SECTION AV
AUDIO, VISUAL & NAVIGATION SYSTEM

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PRECAUTIONS

FOR MEXICO

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

INFOID:0000000006201441

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. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “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:

- **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.**

EXCEPT FOR MEXICO

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

INFOID:0000000006201440

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

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “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:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with**

a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precaution for Trouble Diagnosis

INFOID:0000000006307700

AV COMMUNICATION SYSTEM

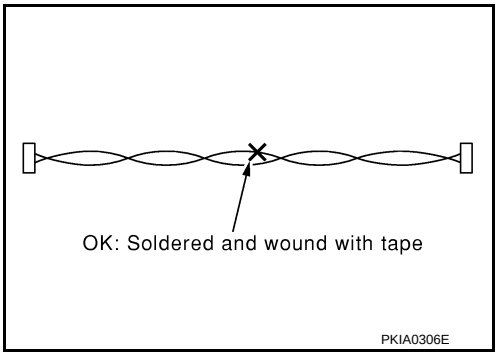
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

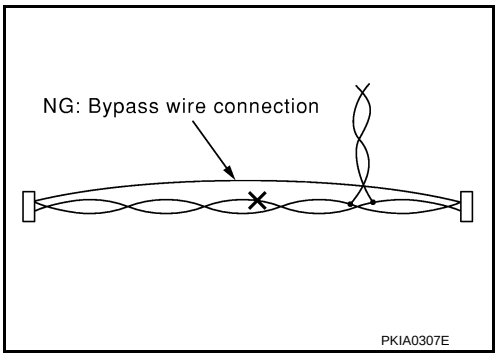
INFOID:0000000006307701

AV COMMUNICATION SYSTEM

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



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

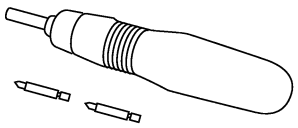


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000006307687

Tool name	Description
Power tool  PBIC0191E	Loosening screws

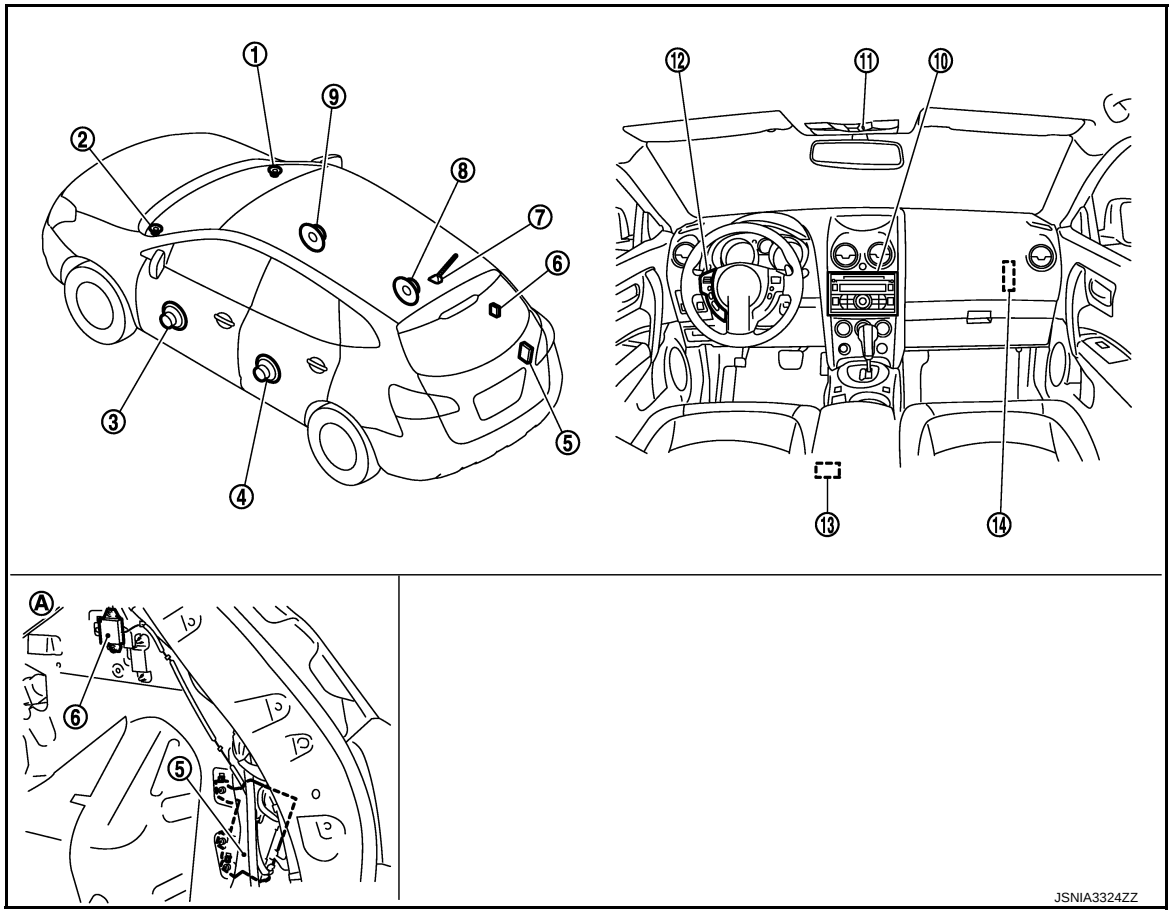
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

