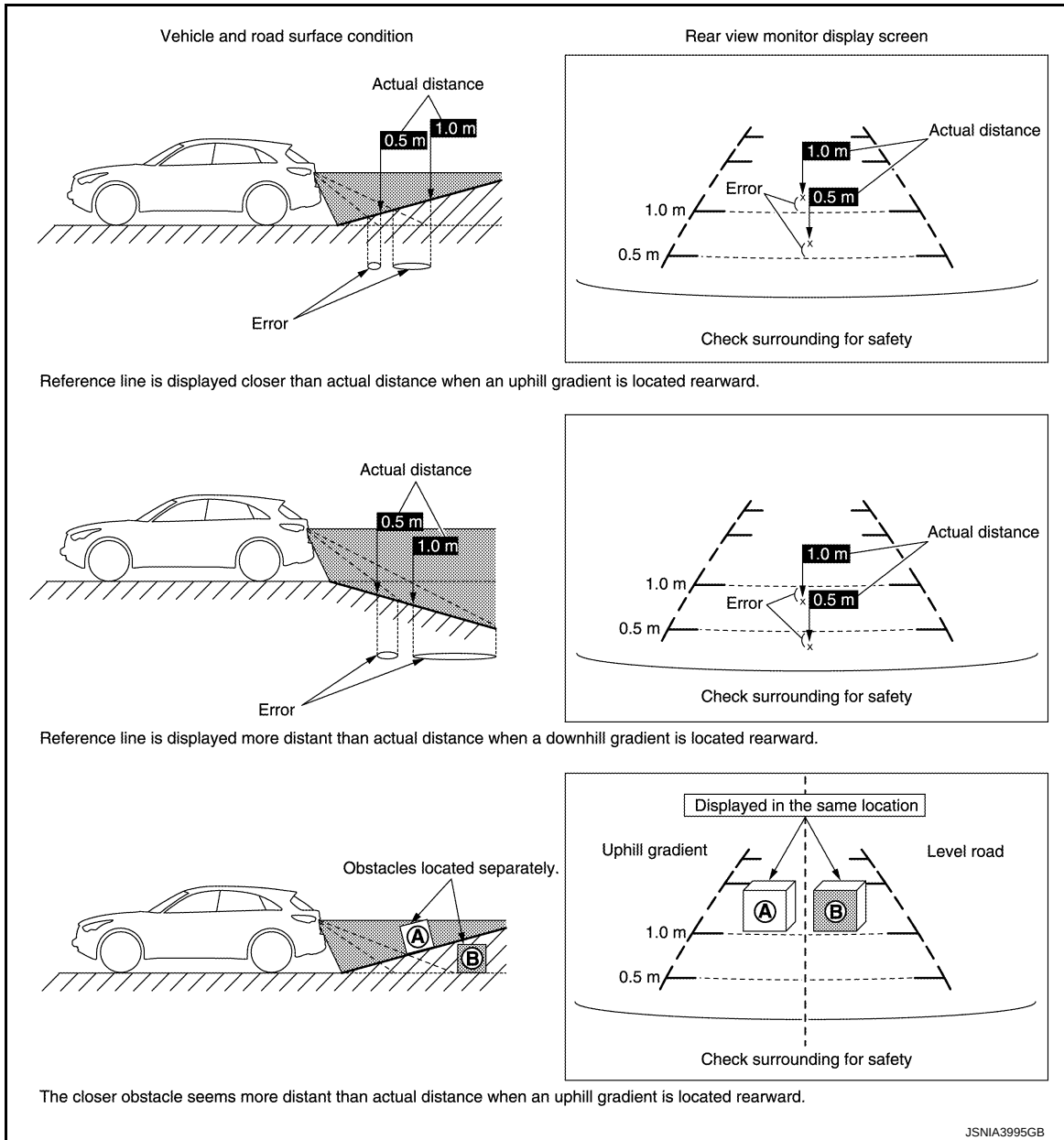
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REAR VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

- Since vehicle width guide lines and predicted course lines are drawn based on the road, a different distance may be displayed if a protruding block is present nearby.



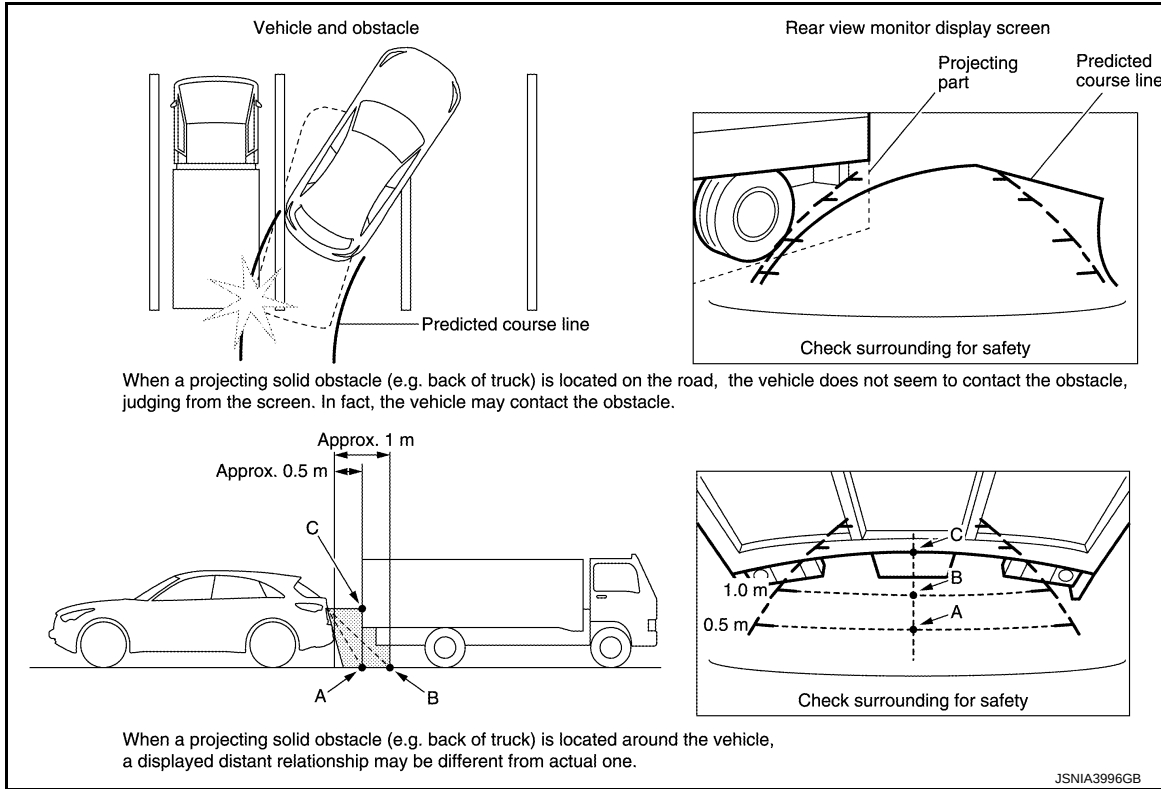
Precautions for block

REAR VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

- Since vehicle width guide lines and predicted course lines are drawn based on the road, a different distance may be displayed if a protruding block is present nearby.



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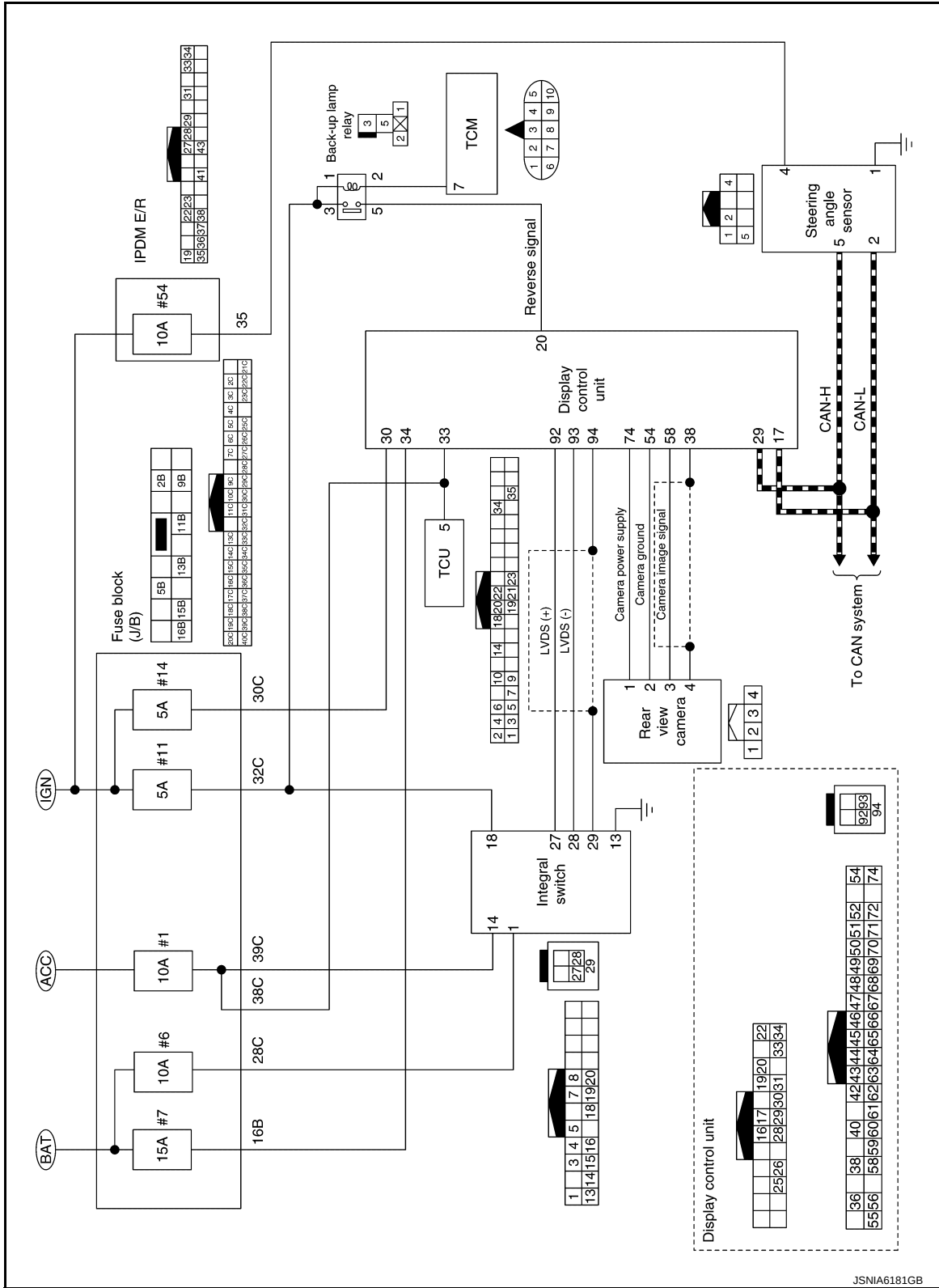
REAR VIEW MONITOR SYSTEM

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

Circuit Diagram

INFOID:000000009693943



JSNIA6181GB

HANDLING PRECAUTION

Display

INFOID:000000009693944

- When the compartment temperature is low, the display images may look slower because the LCD response is deteriorated. The system will recover its normal operation when the cabin temperature increases to an appropriate level.
- When the compartment temperature is low [0°C (32°F) or less], the display images may look slower. It is characteristic of the LCD monitor and should not be considered to be a malfunction. When the temperature is at the operating temperature [0°C (32°F) to 50°C (122°F)], the display returns to normal.
- There may be small dark or bright dots in the screen or remaining display content may be found (image lag). These are inherent symptoms to any LCD monitor and should not be considered to be a malfunction.
- The image may look bright or dark when viewed obliquely from the rear. It is inherent to any LCD monitor and should not be considered to be a malfunction.
- Do not apply pressure on the LCD monitor. Doing so may cause irregularities in the screen image or render it inoperative.
- Do not use hard cloth, organic solvent (alcohol, benzene, and thinner), or chemical wipe to clean the LCD monitor. Doing so may affect the panel surface. When cleaning the LCD monitor, always wipe it with a soft cloth after shutting off the power. For severe contamination, use a soft cloth dampened with mild detergent (no droplets can be present).

Rear View Monitor

INFOID:000000009693945

- Since the range shown on the rear view monitor is limited, be sure to check safety visually around the area. Never drive while viewing only the image. It must be used only as a supplementary measure to gain field of view at the back of the vehicle.
- Since the rear view camera is using a wide lens, distance of the image shown on the display is different from the actual distance.
- Since the rear view camera is a precision device, do not apply a strong impact to it. Doing so may cause a malfunction, fire or electric shock.
- Raindrop, snow, mud, body wax, etc. on the lens may give poor image. Damage to the lens may adversely affect the image.
- Do not use hard cloth, organic solvent (alcohol, benzene, and thinner), or chemical wipe to clean the lens. Doing so may cause discoloration. When cleaning the lens, always wipe it with a dry soft cloth. For severe contamination, use a soft cloth dampened with mild detergent (no droplets can be present).
- In a high-pressure car wash, do not expose the camera directly to water. It may cause entry of water on the lens or cause condensation, resulting in a malfunction, fire or electric shock. Do not use a car wash brush on the lens.
- When it is extremely hot or cold, the image may be poor, but it should not be considered to be a malfunction.
- The image may be poor or bluish at a dark place or at night, but it should not be considered to be a malfunction. In this case, image quality may be adjusted using the image quality adjusting function.
- Flickering may appear on the screen under fluorescent light, but it should not be considered to be a malfunction.
- When the rear view monitor is used, some of the audio and hand-free phone functions can be operated.
- It may take some time to switch to the camera image or non-camera image. Image may be instantaneously disturbed before a complete image appears.
- If highly brilliant point (sun reflecting on the vehicle body) is shown on the camera, a smear or ghost inherent to CCD occur, but it should not be considered to be a malfunction.
- The back view monitor image is a mirror image with reverse left and right to suit the situation when the rear is viewed with the rear view mirror.
- Possible route lines and side distance guide lines are subject to the number of passengers, fuel level, vehicle position, road condition, road gradient, etc. There may be a difference from the actual driving route.
- If tires are replaced with a size not specified, possible route lines may not be correctly displayed.
- The possible route line center position may be misaligned. In this case, perform the correction of the neutral position according to the following procedure.
 - Drive 100 m (328.1 ft) or more straight ahead at 30 km/h (19 MPH) or more.

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

Description

INFOID:000000009759910

- The display control unit diagnosis function starts up with multifunction switch operation and the display 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:000000009759911

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 display control unit, connections between system components. 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	• Display control unit diagnosis. • Diagnoses the connections across system components.

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

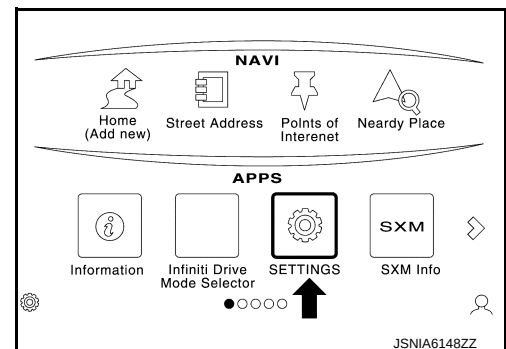
[REAR VIEW MONITOR SYSTEM]

Mode		Description
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: • Color tone check by color bar display, white display and black display • Light and shade check by gray scale display • Touch panel check • Sensor sensitivity settings
	Vehicle Signals	Diagnosis of signals can be performed .
	Speaker Test	The connection of a speaker can be confirmed by test tone.
	Navigation*	The reception status of GPS can be confirmed. Display On/Off of the simulation menu of navigation.
	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.
	AV COMM Diagnosis	The communication condition of each unit of Infiniti InTouch can be monitored.
	Clock Setting*	The date and time information can be adjusted.
	Camera Control Unit	The signal connected to camera control unit can be checked and the guiding line position that overlaps rear view camera image can be adjusted.
	SXM	Display the information related to satellite radio.
	Delete Unit Connection Log	Erase the connection history of unit and error history.
	Reset Settings	Initializes the each data.
	Version Information	Version information of the following items is displayed. • Display control unit • NAVI control unit • AV control unit • BOSE amp. • Integral switch • Combination meter • Around view monitor control unit
	Program Update	Version of the display control unit can be update.
	Switch Information	Display each switch information.
	ANC/ASC	Display the information related to ANC and ASC.
	Hands-free Phone	The received volume adjustment of hands-free phone and microphone speaker check can be performed.

*: Only models with navigation system

METHOD OF STARTING

1. Start the engine.
2. Turn the audio system OFF.
3. Touch the "SETTINGS" icon and display a settings menu screen.



DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

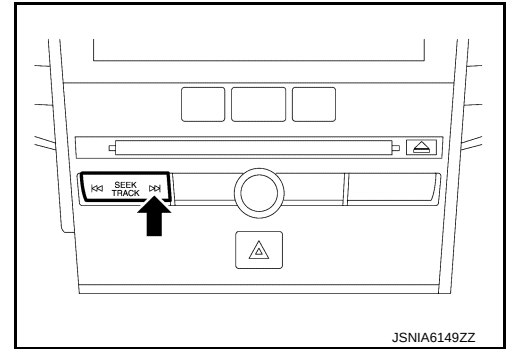
[REAR VIEW MONITOR SYSTEM]

< SYSTEM DESCRIPTION >

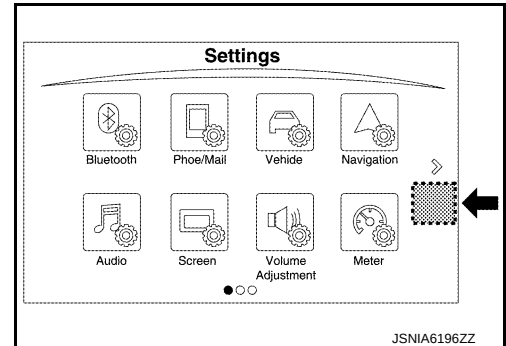
- Press the "Seek/Track Up" switch at least 3 times. (Within 15 seconds after the settings menu screen display.)

NOTE:

When press the "Seek/Track Up" switch more than 4 times, a self-diagnosis mode is not started. press the "MENU" switch again.



- Touch the screen (area of the figure) for 3 seconds.



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

NOTE:

When a diagnostic screen is not displayed, press the "MENU" switch. And then, restart from the procedure of Step 3.

SELF-DIAGNOSIS MODE

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

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

NOTE:

Control Unit (display control unit) and BOSE Amp. are displayed in red.

- Replace display control unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is display control unit internal error. Refer to [AV-277. "Removal and Installation"](#).
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

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

Detection Range of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between display control unit and each unit and the internal operation of the display control unit.

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

- Because the start condition of diagnosis function is a switch operation, the on board diagnosis function cannot be started up if any malfunction is detected in the communication circuit between display control unit and multifunction switch.

SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

Screen switch	Description	Possible malfunction location / Action to take
DCU	Malfunction is detected in display control unit power supply and ground circuits.	Check display control unit power supply and ground circuits. Refer to AV-239, "DISPLAY CONTROL UNIT : Diagnosis Procedure" . When detecting no malfunction in those components, replace display control unit. Refer to AV-277, "Removal and Installation" .
Audio Head Unit	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. Refer to AV-240, "AV CONTROL UNIT : Diagnosis Procedure" . When detecting no malfunction in those components, replace AV control unit. Refer to AV-278, "Removal and Installation" .
Navigation unit	Malfunction is detected in NAVI control unit power supply and ground circuits.	Check NAVI control unit power supply and ground circuits. Refer to AV-241, "NAVI CONTROL UNIT : Diagnosis Procedure" . When detecting no malfunction in those components, replace NAVI control unit. Refer to AV-279, "Removal and Installation" .
BOSE Amp.	When either one of the following items are detected: • Sound signal circuits between BOSE amp. and each speaker are malfunctioning. • Sound signal circuits between BOSE amp. and 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-283, "Removal and Installation".

A Connecting Cable Between Units Is Displayed In Yellow.

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DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

Area with yellow connection lines	Description	Possible malfunction location / Action to take
DCU ⇔ Audio Head Unit	When either one of the following items are detected: • AV control unit power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and AV control unit are malfunctioning. • USB communication circuits between display control unit and AV control unit are malfunctioning.	• AV control unit power supply and ground circuits. Refer to AV-240, "AV CONTROL UNIT : Diagnosis Procedure". • AV communication circuits between display control unit and AV control unit are malfunctioning. • USB communication circuits between display control unit and AV control unit are malfunctioning.
DCU ⇔ Second Display	When either one of the following items are detected: • Integral switch power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and integral switch are malfunctioning.	• Integral switch power supply and ground circuits. Refer to AV-244, "INTEGRAL SWITCH : Diagnosis Procedure". • AV communication circuits between display control unit and integral switch are malfunctioning.
DCU ⇔ BOSE Amp	When either one of the following items are detected: • BOSE amp. power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and BOSE amp. are malfunctioning.	• BOSE amp. power supply and ground circuits. Refer to AV-243, "BOSE AMP. : Diagnosis Procedure". • AV communication circuits between display control unit and BOSE amp. are malfunctioning.
DCU ⇔ AVM	When either one of the following items are detected: • Around view monitor control unit power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and around view monitor control unit are malfunctioning.	• Around view monitor control unit power supply and ground circuits. Refer to AV-435, "AROUND VIEW MONITOR CONTROL UNIT : Diagnosis Procedure". • AV communication circuits between display control unit and around view monitor control unit are malfunctioning.
DCU ⇔ Meter	When either one of the following items are detected: • Combination meter power supply and ground circuits are malfunctioning. • AV communication circuits between display control unit and combination meter are malfunctioning.	• Combination meter power supply and ground circuits. Refer to MWI-104, "COMBINATION METER : Diagnosis Procedure". • AV communication circuits between display control unit and combination meter are malfunctioning.
DCU ⇔ Rear Camera	Malfunction is detected in rear view camera circuit between display control unit and rear view camera.	Rear view camera power supply and ground circuits. Refer to AV-199, "Diagnosis Procedure" .
Navigation unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	GPS antenna Refer to AV-184, "Diagnosis Procedure" .
Audio Head Unit ⇔ XM Antenna	Satellite antenna connection malfunctions detected.	Satellite antenna Refer to AV-188, "Diagnosis Procedure" .
Audio Head Unit ⇔ Radio Antenna	Window antenna connection malfunctions detected.	Window antenna Refer to AV-203, "Diagnosis Procedure" .
Second Display ⇔ IT-Commander	Multifunction switch connection malfunctions detected.	Multifunction switch Refer to AV-201, "Diagnosis Procedure" .
DCU ⇔ Navigation unit	USB communication circuits between display control unit and NAVI control unit are malfunctioning.	USB communication circuits between display control unit and NAVI control unit are malfunctioning. Refer to AV-194, "Diagnosis Procedure" .
DCU ⇔ TCU	USB communication circuits between display control unit and TCU are malfunctioning.	USB communication circuits between display control unit and TCU are malfunctioning. Refer to AV-195, "Diagnosis Procedure" .

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR 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. Touch the "Back" to return to the initial Confirmation/Adjustment Mode screen.

Display Diagnosis

Confirmation of the display control unit screen and integral switch screen.

Item		Description
Display Settings	Color Spectrum Bar	• Display 8 colors of following bars. - White - Yellow - Cyan (Close to light blue) - Green - Magenta (Close to purplish red) - Red - Blue - Black - Gray Scale
	Gradation Bar	Display 64 gradation gray-scale image to a screen.
	White Display	Display white screen.
	Black Display	Display black screen.
Touch Panel		• The function can check the presence of a "+" indication and deviation from where it should be while touching the touch panel. • Display coordinates and gesture operation name (Drag, Tap, Double Tap, Spread, etc.) of the screen which touched.
Sensor Sensitivity Settings		• Display a current touch panel sensor sensitivity set value. • Can change the touch panel sensor sensitivity set value with 1 (Low) - 5 (high) phases. NOTE: The set value is the same as display control unit screen and integral switch screen.

Vehicle Signals

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

Display control unit

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 Signal	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Light Signal	ON	Block the light beam from the auto light optical sensor when the light switch is ON.	—
	OFF	Either of the following conditions • Lighting switch OFF. • Expose the auto light optical sensor to light when the light switch is ON.	
Ignition Signal	ON	Ignition switch ON.	—
	OFF	Ignition switch in ACC position.	
Reverse Signal	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.	

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

NAVI control unit

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)	
Ignition Signal	ON	Ignition switch ON.	—
	OFF	Ignition switch in ACC position.	
Reverse Signal	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.	

NOTE:

Only models with navigation system.

Speaker Test

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

Navigation

Item	Description
Sensor Information	The reception status of GPS can be confirmed.
Route Simulation	Set the display ON/OFF of the “simulation” menu of the navigation.

NOTE:

Only models with navigation system.

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.

- Place of the error occurrence is represented by the longitude and latitude 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 up-and-down manner.

Count up method

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

Display type of occurrence frequency	Error history display item
Count up method	CAN communication line, control unit (CAN), AV communication line, control unit (AV)

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	Applicable DTC	Reference
TACHO signal failure	B1F01	AV-168
DOOR state signal failure	B1F02	AV-170
Compensat. mic1 IN: Open	B1F0B	AV-172
Compensat. mic1 IN: Short	B1F0C	AV-172

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

Error item	Applicable DTC	Reference
Compensat. mic1 IN: Short to battery	B1F0D	AV-172
Compensat. mic1 IN: Short to ground	B1F0E	AV-172
CAN COMM CIRCUIT	U1000	AV-175
CONTROL UNIT (CAN)	U1010	AV-177
Control unit internal error	U121F	AV-178
Mismatched configuration data stored	U1223	AV-179
Amplifier temperature error	U1231	AV-180
Steer. Angle Sensor calibration	U1232	AV-181
Navi unit internal error	U1233	AV-182
Audio unit internal error	U1234	AV-183
Audio unit connection error	U1249	AV-185
GPS Antenna error	U1244	AV-184
Bose AMP connection error	U124E	AV-187
XM Antenna connection error : open	U1258	AV-188
XM Antenna connection error : short		
2nd Display connection error	U1259	AV-190
AVM connection error	U125B	AV-192
Navi unit connection error	U125D	AV-194
TCU connection error	U1266	AV-195
Cluster connection error	U1267	AV-196
Confirm user connection unit	U12B7	AV-198
Rear Camera connection error	U12B8	AV-199
IT Comander connection error	U12BA	AV-201
Radio Antenna error : open	U12BE	AV-203
Radio Antenna error : short		
AV COMM CIRCUIT	U1300	AV-205
CONTROL UNIT (AV)	U1310	AV-207
FL-DOOR woofer OUT: open	U1601	AV-208
FL-DOOR woofer OUT: short		
FL-DOOR woofer OUT: short to ground		
FL-DOOR woofer OUT: short to battery		
FL-DOOR squawker OUT: open	U1602 U190D	AV-211 AV-236
FL-DOOR squawker OUT: short		
FL-DOOR squawker OUT: short to ground		
FL-DOOR squawker OUT: short to battery		
FL-PILLAR tweeter OUT: open	U1603	AV-214
FL-PILLAR tweeter OUT: short		
FL-PILLAR tweeter OUT: short to ground		
FL-PILLAR tweeter OUT: short to battery		
FR-DOOR woofer OUT: open	U1609	AV-208
FR-DOOR woofer OUT: short		
FR-DOOR woofer OUT: short to ground		
FR-DOOR woofer OUT: short to battery		

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DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

Error item	Applicable DTC	Reference
FR-DOOR squawker OUT: open	U160A U190E	AV-211 AV-236
FR-DOOR squawker OUT: short		
FR-DOOR squawker OUT: short to ground		
FR-DOOR squawker OUT: short to battery		
FR-PILLAR tweeter OUT: open	U160B	AV-214
FR-PILLAR tweeter OUT: short		
FR-PILLAR tweeter OUT: short to ground		
FR-PILLAR tweeter OUT: short to battery		
F-INST L-squawker OUT: open	U1626	AV-217
F-INST L-squawker OUT: short		
F-INST L-squawker OUT: short to ground		
F-INST L-squawker OUT: short to battery		
F-INST C-squawker OUT: open	U162A	AV-220
F-INST C-squawker OUT: short		
F-INST C-squawker OUT: short to ground		
F-INST C-squawker OUT: short to battery		
F-INST R-squawker OUT: open	U162E	AV-217
F-INST R-squawker OUT: short		
F-INST R-squawker OUT: short to ground		
F-INST R-squawker OUT: short to battery		
RL-DOOR speaker OUT: open	U1708	AV-222
RL-DOOR speaker OUT: short		
RL-DOOR speaker OUT: short to ground		
RL-DOOR speaker OUT: short		
RR-DOOR speaker OUT: open	U1710	AV-222
RR-DOOR speaker OUT: short		
RR-DOOR speaker OUT: short to ground		
RR-DOOR speaker OUT: short to battery		
R-PSHELF L-speaker OUT: open	U1722	AV-225
R-PSHELF L-speaker OUT: short		
R-PSHELF L-speaker OUT: short to ground		
R-PSHELF L-speaker OUT: short to battery		
R-PSHELF C-woofer OUT: open	U1725	AV-228
R-PSHELF C-woofer OUT: short		
R-PSHELF C-woofer OUT: short to ground		
R-PSHELF C-woofer OUT: short to battery		
R-PSHELF R-speaker OUT: open	U172A	AV-225
R-PSHELF R-speaker OUT: short		
R-PSHELF R-speaker OUT: short to ground		
R-PSHELF R-speaker OUT: short to battery		
FL-DOOR speaker OUT: open	U1901	AV-230
FL-DOOR speaker OUT: short		
FL-DOOR speaker OUT: short to ground		
FL-DOOR speaker OUT: short to battery		

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

Error item	Applicable DTC	Reference
RR-DOOR speaker OUT: open	U1902	AV-233
RR-DOOR speaker OUT: short		
RR-DOOR speaker OUT: short to ground		
RR-DOOR speaker OUT: short to battery		
RL-DOOR speaker OUT: open	U1906	AV-233
RL-DOOR speaker OUT: short		
RL-DOOR speaker OUT: short to ground		
RL-DOOR speaker OUT: short to battery		
FR-DOOR speaker OUT: open	U1907	AV-230
FR-DOOR speaker OUT: short		
FR-DOOR speaker OUT: short to ground		
FR-DOOR speaker OUT: short to battery		

AV COMM Diagnosis

AV COMM Monitor

- Displays the communication status between display 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)
CMF Send Switch	OK / UNKW	OK / 0 – 39 / —
CMF Receive 2ndDisp	OK / UNKW	OK / 0 – 39 / —
CMF Receive Bose AMP	OK / UNKW	OK / 0 – 39 / —
CMF Receive AVM	OK / UNKW	OK / 0 – 39 / —
CMF Receive Meter	OK / UNKW	OK / 0 – 39 / —
CMF Receive Audio	OK / UNKW	OK / 0 – 39 / —

Clock Setting

The date and time information can be adjusted.

NOTE:

Only models with navigation system.

Camera Cont.

Item	Description
Adjust Guide Line of Rear View Cam	The guiding lines in the rear view monitor can be adjusted.
Check/Change Configuration	Displays the current configuration data. NOTE: Refer to the following list for the items of the configuration adjustment function.
Reset Configuration	Initializes the camera system configuration.
Camera System Type	Sets the type of camera that is connected.

Configuration list

Setting item	Setting (Default value)	
	Direct adaptive steering models	Vehicle speed sensitive P/S models
Predictive Course Lines	With SBW	Without SBW
Rear Coeff. K	1.37847	1.37847

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

Setting item	Setting (Default value)	
	Direct adaptive steering models	Vehicle speed sensitive P/S models
Rear Coeff. F	0.0394	0.0394
Rear Coeff. P1	-0.24463	-0.24463
Rear Coeff. P2	0.07005	0.07005
Rear Coeff. C1	-0.00608	-0.00608
Rear Coeff. C2	-0.00001	-0.00001
Rear Coeff. D1	130.6	130.6
Rear Coeff. D2	-35	-35
Car Width	1822.9	1822.9
Rear Offset	3835.175	3835.175
Rear Height	581.589	581.589
Rear L/R Angle	0	0
Rear Up/Dn Angle	0	0
Rear Roll Angle	0	0
Bumper Rear Dist.	0	0
Bumper Rear Ax Dist	0	0
Max. Steering Angle	31.56	31.56
Min. Turning Radius	1	1.47
Wheelbase	2850	2850
Total Length	4792	4792
Steering Gear Ratio	0.032	0.047
Tot.Width With Mirrors	0	0

SMX

XM Mode Diagnosis

Item	Description
Show XM Diagnosis	Display adjustment items to test satellite radio function.
External Connection Mode	Set in external diagnostic mode.

Delete Unit Connection Log

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

Reset Settings

Item	Description
Reset User Data	Initializes the display control unit, NAVI control unit and AV control unit memory.
Reset Configuration	Initializes the configuration data.

Version Information

Version information of the each control unit and switch is displayed.

Program Update

Version of the display control unit can be update.

Switch Information

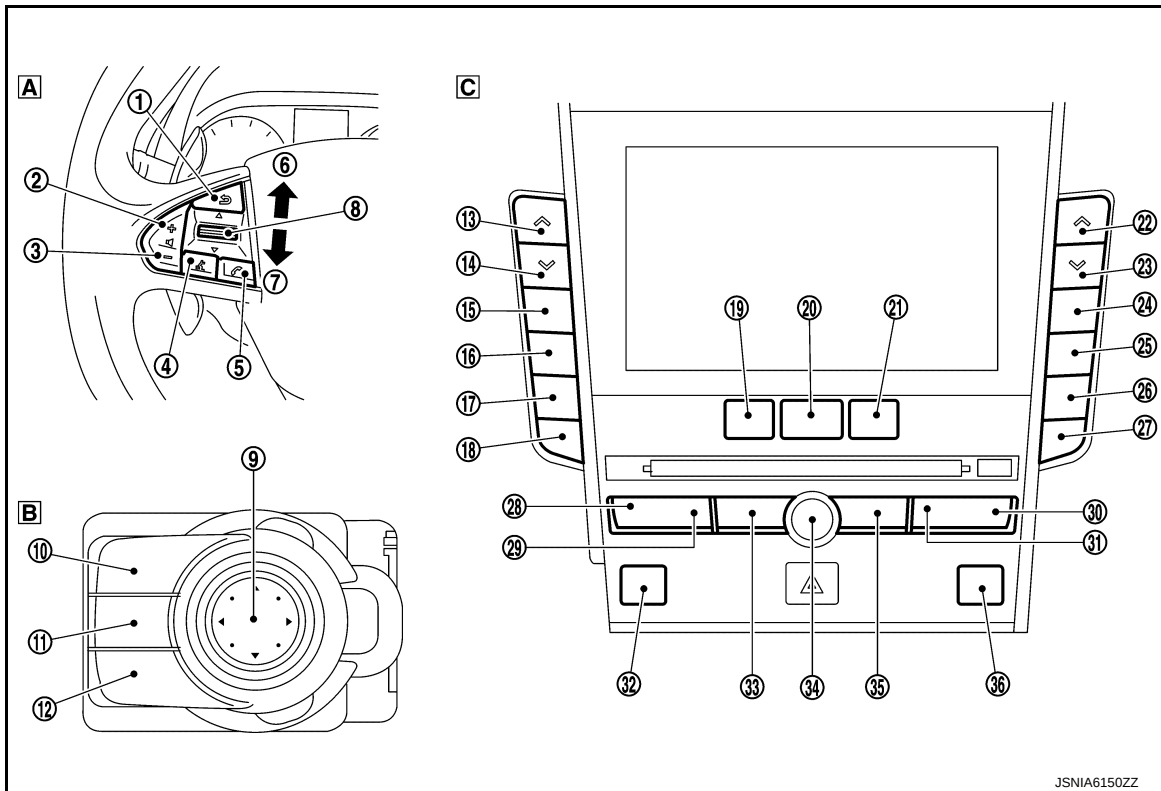
Steering switch, multifunction switch and integral switch information can be checked.

Switch name and ID are displayed when press each switch.

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]



A Steering switch

B Multifunction switch

C Integral switch

No.	Display name	Switch position
①	Source	Steering switch
②	VOL UP/Right	
③	VOL DOWN/Left	
④	Voice Recognition Engine:	
⑤	Phone	
⑥	MENU UP	
⑦	MENU DOWN	
⑧	Enter	Multifunction switch
⑨	OK	
⑩	MAP	
⑪	Back	
⑫	Not displayed	

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

No.	Display name	Switch position
⑬	Temperature	Integral switch
⑭	Temperature	
⑮	Auto	
⑯	Wind Speed +	
⑰	Wind Speed –	
⑱	MODE	
⑲	Audio	
⑳	Menu	
㉑	Climate	
㉒	Temperature	
㉓	Temperature	
㉔	Recirculation	
㉕	Front Defrost	
㉖	Rear Defrost	
㉗	OFF	
㉘	⏮	
㉙	⏭	
㉚	TUNE/CH/HOLDER>	
㉛	<TUNE/CH/HOLDER	
㉜	Seat Heater (Left Seat)	
㉝	Radio	
㉞	Not displayed	
㉟	DISC/AUX	
㊱	Seat Heater (Right Seat)	

ANC/ASC

Item		Description
ANC/ASC Diagnosis	Show Settings	Following items can be confirmed. • Part number • Config result • ANC ON/OFF status • ASC ON/OFF status
	Connection Diagnosis	Display a state of wiring connected with in BOSE amp.
	Active Test	ANC function can be confirmed by test tone.
	Version	ANC and ASC function ON/OFF can be set.

Hands-Free Phone

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

Item	Description
HF Vol. Adjustment	The reception volume can be set in three steps: "Low", "Standard" and "High".

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

Item	Description
Voice Microphone Test	The microphone audio can be directly connected to the speakers to perform a microphone test.
Onload model ID	Displays the on board unit ID.

CONSULT Function

INFOID:000000009759912

APPLICATION ITEMS

CONSULT performs the following functions via the communication with the display control unit

Diagnosis mode	Description
Self Diagnostic Result	Performs a diagnosis on the display 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 display control unit can be performed.
Work Support	Steering angle sensor can be adjusted.
ECU Identification	The part number of display control unit can be checked.
Configuration	- Read and save the vehicle specification. - Write the vehicle specification when replacing display 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 display control unit to each unit as well as the error counter.
	AUDIO	Displays the display control unit communication status and the error counter.

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.
- Refer to [AV-89, "DTC Index"](#).

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.

- Displays the status of the following vehicle signals inputted into the display 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 switch is ON.	—
	Off	Either of the following conditions - Lighting switch OFF. - Expose the auto light optical sensor to light when the light switch is ON.	
IGN SIG	On	Ignition switch ON.	
	Off	Ignition switch in ACC position.	

DIAGNOSIS SYSTEM (DISPLAY CONTROL UNIT)

< SYSTEM DESCRIPTION >

[REAR VIEW MONITOR SYSTEM]

Display Item	Display	Vehicle status	Remarks
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.	

WORK SUPPORT

Adjusts the neutral position of the steering angle sensor.

CAUTION:

For vehicles with VDC, adjust the steering angle sensor neutral position on the ABS actuator control unit side. Refer to [BRC-70, "Work Procedure"](#).

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

ECU IDENTIFICATION

The part number of display control unit is displayed.

CONFIGURATION

Configuration has three functions as follows.

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

CAUTION:

- When replacing display control unit, you must perform "Read / Write Configuration" or "Manual Configuration" with CONSULT.
- Complete the procedure of "Read / Write Configuration" or "Manual Configuration" in order.
- If you set incorrect "Read / Write Configuration" or "Manual Configuration", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

ECU DIAGNOSIS INFORMATION

DISPLAY CONTROL UNIT

Reference Value

INFOID:0000000009803906

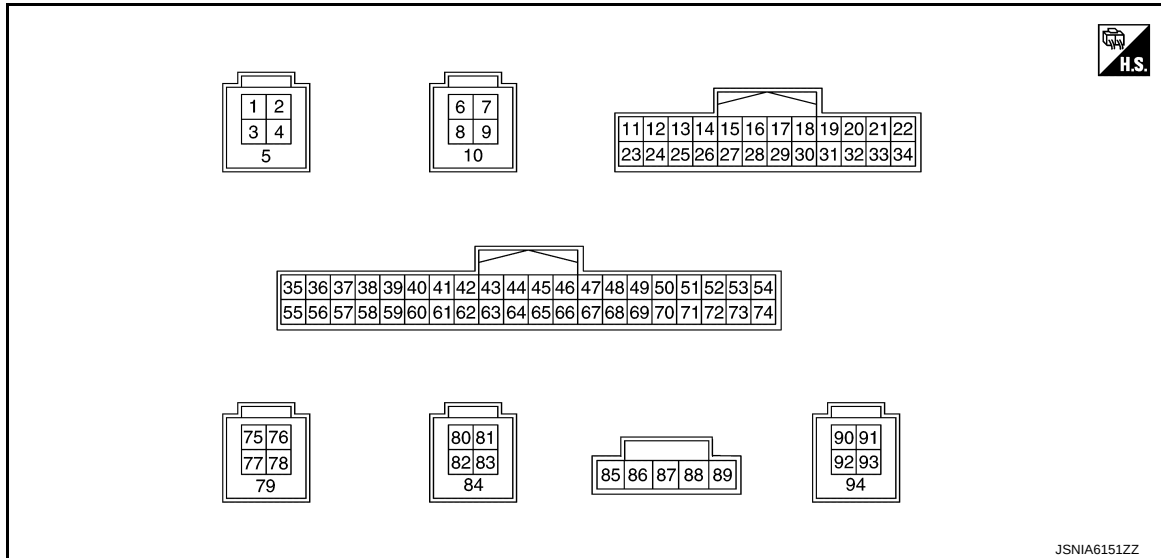
VALUES ON THE DIAGNOSIS TOOL

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
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	Block the light beam from the auto light optical sensor when the light switch is ON.	On
		Expose the auto light optical sensor to light when the light switch is OFF or ON.	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

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
1 (G)	—	USB ground	—	—	—
2 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

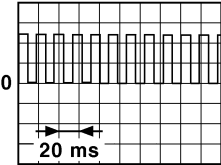
[REAR VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
3 (R)	—	USB D- signal	Input/ Output	—	—
4 (L)	—	USB D+ signal	Input/ Output	—	—
5 (—)	—	Shield	—	—	—
6 (G)	—	USB ground	—	—	—
7 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
8 (R)	—	USB D- signal	Input/ Output	—	—
9 (L)	—	USB D+ signal	Input/ Output	—	—
10 (—)	—	Shield	—	—	—
16 (SB)	—	AV communication signal (L)	Input/ Output	—	—
17 (P)	—	CAN-L	Input/ Output	—	—
19 (R)	22 (B)	Dimmer signal	Input	[Ignition switch ON] • Either of the following conditions - Lighting switch OFF - Expose the auto light optical sensor to light when the light switch is ON.	0 V
				[Ignition switch ON] • Block the light beam from the auto light optical sensor when the light switch is ON.	12.0 V
20 (BR)	22 (B)	Reverse signal	Input	[Ignition switch ON] • R position	12.0 V
				[Ignition switch ON] • Other than R position	0 V
22 (B)	—	Ground	—	[Ignition switch ON]	0 V
25 (SB)	—	—	—	—	—
26 (BR)	22 (B)	Camera switch signal	Input	[Ignition switch ON] • Camera switch: ON	0 - 2.5 V
				[Ignition switch ON] • Camera switch: OFF	3.0 V
28 (LG)	—	AV communication signal (H)	Input/ Output	—	—
29 (L)	—	CAN-H	Input/ Output	—	—
30 (R)	22 (B)	Ignition signal	Input	[Ignition switch ON]	Battery voltage

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

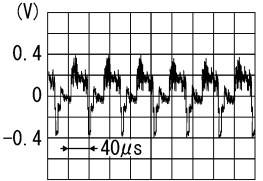
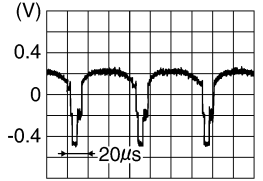
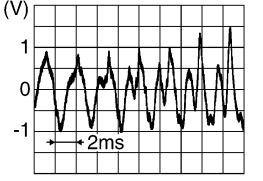
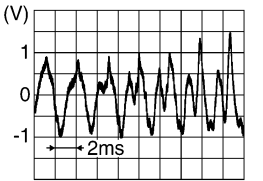
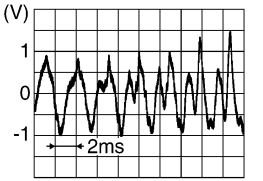
Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
31 (R)	22 (B)	Vehicle speed signal (8-pulse)	Input	[Ignition switch ON] • When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
33 (SB)	22 (B)	ACC power supply	Input	[Ignition switch ACC]	Battery voltage
34 (Y)	22 (B)	Battery power supply	Input	[Ignition switch OFF]	Battery voltage
36 (LG)	—	Composite image signal (-)	—	—	—
38 (—)	—	Shield	—	—	—
40* (—)	—	Manufacturer specific signal	—	—	—
42 (G)	—	Sound signal RH (-)	—	—	—
43 (—)	—	Shield	—	—	—
44 (L)	—	Sound signal LH (-)	—	—	—
45 (W)	—	TEL voice signal (-)	—	—	—
46 (—)	—	Shield	—	—	—
47 (R)	—	Voice guidance signal output (-)	—	—	—
48 (B)	—	Voice guidance signal input (-)	—	—	—
49 (W)	—	NS ON/OFF signal	—	—	—
50 (R)	—	Microphone signal ground	—	[Ignition switch ON]	0 V
51 (—)	—	Shield	—	—	—
52 (—)	22 (B)	Microphone signal ground (NAVI)	—	[Ignition switch ON]	0 V
54 (W)	22 (B)	Camera power supply ground	—	[Ignition switch ON]	0 V
55 (—)	—	Shield	—	—	—

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

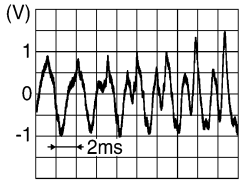
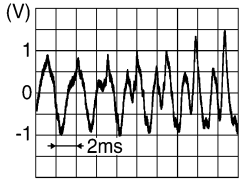
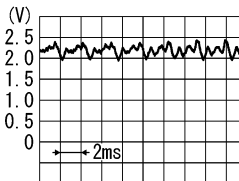
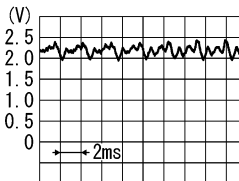
[REAR VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
56 (BR)	36 (LG)	Composite image signal (+)	Input	[Ignition switch ON] • Image is displayed.	 SKIB2251J
58 (B)	22 (B)	Camera image signal	Input	[Ignition switch ON] • Image is displayed.	 SKIB0827E
59 (R)	—	U-VOICE signal	Output	—	—
60 (W)	—	VOICE signal ground	—	—	—
61 (B)	—	D-VOICE signal	Input	—	—
62 (R)	42 (G)	Sound signal RH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
63 (—)	—	Shield	—	—	—
64 (V)	44 (L)	Sound signal LH (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
65 (B)	45 (W)	TEL voice signal (+)	Input	[Ignition switch ON] • During voice guide output with the  switch pressed	 SKIB3609E
66 (—)	—	Shield	—	—	—

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
67 (G)	47 (R)	Voice guidance signal out- put (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
68 (W)	48 (B)	Voice guidance signal input (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
69 (—)	—	Shield	—	—	—
70 (G)	52 (—)	Microphone signal (NAVI)	Output	[Ignition switch ON] • Give a voice	 PKIB5037J
71 (G)	50 (R)	Microphone signal	Output	[Ignition switch ON] • Give a voice	 PKIB5037J
72 (L)	22 (B)	Microphone VCC	Output	[Ignition switch ON]	5.0 V
74 (R)	54 (W)	Camera power supply	Output	[Ignition switch ON] • At rear view camera image is dis- played	6.0 V
				[Ignition switch ON] • Except for above	0 V
77 (W)	78 (B)	LVDS (+)	Input/ Output	—	—
78 (B)	—	LVDS (—)	Input/ Output	—	—
79 (—)	—	Shield	—	—	—
80 (G)	—	USB ground	—	—	—
81 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
82 (R)	—	USB D- signal	Input/ Output	—	—

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
83 (L)	—	USB D+ signal	Input/ Output	—	—
84 (—)	—	Shield	—	—	—
85 (R)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
86 (P)	—	USB D- signal	Input/ Output	—	—
87 (W)	—	USB D+ signal	Input/ Output	—	—
88 (—)	—	Shield	—	—	—
89 (Y)	—	USB ground	—	—	—
92 (W)	—	LVDS (+)	Input/ Output	—	—
93 (B)	—	LVDS (—)	Input/ Output	—	—
94 (—)	—	Shield	—	—	—

*: Not used

Fail-Safe

INFOID:000000009803907

If a malfunction occurs in the Infiniti InTouch, display control unit performs fail-safe activation according to the detected malfunction.