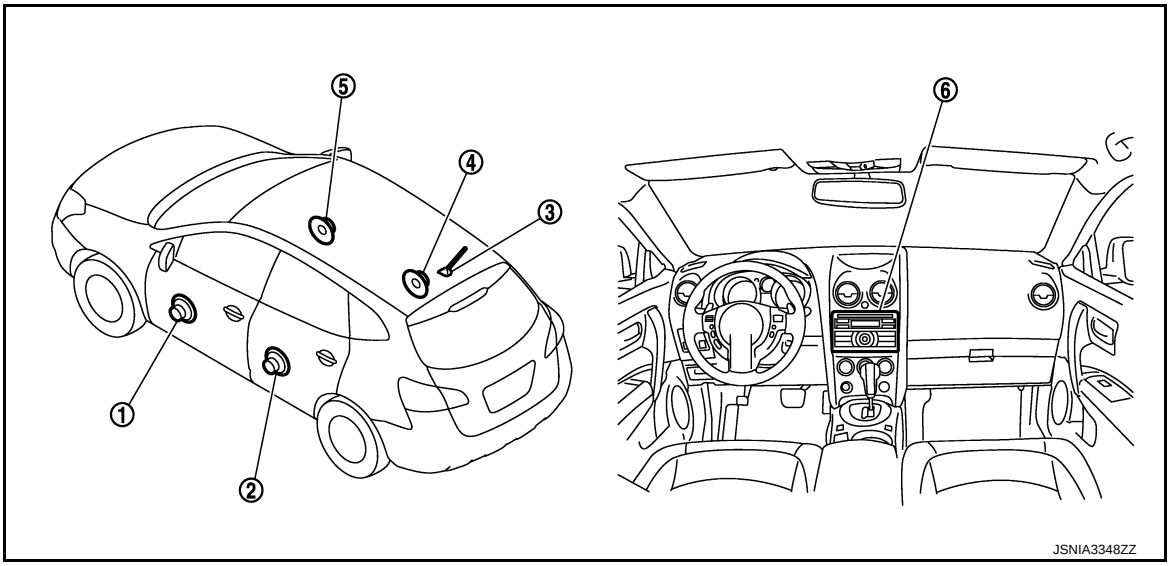
INFOID:0000000006201423

MODELS WITH iPod® CONNECTION FUNCTION



1. Tweeter RH
2. Tweeter LH
3. Front speaker LH
4. Antenna rod
5. TEL adapter unit
6. TEL antenna
7. Antenna base (antenna amp.)
8. Rear door speaker RH
9. Front door speaker RH
10. Audio unit
11. Microphone
12. Steering switch
13. iPod connector
14. iPod adapter
A. Luggage side RH

MODELS WITHOUT iPod® CONNECTION FUNCTION



1. Front speaker LH
2. Rear speaker LH
3. Antenna base (antenna amp.)
4. Rear speaker RH
5. Front speaker RH
6. Audio unit

Component Description

INFOID:0000000006201424

Part name	Description	
Audio unit	Models with iPod® connection function and hands-free phone system	Controls audio system and hands-free phone system functions.
	Except for above.	Controls audio system function.
Steering switch	• Operation for audio and hands-free phone are possible. • Steering switch signal (operation signal) is output to TEL adapter unit. • Steering switch signal (operation signal) is output to audio unit via TEL adapter unit.	
Front speaker	• Outputs sound signal from audio unit. • Outputs high, mid and low range sounds.	
Rear speaker	• Outputs sound signal from audio unit. • Outputs high, mid and low range sounds.	
Tweeter	• Outputs sound signal from audio unit. • Outputs high range sounds.	
Antenna base	• An antenna base integrated with antenna amp. • Radio signal received by rod antenna is amplified and transmitted to audio unit. • Power (antenna amp. ON signal) is supplied from audio unit.	
iPod adapter	• Inputs iPod sound signal from iPod®, and outputs iPod sound signal to audio unit. • Receiving/transmitting of iPod® operation signals are performed as follows: - between audio unit and iPod adapter: AV communication. - between iPod® and iPod adapter: serial communication.	
TEL adapter unit	• Inputs the steering switch signal (operation signal) from the steering switch. • Outputs the steering switch signal (operation signal) to audio unit. • Inputs the TEL voice signal from TEL antenna during reception and outputs it to the audio unit. • Inputs the TEL voice signal from microphone during speech recognition and outputs it to the TEL antenna. • Audio unit and TEL adapter unit exchange data by AV communication.	

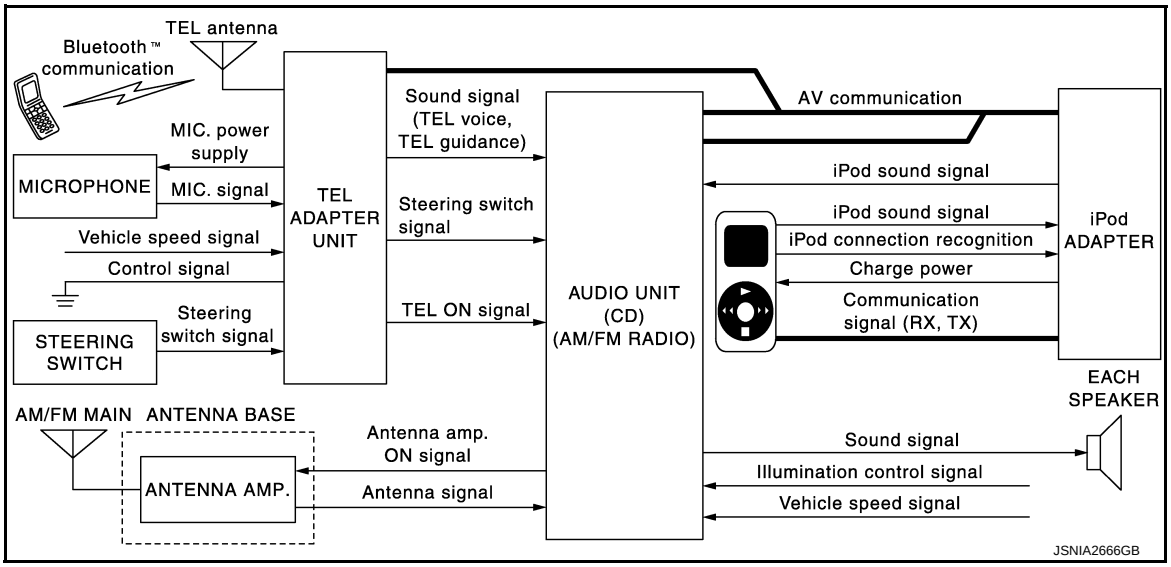
Part name	Description
TEL antenna	Receives the TEL voice signal and outputs it to the TEL adapter unit.
Microphone	• Used for hands-free phone operation. • Microphone signal is transmitted to TEL adapter unit. • Power (microphone VCC) is supplied from TEL adapter unit.

SYSTEM

System Diagram

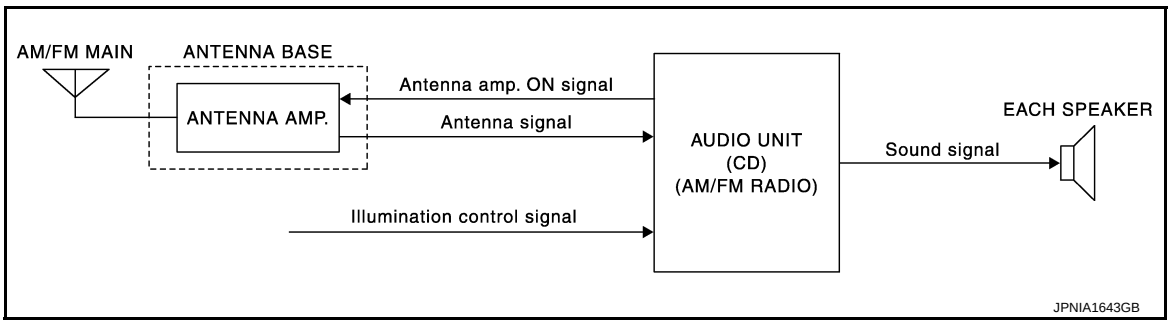
INFOID:0000000006376333

MODELS WITH iPod® CONNECTION FUNCTION AND HANDS-FREE PHONE SYSTEM



NOTE:
An antenna base integrated with radio antenna amp. is adopted.
iPod® is a trademark of Apple inc., registered in the U.S. and other countries.