Detection item	Infiniti InTouch operation in fail-safe mode	DTC
Engine speed signal	Active noise control and active sound control function are deactivated.	B1F01
Step lamp signal		B1F02
Front microphone	Active noise control function is deactivated.	B1F0B B1F0C B1F0D B1F0E
CAN communication	The system using the CAN communication signal from control unit which cannot communicate does not function.	U1000
	The system using the CAN communication signal does not function.	U1010
Display control unit	- Display is not displayed. - Display control unit restart. - Display control unit freezes. NOTE: Symptom other than an item may occur.	U121F
Configuration	A function of display control unit becomes mismatched with a vehicle specification and destination.	U1223
BOSE amp.	BOSE system does not function.	U1231
Steering angle sensor	Predictive course line is not displayed.	U1232
NAVI control unit	- Map is not displayed. - Navigation screen does not operate. NOTE: Symptom other than an item may occur.	U1233

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
AV control unit	• Sound is not output by a speaker. • CD is not played. • Radio does not operate. NOTE: Symptom other than an item may occur.		U1234
GPS antenna	The vehicle positions of a navigation screen differ.		U1244
AV communication	AV control unit	• Sound is not output by a speaker. • CD is not played. • Radio does not operate. NOTE: Symptom other than an item may occur.	U1249
	BOSE amp.	Sound is not output by a speaker.	U124E
	Integral switch	• Integral switch display is not displayed. • Switch operation does not operate. • Touch panel operation does not operate. NOTE: Symptom other than an item may occur.	U1259
	Around view monitor control unit	Camera image is not displayed.	U125B
	Combination meter	• Audio information is not displayed by the information display in the combination meter. • Navigation indicator is not displayed by the information display in the combination meter. • Steering switch does not operate.	U1267
	Display control unit	The system of ECU which detected abnormalities does not operate.	U1300
		The system which is using AV communication does not operate.	U1310
Satellite radio antenna	Satellite radio is not received.		U1258
USB communication	NAVI control unit	A navigation menu cannot be selected (hatching display).	U125D
	TCU	Telematics system does not function.	U1266
	External data input box	Audio equipment which connected to USB does not operate.	U12B7
Rear view camera	Rear camera image is not displayed.		U12B8
Multifunction switch	Multifunction switch operation does not operate.		U12BA
Radio antenna	Radio is not received.		U12BE

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Speaker/squawker/tweeter/woofer	With BOSE system		
	Front door woofer	No sound from front door woofer LH or RH.	U1601 U1609
	Front door squawker	No sound from front door squawker LH or RH.	U1602 U160A
	Front door tweeter	No sound from front door tweeter LH or RH.	U1603 U160B
	Front squawker	No sound from front squawker LH or RH.	U1626 U162E
	Front center squawker	No sound from front center squawker.	U162A
	Rear door speaker	No sound from rear door speaker LH or RH.	U1708 U1710
	Rear satellite speaker	No sound from rear satellite speaker LH or RH.	U1722 U172A
	Rear woofer	No sound from rear woofer.	U1725
	Without BOSE system		
	Front door speaker	No sound from front door speaker LH or RH.	U1901 U1907
	Rear door speaker	No sound from rear door speaker LH or RH.	U1902 U1906
	Front door squawker	No sound from front door squawker LH or RH.	U190D U190E

DTC Inspection Priority Chart

INFOID:000000009803908

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1223: CONFIG UNFINISH
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- B1F01: ENG SPEED SIG ERROR - B1F02: DOOR STATUS SIG ERROR - U1249: AUDIO H/U CONN - U124E: AMP CONN - U1259: 2ND DISP CONN - U125B: AROUND CAMERA CONN - U1267: METER CONN

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

Priority	Detected items (DTC)	
4	• U121F: DISPLAY CONTROL UNIT	A
	• U1233: NAVI CONTROL UNIT	
	• U1234: AV CONTROL UNIT	B
	• U1300: AV COMM CIRCUIT	
	• U1310: CONTROL UNIT(AV)	
5	• B1F0B: ANC MIC1 CIRC OPEN	C
	• B1F0C: ANC MIC1 CIRC SHORT	
	• B1F0D: ANC MIC1 CIRC SHORT-BAT	D
	• B1F0E: ANC MIC1 CIRC SHORT-GND	
	• U1232: ST ANGLE SEN CALIB	E
	• U1244: GPS ANTENNA CONN	
	• U1258: XM ANTENNA CONN	F
	• U125D: DVD NAVI CONN	
	• U1266: TCU CONN	G
	• U12B7: USB CONN	
	• U12B8: REAR CAMERA CONN	H
	• U12BA: MULTIFUNCTION SWITCH CONN	
	• U12BE: RADIO ANTENNA CONN	I
	• U1231: AMP TEMP	
	• U1601: FL-DOOR WOOFER	J
	• U1602: FL-DOOR SQUAWK	
	• U1603: FL-DOOR TWEETER	K
	• U1609: FR-DOOR WOOFER	
	• U160A: FR-DOOR SQUAWK	L
	• U160B: FR-DOOR TWEETER	
	• U1626: F-INST L-SQUAWK	M
	• U162A: F-INST C-SQUAWK	
	• U162E: F-INST R-SQUAWK	
	• U1708: RL-DOOR SPEAKER	
	• U1710: RR-DOOR SPEAKER	
	• U1722: R-PSHELF L-SQUAWK	
	• U1725: R-PSHELF C-WOOFER	
	• U172A: R-PSHELF R-SQUAWK	
	• U1901: FL-DOOR SPEAKER	
	• U1902: RR-DOOR SPEAKER	
	• U1906: RL-DOOR SPEAKER	
	• U1907: FR-DOOR SPEAKER	
	• U190D: FR TWEETER	
	• U190E: FL TWEETER	

DTC Index

INFOID:000000009803909

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	CONSULT display	Reference	
B1F01	ENG SPEED SIG ERROR	AV-168, "DTC Description"	
B1F02	DOOR STATUS SIG ERROR	AV-170, "DTC Description"	AV
B1F0B	ANC MIC1 CIRC OPEN	AV-172, "DTC Description"	
B1F0C	ANC MIC1 CIRC SHORT	AV-172, "DTC Description"	
B1F0D	ANC MIC1 CIRC SHORT-BAT	AV-172, "DTC Description"	O
B1F0E	ANC MIC1 CIRC SHORT-GND	AV-172, "DTC Description"	
U1000	CAN COMM CIRCUIT	AV-175, "DTC Description"	P
U1010	CONTROL UNIT (CAN)	AV-177, "DTC Description"	
U121F	DISPLAY CONTROL UNIT	AV-178, "DTC Description"	
U1223	CONFIG UNFINISH	AV-179, "DTC Description"	
U1231	AMP TEMP	AV-180, "DTC Description"	
U1232	ST ANGLE SEN CALIB	AV-181, "DTC Description"	

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

DTC	CONSULT display		Reference
U1233	NAVI CONTROL UNIT		AV-182, "DTC Description"
U1234	AV CONTROL UNIT		AV-183, "DTC Description"
U1244	GPS ANTENNA CONN		AV-184, "DTC Description"
U1249	AUDIO H/U CONN		AV-185, "DTC Description"
U124E	AMP CONN		AV-187, "DTC Description"
U1258	XM ANTENNA CONN	GND-SHORT	AV-188, "DTC Description"
		OPEN	
U1259	2ND DISP CONN		AV-190, "DTC Description"
U125B	AROUND CAMERA CONN		AV-192, "DTC Description"
U125D	DVD NAVI CONN		AV-194, "DTC Description"
U1266	TCU CONN		AV-195, "DTC Description"
U1267	METER CONN		AV-196, "DTC Description"
U12B7	USB CONN		AV-198, "DTC Description"
U12B8	REAR CAMERA CONN		AV-199, "DTC Description"
U12BA	MULTIFUNCTION SWITCH CONN		AV-201, "DTC Description"
U12BE	RADIO ANTENNA CONN	GND-SHORT	AV-203, "DTC Description"
		OPEN	
U1300	AV COMM CIRCUIT		AV-205, "DTC Description"
U1310	CONTROL UNIT(AV)		AV-207, "DTC Description"
U1601	FL-DOOR WOOFER	OPEN	AV-208, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1602	FL-DOOR SQUAWK	OPEN	AV-211, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1603	FL-DOOR TWEETER	OPEN	AV-214, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1609	FR-DOOR WOOFER	OPEN	AV-208, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U160A	FR-DOOR SQUAWK	OPEN	AV-211, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U160B	FR-DOOR TWEETER	OPEN	AV-214, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

DTC	CONSULT display		Reference	
U1626	F-INST L-SQUAWK	OPEN	AV-217, "DTC Description"	A
		SHORT		
		GND-SHORT		B
		VB-SHORT		
U162A	F-INST C-SQUAWK	OPEN	AV-220, "DTC Description"	C
		SHORT		
		GND-SHORT		D
		VB-SHORT		
U162E	F-INST R-SQUAWK	OPEN	AV-217, "DTC Description"	E
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1708	RL-DOOR SPEAKER	OPEN	AV-222, "DTC Description"	F
		SHORT		
		GND-SHORT		G
		VB-SHORT		
U1710	RR-DOOR SPEAKER	OPEN	AV-222, "DTC Description"	H
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1722	R-PSHELF L-SQUAWK	OPEN	AV-225, "DTC Description"	I
		SHORT		
		GND-SHORT		J
		VB-SHORT		
U1725	R-PSHELF C-WOOFER	OPEN	AV-228, "DTC Description"	K
		SHORT		
		GND-SHORT		
		VB-SHORT		
U172A	R-PSHELF R-SQUAWK	OPEN	AV-225, "DTC Description"	L
		SHORT		
		GND-SHORT		M
		VB-SHORT		
U1901	FL-DOOR SPEAKER	OPEN	AV-230, "DTC Description"	AV
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1902	RR-DOOR SPEAKER	OPEN	AV-233, "DTC Description"	O
		SHORT		
		GND-SHORT		P
		VB-SHORT		
U1906	RL-DOOR SPEAKER	OPEN	AV-233, "DTC Description"	
		SHORT		
		GND-SHORT		
		VB-SHORT		

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[REAR VIEW MONITOR SYSTEM]

DTC	CONSULT display		Reference
U1907	FR-DOOR SPEAKER	OPEN	AV-230, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U190D	FR TWEETER	OPEN	AV-236, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U190E	FL TWEETER	OPEN	AV-236, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

REAR VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

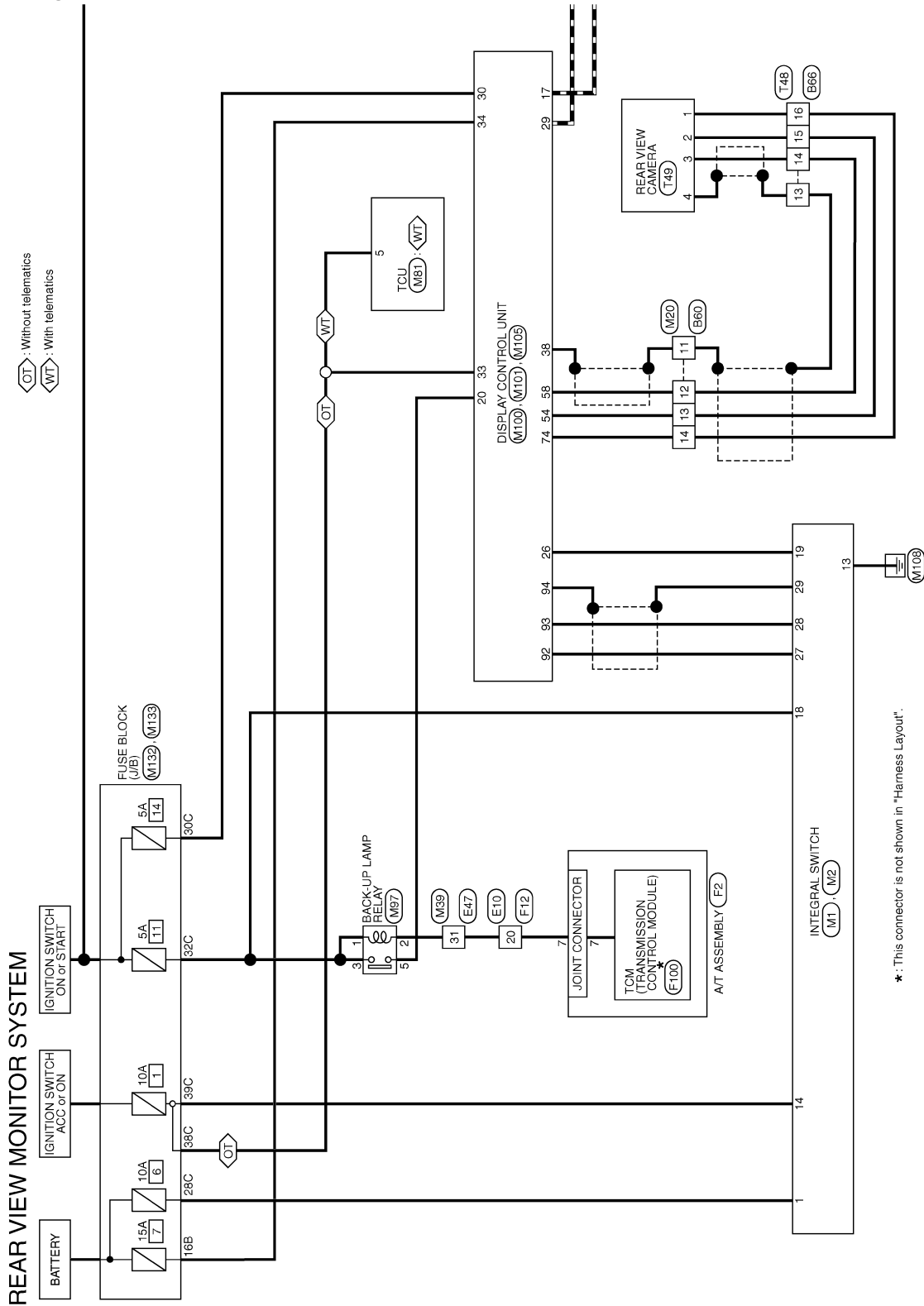
[REAR VIEW MONITOR SYSTEM]

WIRING DIAGRAM

REAR VIEW MONITOR SYSTEM

Wiring Diagram

INFOID:000000009728931



*: This connector is not shown in "Harness Layout".

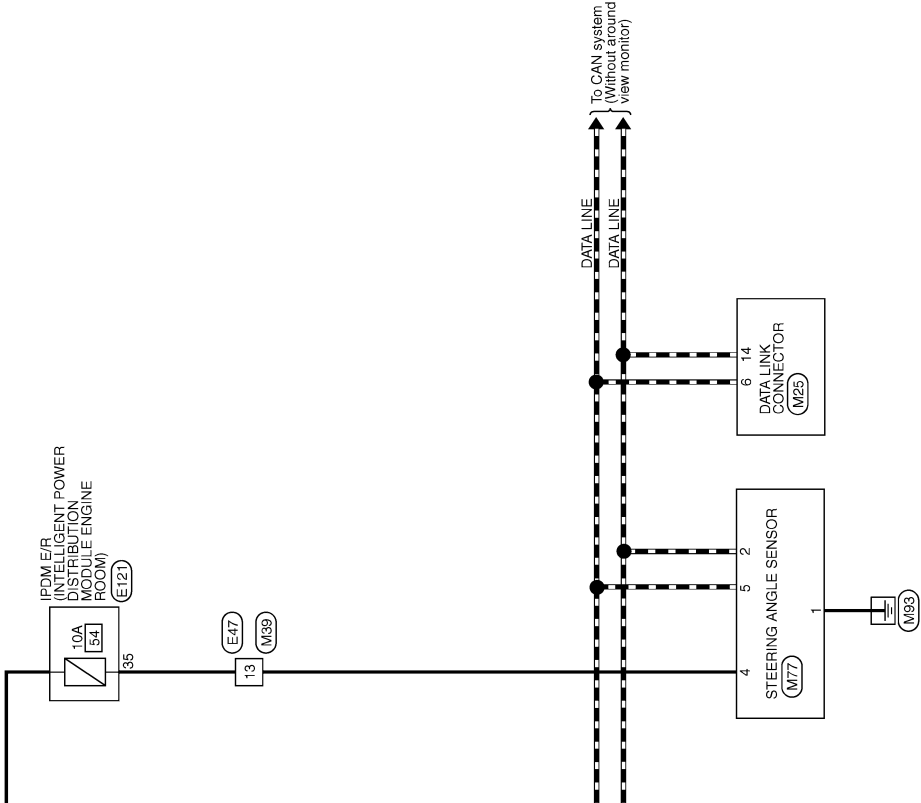
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REAR VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[REAR VIEW MONITOR SYSTEM]



JRNWC4784GB

REAR VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[REAR VIEW MONITOR SYSTEM]

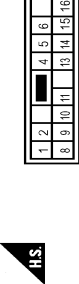
REAR VIEW MONITOR SYSTEM

Connector No.	E60
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-4H



Terminal No.	Color	Wire	Signal Name [Specification]
1	BR	-	-
10	Y	-	-
11	SHIELD	-	-
12	B	-	-
13	W	-	-
14	R	-	-

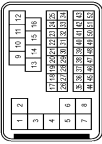
Connector No.	E66
Connector Name	WIRE TO WIRE
Connector Type	IN18MW-CS



Terminal No.	Color	Wire	Signal Name [Specification]
1	R	-	-
2	BG	-	-
4	SHIELD	-	-
5	W	-	-
6	GR	-	-
8	B	-	-
9	R	-	-
10	P	-	-
11	B	-	-
13	SHIELD	-	- [With back view monitor]
14	B	-	- [With around view monitor]
14	G	-	- [With around view monitor]

15	R	-	- [With around view monitor]
16	W	-	- [With back view monitor]
16	B	-	- [With around view monitor]
16	R	-	- [With back view monitor]

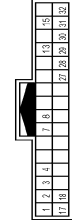
Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RSP-SH2B



Terminal No.	Color	Wire	Signal Name [Specification]
1	L/Y	-	-
2	SHIELD	-	-
3	L/B	-	-
4	SHIELD	-	-
5	BR	-	-
6	SB	-	-
7	G	-	-
8	W	-	-
9	W	-	-
10	P	-	-
11	SB	-	-
12	L	-	-
14	G	-	-
15	L/G	-	-
16	BR	-	-
17	L	-	-
18	P	-	-
19	GR	-	-
20	G	-	-
21	V	-	-
22	Y	-	-
23	L	-	-
24	GR	-	-
25	V	-	-
26	BR	-	-
27	W	-	-
28	V	-	-
29	BR	-	-

30	R	-	-
31	P	-	-
32	G	-	-
33	B	-	-
34	BG	-	-
35	L	-	-
36	W	-	-
37	SHIELD	-	-
38	L	-	-
39	P	-	-
40	R	-	-
41	W	-	-
42	L/G	-	-
43	G	-	-
44	V	-	-
45	Y	-	-
46	SHIELD	-	-
47	W	-	-
48	BR	-	-
49	G	-	-
50	B	-	-
51	SB	-	-
52	R	-	-

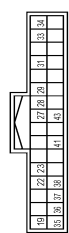
Connector No.	E47
Connector Name	WIRE TO WIRE
Connector Type	TH52MW-4H



Terminal No.	Color	Wire	Signal Name [Specification]
1	G	-	-
2	V	-	-
3	L	-	-
4	P	-	- [Without Gateway]
4	R	-	- [With Gateway]
7	L	-	-
8	W	-	-
13	G	-	-
15	BR	-	-
17	W	-	-

18	BG	-	-
27	LG	-	-
28	BR	-	-
29	W	-	-
30	Y	-	-
31	G	-	-
32	LG	-	-

Connector No.	E121
Connector Name	FROM IN INTELLIGENT POWER DISTRIBUTION MODULE ENGINE (ROOM)
Connector Type	TH32FW-4H



Terminal No.	Color	Wire	Signal Name [Specification]
19	G	-	-
22	BG	-	-
23	LG	-	-
27	GR	-	-
28	P	-	-
29	L	-	-
31	G	-	-
33	SB	-	-
34	Y	-	-
35	G	-	-
39	SB	-	-
39	GR	-	-
38	BR	-	-
41	GR	-	-
43	V	-	-

REAR VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[REAR VIEW MONITOR SYSTEM]

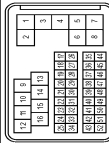
REAR VIEW MONITOR SYSTEM

Connector No.	F2
Connector Name	A/T ASSEMBLY
Connector Type	HK10FC-DGY



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	IGNITION POWER SUPPLY
2	P	BATTERY POWER SUPPLY (MEMORY BACK-UP)
3	L	CAN-H
4	LG	K-LINE
5	B	GROUND
6	GR	IGNITION POWER SUPPLY
7	BG	BACK-UP LAMP RELAY
8	P	CAN-L
9	GR	STARTER RELAY
10	B	GROUND

Connector No.	F12
Connector Name	WIRE TO WIRE
Connector Type	SAAS36FB-RSS-SFZ8



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

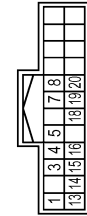
11	R	-
12	P	-
13	LG	-
14	P	-
15	Y	-
16	L	-
17	P	-
18	GR	-
19	BG	-
20	BG	-
21	LG	-
22	W	-
23	Y	-
24	LG	-
25	V	-
26	W	-
27	V	-
28	BR	-
29	LG	-
30	R	-
31	P	-
32	GR	-
33	B	-
34	BG	-
35	LG	-
36	SB	-
37	SHIELD	-
38	W	-
39	Y	-
40	G	-
41	B	-
42	GR	-
43	R	-
44	BG	-
45	Y	-
46	SHIELD	-
47	W	-
48	LG	-
49	L	-
50	R	-
51	SB	-
52	G	-

Connector No.	F100
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FG



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	IGNITION POWER SUPPLY
2	-	BATTERY POWER SUPPLY (MEMORY BACK-UP)
3	-	CAN-H
4	-	K-LINE
5	-	GROUND
6	-	IGNITION POWER SUPPLY
7	-	BACK-UP LAMP RELAY
8	-	CAN-L
9	-	STARTER RELAY
10	-	GROUND

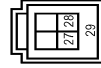
Connector No.	M1
Connector Name	INTEGRAL SWITCH
Connector Type	TH24FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	BAT
3	SB	AV COMM (L)
4	LG	AV COMM (H)
5	G	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
7	W/B	DISK EJECT SIGNAL
8	G	HAZARD SIGNAL
13	B	GND
14	V	ACC
15	B	ILLUMINATION CONTROL SIGNAL
16	BG	DISK EJECT SIGNAL GROUND

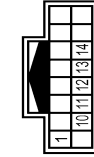
18	R	IGN
19	BR	CAMERA SWITCH SIGNAL
20	LG	AIR BAG INDICATOR OFF SIGNAL

Connector No.	M2
Connector Name	INTEGRAL SWITCH
Connector Type	Type 1554887-6



Terminal No.	Color Of Wire	Signal Name [Specification]
27	W	LVDS (+)
28	B	LVDS (-)
29	SHIELD	SHIELD

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH16MM-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
10	Y	-
11	SHIELD	-
12	B	-
13	W	-
14	R	-

REAR VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[REAR VIEW MONITOR SYSTEM]

REAR VIEW MONITOR SYSTEM

Connector No.	M23
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color	Wire	Signal Name [Specification]
3	SB		AV COMM (L)
4	B		EARTH
5	B		EARTH
6	L		CAN-H
7	V		KLINE
8	W		IGN SW
11	LG		AV COMM (H)
12	R		CAN-L
13	L		CAN-H
14	P		CAN-L
16	W		POWER

Connector No.	M39
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	W/B		-
2	SB		-
3	L		-
4	P		- [Without Gateway]
7	L		- [With Gateway]
8	W		-
13	G		-
15	R		-

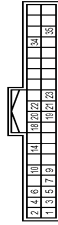
17	BR		-
18	BG		-
27	LG		-
28	BR		-
29	W/B		-
30	W		-
31	W		-
32	LG		-

Connector No.	M77
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	B		GROUND
2	P		CAN-L [Without Gateway]
2	R		CAN-L [With Gateway]
4	G		IGN
5	L		CAN-H

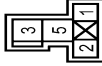
Connector No.	M81
Connector Name	TQU
Connector Type	TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	Y		BAT
2	B		GROUND
3	V		ACC
4	R		IGN
5	SB		ACC OUTPUT

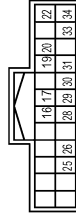
6	SB		-
7	B		GROUND
9	L		CAN-H
10	P		AUDIO TYPE RESOLUTION SIGNAL
13	B		AUDIO TYPE RESOLUTION SIGNAL
18	G		MICROPHONE VCC
19	G		MICROPHONE SIGNAL
20	SHIELD		SHIELD
21	L		MICROPHONE VCC
22	G		SOUND SIGNAL
23	SHIELD		SHIELD
34	G		SOS CALL SWITCH SIGNAL
35	BR		SOS SWITCH LED SIGNAL

Connector No.	M87
Connector Name	BACK-UP LAMP RELAY
Connector Type	MS02L-MZ-LC



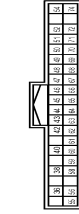
Terminal No.	Color	Wire	Signal Name [Specification]
1	R		-
2	W		-
3	R		-
5	BR		-

Connector No.	M100
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH24FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
16	SB		AV COMM (L)
17	P		ON-PAUSE
19	B		DANGER SIGNAL
20	BR		REVERSE SIGNAL
22	B		GROUND
25	SB		CAMERA SWITCH SIGNAL
26	BR		AV COMM (H)
28	LG		CAN-H
29	L		IGN
30	R		VEHICLE SPEED SIGNAL (8-PULSE)
31	R		ACC
33	SB		BAT
34	Y		-

Connector No.	M101
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
38	LG		COMPOSITE IMAGE SIGNAL (-)
39	SHIELD		SHIELD
40	SHIELD		MANUFACTURE SPECIFIC SIGNAL
42	G		SOUND SIGNAL RH (-)
43	SHIELD		SHIELD
44	L		SOUND SIGNAL LH (-)
45	W		TEL VOICE SIGNAL (-)
46	SHIELD		SHIELD
47	R		VOICE GUIDANCE SIGNAL OUTPUT (-)
48	B		VOICE GUIDANCE SIGNAL INPUT (-)
49	W		NS ON/OFF SIGNAL
50	R		MICROPHONE SIGNAL GND
51	SHIELD		SHIELD
52	SHIELD		MICROPHONE SIGNAL GND
54	W		CAMERA GND
55	SHIELD		SHIELD
56	BR		COMPOSITE IMAGE SIGNAL (+)
58	B		CAMERA IMAGE SIGNAL
59	R		U-VOICE SIGNAL

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REAR VIEW MONITOR SYSTEM

< WIRING DIAGRAM >

[REAR VIEW MONITOR SYSTEM]

REAR VIEW MONITOR SYSTEM

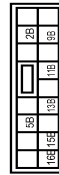
Terminal No.	Wire	Signal Name [Specification]
60	W	VOICE SIGNAL GND
61	B	0-VOICE SIGNAL
62	R	SOUND SIGNAL RH (+)
63	SHIELD	SOUND SIGNAL SHIELD
64	SHIELD	SOUND SIGNAL LH (+)
65	B	TEL. VOICE SIGNAL (+)
66	B	SHIELD
67	G	VOICE GUIDANCE SIGNAL OUTPUT (+)
68	W	VOICE GUIDANCE SIGNAL INPUT (+)
69	SHIELD	SHIELD
70	G	MICROPHONE SIGNAL
71	G	MICROPHONE VCC
72	L	MICROPHONE VCC
74	R	CAMERA POWER SUPPLY

Connector No.	M105
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Type 1554987-6



Terminal No.	Wire	Signal Name [Specification]
80	W	LVDS (+)
82	B	LVDS (-)
84	SHIELD	SHIELD

Connector No.	M132
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Terminal No.	Wire	Signal Name [Specification]
11B	G	-
13B	G	-
15B	Y	-
16B	Y	-
2B	B	-
9B	R	-
9B	Y	-

Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH40FW-NH



Terminal No.	Wire	Signal Name [Specification]
10C	V	-
11C	V	-
13C	L	-
14C	R	-
15C	R	-
17C	L	-
18C	BG	- [Without DBPO]
18C	P	- [With DBPO]
19C	B	-
20C	W	-
21C	L	-
22C	L	-
23C	L	-
25C	LG	-
26C	SB	-
27C	P	-
28C	W	-
29C	W	-
2C	R	-
30C	R	-
31C	W	-
32C	R	-
33C	B	-
34C	W/B	-

35C	SB	-
36C	R	-
37C	SB	-
38C	SB	-
39C	V	-
40C	P	-
40C	G	-
40C	B	-
40C	P	-
5C	P	-
6C	G	-
7C	G	-
9C	V	-

Connector No.	T48
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



Terminal No.	Wire	Signal Name [Specification]
1	Y	-
2	BG	-
5	B	-
6	G	-
8	B	-
9	R	-
10	P	-
11	L	-
13	L	- [With around view monitor]
13	L	- [With back view monitor]
14	B	- [With back view monitor]
14	R	- [With around view monitor]
15	B	- [With around view monitor]
15	W	- [With back view monitor]
16	R	- [With back view monitor]
16	W	- [With around view monitor]

Connector No.	T49
Connector Name	REAR VIEW CAMERA
Connector Type	TH6AMH-NH



Terminal No.	Wire	Signal Name [Specification]
1	R	CAMERA ON
2	W	GND
3	B	COMP+
4	SHIELD	COMP-

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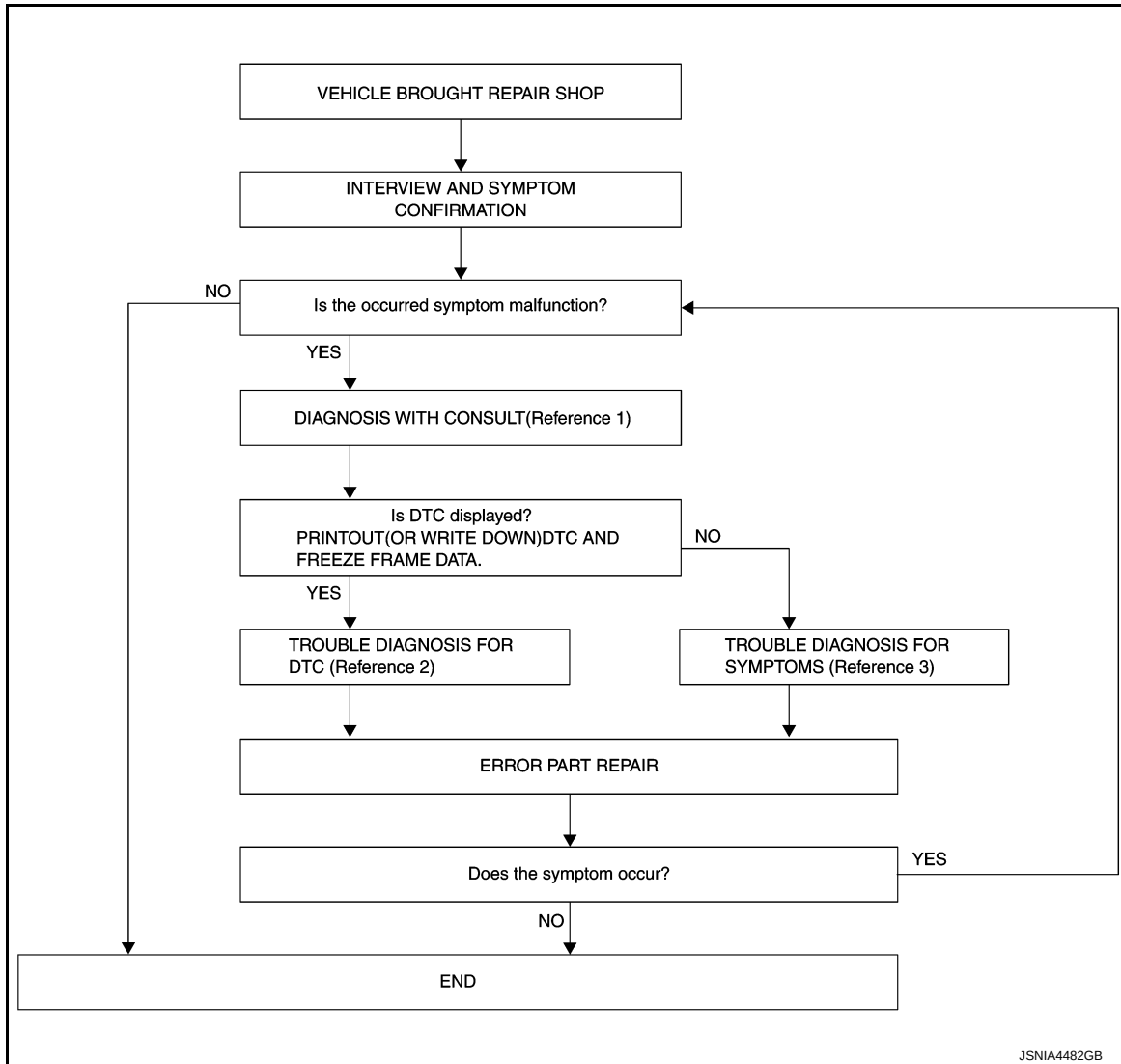
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000009727671

OVERALL SEQUENCE



- Reference 1... Refer to [AV-493, "CONSULT Function"](#).
- Reference 2... Refer to [AV-503, "DTC Index"](#).
- Reference 3... Refer to [AV-521, "Symptom Table"](#).

DETAILED FLOW

1. INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

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

Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2. DIAGNOSIS WITH CONSULT

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[REAR VIEW MONITOR SYSTEM]

1. Connect CONSULT and perform a self-diagnosis for "MULTI AV". Refer to [AV-493. "CONSULT Function"](#).
NOTE:
Skip to step 4 of the diagnosis procedure if "MULTI AV" is not displayed.
2. When DTC is detected, follow the instructions below:
 - Record DTC and Freeze Frame Data.

Is DTC displayed?

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

3. TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the "Self-Diagnosis Results".
2. Perform the relevant diagnosis referring to the DTC Index. Refer to [AV-503. "DTC Index"](#).

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-521. "Symptom Table"](#).

>> GO TO 5.

5. ERROR PART REPAIR

1. Repair or replace the identified malfunctioning parts.
2. Perform a self-diagnosis for "MULTI AV" with CONSULT.
NOTE:
Erase the stored self-diagnosis results after repairing or replacing the relevant components if any DTC has been indicated in the "Self-Diagnosis Results".
3. Check that the symptom does not occur.

Does the symptom occur?

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

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

INFOID:000000009759909

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not fusing.

Power source	Fuse No.	Capacity
Battery	#7	15 A
Ignition switch ACC	#1	10 A
Ignition switch ON	#14	5 A

Is the fuse fusing?

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

2.CHECK DISPLAY CONTROL UNIT BATTERY POWER SUPPLY

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

Terminals			Voltage
(+)		(–)	
Display control unit			
Connector	Terminal		
M100	34	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Perform trouble diagnosis for battery power supply circuit.

3.CHECK DISPLAY CONTROL UNIT ACCESSORY POWER SUPPLY

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

Terminals			Voltage
(+)		(–)	
Display control unit			
Connector	Terminal		
M100	33	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Perform trouble diagnosis for accessory power supply circuit.

4.CHECK DISPLAY CONTROL UNIT IGNITION POWER SUPPLY

Check the voltage between display control unit harness connector and ground.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[REAR VIEW MONITOR SYSTEM]

Terminals			Voltage
(+) Display control unit		(−)	
Connector	Terminal		
M100	30		
		Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> Perform trouble diagnosis of ignition power supply circuit.

5.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check the continuity between display control unit and ground.

Terminals			Continuity
(+) Display control unit		(-)	
Connector	Terminal		
M100	22		
		Ground	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace malfunctioning parts.

CAMERA IMAGE SIGNAL CIRCUIT (WITH REAR VIEW MONITOR)

< DTC/CIRCUIT DIAGNOSIS >

[REAR VIEW MONITOR SYSTEM]

CAMERA IMAGE SIGNAL CIRCUIT (WITH REAR VIEW MONITOR)

Description

INFOID:000000009727673

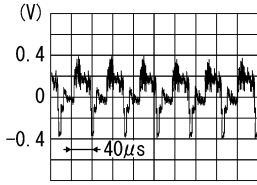
- The display control unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits camera images to the display control unit when power is supplied from the display control unit.

Diagnosis Procedure

INFOID:000000009727674

1.CHECK CAMERA IMAGE SIGNAL

1. Turn ignition switch ON.
2. Shift the selector lever to "R" position.
3. Check the signal between display control unit harness connector and ground.

Display control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M101	58	38	At rear view camera image is displayed.	 SKIB2251J

Is the inspection result normal?

- YES >> Replace display control unit. Refer to [AV-523, "Removal and Installation"](#).
NO >> GO TO 2.

2.CHECK CAMERA IMAGE SIGNAL CIRCUIT FOR OPEN

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

Display control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M101	58	T49	3	Existed

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Repair or replace malfunctioning parts.

3.CHECK CAMERA IMAGE SIGNAL CIRCUIT FOR SHORT

Check the continuity between display control unit harness connector and ground.

Terminals			Continuity
(+)		(-)	
Display control unit			
Connector	Terminal		
M101	58	Ground	Not existed

Is the inspection result normal?

- YES >> GO TO 4.

CAMERA IMAGE SIGNAL CIRCUIT (WITH REAR VIEW MONITOR)

< DTC/CIRCUIT DIAGNOSIS >

[REAR VIEW MONITOR SYSTEM]

NO >> Repair or replace malfunctioning parts.

4.CHECK CAMERA IMAGE SIGNAL GROUND CIRCUIT

Check the continuity between display control unit harness connector and rear view camera harness connector.

Display control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M101	38	T49	4	Existed

Is the inspection result normal?

YES >> Replace rear view camera. Refer to [AV-524, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

REVERSE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[REAR VIEW MONITOR SYSTEM]

REVERSE SIGNAL CIRCUIT

Component Function Check

INFOID:000000009803971

1.CHECK REVERSE SIGNAL

 With CONSULT

1. Turn ignition ON.
2. Select "REV SIG" in "DATA MONITOR" mode of "MULTI AV" using CONSULT.
3. Check "REV SIG" indication as per the following condition.

Monitor item	Condition		Indication
REV SIG	Selector lever position	R position	On
		Other than R position	Off

Is the inspection result normal?

YES >> INSPECTION END

NO >> Proceed to [AV-519, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009727675

1.CHECK REVERSE RANGE SIGNAL

Check the voltage between display control unit harness connector and ground as per the following condition.

Terminals			Condition	Voltage (Approx.)
(+)		(-)		
Display control unit				
Connector	Terminal			
M100	20	Ground	Shift the selector lever to R position.	12.0 V
			Shift the selector lever other than R position.	0 V

Is the inspection result normal?

YES >> Replace display control unit. Refer to [AV-523, "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK REVERSE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect display control unit harness connector.
3. Remove back-up lamp relay.
4. Check the continuity between display control unit harness connector and back-up lamp relay harness connector.

Display control unit		Back-up lamp relay		Continuity
Connector	Terminal	Connector	Terminal	
M47	17	M69	5	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK BACK-UP LAMP POWER SUPPLY

1. Turn ignition switch ON.
2. Check the voltage between back-up lamp relay harness connector and ground.

REVERSE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[REAR VIEW MONITOR SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
Back-up lamp relay			
Connector	Terminal		
M69	1	Ground	Battery voltage
	3		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check ignition power supply circuit.

4.CHECK BACK-UP LAMP RELAY

1. Turn ignition switch OFF.
2. Check the back-up lamp relay. Refer to [AV-520. "Component Inspection"](#).

Is the inspection result normal?

YES >> Perform "self diagnostic result" in "TRANSMISSION". Refer to [TM-69. "CONSULT Function"](#).

NO >> Replace back-up lamp relay.

Component Inspection

INFOID:000000009727676

1.CHECK BACK-UP LAMP RELAY

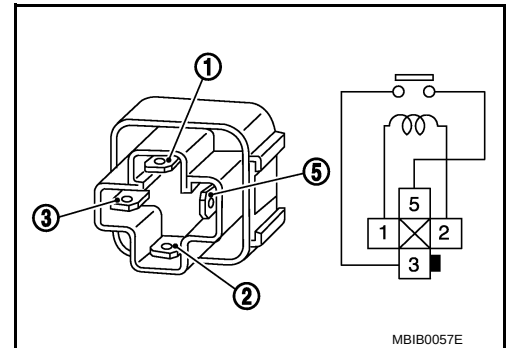
1. Turn ignition switch OFF.
2. Remove back-up lamp relay.
3. Check the continuity between back-up lamp relay terminals as per the following condition.

Back-up lamp relay		Condition	Continuity
Terminal			
3	5	12 V direct current supply between terminals 1 and 2	Existed
		No current supply	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back-up lamp relay.



SYMPTOM DIAGNOSIS

REAR VIEW MONITOR SYSTEM

Symptom Table

INFOID:000000009727677

REAR VIEW MONITOR SYSTEM

Symptoms	Possible cause	Inspection item
Camera image is not shown. (Vehicle width and predictive course line are displayed.)	• Harness between rear view camera and display control unit • Rear view camera • Display control unit	Camera image signal circuit. Refer to AV-517, "Diagnosis Procedure" .
Camera image does not switch.	• Harness between back-up lamp relay and display control unit • Ignition power supply circuit • Back-up lamp relay • Display control unit • TCM	Reverse signal circuit. Refer to AV-519, "Diagnosis Procedure" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[REAR VIEW MONITOR SYSTEM]

NORMAL OPERATING CONDITION

Description

INFOID:000000009727678

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.

REMOVAL AND INSTALLATION

DISPLAY CONTROL UNIT

Removal and Installation

INFOID:000000009784602

REMOVAL

CAUTION:

- Before replacing display control unit, perform “Read/Write Configuration” to save or print current vehicle specification. For details, refer to [AV-164, "ADDITIONAL SERVICE WHEN REPLACING DISPLAY CONTROL UNIT : Description"](#).
- Remove battery terminal and display 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 display control unit continues operating for approximately 30 seconds. Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.
 - Downloaded applications are deleted when display control unit is replaced.
1. Remove the integral switch. Refer to [AV-280, "Removal and Installation"](#).
 2. Remove the bracket screws.
 3. Disconnect the harness connector from the display control unit.
 4. Remove the bracket from display control unit.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to perform “Read/Write Configuration” when replacing display control unit. For details, refer to [AV-164, "ADDITIONAL SERVICE WHEN REPLACING DISPLAY CONTROL UNIT : Description"](#).

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REAR VIEW CAMERA

Removal and Installation

INFOID:0000000009705604

REMOVAL

1. Remove the trunk lid finisher. Refer to [EXT-55, "TRUNK LID FINISHER : Removal and Installation"](#).
2. Remove the rear view camera mounting screws, then remove rear view camera.

INSTALLATION

Install in the reverse order of removal.

NOTE:

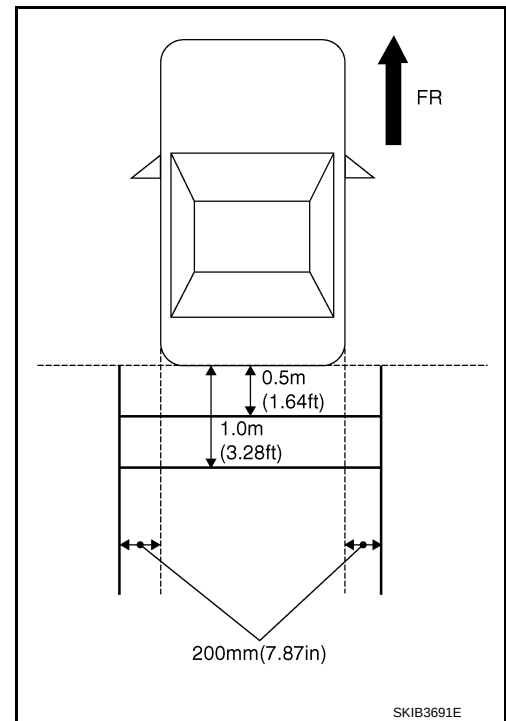
Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to [AV-524, "Adjustment"](#).

Adjustment

INFOID:0000000009705605

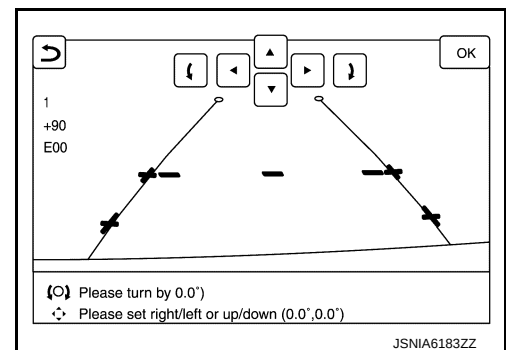
If the side distance guiding lines are dislocated after installation of the rear view camera, adjust the position of the side distance guiding lines.

1. Draw the correction lines at the rear of the vehicle passing through the following points: 20 cm from both sides of the vehicle, and 0.5 m and 1.0 m from the rear end of the bumper.
2. Set "Adjust offset of rear view camera" mode in Confirmation/Adjustment mode.



3. Operate the touch panel and select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

Selection range $(-10^{\circ}) - (+10^{\circ})$ in increments of 0.2° step



4. Press the upper/lower/left/right switch to perform the fine adjustment of the guiding lines so that the position of the guiding lines is aligned with the correction lines of the rear of the vehicle. The position of adjusted guiding line is recorded to the display control unit by pressing the “OK” switch.

CAUTION:

Never perform other operations while the guiding line position is memorized.

REAR VIEW CAMERA

< REMOVAL AND INSTALLATION >

[REAR VIEW MONITOR SYSTEM]

Upper/lower adjustment range $(-10^{\circ}) - (+10^{\circ})$ in increments of 0.2° step
Left/right adjustment range $(-10^{\circ}) - (+10^{\circ})$ in increments of 0.2° step

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STEERING ANGLE SENSOR

< REMOVAL AND INSTALLATION >

[REAR VIEW MONITOR SYSTEM]

STEERING ANGLE SENSOR

Removal and Installation

INFOID:000000009705606

REMOVAL

1. Remove the spiral cable. Refer to [SR-20, "Removal and Installation"](#).
2. Remove the steering angle sensor from spiral cable.

INSTALLATION

Install in the reverse order of removal.

PRECAUTION

PRECAUTIONS

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

INFOID:000000009728748

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.

Cautions in Removing Battery Terminal, Display Control Unit, and AV Control Unit

INFOID:000000009728749

CAUTION:

Remove battery terminal, display control unit, 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 display control unit, and the AV control unit continues operating for approximately 30 seconds.

Therefore, data corruption may occur if battery voltage is cut off within 30 seconds.

Precaution for Trouble Diagnosis

INFOID:000000009728750

AV COMMUNICATION SYSTEM

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

Precaution for Harness Repair

INFOID:000000009728751

AV COMMUNICATION SYSTEM

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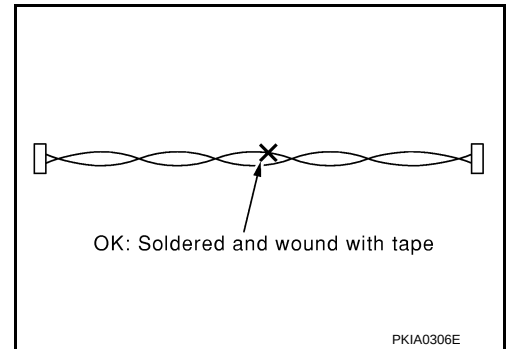
P

PRECAUTIONS

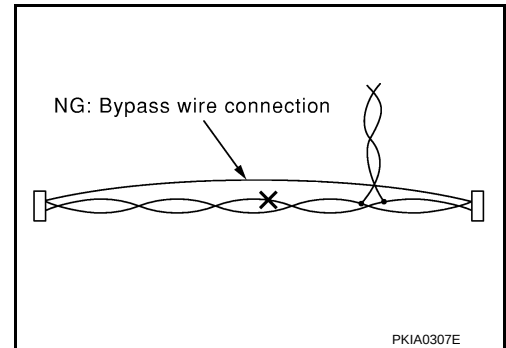
< PRECAUTION >

[TELEMATICS 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.)

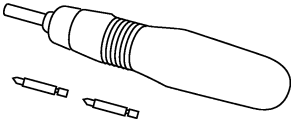


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000009728833

Tool		Description
Power tool  PBIC0191E		Loosening screws

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SYSTEM DESCRIPTION

DESCRIPTION

Telematics system

INFOID:000000009240189

The adoption of the Telematics system allows the provision of information and services in real time for safe and pleasant driving.

- TCU (Telematics Control Unit) equipped with a radio communication terminal communicates with the information center (Infiniti Connection™ Data Center) via radio waves for receiving Infiniti Connection™ services.
- In addition to the services received while driving, various kinds of vehicle information can be obtained via Infiniti Connection™ Data Center by using cell phone or personal computer.

Infiniti Connection™ SERVICE

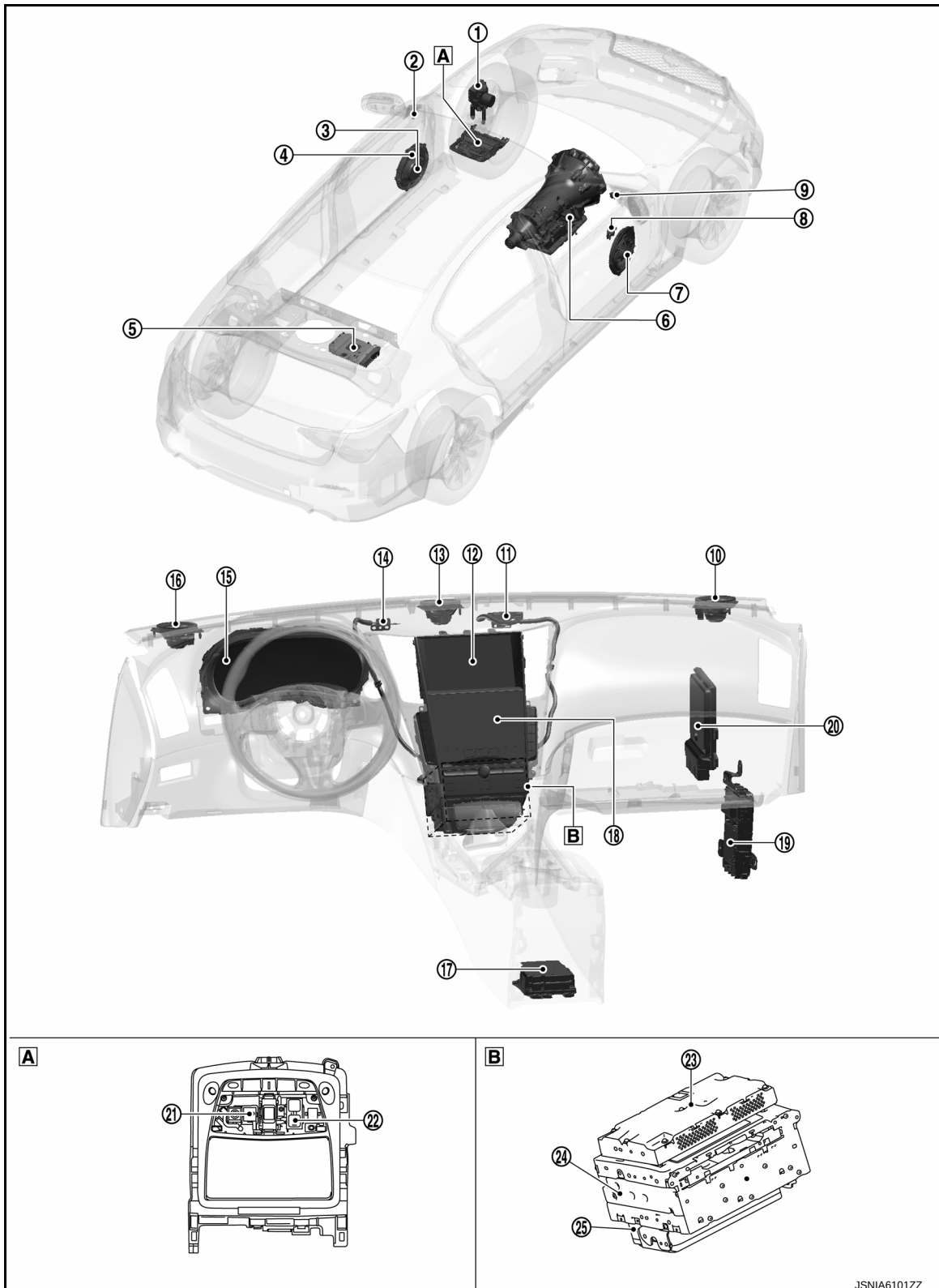
The user can transmit/receive various kinds of information via the information centers (Infiniti Connection™ Data Center).

- The available services are: Information service, Infiniti Connection™ Response service, shortest route search, safety & security service, etc.
- The user can access Infiniti Connection™ user's homepage and check eco drive information by using cell phone or personal computer.

COMPONENT PARTS

Component Parts Location

INFOID:000000009240190



A Map lamp

B Back of integral switch

COMPONENT PARTS

< SYSTEM DESCRIPTION >

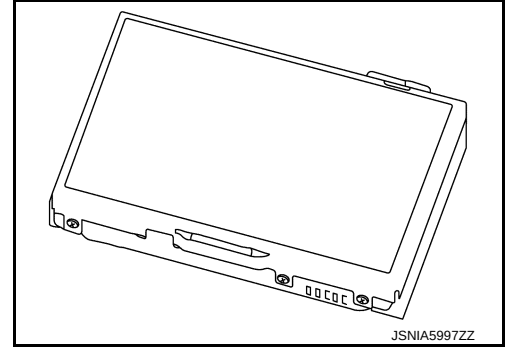
[TELEMATICS SYSTEM]

No.	Part name	Description
①	ABS actuator and electric unit (control unit)	Transmits the following signals to the TCU via CAN communication. • ABS warning lamp signal • VDC warning lamp signal
②	Tweeter LH	Outputs sound signal.
③	Front door squawker LH	
④	Front door woofer LH	
⑤	BOSE amp.	Inputs sound signal from AV control unit, and outputs sound signal to each speaker.
⑥	TCM	Outputs sound signal.
⑦	Front door woofer RH	
⑧	Front door squawker RH	
⑨	Tweeter RH	
⑩	Front squawker RH	
⑪	Telematics antenna	Refer to AV-533, "Antenna and Antenna Feeder" .
⑫	Display control unit	Refer to AV-533, "Display Control Unit" .
⑬	Center squawker RH	Outputs sound signal.
⑭	GPS antenna	Refer to AV-533, "Antenna and Antenna Feeder" .
⑮	Combination meter	Transmits the following signals to the TCU via CAN communication. • Brake warning lamp signal
⑯	Front squawker LH	Outputs sound signal.
⑰	Air bag diagnosis sensor unit	Transmits the following signals to the TCU via CAN communication. • Car crash information signal
⑱	Integral switch	Outputs switch operation signal to display control unit via AV communication.
⑲	BCM	Transmits the following signals to the TCU via CAN communication. • Door lock status signal • Oil pressure switch signal
⑳	ECM	Transmits the following signals to the TCU via CAN communication. • Malfunctioning indicator lamp signal • Engine status signal
㉑	Microphone	Refer to AV-533, "Microphone" .
㉒	Telematics switch	Refer to AV-536, "Telematics Switch" .
㉓	NAVI control unit	Inputs GPS antenna signal from GPS antenna, and outputs GPS antenna signal to display control unit.
㉔	AV control unit	Inputs sound signal from display control unit, and outputs sound signal to BOSE amp.
㉕	TCU	Refer to AV-533, "TCU" .