MODELS WITHOUT iPod® CONNECTION FUNCTION



NOTE:
An antenna base integrated with radio antenna amp. is adopted.
iPod® is a trademark of Apple inc., registered in the U.S. and other countries.

System Description

INFOID:0000000006376334

AUDIO SYSTEM

Audio functions

×: Applicable

		Models without iPod® connection function	Models with iPod® connection function	Models with iPod® connection function and hands-free phone system
Audio function	AM/FM radio	×	×	×
	CD	×	×	×
	AUX connection	×	×	×
	iPod® connection	—	×	×
	Speed sensitive volume	—	×	×
Hands-free phone system		—	—	×

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

AUDIO FUNCTION

AM/FM Radio
- AM/FM radio tuner is built into audio unit.
- Radio signals are received by radio antenna, next they are amplified by antenna amp., and finally the they are input to audio unit. (Antenna amp. is built into antenna base.)
- Audio unit outputs the sound signal to each speaker.

CD
- CD function is built into audio unit.
- Audio unit outputs sound signal to each speaker when CD is inserted to audio unit.

Auxiliary input
- When the external device is connected to the auxiliary (AUX) input jack of the audio unit, the external device inputs a sound signal to the audio unit.
- When AUX mode is selected, audio unit outputs sound signal to each speaker.

iPod® Connection
- Connect iPod® and iPod adapter with wire harness and iPod adapter input iPod sound signal from iPod®.
- When iPod mode is selected, iPod adapter outputs iPod sound signal to audio unit.
- Audio unit outputs the sound signal to each speaker.

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

HANDS-FREE PHONE FUNCTION
- The connection between cellular phone and TEL adapter unit is performed with Bluetooth™ communication.
- The voice guidance signal is input from the TEL adapter unit to the audio unit and output to the front speaker when operating the telephone.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-19, "Diagnosis Description".

When Receiving A Call
TEL voice signal received with the cellular phone is input from TEL antenna via TEL adapter unit to audio unit with Bluetooth™ communication and output to the front speaker. The operation is performed with the steering switch or voice recognition function.

When A Call Is Originated
Speech sound (TEL voice signal) is input from the microphone to the TEL adapter unit. It is input from the TEL antenna via Bluetooth™ communication to the cellular phone. It is transmitted to the phone on the other side. The operation is performed with the steering switch or voice recognition function.

DIAGNOSIS SYSTEM (AUDIO UNIT)

MODELS WITH iPod® CONNECTION FUNCTION

MODELS WITH iPod® CONNECTION FUNCTION : Description

INFOID:0000000006404078

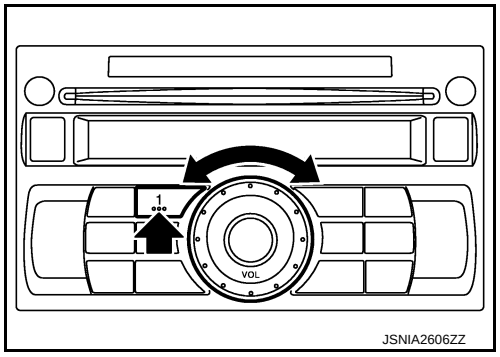
Self-diagnosis mode can check the following items.
- Display all icons and segments
- Audio unit hardware/software/CD mechanism/EEPROM versions
- Satellite radio version
- Audio CD changer version
- iPod hardware/software versions

MODELS WITH iPod® CONNECTION FUNCTION : On Board Diagnosis Function

INFOID:0000000006404075

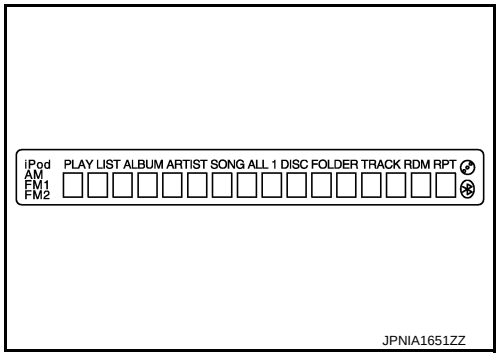
OPERATION PROCEDURE

1. Turn ignition switch to the ON position.
2. Turn the audio unit off.
3. While pressing the “1” button, turn the volume control dial clockwise or counterclockwise 30 clicks or more. When the self-diagnosis mode is started, a short beep will be heard.