Display Control Unit

INFOID:000000009240191

- Display control unit is installed at the center of the instrument panel.
- It is connected to TCU with the USB harness and signals necessary for telematics function is sent and received.
- Switch operation signals used for the Telematics system are transmitted to TCU via USB communication from the display control unit.



TCU

INFOID:000000009705482

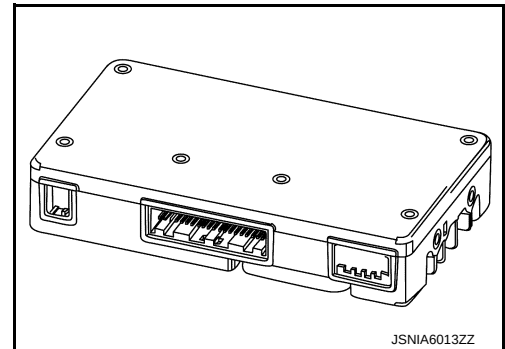
- TCU is abbreviation of Telematics Control Unit.
- It is installed on the instrument lower cover.
- A radio communication terminal and SIM card are built into the unit and data is sent and received in SMS^{*1}, DTMF tone signal and packet communication^{*2} with the Infiniti Connection™ Data Center through the TEL antenna.

NOTE:

*1: SMS stands for Short Message Service. It is also referred to as Text Messaging, Short Mail, etc. It is the service that performs text based message communication.

*2: Packet communication means a communication method that data are broken down into smaller chunks for communication. The split data is called a packet and this method improves the efficiency of the communication circuit.

- It is connected to the display control unit with the USB harness for sound signal input/output and USB communication.
- VIN information necessary for the Telematics service is memorized.
- It is connected to the air bag diagnosis sensor unit via CAN communication. TCU performs an emergency report when the air bag is inflated.
- Audio signals received during SOS/Infiniti Connection™ Response Specialists call are transmitted from TCU to each speaker via the display control unit and AV control unit.
- During the communication with Infiniti Connection™ Data Center and Infiniti Connection™ Response Center, TCU prohibit the use of Bluetooth® hands-free phone.

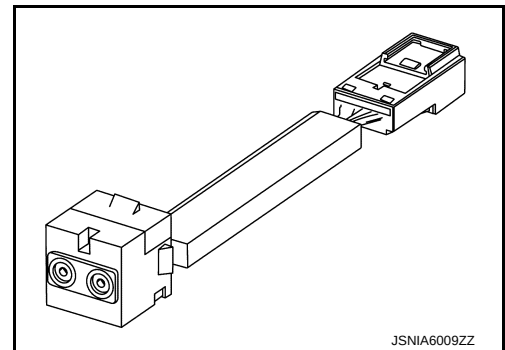


Microphone

INFOID:000000009240195

Microphone is installed on the map lamp assembly.

- The microphone is used for hands-free phone and voice recognition function in addition to the Infiniti Connection™ Response service of Infiniti Connection™.
- TCU supplies power to the microphone.
- An audio signal during speech is transmitted to TCU.



Antenna and Antenna Feeder

INFOID:000000009728832

GPS ANTENNA

COMPONENT PARTS

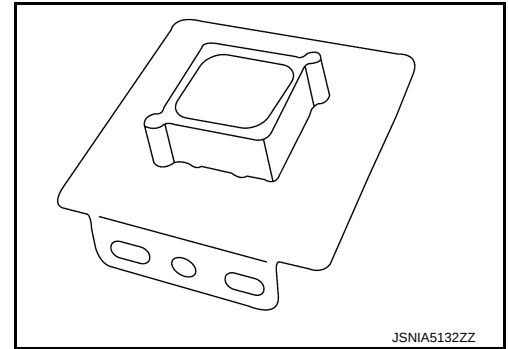
< SYSTEM DESCRIPTION >

[TELEMATICS SYSTEM]

- GPS antenna is installed in the instrument panel.
- Power is supplied from the NAVI control unit.
- This antenna amplifies radio waves received from the GPS satellite and transmits the GPS signal to the NAVI control unit.

NOTE:

An object on the instrument panel may cause the reception sensitivity to be decreased.

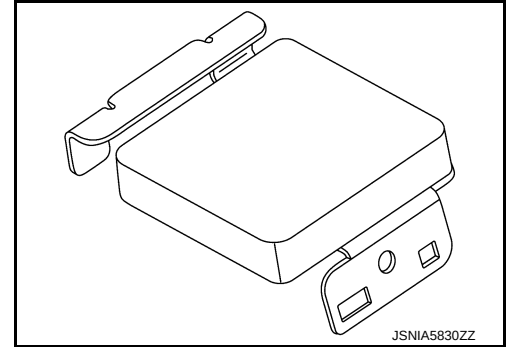


TELEMATICS ANTENNA

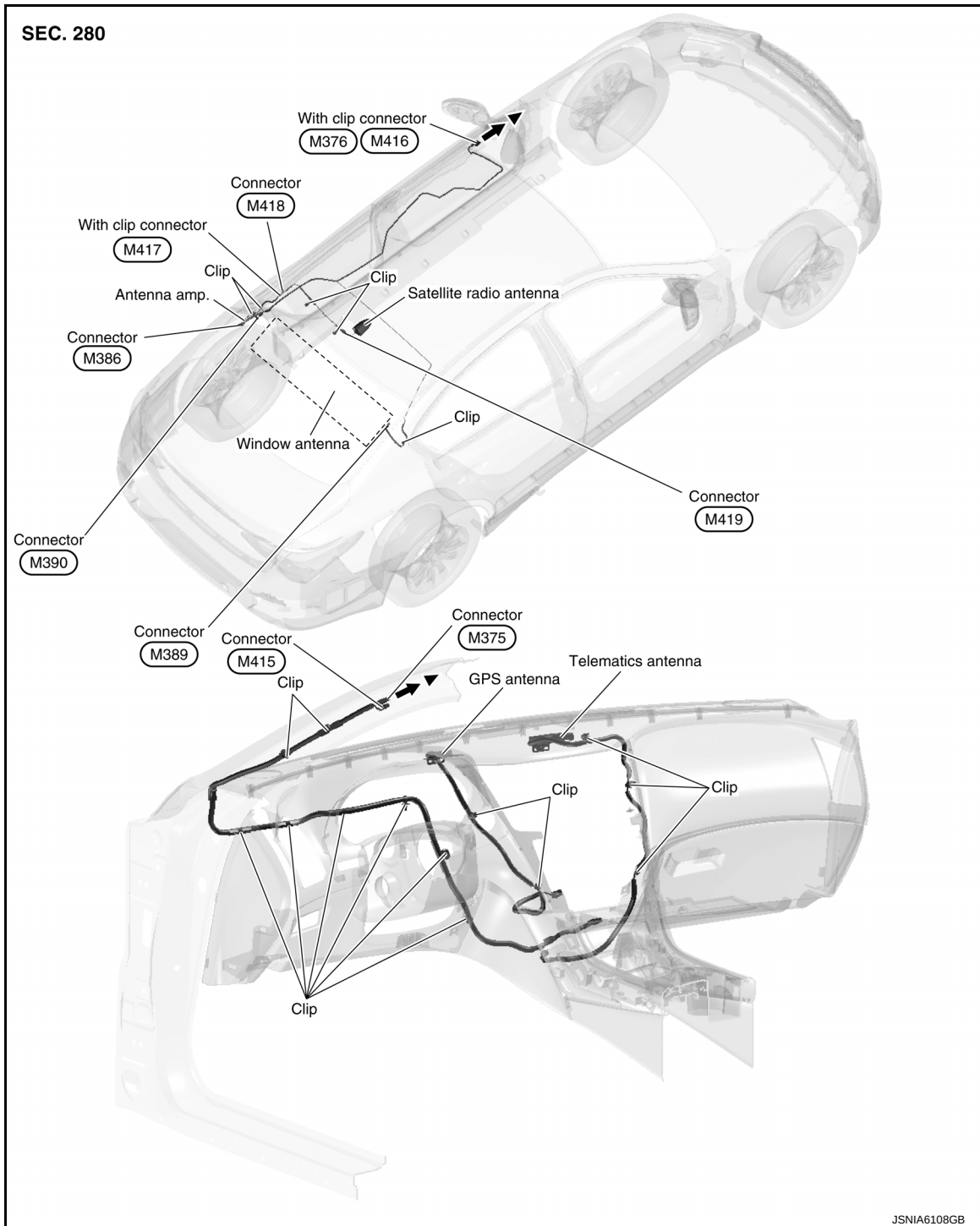
- The telematics antenna is installed in the instrument panel.
- Data communications signals and voice signals are transmitted/received.
- Power is supplied with TCU activated.

NOTE:

The placement of an object on the instrument panel may cause desensitization in the receiver sensitivity.



ANTENNA FEEDER



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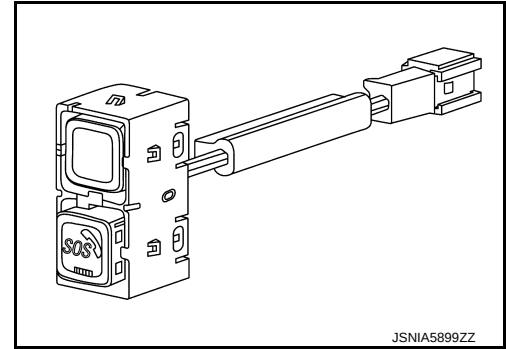
AV

Telematics Switch

INFOID:000000009705483

- The Telematics switch is located on the map lamp assembly.
- The Telematics switch is connected to TCU and transmits an operation signal.
- The state of LED (ON/Blink/OFF) shows the status of SOS call.

LED ON	:SOS Call available
LED Blink	:SOS Call in communication
LED OFF	:Out of service area or system error



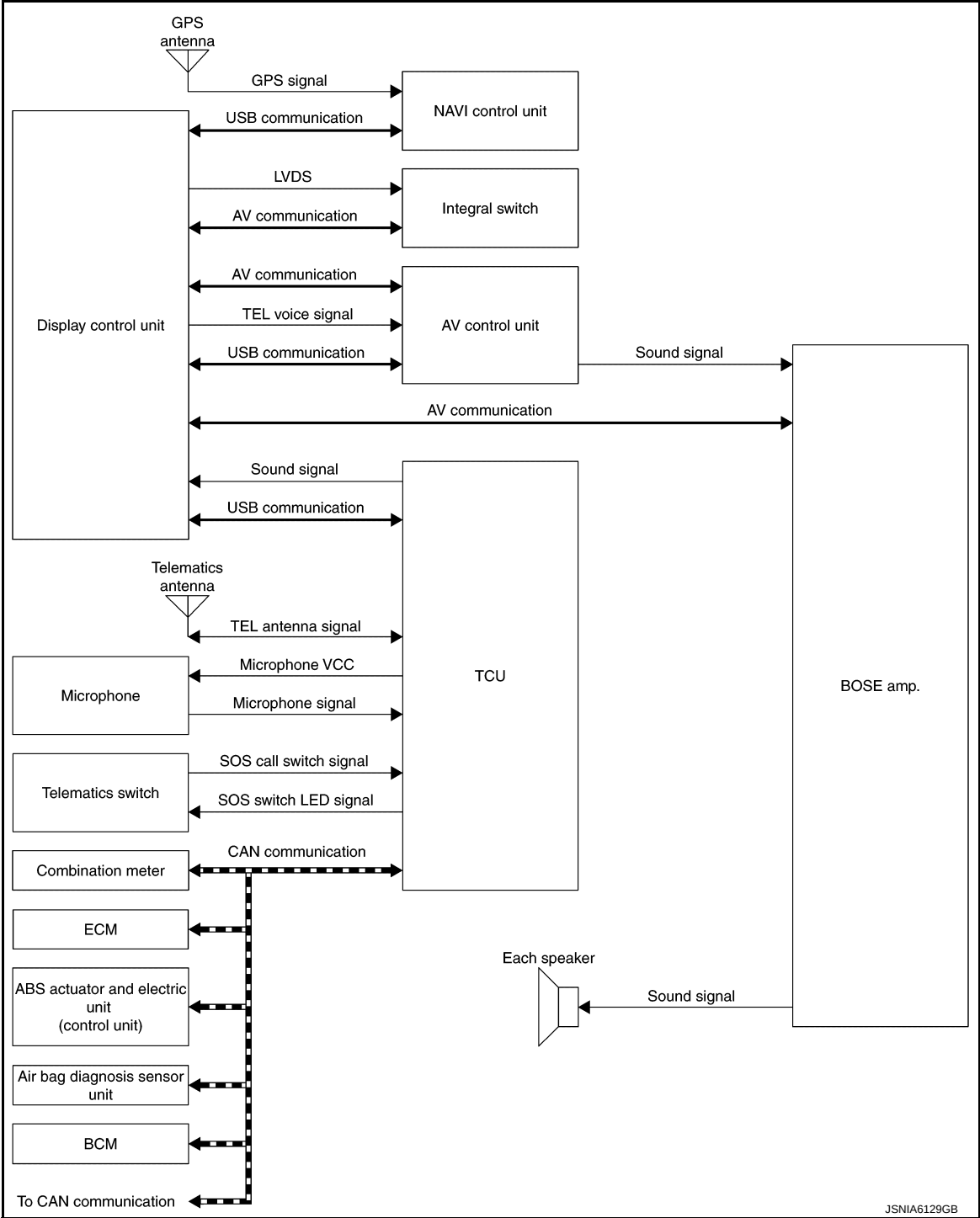
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SYSTEM
TELEMATICS SYSTEM

TELEMATICS SYSTEM : System Description

INFOID:000000009240198

SYSTEM DIAGRAM



TCU Input Signal (CAN Communication)

Transmit unit	Signal name
ABS actuator and electric unit (control unit)	ABS warning lamp signal
	VDC warning lamp signal

SYSTEM

< SYSTEM DESCRIPTION >

[TELEMATICS SYSTEM]

Transmit unit	Signal name
BCM	Door switch signal
	Trunk switch signal
Combination meter	Brake warning lamp signal
Airbag diagnosis sensor unit	Car crash information signal
BCM	Door lock status signal
	Oil pressure switch signal
ECM	Malfunctioning indicator lamp signal
	Engine status signal

DESCRIPTION

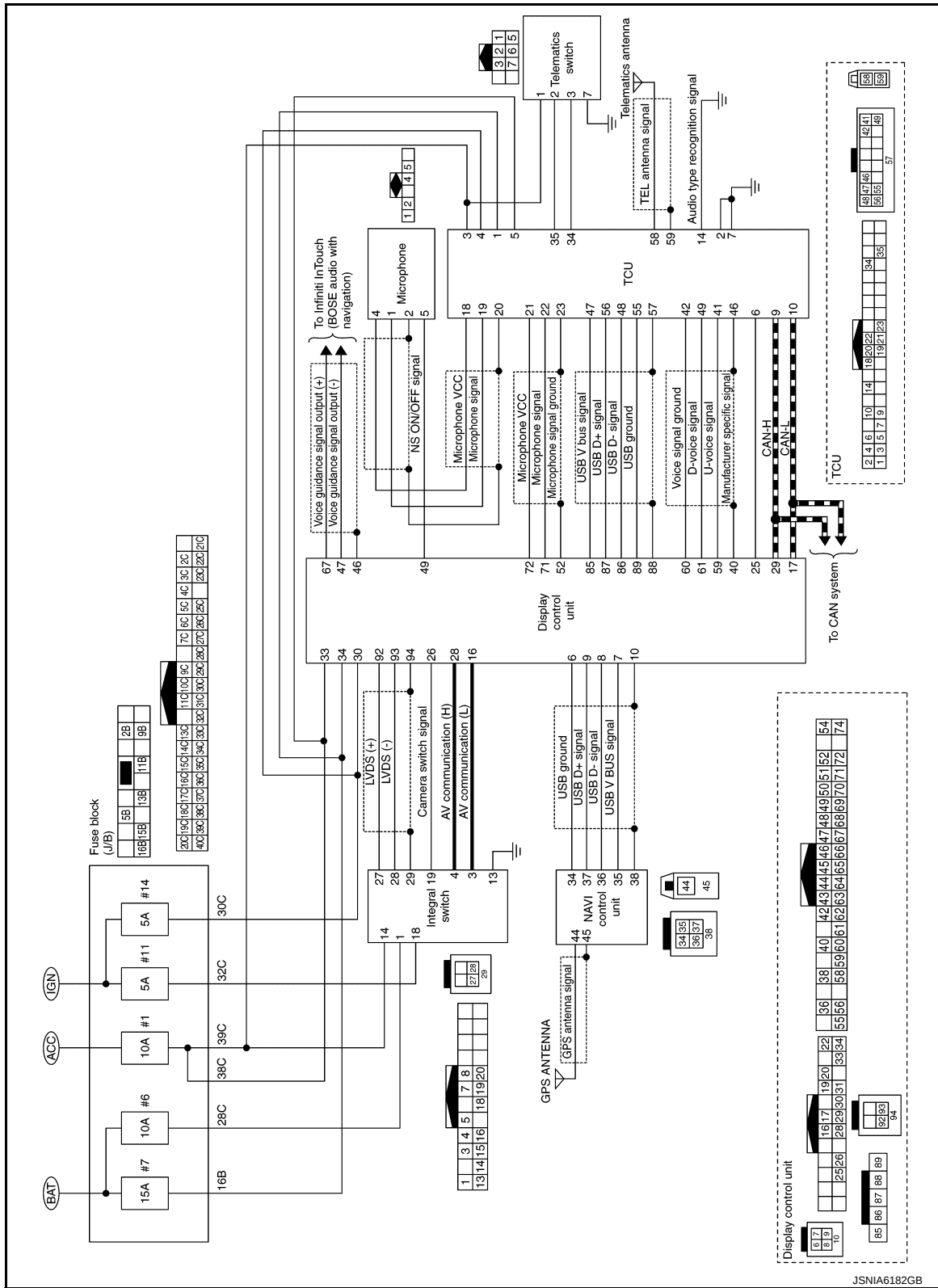
The telematics system interacts with the INFINITI CONNECTION data center using GPS and GSM/GPRS technologies. The telematics control unit (TCU) can send messages to and receive commands from the INFINITI CONNECTION data center. This allows the INFINITI CONNECTION data center to monitor the vehicle and obtain actual position coordinates and automatically detected events, as well as initiate certain services from outside the vehicle. In addition, the vehicle operator can initiate services from inside the vehicle.

NOTE:

For additional information on the Telematics system, refer to the NAVIGATION SYSTEM OWNER'S MANUAL.

TELEMATICS SYSTEM : Circuit Diagram

INFOID:000000009728855



JSNIA6182GB

TELEMATICS SYSTEM : Fail-safe

INFOID:000000009728926

If a malfunction occurs in the telematics system, TCU performs fail-safe activation according to the detected malfunction.

SYSTEM

< SYSTEM DESCRIPTION >

[TELEMATICS SYSTEM]

Detection item	Telematics system operation in fail-safe mode	DTC
CAN communication	• Telematics system does not function. • Inform a INFINITI CONNECTION data center about abnormality.	U1000
TEL antenna	• Telematics switch LED indicator turn OFF. (LED indicator turns ON 10 times when push the SOS call switch.) • When operated a telematics system, inform that cannot be connected to the INFINITI CONNECTION data center.	U1A07 U1A08
USB communication	• Telematics system does not function. • Inform a INFINITI CONNECTION data center about abnormality.	U1A05
TCU	Telematics system function stops.	U1A01
	• Telematics system function stops. • When operated a telematics system, inform that cannot be connected to the INFINITI CONNECTION data center.	U1A02
Telematics switch (SOS call switch)	• Telematics system does not function. (Only SOS call does not operate.) • Telematics switch LED indicator turn OFF.	U1A0E U1A0F
Microphone	• Transmit an own vehicle position to the INFINITI CONNECTION data center. • Inform a INFINITI CONNECTION data center about abnormality.	U1A0B U1A0C

HANDLING PRECAUTION

Telematics

INFOID:000000009240199

- In the following cases, no Infiniti Connection™ services are available.
 - When the user has not subscribed to the service.
 - When the vehicle moves out of the radio receiving zone
 - When the radio wave reception environment is not suitable to data communication.
 - When the vehicle is in a location that may block radio waves such as in an underground parking lot, behind a building, and in mountainous areas.
- Because the voice exchange with the Infiniti Connection™ data center uses the data communication mode, the service area may be narrower and the connection availability may be worse than the normal telephone system.
- Communication and calls to the Infiniti Connection™ data center require additional charges.
- If the vehicle is outside the communication area of TCU or the radio wave reception condition is poor, the connection to the Infiniti Connection™ data center may not be available or interrupted.
- If the communication is interrupted during a data download through any of the available services, the data must be downloaded again from the beginning.
- When transferring your vehicle, always resign from your membership. For details about the cancellation procedure, contact the Infiniti Connection™ customer center.

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DIAGNOSIS SYSTEM (TCU)

CONSULT Function

INFOID:000000009726877

APPLICABLE ITEM

CONSULT performs the following items by communication with TCU:

Diagnosis mode	Description
ECU identification information	Checks TCU part number and various ID numbers.
Self-diagnosis results	Performs the diagnosis of TCU and displays the current and past malfunctions collectively.
Data Monitor	The diagnosis of the vehicle signal that is input to TCU can be performed.
Work Support	Performs TCU activation setting and center connection setting.

ECU IDENTIFICATION INFORMATION

Displays TCU part number and various ID numbers.

Display items	Description
CONTROL UNIT NUMBER	Displays TCU part number.
UNIT ID	Displays display control unit ID number.
TCU ID	Displays TCU ID number.
SIM ID	Displays ICC ID of SIM card.
TCU PHONE NUMBER	Displays the phone number of TCU.
VIN	Displays the vehicle identification number stored in TCU.

SELF-DIAGNOSIS RESULTS

Refer to [AV-559, "DTC Index"](#).

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 Items

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

Display item	Display	Condition	Note
ECHO CANCEL	type1	—	This item is displayed, but cannot be monitored.
	type2		
	type3		
	type4		
NOISE CANCEL	type1	—	This item is displayed, but cannot be monitored.
	type2		
	type3		
	type4		
TCU STANDBY TIME	14DAYS	Set at 14 days (default)	Set value for continued operation time to control battery consumption
	2DAYS	Set at 2 days	
	30DAYS	Set at 30 days	
	NON	No setting	
NAD OUTPUT STATUS	On	When TCU activation is ON	NAD: Abbreviation of Network Access Device. ON/OFF setting of radio wave
	Off	When TCU activation is OFF	

DIAGNOSIS SYSTEM (TCU)

< SYSTEM DESCRIPTION >

[TELEMATICS SYSTEM]

Display item	Display	Condition	Note
ACN COMM SEQUENCE LOG	—	—	—
SOS COMM SEQUENCE LOG	—	—	—

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
ECHO CANCEL	"The same as when ALL SIGNALS" is selected
NOISE CANCEL	
TCU STANDBY TIME	
NAD OUTPUT STATUS	
ACN COMM SEQUENCE LOG	
SOS COMM SEQUENCE LOG	

Work Support

Performs TCU activation setting and center connection setting.

Item name	Description
SAVE VIN DATA	The VIN data saved in TCU is stored in CONSULT.
CHANGE TCU ACTIVATE SETTING	TCU ON/OFF setting is available.
CENTER CONNECTION SETTING	Connection of the Infiniti Connection™ Data Center can be set.
WRITE VIN DATA	Write VIN data stored by "SAVE VIN DATA" in work support mode to TCU.
WRITE VIN DATA (MANUAL)	Write VIN data in TCU.

AV

ECU DIAGNOSIS INFORMATION

DISPLAY CONTROL UNIT

Reference Value

INFOID:000000009803910

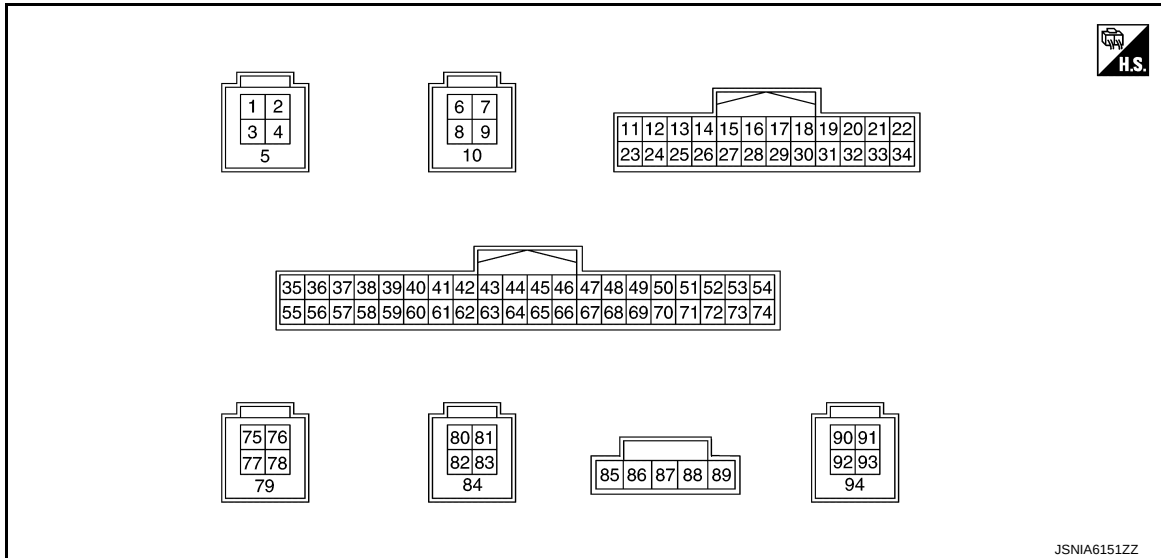
VALUES ON THE DIAGNOSIS TOOL

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
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	Block the light beam from the auto light optical sensor when the light switch is ON.	On
		Expose the auto light optical sensor to light when the light switch is OFF or ON.	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

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
1 (G)	—	USB ground	—	—	—
2 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

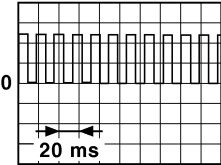
[TELEMATICS SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)	
+	—	Signal name	Input/ Output			
3 (R)	—	USB D- signal	Input/ Output	—	—	A
4 (L)	—	USB D+ signal	Input/ Output	—	—	B
5 (—)	—	Shield	—	—	—	C
6 (G)	—	USB ground	—	—	—	D
7 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V	E
8 (R)	—	USB D- signal	Input/ Output	—	—	F
9 (L)	—	USB D+ signal	Input/ Output	—	—	G
10 (—)	—	Shield	—	—	—	H
16 (SB)	—	AV communication signal (L)	Input/ Output	—	—	I
17 (P)	—	CAN-L	Input/ Output	—	—	J
19 (R)	22 (B)	Dimmer signal	Input	[Ignition switch ON] • Either of the following conditions - Lighting switch OFF - Expose the auto light optical sensor to light when the light switch is ON.	0 V	K
				[Ignition switch ON] • Block the light beam from the auto light optical sensor when the light switch is ON.	12.0 V	L
20 (BR)	22 (B)	Reverse signal	Input	[Ignition switch ON] • R position	12.0 V	M
				[Ignition switch ON] • Other than R position	0 V	N
22 (B)	—	Ground	—	[Ignition switch ON]	0 V	O
25 (SB)	—	—	—	—	—	P
26 (BR)	22 (B)	Camera switch signal	Input	[Ignition switch ON] • Camera switch: ON	0 - 2.5 V	AV
				[Ignition switch ON] • Camera switch: OFF	3.0 V	
28 (LG)	—	AV communication signal (H)	Input/ Output	—	—	
29 (L)	—	CAN-H	Input/ Output	—	—	
30 (R)	22 (B)	Ignition signal	Input	[Ignition switch ON]	Battery voltage	

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

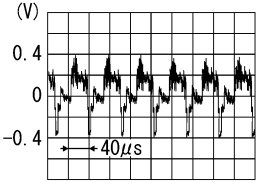
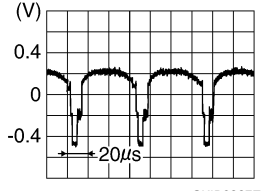
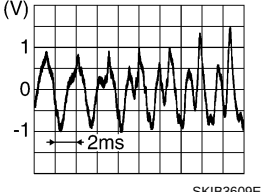
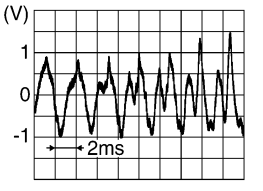
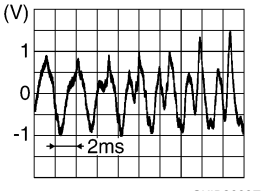
[TELEMATICS SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
31 (R)	22 (B)	Vehicle speed signal (8-pulse)	Input	[Ignition switch ON] • When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
33 (SB)	22 (B)	ACC power supply	Input	[Ignition switch ACC]	Battery voltage
34 (Y)	22 (B)	Battery power supply	Input	[Ignition switch OFF]	Battery voltage
36 (LG)	—	Composite image signal (-)	—	—	—
38 (—)	—	Shield	—	—	—
40* (—)	—	Manufacturer specific signal	—	—	—
42 (G)	—	Sound signal RH (-)	—	—	—
43 (—)	—	Shield	—	—	—
44 (L)	—	Sound signal LH (-)	—	—	—
45 (W)	—	TEL voice signal (-)	—	—	—
46 (—)	—	Shield	—	—	—
47 (R)	—	Voice guidance signal output (-)	—	—	—
48 (B)	—	Voice guidance signal input (-)	—	—	—
49 (W)	—	NS ON/OFF signal	—	—	—
50 (R)	—	Microphone signal ground	—	[Ignition switch ON]	0 V
51 (—)	—	Shield	—	—	—
52 (—)	22 (B)	Microphone signal ground (NAVI)	—	[Ignition switch ON]	0 V
54 (W)	22 (B)	Camera power supply ground	—	[Ignition switch ON]	0 V
55 (—)	—	Shield	—	—	—

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
56 (BR)	36 (LG)	Composite image signal (+)	Input	[Ignition switch ON] • Image is displayed.	
58 (B)	22 (B)	Camera image signal	Input	[Ignition switch ON] • Image is displayed.	
59 (R)	—	U-VOICE signal	Output	—	—
60 (W)	—	VOICE signal ground	—	—	—
61 (B)	—	D-VOICE signal	Input	—	—
62 (R)	42 (G)	Sound signal RH (+)	Output	[Ignition switch ON] • Sound output	
63 (—)	—	Shield	—	—	—
64 (V)	44 (L)	Sound signal LH (+)	Output	[Ignition switch ON] • Sound output	
65 (B)	45 (W)	TEL voice signal (+)	Input	[Ignition switch ON] • During voice guide output with the switch pressed	
66 (—)	—	Shield	—	—	—

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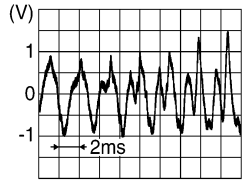
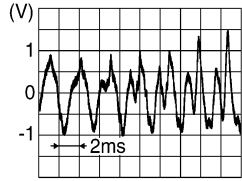
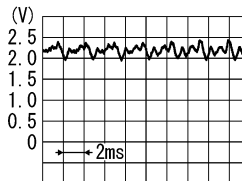
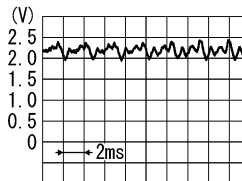
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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
67 (G)	47 (R)	Voice guidance signal out- put (+)	Output	[Ignition switch ON] • Sound output	 SKIB3609E
68 (W)	48 (B)	Voice guidance signal input (+)	Input	[Ignition switch ON] • Sound output	 SKIB3609E
69 (—)	—	Shield	—	—	—
70 (G)	52 (—)	Microphone signal (NAVI)	Output	[Ignition switch ON] • Give a voice	 PKIB5037J
71 (G)	50 (R)	Microphone signal	Output	[Ignition switch ON] • Give a voice	 PKIB5037J
72 (L)	22 (B)	Microphone VCC	Output	[Ignition switch ON]	5.0 V
74 (R)	54 (W)	Camera power supply	Output	[Ignition switch ON] • At rear view camera image is dis- played	6.0 V
				[Ignition switch ON] • Except for above	0 V
77 (W)	78 (B)	LVDS (+)	Input/ Output	—	—
78 (B)	—	LVDS (—)	Input/ Output	—	—
79 (—)	—	Shield	—	—	—
80 (G)	—	USB ground	—	—	—
81 (W)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
82 (R)	—	USB D- signal	Input/ Output	—	—

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

Terminal (Wire color)		Description		Condition	Reference value (Approx.)
+	—	Signal name	Input/ Output		
83 (L)	—	USB D+ signal	Input/ Output	—	—
84 (—)	—	Shield	—	—	—
85 (R)	—	USB V BUS signal	Output	[Ignition switch ON]	5.0 V
86 (P)	—	USB D- signal	Input/ Output	—	—
87 (W)	—	USB D+ signal	Input/ Output	—	—
88 (—)	—	Shield	—	—	—
89 (Y)	—	USB ground	—	—	—
92 (W)	—	LVDS (+)	Input/ Output	—	—
93 (B)	—	LVDS (—)	Input/ Output	—	—
94 (—)	—	Shield	—	—	—

*: Not used

Fail-Safe

INFOID:0000000009803911

If a malfunction occurs in the Infiniti InTouch, display control unit performs fail-safe activation according to the detected malfunction.

Detection item	Infiniti InTouch operation in fail-safe mode	DTC
Engine speed signal	Active noise control and active sound control function are deactivated.	B1F01
Step lamp signal		B1F02
Front microphone	Active noise control function is deactivated.	B1F0B B1F0C B1F0D B1F0E
CAN communication	The system using the CAN communication signal from control unit which cannot communicate does not function.	U1000
	The system using the CAN communication signal does not function.	U1010
Display control unit	- Display is not displayed. - Display control unit restart. - Display control unit freezes. NOTE: Symptom other than an item may occur.	U121F
Configuration	A function of display control unit becomes mismatched with a vehicle specification and destination.	U1223
BOSE amp.	BOSE system does not function.	U1231
Steering angle sensor	Predictive course line is not displayed.	U1232
NAVI control unit	- Map is not displayed. - Navigation screen does not operate. NOTE: Symptom other than an item may occur.	U1233

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
AV control unit	• Sound is not output by a speaker. • CD is not played. • Radio does not operate. NOTE: Symptom other than an item may occur.		U1234
GPS antenna	The vehicle positions of a navigation screen differ.		U1244
AV communication	AV control unit	• Sound is not output by a speaker. • CD is not played. • Radio does not operate. NOTE: Symptom other than an item may occur.	U1249
	BOSE amp.	Sound is not output by a speaker.	U124E
	Integral switch	• Integral switch display is not displayed. • Switch operation does not operate. • Touch panel operation does not operate. NOTE: Symptom other than an item may occur.	U1259
	Around view monitor control unit	Camera image is not displayed.	U125B
	Combination meter	• Audio information is not displayed by the information display in the combination meter. • Navigation indicator is not displayed by the information display in the combination meter. • Steering switch does not operate.	U1267
	Display control unit	The system of ECU which detected abnormalities does not operate.	U1300
		The system which is using AV communication does not operate.	U1310
Satellite radio antenna	Satellite radio is not received.		U1258
USB communication	NAVI control unit	A navigation menu cannot be selected (hatching display).	U125D
	TCU	Telematics system does not function.	U1266
	External data input box	Audio equipment which connected to USB does not operate.	U12B7
Rear view camera	Rear camera image is not displayed.		U12B8
Multifunction switch	Multifunction switch operation does not operate.		U12BA
Radio antenna	Radio is not received.		U12BE

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

Detection item	Infiniti InTouch operation in fail-safe mode		DTC
Speaker/squawker/tweeter/ woofer	With BOSE system		
	Front door woofer	No sound from front door woofer LH or RH.	U1601 U1609
	Front door squawker	No sound from front door squawker LH or RH.	U1602 U160A
	Front door tweeter	No sound from front door tweeter LH or RH.	U1603 U160B
	Front squawker	No sound from front squawker LH or RH.	U1626 U162E
	Front center squawker	No sound from front center squawker.	U162A
	Rear door speaker	No sound from rear door speaker LH or RH.	U1708 U1710
	Rear satellite speaker	No sound from rear satellite speaker LH or RH.	U1722 U172A
	Rear woofer	No sound from rear woofer.	U1725
	Without BOSE system		
	Front door speaker	No sound from front door speaker LH or RH.	U1901 U1907
	Rear door speaker	No sound from rear door speaker LH or RH.	U1902 U1906
	Front door squawker	No sound from front door squawker LH or RH.	U190D U190E

DTC Inspection Priority Chart

INFOID:0000000009803912

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1223: CONFIG UNFINISH
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- B1F01: ENG SPEED SIG ERROR - B1F02: DOOR STATUS SIG ERROR - U1249: AUDIO H/U CONN - U124E: AMP CONN - U1259: 2ND DISP CONN - U125B: AROUND CAMERA CONN - U1267: METER CONN

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

Priority	Detected items (DTC)
4	• U121F: DISPLAY CONTROL UNIT • U1233: NAVI CONTROL UNIT • U1234: AV CONTROL UNIT • U1300: AV COMM CIRCUIT • U1310: CONTROL UNIT(AV)
5	• B1F0B: ANC MIC1 CIRC OPEN • B1F0C: ANC MIC1 CIRC SHORT • B1F0D: ANC MIC1 CIRC SHORT-BAT • B1F0E: ANC MIC1 CIRC SHORT-GND • U1232: ST ANGLE SEN CALIB • U1244: GPS ANTENNA CONN • U1258: XM ANTENNA CONN • U125D: DVD NAVI CONN • U1266: TCU CONN • U12B7: USB CONN • U12B8: REAR CAMERA CONN • U12BA: MULTIFUNCTION SWITCH CONN • U12BE: RADIO ANTENA CONN • U1231: AMP TEMP • U1601: FL-DOOR WOOFER • U1602: FL-DOOR SQUAWK • U1603: FL-DOOR TWEETER • U1609: FR-DOOR WOOFER • U160A: FR-DOOR SQUAWK • U160B: FR-DOOR TWEETER • U1626: F-INST L-SQUAWK • U162A: F-INST C-SQUAWK • U162E: F-INST R-SQUAWK • U1708: RL-DOOR SPEAKER • U1710: RR-DOOR SPEAKER • U1722: R-PSHELF L-SQUAWK • U1725: R-PSHELF C-WOOFER • U172A: R-PSHELF R-SQUAWK • U1901: FL-DOOR SPEAKER • U1902: RR-DOOR SPEAKER • U1906: RL-DOOR SPEAKER • U1907: FR-DOOR SPEAKER • U190D: FR TWEETER • U190E: FL TWEETER

DTC Index

INFOID:000000009803913

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	CONSULT display	Reference
B1F01	ENG SPEED SIG ERROR	AV-168, "DTC Description"
B1F02	DOOR STATUS SIG ERROR	AV-170, "DTC Description"
B1F0B	ANC MIC1 CIRC OPEN	AV-172, "DTC Description"
B1F0C	ANC MIC1 CIRC SHORT	AV-172, "DTC Description"
B1F0D	ANC MIC1 CIRC SHORT-BAT	AV-172, "DTC Description"
B1F0E	ANC MIC1 CIRC SHORT-GND	AV-172, "DTC Description"
U1000	CAN COMM CIRCUIT	AV-175, "DTC Description"
U1010	CONTROL UNIT (CAN)	AV-177, "DTC Description"
U121F	DISPLAY CONTROL UNIT	AV-178, "DTC Description"
U1223	CONFIG UNFINISH	AV-179, "DTC Description"
U1231	AMP TEMP	AV-180, "DTC Description"
U1232	ST ANGLE SEN CALIB	AV-181, "DTC Description"

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

DTC	CONSULT display		Reference	
U1233	NAVI CONTROL UNIT		AV-182, "DTC Description"	A
U1234	AV CONTROL UNIT		AV-183, "DTC Description"	
U1244	GPS ANTENNA CONN		AV-184, "DTC Description"	B
U1249	AUDIO H/U CONN		AV-185, "DTC Description"	
U124E	AMP CONN		AV-187, "DTC Description"	
U1258	XM ANTENNA CONN	GND-SHORT	AV-188, "DTC Description"	C
		OPEN		
U1259	2ND DISP CONN		AV-190, "DTC Description"	D
U125B	AROUND CAMERA CONN		AV-192, "DTC Description"	
U125D	DVD NAVI CONN		AV-194, "DTC Description"	
U1266	TCU CONN		AV-195, "DTC Description"	E
U1267	METER CONN		AV-196, "DTC Description"	
U12B7	USB CONN		AV-198, "DTC Description"	F
U12B8	REAR CAMERA CONN		AV-199, "DTC Description"	
U12BA	MULTIFUNCTION SWITCH CONN		AV-201, "DTC Description"	
U12BE	RADIO ANTENA CONN	GND-SHORT	AV-203, "DTC Description"	G
		OPEN		
U1300	AV COMM CIRCUIT		AV-205, "DTC Description"	H
U1310	CONTROL UNIT(AV)		AV-207, "DTC Description"	
U1601	FL-DOOR WOOFER	OPEN	AV-208, "DTC Description"	I
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1602	FL-DOOR SQUAWK	OPEN	AV-211, "DTC Description"	J
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1603	FL-DOOR TWEETER	OPEN	AV-214, "DTC Description"	L
		SHORT		
		GND-SHORT		
		VB-SHORT		
U1609	FR-DOOR WOOFER	OPEN	AV-208, "DTC Description"	M
		SHORT		
		GND-SHORT		
		VB-SHORT		
U160A	FR-DOOR SQUAWK	OPEN	AV-211, "DTC Description"	O
		SHORT		
		GND-SHORT		
		VB-SHORT		
U160B	FR-DOOR TWEETER	OPEN	AV-214, "DTC Description"	P
		SHORT		
		GND-SHORT		
		VB-SHORT		

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DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

DTC	CONSULT display		Reference
U1626	F-INST L-SQUAWK	OPEN	AV-217, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U162A	F-INST C-SQUAWK	OPEN	AV-220, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U162E	F-INST R-SQUAWK	OPEN	AV-217, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1708	RL-DOOR SPEAKER	OPEN	AV-222, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1710	RR-DOOR SPEAKER	OPEN	AV-222, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1722	R-PSHELF L-SQUAWK	OPEN	AV-225, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1725	R-PSHELF C-WOOFER	OPEN	AV-228, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U172A	R-PSHELF R-SQUAWK	OPEN	AV-225, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1901	FL-DOOR SPEAKER	OPEN	AV-230, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1902	RR-DOOR SPEAKER	OPEN	AV-233, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U1906	RL-DOOR SPEAKER	OPEN	AV-233, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

DISPLAY CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

DTC	CONSULT display		Reference
U1907	FR-DOOR SPEAKER	OPEN	AV-230, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U190D	FR TWEETER	OPEN	AV-236, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	
U190E	FL TWEETER	OPEN	AV-236, "DTC Description"
		SHORT	
		GND-SHORT	
		VB-SHORT	

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TCU

Reference Value

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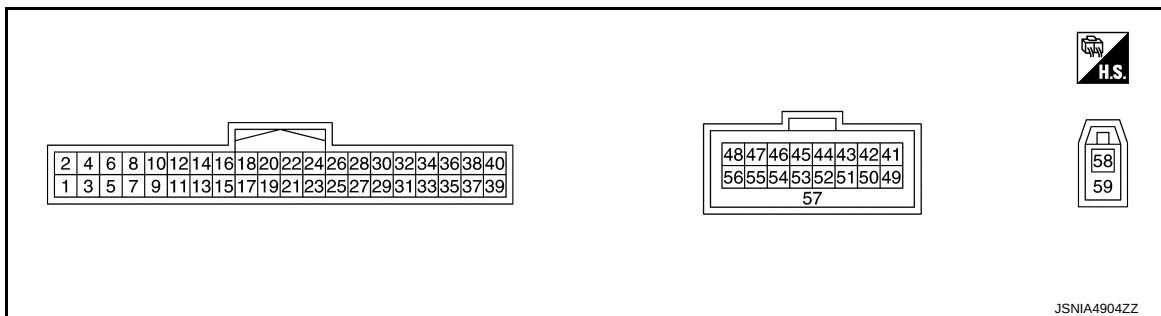
VALUES ON THE DIAGNOSIS TOOL

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
ECHO CANCEL	This item is displayed, but cannot be monitored.	type1
		type2
		type3
		type4
NOISE CANCEL	This item is displayed, but cannot be monitored.	type1
		type2
		type3
		type4
TCU STANDBY TIME	Set at 14 days (default)	14DAYS
	Set at 2 days	2DAYS
	Set at 30 days	30DAYS
	No setting	NON
NAD OUTPUT STATUS	When TCU activation is ON	On
	When TCU activation is OFF	Off
ACN COMM SEQUENCE LOG	—	—
SOS COMM SEQUENCE LOG	—	—

TERMINAL LAYOUT



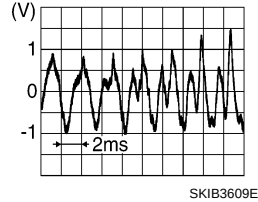
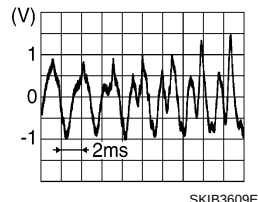
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition	Threshold value	Reference value (Approx.)
+	—	Signal name	Input/ Out- put			
1 (Y)	2 (B)	Battery power supply	Input	[Ignition switch OFF]	9 - 16 V	Battery Voltage
2 (B)	Ground	Ground	—	[Ignition switch ON]	Less than 1 V	0 V
3 (V)	2 (B)	ACC power supply	Input	[Ignition switch ACC]	9 - 16 V	12 V

TCU

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

Terminal (Wire color)		Description		Condition	Threshold value	Reference value (Approx.)
+	-	Signal name	Input/ Output			
4 (R)	2 (B)	Ignition signal	Input	[Ignition switch ON]	9 - 16 V	12 V
5 (SB)	2 (B)	ACC output	Output	[Ignition switch ACC]	9 - 16 V	12 V
6 (SB)	—	—	—	—	—	—
7 (B)	Ground	Ground	—	[Ignition switch ON]	Less than 1 V	0 V
9 (L)	—	CAN-H	Input/ Output	—	—	—
10 (P)	—	CAN-L	Input/ Output	—	—	—
18 (L)	Ground	Microphone VCC	Output	—	4.0 - 5.3 V	5 V
19 (G)	20 (—)	Microphone signal	Input	[Ignition switch ACC] • When inputting interior sound	—	
20 (—)	—	Shield	—	—	—	—
21 (L)	23 (—)	Microphone VCC	Input	[Ignition switch ACC]	4.0 - 5.3 V	5 V
22 (G)	23 (—)	Sound signal	Output	[Ignition switch ACC] • When inputting interior sound	—	
23 (—)	—	Shield	—	—	—	—
34 (G)	2 (B)	SOS call switch signal	Input	[Ignition switch ACC] • When pressing SOS switch	Less than 1 V	0 V
				[Ignition switch ACC] • Except for above	—	5 V
35 (BR)	2 (B)	SOS switch LED signal	Input	[Ignition switch ACC] • When not illuminated LED lamp of SOS switch	—	12 V
				[Ignition switch ACC] • When illuminated LED lamp of SOS switch	Less than 1 V	0 V
41 (R)	42 (W)	U-VOICE signal	Input	[Ignition switch ON]	—	—

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TCU

< ECU DIAGNOSIS INFORMATION >

[TELEMATICS SYSTEM]

Terminal (Wire color)		Description		Condition	Threshold value	Reference value (Approx.)
+	—	Signal name	Input/ Out- put			
42 (W)	—	VOICE ground	—	—	—	—
46 (—)	—	Manufacturer Specific signal	—	Not used.	—	—
47 (R)	55 (Y)	USB V BUS signal	Input	[Ignition switch ON]	—	—
48 (P)	55 (Y)	USB D- signal	Input/ Out- put	[Ignition switch ON]	—	—
49 (B)	42 (W)	D-VOICE signal	Out- put	[Ignition switch ON]	—	—
55 (Y)	—	USB ground	—	—	—	—
56 (W)	55 (Y)	USB D+ signal	Input/ Out- put	[Ignition switch ON]	—	—
57 (—)	—	Shield	—	—	—	—
58 (—)	Grou nd	TEL antenna sig- nal	Input	Not connected TEL antenna connector.	—	2.8 V
59 (—)	—	Shield	—	—	—	—

Fail-safe

INFOID:000000009726880

If a malfunction occurs in the telematics system, TCU performs fail-safe activation according to the detected malfunction.