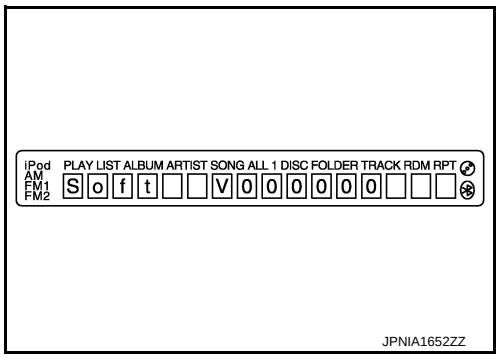
JSNIA2606ZZ

4. Initially, all display segments will be illuminated.



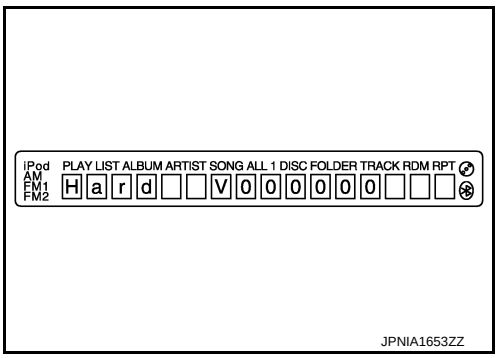
JPNIA1651ZZ

5. Press the “DISP TEXT” switch to enter version diagnostics. “Soft” (audio software version) is displayed.



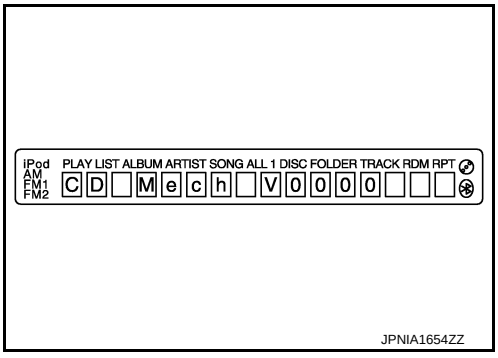
JPNIA1652ZZ

6. Press the “DISP TEXT” switch again to display the “Hard” (audio hardware version).



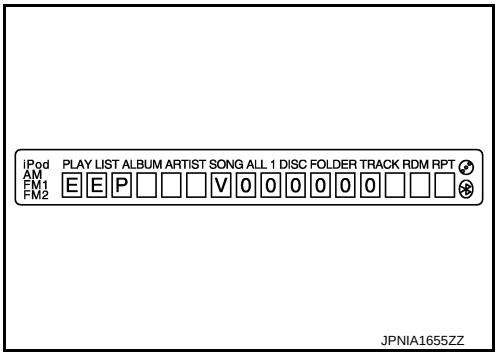
JPNIA1653ZZ

7. Press the “DISP TEXT” switch again to display the “CD Mech” (CD mechanism version).



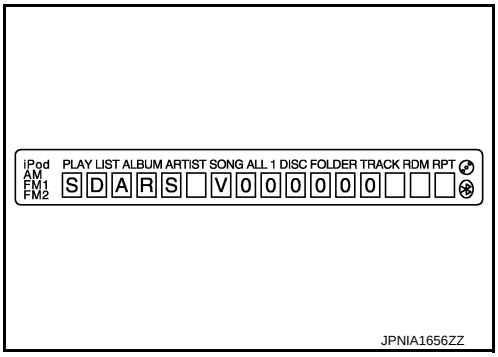
JPNIA1654ZZ

8. Press the “DISP TEXT” switch again to display the “EEP” (audio unit EEPROM version).



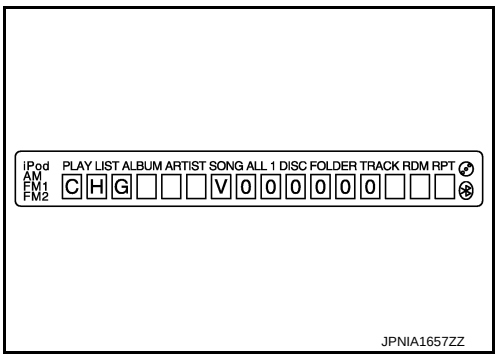
JPNIA1655ZZ

9. Press the “DISP TEXT” switch again to display the “SDARS” (satellite radio version).



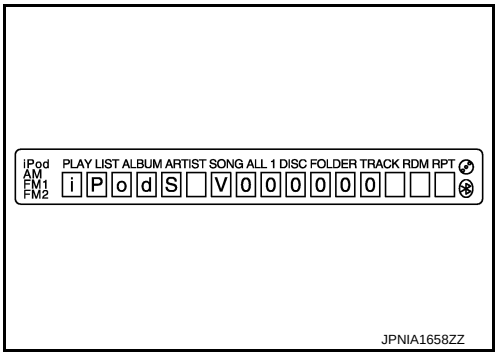
JPNIA1656ZZ

10. Press the “DISP TEXT” switch again to display the “CHG” (audio CD changer version). If audio CD changer is not connected, “FFFFFF” is displayed.



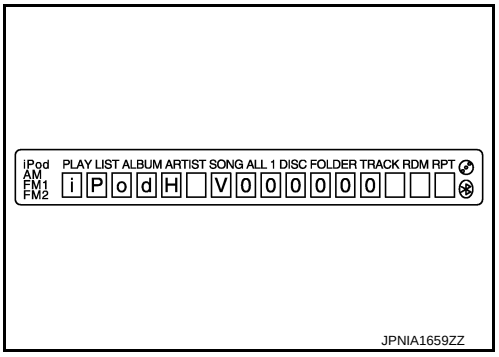
JPNIA1657ZZ

11. Press the “DISP TEXT” switch again to display the “iPodS” (iPod software version). “FFFFFF” is displayed when communication signals between the audio unit and iPod adapter include a malfunction.



JPNIA1658ZZ

12. Press the “DISP TEXT” switch again to display the “iPodH” (iPod hardware version). “FFFFFF” is displayed when communication signals between the audio unit and iPod adapter include a malfunction.



JPNIA1659ZZ

Finishing Self-diagnosis Mode

Self-diagnosis Mode is canceled when turning ignition switch OFF.

MODELS WITHOUT iPod® CONNECTION FUNCTION

MODELS WITHOUT iPod® CONNECTION FUNCTION : Description

INFOID:0000000006404077

Self-diagnosis mode can check the following items.

- Audio unit software version
- Audio CD changer version

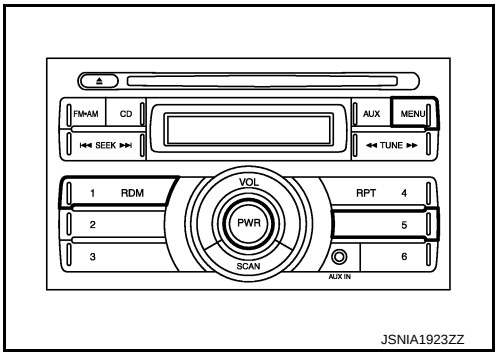
MODELS WITHOUT iPod® CONNECTION FUNCTION : On Board Diagnosis Function

INFOID:0000000006404076

OPERATION PROCEDURE

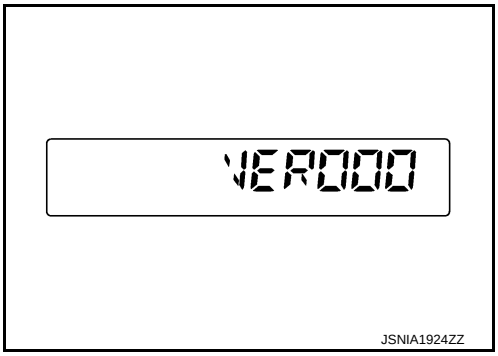
1. Turn ignition switch to the ON position.
2. Turn the audio unit off.

3. Press “PWR” button while pressing “MENU”, “1” and “5” buttons. When the self-diagnosis mode is started, a short beep will be heard.



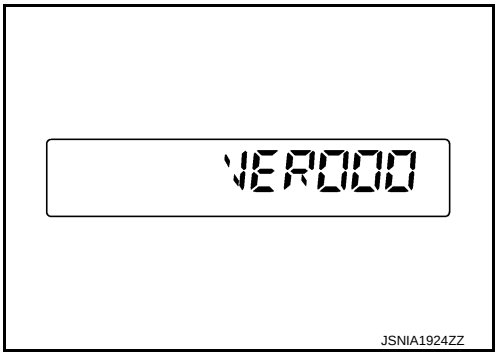
JSNIA1923ZZ

4. Initially, Audio software version is displayed.



JSNIA1924ZZ

5. Press the “PWR” button to display the audio CD changer version. If audio CD changer is not connected, “FF” is displayed.



JSNIA1924ZZ

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

DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

Description

INFOID:0000000006397655

During on board diagnosis the diagnosis function of TEL adapter unit starts with the operation of the steering switch and performs the diagnosis when ignition switch ACC.

Diagnosis Description

INFOID:0000000006397656

ON BOARD DIAGNOSIS ITEM

The on board diagnosis has 3 modes: the self-diagnosis mode that performs the trouble diagnosis, the speaker adaptation data deleting mode and the hands-free phone system initialization mode.