Detection item	Telematics system operation in fail-safe mode	DTC
CAN communication	- Telematics system does not function. - Inform a INFINITI CONNECTION data center about abnormality.	U1000
TEL antenna	- Telematics switch LED indicator turn OFF. (LED indicator turns ON 10 times when push the SOS call switch.) - When operated a telematics system, inform that cannot be connected to the INFINITI CONNECTION data center.	U1A07 U1A08
USB communication	- Telematics system does not function. - Inform a INFINITI CONNECTION data center about abnormality.	U1A05
TCU	Telematics system function stops.	U1A01
	- Telematics system function stops. - When operated a telematics system, inform that cannot be connected to the INFINITI CONNECTION data center.	U1A02
Telematics switch (SOS call switch)	- Telematics system does not function. (Only SOS call does not operate.) - Telematics switch LED indicator turn OFF.	U1A0E U1A0F
Microphone	- Transmit an own vehicle position to the INFINITI CONNECTION data center. - Inform a INFINITI CONNECTION data center about abnormality.	U1A0B U1A0C

DTC Inspection Priority Chart

INFOID:000000009802235

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	U1A04: VIN UNFINISHED
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- U1A00: ACC NO CONN - U1A01: INTERNAL ERROR (TCU) - U1A02: TEL COMMUNICATION MODULE - U1A03: SIM CARD - U1A05: USB COMM - U1A07: TEL ANTENNA SHORT - U1A08: TEL ANTENNA NO CONN - U1A0B: MIC IN CONN - U1A0C: MIC OUT CONN - U1A0E: SOS SWITCH ON STUCK - U1A0F: SOS SWITCH NO CONN

DTC Index

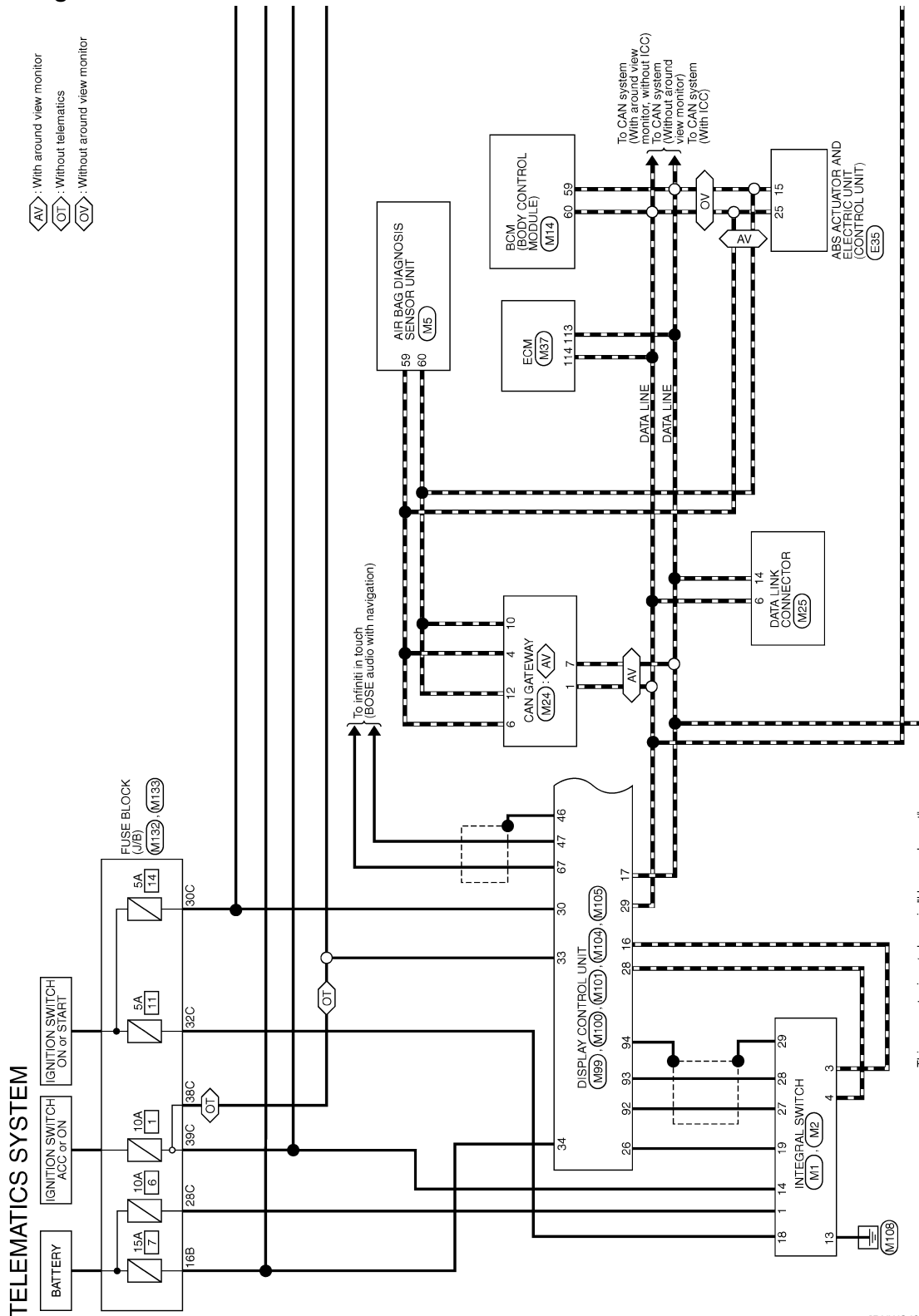
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DTC	CONSULT display	Reference
U1000	CAN COMM CIRC	AV-571, "DTC Description"
U1010	CONTROL UNIT (CAN)	AV-572, "DTC Description"
U1A00	ACC NO CONN	AV-573, "DTC Description"
U1A01	INTERNAL ERROR (TCU)	AV-574, "DTC Description"
U1A02	TEL COMMUNICATION MODULE	AV-575, "DTC Description"
U1A03	SIM CARD	AV-576, "DTC Description"
U1A04	VIN UNFINISHED	AV-577, "DTC Description"
U1A05	USB COMM	AV-578, "DTC Description"
U1A07	TEL ANTENNA SHORT	AV-579, "DTC Description"
U1A08	TEL ANTENNA NO CONN	AV-580, "DTC Description"
U1A0B	MIC IN CONN	AV-581, "DTC Description"
U1A0C	MIC OUT CONN	AV-583, "DTC Description"
U1A0E	SOS SWITCH ON STUCK	AV-585, "DTC Description"
U1A0F	SOS SWITCH NO CONN	AV-587, "DTC Description"

WIRING DIAGRAM

TELEMATICS SYSTEM

Wiring Diagram



INFOID:000000009240204

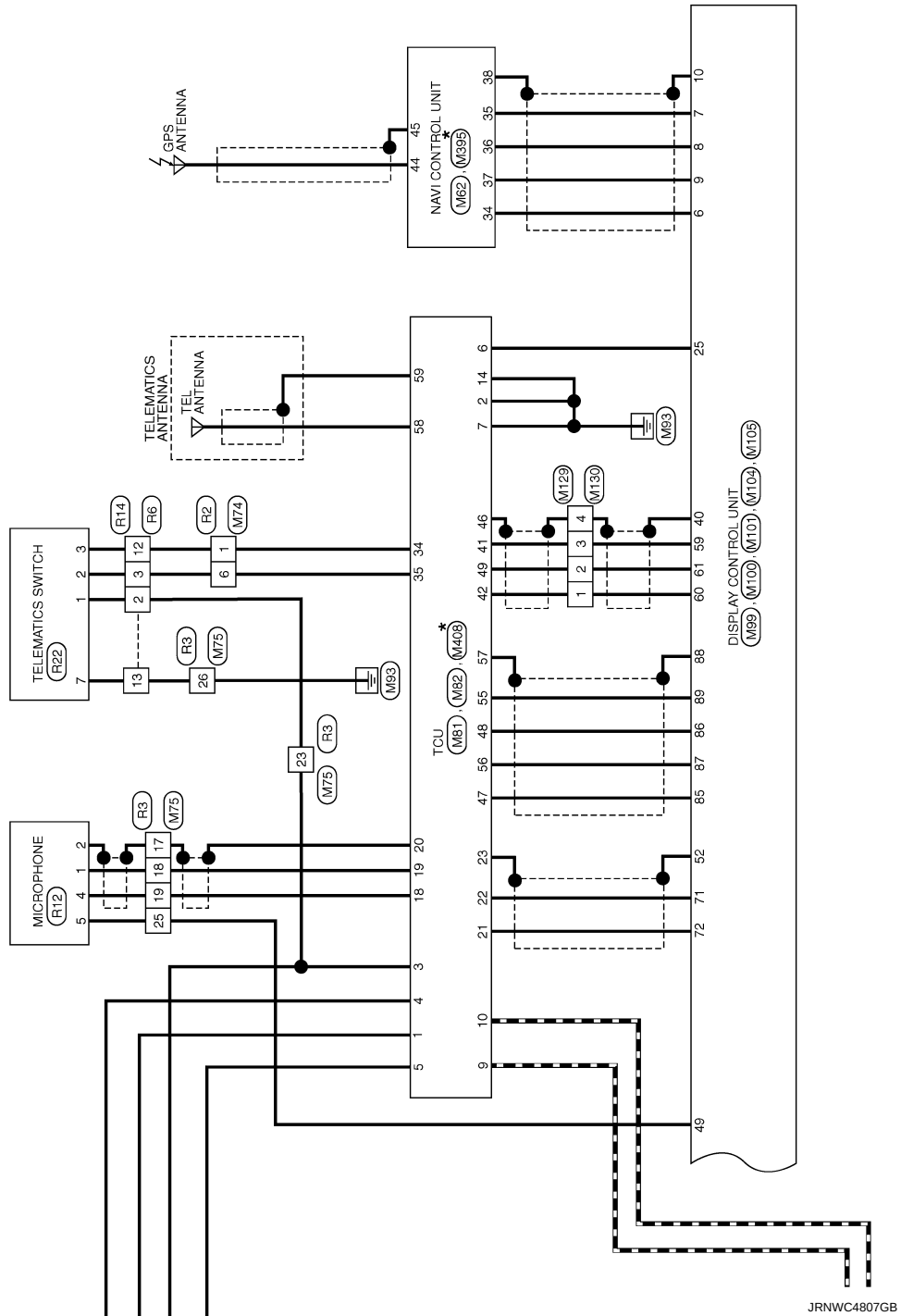
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TELEMATICS SYSTEM

< WIRING DIAGRAM >

[TELEMATICS SYSTEM]



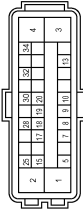
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TELEMATICS SYSTEM

Connector No.	E33
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT CONTROL UNIT
Connector Type	SAZ30FEB-SLZ4-U



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	B	GROUND
3	G	VALVE BATTERY
4	Y	MOTOR BATTERY
5	LG	STOP LAMP SW SIGNAL [With ICG]
6	V	STOP LAMP SW SIGNAL [With ASDG]
7	GR	RR LH WHEEL SENSOR SIGNAL
8	G	RR LH WHEEL SENSOR POWER SUPPLY
9	BR	FR RH WHEEL SENSOR SIGNAL
10	GR	FR RH WHEEL SENSOR POWER SUPPLY
13	R	VACUUM SENSOR SIGNAL
15	P	CAN-L [Without Gateway]
16	R	CAN-L [With Gateway]
17	Y	RR RH WHEEL SENSOR SIGNAL
18	Y	RR RH WHEEL SENSOR POWER SUPPLY
19	SB	FR LH WHEEL SENSOR SIGNAL
20	RG	FR LH WHEEL SENSOR POWER SUPPLY
25	L	CAN-H
28	G	VACUUM SENSOR POWER SUPPLY
30	R	VDC OFF SW SIGNAL
32	SHIELD	VACUUM SENSOR GROUND
34	G	IGN

Connector No.	M1
Connector Name	INTEGRAL SWITCH
Connector Type	TH24FEW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	BAT
2	SB	AV COM1 (L)
3	LG	AV COM1 (H)
4	G	DISK EJECT SIGNAL
5	W/B	DOOR LOCK STATUS INDICATOR LAMP SIGNAL
6	G	HAZARD SIGNAL
7	G	HAZARD SIGNAL
8	G	HAZARD SIGNAL
13	B	ACC
14	V	ILLUMINATION CONTROL SIGNAL
15	B	DISK EJECT SIGNAL GROUND
16	EG	IGN
18	R	CAMERA SWITCH SIGNAL
19	BR	AIR BAG INDICATOR OFF SIGNAL
20	LG	AIR BAG INDICATOR OFF SIGNAL

Connector No.	M2
Connector Name	INTEGRAL SWITCH
Connector Type	Teco 1554987-6



Terminal No.	Color Of Wire	Signal Name [Specification]
27	W	LVDS (+)
28	B	LVDS (-)
29	SHIELD	SHIELD

Connector No.	M5
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH28Y-EX



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	IGN
2	B	IGN
3	Y/B	DRT (+)
4	Y/B	DRT (-)
5	Y	DR2 (+)
6	Y/R	ASI (+)
7	Y/B	ASI (-)
8	Y/G	AS2 (-)
9	Y	EC2S+
18	Y	EC2S-
19	BR	ACT VENT+
20	Y/R	ACT VENT-
21	SHIELD	IGN
22	SHIELD	IGN
23	G	AIRBAG W/L
24	G	AIRBAG W/L
25	GR	AIR OFF IND
31	G	SATELLITE RH2 (+)
32	R	SIDE SENS RH2+
53	V	SIDE SENS LH2+
54	L	SIDE SENS LH2-
57	LG	LVDS
59	L	CAN-H
60	P	CAN-L

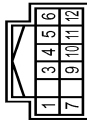
Connector No.	M4
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40EB-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
51	R	PUSH-RTN IGN SW L/PWR
52	G	CONGL LINK
54	V	CONGL LINE
55	R	RAIN SENSOR
59	P	CAN-L
60	L	CAN-H
61	G	REAR WINDOW DEF RLY CONT
62	R	STARTER RLY CONT
64	V	I-KEY WARN BUZZER
65	B	OUTS HD LAMP CONT
66	B	BLOWER FAN RLY CONT
67	W/B	IGN RLYAY (7/B) CONT
68	R	DIMMER
69	GR	A/T SHFT SELECT PWR SPLY
70	B	IGN RELAY RLY CONT
71	G	PR DOOR REG SW
72	SB	PASS DOOR REG SW
75	BR	COMBI SW INPUT 5
76	EG	COMBI SW INPUT 4
77	V	COMBI SW INPUT 3
78	Y	COMBI SW INPUT 2
79	LG	COMBI SW INPUT 1
80	L	TR LID OPNE SW

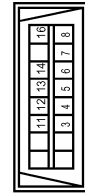
TELEMATICS SYSTEM

Connector No.	M64
Connector Name	CAN GATEWAY
Connector Type	TH32FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	L		CAN-H
2	W		CAN-EV
3	L		CAN-L
4	W		CAN-EV
5	B		GND
6	L		CAN-H
7	P		CAN-L
8	R		IGN
9	R		CAN2-L
10	R		CAN2-L
11	B		GND
12	R		CAN3-L

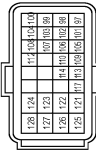
Connector No.	M65
Connector Name	DATA LINK CONNECTOR
Connector Type	ED18FW



Terminal No.	Color	Wire	Signal Name [Specification]
3	SB		AV COMM(L)
4	B		EARTH
5	B		EARTH
6	W		CAN-H
7	V		KLINE
8	W		IGN SW
11	LG		AV COMM(H)
12	R		CAN-L
13	L		CAN-H
14	P		CAN-L

16	W	POWER

Connector No.	M67
Connector Name	ECM
Connector Type	RM24FGY-R28-R-LH-Z



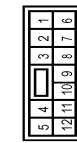
Terminal No.	Color	Wire	Signal Name [Specification]
97	Y		ACCELERATOR PEDAL POSITION SENSOR 1
98	BR		ACCELERATOR PEDAL POSITION SENSOR 2
99	W		SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1)
100	G		ASCD STEERING SWITCH
101	SB		ICC STEERING SWITCH
102	LG		EVAP CONTROL SYSTEM PRESSURE SENSOR
103	L		SENSOR GROUND (EVAP CONTROL SYSTEM PRESSURE SENSOR)
104	R		REFRIGERANT PRESSURE SENSOR
105	L		FUEL TANK TEMPERATURE SENSOR
106	GR		SENSOR GROUND (FUEL TANK TEMPERATURE SENSOR)
107	GR		TRANSMISSION RANGE SWITCH
108	BR		ENGINE SPEED SIGNAL OUTPUT
110	V		IGNA PIPES (FIPRES)
112	V		CAN COMMUNICATION LINE
113	P		CAN COMMUNICATION LINE
114	L		DATA LINK CONNECTOR
117	V		EVAP CANISTER VENT CONTROL VALVE
121	LG		STOP LAMP SWITCH
122	SB		ECM GROUND
123	B		ECM GROUND
124	B		ECM GROUND
125	R		POWER SUPPLY FOR ECM
126	BG		ECM GROUND
127	B		ECM GROUND
128	B		ECM GROUND

Connector No.	M62
Connector Name	NAVI CONTROL UNIT
Connector Type	Typo SS4837-4



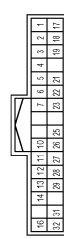
Terminal No.	Color	Wire	Signal Name [Specification]
34	G		USB GND
35	R		USB V+ SIGNAL
36	R		USB D+ SIGNAL
37	L		USB D- SIGNAL
38	SHIELD		SHIELD

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Terminal No.	Color	Wire	Signal Name [Specification]
1	G		USB GND
2	R		USB V+ SIGNAL
3	B		USB D+ SIGNAL
4	LG		USB D- SIGNAL
5	BR		SHIELD
6	BR		SHIELD
7	R		SHIELD
8	B		SHIELD
9	L		SHIELD
10	L		SHIELD
11	R		SHIELD
12	V		SHIELD

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	R		SHIELD
2	W		SHIELD
3	W		SHIELD
4	BR		SHIELD
5	R		SHIELD
6	G		SHIELD
7	B		SHIELD
10	V		SHIELD
11	LG		SHIELD
12	W		SHIELD
13	G		SHIELD
14	B		SHIELD
16	R		SHIELD
17	SHIELD		SHIELD
18	G		SHIELD
19	L		SHIELD
20	B		SHIELD
22	R		SHIELD
23	V		SHIELD
25	W		SHIELD
26	B		SHIELD
27	R		SHIELD
28	GR		SHIELD
29	W		SHIELD
31	W		SHIELD
32	L		SHIELD

TELEMATICS SYSTEM

Connector No.	M81
Connector Name	TCU
Connector Type	TH44FW-NH



2	4	6	10	14	18	22	26	30	34
1	3	5	7	9	11	13	15	17	19

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	BAT
2	R	GND
3	V	ACC
4	R	IGN
5	SB	ACC OUTPUT
6	SB	GND
7	B	GND
8	L	CAN-H
9	L	CAN-L
10	P	AUDIO TYPE RECOGNITION SIGNAL
14	B	MICROPHONE VCC
18	L	MICROPHONE SIGNAL
19	G	SHIELD
20	SHIELD	MICROPHONE VCC
21	L	SOCS SIGNAL
22	SHIELD	SOCS CALL SWITCH SIGNAL
34	G	SOCS SWITCH LED SIGNAL
35	BR	

Connector No.	M82
Connector Name	TCU
Connector Type	HUA18FGY



48	47	46	42	41
56	55			49

Terminal No.	Color Of Wire	Signal Name [Specification]
41	R	U-VOICE SIGNAL
42	W	VOICE GND
46	SHIELD	MANUFACTURER SPECIFIC SIGNAL
47	R	REVERSE SIGNAL
48	P	USB V BUS SIGNAL
49	B	D-VOICE SIGNAL
55	Y	USB GND
56	W	USB D+ SIGNAL
57	SHIELD	SHIELD

Connector No.	M89
Connector Name	DISPLAY CONTROL UNIT
Connector Type	Typo 1554897-4



6	7	8	9	10

Terminal No.	Color Of Wire	Signal Name [Specification]
6	G	USB GROUND
7	R	USB D- SIGNAL
8	R	USB D+ SIGNAL
9	L	SHIELD
10	SHIELD	SHIELD

Connector No.	M100
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH24FW-NH



25	26	28	29	30	31	33	34
16	17	18	20	21	22		

Terminal No.	Color Of Wire	Signal Name [Specification]
16	SB	AV COMM (L)
17	P	CAN-L
19	R	DIMMER SIGNAL
20	BR	REVERSE SIGNAL
22	B	GND
25	SB	—
26	BR	CAMERA SWITCH SIGNAL
28	L	AV COMM (H)
29	LG	CAN-H
30	R	IGN
31	R	VEHICLE SPEED SIGNAL (8-PULSE)
33	SB	ACC
34	Y	BAT

Connector No.	M101
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH46FW-NH



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

Terminal No.	Color Of Wire	Signal Name [Specification]
36	LG	COMPOSITE IMAGE SIGNAL (-)
38	SHIELD	SHIELD
40	SHIELD	MANUFACTURER SPECIFIC SIGNAL
42	G	SOUND SIGNAL RH (-)
43	SHIELD	SHIELD
44	L	SOUND SIGNAL LH (-)
45	W	TEL VOICE SIGNAL (-)
46	SHIELD	SHIELD
47	R	VOICE GUIDANCE SIGNAL OUTPUT (-)
48	B	VOICE GUIDANCE SIGNAL INPUT (-)
49	W	HS ON/OFF SIGNAL
51	SHIELD	MICROPHONE SIGNAL GND
52	SHIELD	SHIELD
54	W	MICROPHONE SIGNAL GND
54	W	CAMERA GND
55	SHIELD	SHIELD
56	BR	COMPOSITE IMAGE SIGNAL (+)
58	B	CAMERA IMAGE SIGNAL
59	R	U-VOICE SIGNAL

Terminal No.	Color Of Wire	Signal Name [Specification]
60	W	VOICE SIGNAL GND
61	B	D-VOICE SIGNAL
62	R	SOUND SIGNAL RH (+)
63	SHIELD	SHIELD
64	V	SOUND SIGNAL LH (+)
65	B	TEL VOICE SIGNAL (+)
66	SHIELD	SHIELD
67	G	VOICE GUIDANCE SIGNAL OUTPUT (+)
68	W	VOICE GUIDANCE SIGNAL INPUT (+)
69	SHIELD	SHIELD
70	G	MICROPHONE SIGNAL
71	G	MICROPHONE VCC
72	L	MICROPHONE VCC
74	R	CAMERA POWER SUPPLY

Connector No.	M104
Connector Name	DISPLAY CONTROL UNIT
Connector Type	USCAR30-MC-F



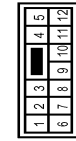
85	86	87	88	89

Terminal No.	Color Of Wire	Signal Name [Specification]
85	R	USB V BUS SIGNAL
86	P	USB D- SIGNAL
87	W	USB D+ SIGNAL
88	SHIELD	SHIELD
89	Y	USB GROUND

Terminal No.	Color Of Wire	Signal Name [Specification]
58	-	TEL ANTENNA SIGNAL
59	-	SUICI D

TELEMATICS SYSTEM

Connector No.	R2
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-GS



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

Connector No.	R3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



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

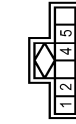
11	SB	-
12	GR	-
13	B	-
14	V	-
15	SHIELD	-
16	R	-
17	L	-
18	LG	-
19	V	-
20	GR	-
21	W	-
22	B	-
23	BR	-
24	EG	-
25	GR	-
26	W	-
27	L	-

Connector No.	R6
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH



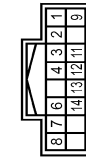
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	GR	-
3	BR	-
4	V	-
5	SB	-
6	W	-
7	EG	-
8	BR	-
9	R	-
10	LG	-
11	B	-
12	L	-

Connector No.	R12
Connector Name	MICROPHONE
Connector Type	ARGFW



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

Connector No.	R14
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH



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

Connector No.	R22
Connector Name	TELEMATICS SWITCH
Connector Type	TH06FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	BR	-
3	G	-
4	SB	-
5	B	-
6	B	-

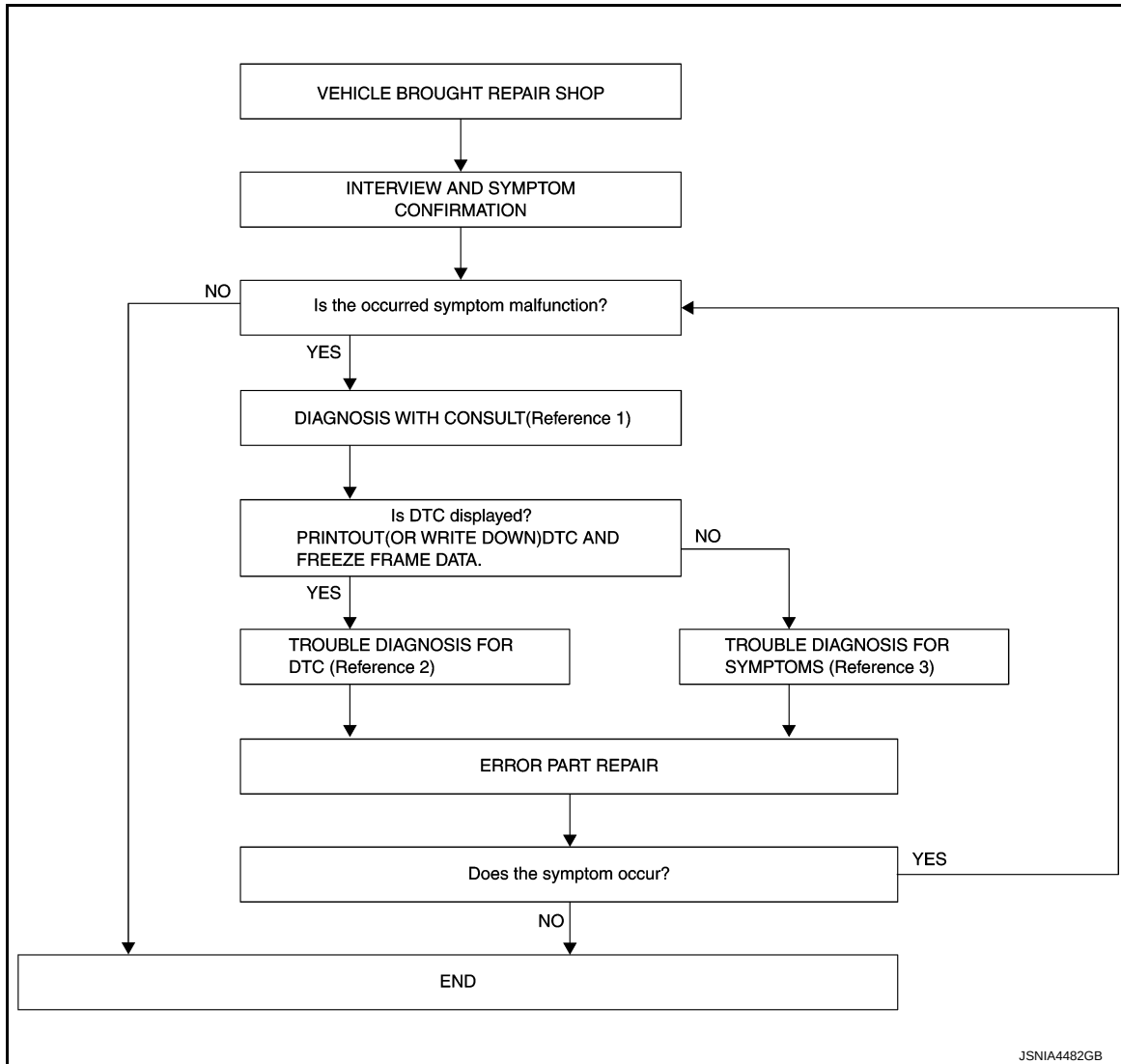
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000009726882

OVERALL SEQUENCE



- Reference 1... Refer to [AV-542, "CONSULT Function"](#).
- Reference 2... Refer to [AV-559, "DTC Index"](#).
- Reference 3... Refer to [AV-593, "SYMPTOM TABLE"](#).

DETAILED FLOW

1. INTERVIEW AND SYMPTOM CONFIRMATION

Check the malfunction symptoms by performing the following items.

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

Is the occurred symptom malfunction?

YES >> GO TO 2.

NO >> INSPECTION END

2. DIAGNOSIS WITH CONSULT

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[TELEMATICS SYSTEM]

1. Connect CONSULT and perform a self-diagnosis for "TCU". Refer to [AV-542, "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-559, "DTC Index"](#).

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to [AV-593, "SYMPTOM TABLE"](#).

>> GO TO 5.

5. ERROR PART REPAIR

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

Does the symptom occur?

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

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING TCU

ADDITIONAL SERVICE WHEN REPLACING TCU : Description

INFOID:000000009240206

When TCU is replaced, TCU activation operation is required.

Preparation before activation operation

- Subscribe to telematics service
- Preregister user ID and password (can be performed from owner homepage)

ADDITIONAL SERVICE WHEN REPLACING TCU : Work Procedure

INFOID:000000009240207

1. READING OF VIN DATA

 CONSULT work support

Select SAVE VIN DATA, then START on SAVE VIN DATA screen to save the VIN data stored in replaced TCU in CONSULT. If it cannot be saved, writing operation must be performed manually.