CAUTION:

- **Perform the diagnosis with the vehicle stopped.**
- **Perform STEP2 if necessary.**

STEP	MODE	Description
STEP1	Self-diagnosis	The self-diagnosis mode performs the microphone test and the diagnosis of TEL adapter unit, TEL antenna and steering unit, and then reads out the results with the sound and indicates them on the display.
STEP2	Speaker adaptation data deleting	The speaker adaptation data deleting mode can delete the speaker adaptation data.
	Hands-free phone system initialization	Hands-free phone system initialization mode can perform the initialization of hands-free phone system.

Self-diagnosis results

Self-diagnosis mode reads out the self-diagnosis results.

NOTE:

- Error count is read out simultaneously when reading out the DTC name.
- The errors are read out continuously when some errors occur at the same time.

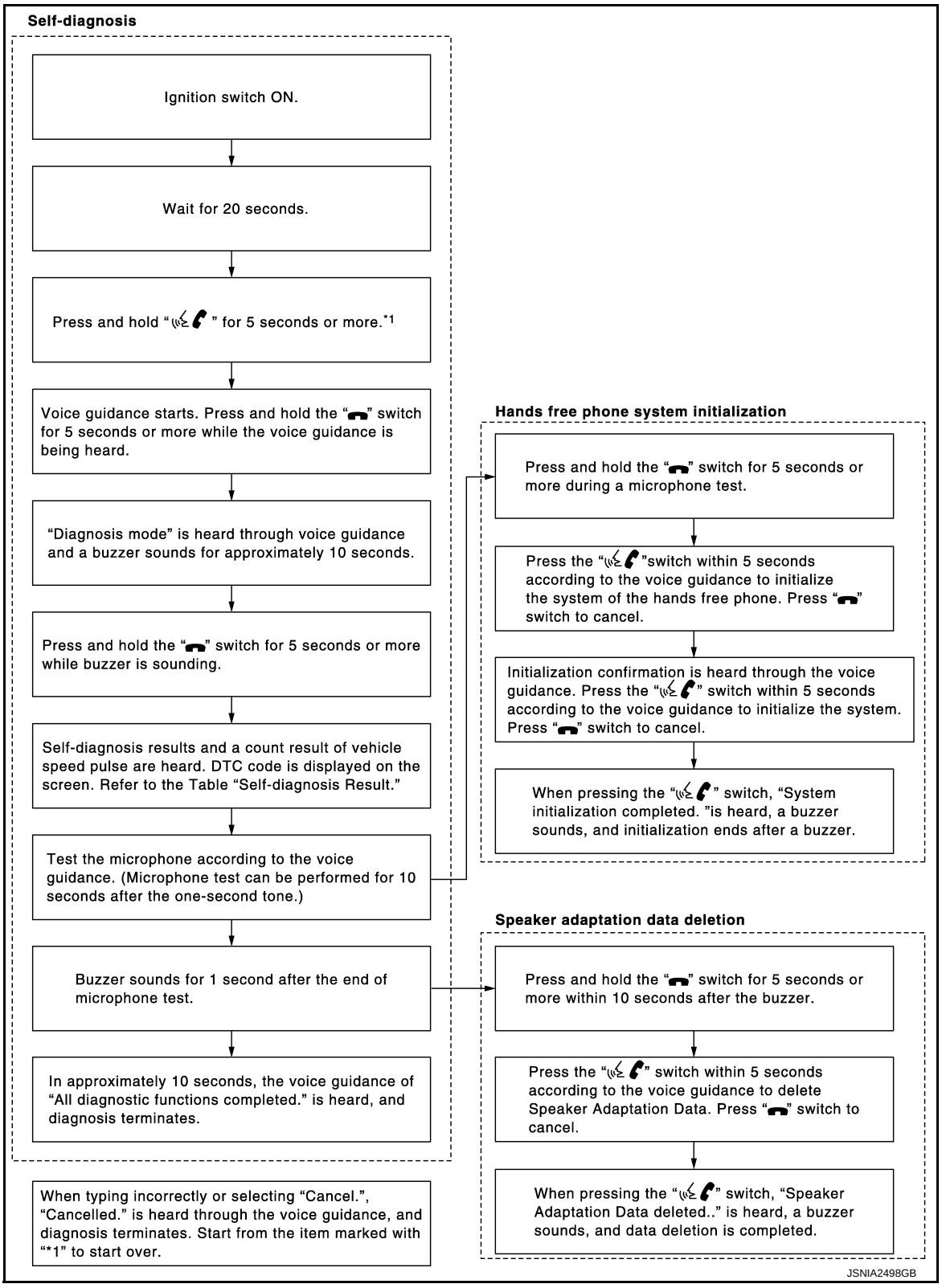
Self-diagnosis results

DTC	DTC name	Possible causes
DTC 10000	INTERNAL FAILURE	TEL adapter unit
DTC 01000	ANT. SHORT TO BATT OR OPEN	TEL antenna
DTC 00100	ANT. SHORT TO GROUND	
DTC 00010	STEERING REMOTE BUTTON STUCK A	Steering switch
DTC 00001	STEERING REMOTE BUTTON STUCK B	
DTC 00000	THERE ARE NO FAILURE RECORDS TO REPORT	—