>> GO TO 2.

2. TCU REPLACEMENT

Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

>> GO TO 3.

3. NOTICE TO CARRIER ATX HELP DESK

Contact ATX help desk to notice the termination of replaced TCU and connection of new TCU. (VIN is required)

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

YES >> GO TO 4.

NO >> GO TO 5.

4. AUTOMATIC WRITING OF VIN DATA TO TCU

 CONSULT work support

Select WRITE VIN DATA, then START at WRITE SAVED VIN DATA screen to write the VIN data saved in CONSULT into new TCU.

>> GO TO 6.

5. MANUAL WRITING OF VIN DATA TO TCU

 CONSULT work support

Select VIN REGISTRATION, WRITE VIN DATA then START on changing screen to write the VIN data saved into new TCU.

>> GO TO 6.

6. TCU ACTIVATION

 CONSULT work support

1. Wait for 5 seconds or more after turning the power switch ON.
2. Touch TELEMATICS on the CONSULT screen.
3. After performing System Call of CONSULT, touch the Work support tab.
4. On the work support screen of CONSULT, select TCU ACTIVATE SETTING and touch Start.
5. On the TCU ACTIVATE SETTING screen, touch Start to set to ON. Touch End.
6. Exit from CONSULT.
7. Turn the power switch OFF.
8. Wait (at least 10 seconds) until the power switch indicator turns OFF to shut down TCU.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[TELEMATICS SYSTEM]

>> WORK END.

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Description

INFOID:000000009726883

DESCRIPTION

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-44, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart"](#).

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1000	CAN COMM CIRC (CAN communication circuit)	When TCU did not transmit and receive CAN communication signal continuity for 2 seconds or more.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

Telematics system does not function

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

Ⓐ With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 2 seconds or more.
4. Select "Self-Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1000 detected?

- YES >> Proceed to [AV-571, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726884

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-571, "DTC Description"](#).

Is DTC U1000 detected again?

- YES >> Perform the trouble diagnosis for CAN communication system. Refer to [LAN-26, "Trouble Diagnosis Flow Chart"](#).
 NO >> INSPECTION END

U1010 CONTROL UNIT (CAN)

DTC Description

INFOID:000000009726885

DESCRIPTION

CAN controller controls the communication of CAN communication signal and the error detection.

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	A malfunction is detected in CAN controller initial diagnosis of TCU.

POSSIBLE CAUSE

TCU

FAIL-SAFE

Telematics system dose not function

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

ⒺWith CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 2 seconds or more.
4. Select "Self-Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1010 detected?

- YES >> Proceed to [AV-572, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726886

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-572, "DTC Description"](#).

Is DTC U1010 detected again?

- YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).
- NO >> INSPECTION END

U1A00 TCU

DTC Description

INFOID:000000009726887

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A00	ACC NO CONN (Accessory no connection)	No input of ACC signal.

POSSIBLE CAUSE

ACC power circuit

FAIL-SAFE

Telematics system does not function

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDUREWith CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of TCU" using CONSULT.
5. Check DTC.

Is DTC U1A00 detected?YES >> Proceed to [AV-573, "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726888

1.CHECK ACC POWER CIRCUITCheck the ACC power circuit. Refer to [AV-589, "TCU : Diagnosis Procedure"](#).Is the inspection result normal?YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

U1A01 TCU

DTC Description

INFOID:000000009726889

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A01	INTERNAL ERROR (TCU) [Internal error (TCU)]	Malfunction in TCU is detected.

POSSIBLE CAUSE

TCU

FAIL-SAFE

Telematics system function stops

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A01 detected?

YES >> Proceed to [AV-574. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726890

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

⑧With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-574. "DTC Description"](#).

Is DTC U1A01 detected again?

YES >> Replace TCU. Refer to [AV-597. "Removal and Installation"](#).

NO >> INSPECTION END

U1A02 TCU

DTC Description

INFOID:000000009726891

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A02	TEL COMMUNICATION MODULE (TEL communication module)	Malfunction on the communication module in TCU is detected.

POSSIBLE CAUSE

TCU

FAIL-SAFE

Telematics system function stops

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A02 detected?

YES >> Proceed to [AV-575. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726892

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-575. "DTC Description"](#).

Is DTC U1A02 detected again?

YES >> Replace TCU. Refer to [AV-597. "Removal and Installation"](#).

NO >> INSPECTION END

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U1A03 TCU

DTC Description

INFOID:000000009726893

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A03	SIM CARD (SIM card)	SIM card malfunction is detected.

POSSIBLE CAUSE

TCU

FAIL-SAFE

Telematics system does not function

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A03 detected?

YES >> Proceed to [AV-576. "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726894

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

⑧With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-576. "DTC Description"](#).

Is DTC U1A03 detected again?

YES >> Replace TCU. Refer to [AV-597. "Removal and Installation"](#).

NO >> INSPECTION END

U1A04 TCU

DTC Description

INFOID:000000009726895

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A04	VIN UNFINISHED (VIN unfinished)	No write of VIN number is detected.

POSSIBLE CAUSE

- VIN number is not written
- TCU

FAIL-SAFE

Telematics system does not function

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

⑧ With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A04 detected?YES >> Proceed to [AV-577, "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726896

1.PERFORM WRITING VIN DATA TO TCUPerform writing VIN data to TCU. Refer to [AV-569, "ADDITIONAL SERVICE WHEN REPLACING TCU : Description"](#).Was the writing of VIN data completed?

YES >> GO TO 2.

NO >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).**2.**PERFORM DTC CONFIRMATION PROCEDURE AGAIN

⑧ With CONSULT

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to [AV-577, "DTC Description"](#).

Is DTC U1A04 detected again?YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

NO >> INSPECTION END

U1A05 TCU

DTC Description

INFOID:000000009726897

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A05	USB COMM (USB communication)	TCU it is detected for malfunction of the USB communication module (communication disabled) between TCU and display control unit.

POSSIBLE CAUSE

- USB harness connector
- TCU

FAIL-SAFE

Telematics system does not function

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A05 detected?

YES >> Proceed to [AV-578, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726898

1.CHECK USB HARNESS

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

TCU		Display control unit		Continuity
Connector	Terminal	Connector	Terminal	
M81	47	M104	85	Existed
	48		86	
	56		87	

4. Check the continuity between TCU vehicle-side harness connector and ground.

TCU		Ground	Continuity
Connector	Terminal		
M81	47	Ground	Not existed
	48		
	56		

Is the inspection result normal?

YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

U1A07 TEL ANTENNA

DTC Description

INFOID:000000009726899

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A07	TEL ANTENNA SHORT (TEL antenna short)	Telematics antenna was short-circuit.

POSSIBLE CAUSE

- Telematics antenna circuit (short or poor harness condition)
- Telematics antenna

FAIL-SAFE

Telematics switch LED indicator turn OFF
(LED indicator turns ON 10 times when push the SOS call switch)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A07 detected?

- YES >> Proceed to [AV-579, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726900

1.TELEMATICS ANTENNA HARNESS INSPECTION

1. Turn ignition switch OFF.
2. Disconnect telematics antenna feeder harness connector of TCU.
3. Check the continuity between TCU harness connector.

TCU			Continuity
Connector	Terminal		
M408	58	59	Not existed

Is the inspection result normal?

- YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).
 NO >> Replace telematics antenna. Refer to [AV-601, "Removal and Installation"](#).

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U1A08 TEL ANTENNA

DTC Description

INFOID:000000009726901

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A08	TEL ANTENNA NO CONN (Telematics antenna no connection)	No input of telematics antenna signal.

POSSIBLE CAUSE

- Telematics antenna
- TCU

FAIL-SAFE

Telematics switch LED indicator turn OFF
(LED indicator turns ON 10 times when push the SOS call switch)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A08 detected?

- YES >> Proceed to [AV-580, "Diagnosis Procedure"](#).
 NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
 NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726902

1.CHECK TELEMATICS ANTENNA

1. Turn ignition switch OFF.
2. Disconnect telematics antenna feeder harness connector.
3. Visually check telematics antenna and antenna feeder.

Is the inspection result normal?

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

2.CHECK TCU VOLTAGE

1. Disconnect telematics antenna harness connector.
2. Turn ignition switch ON.
3. Check the voltage between TCU terminal and ground.

Terminals		Voltage (Approx.)
(+)	(–)	
TCU		
Terminal		
58	Ground	2.8 V

Is the inspection result normal?

- YES >> Replace telematics antenna. Refer to [AV-601, "Removal and Installation"](#).
 NO >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

U1A0B MICROPHONE

DTC Description

INFOID:000000009726903

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A0B	MIC IN CONN (Microphone input connection)	When either one of the following items is detected: - Sound signal circuit between TCU and microphone. - Microphone VCC signal circuits between TCU and microphone.

POSSIBLE CAUSE

- Sound signal circuit
- Microphone VCC signal circuit

FAIL-SAFE

Transmit an own vehicle position to the center

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

④ With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A0B detected?

- YES >> Proceed to [AV-581, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726904

1.CHECK MICROPHONE SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCU harness connector and microphone harness connector.
3. Check the continuity between TCU harness connector and microphone harness connector.

TCU		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M81	18	R12	4	Existed
	19		1	
	20		2	

4. Check the continuity between TCU harness connector and ground.

TCU		Ground	Continuity
Connector	Terminal		
M81	18		Not existed
	19		

Is the inspection result normal?

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

2.CHECK VOLTAGE MICROPHONE POWER SUPPLY

U1A0B MICROPHONE

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

1. Connect TCU harness connector.
2. Turn ignition switch ON.
3. Check the voltage between TCU harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(−)	
TCU			
Connector	Terminal		
M81	18	Ground	5.0 V

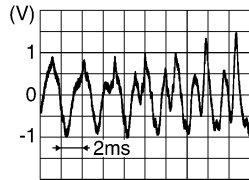
Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace TCU. Refer to [AV-597. "Removal and Installation"](#).

3.CHECK MICROPHONE SIGNAL

1. Connect microphone harness connector.
2. Check the signal between TCU harness connector terminals.

TCU			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M81	19	20	When inputting interior sound.	

Is the inspection result normal?

YES >> Replace TCU. Refer to [AV-597. "Removal and Installation"](#).

NO >> Replace microphone. Refer to [AV-598. "Removal and Installation"](#).

U1A0C MICROPHONE

DTC Description

INFOID:000000009726905

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A0C	MIC OUT CONN (Microphone output connection)	Malfunction is detected sound signal circuits between TCU and display control unit.

POSSIBLE CAUSE

Sound signal circuit

FAIL-SAFE

Transmit an own vehicle position to the center

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDUREWith CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A0C detected?YES >> Proceed to [AV-583. "Diagnosis Procedure"](#).NO-1 >> To check malfunction symptom before repair: Refer to [GI-43. "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726906

1.CHECK SOUND SIGNAL CIRCUIT

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

TCU		Display control unit		Continuity
Connector	Terminal	Connector	Terminal	
M81	22	M101	71	Existed
	23		52	

4. Check continuity between TCU harness connector and ground.

TCU		Ground	Continuity
Connector	Terminal		
M81	22		Not existed
	23		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

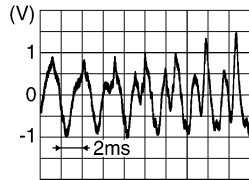
2.CHECK MICROPHONE SIGNAL

1. Connect TCU harness connector and display control unit harness connector.
2. Check the signal between TCU harness connector.

U1A0C MICROPHONE

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

TCU			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M81	22	23	When inputting interior sound.	

Is the inspection result normal?

- YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).
NO >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

U1A0E TELEMATICS SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

U1A0E TELEMATICS SWITCH

DTC Description

INFOID:000000009726907

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A0E	SOS SWITCH ON STUCK (SOS switch ON stuck)	SOS call switch is ON for 10 second or more.

POSSIBLE CAUSE

SOS call switch signal circuit

FAIL-SAFE

- Telematics system does not function (Only SOS call does not operate)
- Telematics switch LED indicator turn OFF

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A0E detected?

YES >> Proceed to [AV-585, "Diagnosis Procedure"](#).

NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726908

1.CHECK TELEMATICS SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCU harness connector and telematics switch harness connector.
3. Check the continuity between TCU harness connector and telematics switch harness connector.

TCU		Telematics switch		Continuity
Connector	Terminal	Connector	Terminal	
M81	34	R22	3	Existed

4. Check the continuity between TCU harness connector and ground.

TCU		Ground	Continuity
Connector	Terminal		
M81	34		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK TCU VOLTAGE

1. Connect TCU switch harness connector.
2. Turn ignition switch ON.
3. Check the voltage TCU harness connector and ground.

U1A0E TELEMATICS SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

Terminals			Voltage (Approx.)
(+) TCU		(-) Ground	
Connector	Terminal		
M81	34		
			5.0 V

Is the inspection result normal?

- YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).
NO >> Replace telematics switch. Refer to [AV-599, "Removal and Installation"](#).

U1A0F TELEMATICS SWITCH

DTC Description

INFOID:000000009726909

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1A0F	SOS SWITCH NO CONN (SOS switch no connection)	Malfunction detected is SOS call switch signal circuit between TCU and telematics switch.

POSSIBLE CAUSE

SOS call switch signal circuit

FAIL-SAFE

- Telematics system cannot start
- Telematics switch LED indicator turn OFF

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait at least 30 seconds.
3. Turn ignition switch ON and wait at least 30 seconds or more.
4. Select "Self Diagnostic Result" mode of "TCU" using CONSULT.
5. Check DTC.

Is DTC U1A0F detected?

- YES >> Proceed to [AV-587, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-43, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:000000009726910

1.CHECK TCU AND TELEMATICS SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCU harness connector and telematics switch harness connector.
3. Check the continuity between TCU harness connector and telematics switch harness connector.

TCU		Telematics switch		Continuity
Connector	Terminal	Connector	Terminal	
M81	34	R22	3	Existed

4. Check the continuity between TCU harness connector and ground.

TCU		Ground	Continuity
Connector	Terminal		
M81	34		Not existed

Is the inspection result normal?

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

2.CHECK TCU VOLTAGE

1. Connect TCU harness connector.
2. Turn ignition switch ON.
3. Check the voltage TCU harness connector and ground.

U1A0F TELEMATICS SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

Terminals			Voltage (Approx.)
(+)		(−)	
TCU			
Connector	Terminal		
M81	34	Ground	5.0 V

Is the inspection result normal?

YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

NO >> Replace telematics switch. Refer to [AV-599, "Removal and Installation"](#).

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

TCU

TCU : Diagnosis Procedure

INFOID:000000009726911

1.CHECK FUSE

Check if the fuse is burned out.

Power source	Fuse No.
Battery	#6
Ignition switch ACC or ON	#1

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the fuse after repairing the applicable circuit.

2.CHECK BATTERY POWER SUPPLY

Check the voltage between the TCU harness connector and ground.

TCU			Condition	Reference value (Approx.)
Connector	Terminals			
	(+)	(-)		
	Terminal			
M81	1	2	Ignition switch OFF	Battery Voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between TCU and fuse.

3.CHECK ACC POWER SUPPLY

Check the voltage between the TCU harness connector and ground.

TCU			Condition	Reference value (Approx.)
Connector	Terminals			
	(+)	(-)		
	Terminal			
M81	3	2	Ignition switch ACC	Battery Voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness between TCU and fuse.

4.CHECK GROUND CIRCUIT

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

TCU		Ground	Continuity
Connector	Terminal		
M81	2		Exists
	7		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace malfunctioning parts.

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MICROPHONE SIGNAL CIRCUIT

Description

INFOID:000000009726912

- TCU supplies power to the microphone when receiving a microphone ON signal from the display control unit.
- The microphone transmits an audio signal to TCU.
- TCU transmits a received sound signal to the display control unit.

Diagnosis Procedure

INFOID:000000009726913

1.CHECK CONTINUITY BETWEEN DISPLAY CONTROL UNIT AND TCU CIRCUIT

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

Display control unit		TCU		Continuity
Connector	Terminal	Connector	Terminal	
M101	72	M81	21	Existed
	71		22	
	87		23	

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

Display control unit		Ground	Continuity
Connector	Terminal		
M101	72		Not existed
	71		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK VOLTAGE TEL ON SIGNAL

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

Terminals			Voltage (Approx.)
(+)		(−)	
Display control unit			
Connector	Terminal		
M101	72	Ground	5.0 V

Is the inspection result normal?

YES >> GO TO 3.

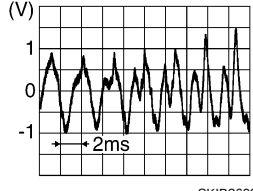
NO >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).**3.CHECK MICROPHONE SIGNAL (DISPLAY CONTROL UNIT TO TCU)**

1. Turn ignition switch OFF.
2. Connect TCU harness connector.
3. Turn ignition switch ON.
4. Check the signal between display control unit harness connector.

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

Display control unit			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M101	71	52	Give a voice.	

Is the inspection result normal?

- YES >> Replace display control unit. Refer to [AV-277, "Removal and Installation"](#).
 NO >> GO TO 4.

4.CHECK CONTINUITY BETWEEN TCU AND MICROPHONE CIRCUIT

- Turn ignition switch OFF.
- Disconnect TCU harness connector and microphone harness connector.
- Check the continuity between TCU harness connector and microphone harness connector.

TCU		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
M81	18	R12	4	Existed
	19		1	
	20		2	

- Check the continuity between TCU harness connector and ground.

TCU		Ground	Continuity
Connector	Terminal		
M81	18		Not existed
	19		

Is the inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace malfunctioning parts.

5.CHECK VOLTAGE MICROPHONE POWER SUPPLY

- Connect TCU harness connector.
- Turn ignition switch ON.
- Check the voltage between TCU harness connector ground.

Terminals			Voltage (Approx.)
(+) TCU		(−)	
Connector	Terminal		
M81	18		
		Ground	5.0 V

Is the inspection result normal?

- YES >> GO TO 6.
 NO >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).

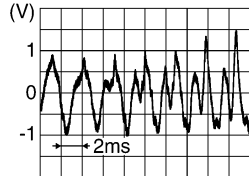
6.CHECK MICROPHONE SIGNAL (TCU TO MICROPHONE)

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TELEMATICS SYSTEM]

1. Turn ignition switch OFF.
2. Connect microphone harness connector.
3. Turn ignition switch ON.
4. Check the signal between TCU harness connector.

TCU			Condition	Reference value
Connector	Terminals			
	(+)	(-)		
	Terminal			
M81	19	20	When inputting interior sound.	(V)  SKIB3609E

Is the inspection result normal?

- YES >> Replace TCU. Refer to [AV-597, "Removal and Installation"](#).
- NO >> Replace microphone. Refer to [AV-598, "Removal and Installation"](#).

SYMPTOM DIAGNOSIS

TELEMATICS SYSTEM

SYMPTOM TABLE

INFOID:000000009726914

INFINITI INTOUCH

Symptoms	Check items	Possible malfunction location/Action to take
Display control unit does not start (Display is not indicated).	—	Refer to AV-267, "Symptom Table" .

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TELEMATICS SYSTEM

< SYMPTOM DIAGNOSIS >

[TELEMATICS SYSTEM]

Symptoms	Check items	Indica- tor on SOS switch	Pop-up message	Possible malfunction location/Action to take
Telematics opera- tion is not avail- able.	Check the display when Telematics is operated.	OFF	No service.	Check ON/OFF status of TCU using the data mon- itor of CONSULT. • Replace TCU if it is ON. Refer to AV-597, "Removal and Installation". • Turn it ON again if it is OFF. Replace TCU if ON is switched to OFF. Refer to AV-597, "Removal and Installation".
				Use other cellular phone to check radio wave con- dition. • If the service is available, replace TCU or TEL antenna. - For TCU replacement, refer to AV-597, "Remov- al and Installation". - For TEL antenna replacement, refer to AV-601. "Removal and Installation". • If the service is not available, move the vehicle to the position where service is available and perform the operation again. If guidance of "out of service area" appears when SOS switch is pressed even in the service area of cellular phone, confirm the SIM line contract status.
		ON	Telematics communica- tion is currently busy. Please try again later.	Use other cellular phone to check radio wave con- dition. • If it is OK, there may be a cause at the Infiniti Connection™ Data Center. Check connection after certain time. If there is no problem at the Infiniti Connection™ Data Center, replace TCU or TEL antenna. - For TCU replacement, refer to AV-597, "Remov- al and Installation". - For TEL antenna replacement, refer to AV-601. "Removal and Installation". • If it is NG, check connection again after certain time.
			TCU line is using.	Check connection after certain time. Replace TCU if it is frequently displayed. Refer to AV-597, "Removal and Installation" .
			The connection to the call center failed.	There may be a cause at the Infiniti Connection™ Data Center. Check connection after certain time. If there is no problem at the Infiniti Connection™ Data Center, replace TCU or TEL antenna. • For TCU replacement, refer to AV-597, "Remov- al and Installation". • For TEL antenna replacement, refer to AV-601. "Removal and Installation". • Perform CONSULT self-diagnosis. Refer to AV- 542, "CONSULT Function".
	"Please ask for initiation of service at your dealer"	Check the infiniti connection™ data base.		
	• No communication with Infiniti Connection™ Response ser- vice is available in Infiniti Connection™ service. • Other services are normal.	Check the microphone voice signal circuit. Refer to AV-590, "Diagnosis Procedure" .		

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[TELEMATICS SYSTEM]

NORMAL OPERATING CONDITION

Description

INFOID:000000009726915

NOTE:

For Telematics system operation detail 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 system in the video mode.	Press "" "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.
The screen is darker.	The cabin temperature is too low.	Wait until the interior of the vehicle temperature becomes moderate.
The screen is brighter.	The adjustment of display brightness is set to the maximum of darkness.	Adjust the brightness setting of the display.
When looking at the screen from an angle, the screen lightens or darkens.	The adjustment of display brightness is set to the maximum of brightness.	
	This is a typical phenomenon for liquid crystal displays.	
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is less than 50°F (0°C).	Wait until the interior of the vehicle temperature becomes within 50°F(0°C) to 122°F (50°C).
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.
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".
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.
A small black spot or a small bright spot appears on the screen.	This is a typical phenomenon for liquid crystal displays.	This is not a malfunction.
A dot or stripe pattern appears on the screen.	Electromagnetic wave that is generated from neon billboards, high voltage electric power cables, ham radios or other radio devices equipped to other vehicles may adversely affect the screen.	
Image lag appears on the screen.	This is a typical phenomenon for liquid crystal displays.	

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 CARWINGS™

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[TELEMATICS SYSTEM]

Symptom	Possible cause	Possible solution
The system cannot connect to the NISSAN CARWINGS center.	A subscription for the CARWINGS™ service has not been established.	Sign up for a subscription to the CARWINGS™ service. For details about subscriptions, contact a NISSAN dealer or visit the Nissan CARWINGS center website.
	The communication line is busy.	Try again after a short period of time.
	The vehicle is in a location where it is difficult to receive radio waves.	When the vehicle moves to an area where radio waves can be transmitted sufficiently, communication will be restored. When the icon on the display shows that the vehicle is inside the communication area, the system can be used.
	Radio wave reception for TCU is insufficient.	When the vehicle moves to an area where radio waves can be transmitted sufficiently, communication will be restored. When the icon on the display shows that the vehicle is inside the communication area, the system can be used.
Some of the items that are displayed on the menu screen cannot be selected.	The vehicle is being driven and some menu items are disabled.	The vehicle is being driven. Stop the vehicle in a safe location and apply the parking brake before operating the functions.
Some parts of the screen are not displayed	The vehicle is being driven and some menu items are disabled.	Operate the system after stopping the vehicle in a safe location and applying the parking brake.
The system does not announce information.	The volume level is set to the minimum.	Adjust the volume level by operating the VOL switches located on the control panel or on the steering wheel switch while the system is announcing information.

REMOVAL AND INSTALLATION

TCU

Removal and Installation

INFOID:000000009728844

REMOVAL

NOTE:

Before replacing TCU, perform "WRITE VIN DATA" to save current vehicle specification. For details, refer to [AV-569, "ADDITIONAL SERVICE WHEN REPLACING TCU : Work Procedure"](#).

1. Remove the integral switch. Refer to [AV-280, "Removal and Installation"](#).
2. Remove the screws.
3. Disconnect the harness connector from the TCU.
4. Remove the bracket screws, and then remove the TCU.

INSTALLATION

1. Installation is in the reverse order of removal.
2. After installation, perform activation. Refer to [AV-569, "ADDITIONAL SERVICE WHEN REPLACING TCU : Work Procedure"](#).

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AV

MICROPHONE**Removal and Installation**

INFOID:000000009785316

REMOVAL

1. Remove the map lamp assembly. Refer to [INL-63, "MAP LAMP : Removal and Installation"](#).
2. Disconnect the microphone connector from the map lamp assembly.
3. Release the microphone pawls, then remove the microphone.

INSTALLATION

Installation is in the reverse order of removal.

TELEMATICS SWITCH

Removal and Installation

INFOID:000000009728846

REMOVAL

- 1. Remove the map lamp assembly. Refer to [INL-63, "MAP LAMP : Removal and Installation"](#).
- 2. Disconnect connectors and remove screws and connectors clip, then remove telematics switch with the map lamp assembly finisher.
- 3. Remove the telematics switch, stretching pawls of telematics switch finisher.

INSTALLATION

Installation is the reverse order of removal.

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GPS ANTENNA

Removal and Installation

INFOID:000000009785322

REMOVAL

1. Remove the instrument panel assembly. Refer to [IP-12, "Removal and Installation"](#).
2. Remove the screw to remove the GPS antenna from the instrument panel.

INSTALLATION

Install in the reverse order of removal.

TELEMATICS ANTENNA

Removal and Installation

INFOID:000000009728845

REMOVAL

1. Remove the instrument panel assembly. Refer to [IP-12. "Removal and Installation"](#).
2. Remove the screw to remove the telematics antenna from the instrument panel.

INSTALLATION

Install in the reverse order of removal.

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ANTENNA FEEDER

Feeder Layout

INFOID:000000009785315