The Details of Error Count

The error count guides “0” when the error occurs. The next time it counts up “1” if it is normal with the ignition switch ON. It continues the count up unless the initialization of hands-free phone system is performed.

FLOW CHART OF TROUBLE DIAGNOSIS



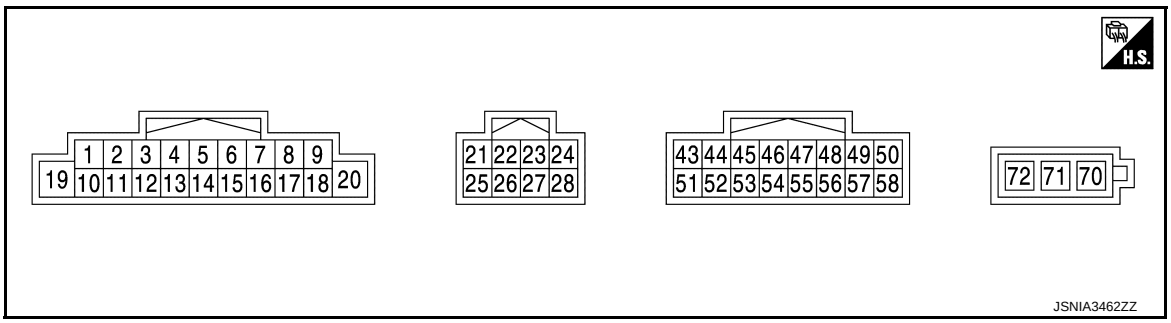
ECU DIAGNOSIS INFORMATION

AUDIO UNIT

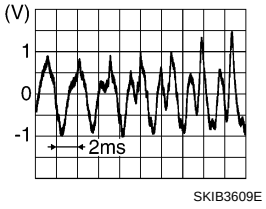
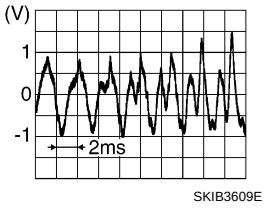
Reference Value

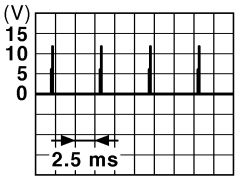
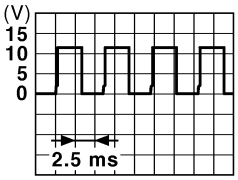
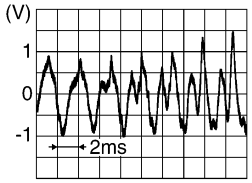
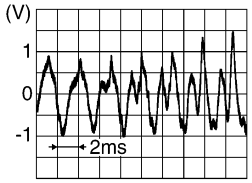
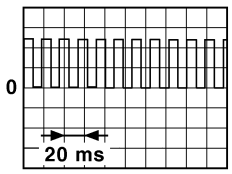
INFOID:0000000006382982

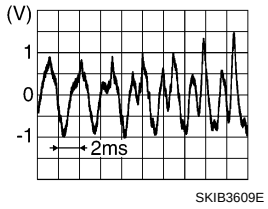
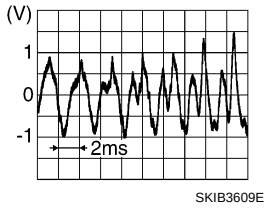
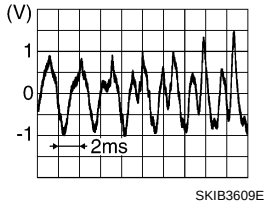
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
2 (R)	3 (G)	Sound signal front speaker LH	Output	Ignition switch ON	Sound output	
4 (V)	5 (LG)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output	
6 (BR)	15 (GR)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch	0.2 V
					Keep pressing SEEK UP switch	1.0 V
					Keep pressing VOL UP switch	2.2 V
					Except for above	3.3 V
7 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (R)	8 (Y)	Illumination control signal	Input	Ignition switch OFF	• Lighting switch 1ST • When meter illumination is maximum	 JPNIA1687GB
					• Lighting switch 1ST • When meter illumination is step 11	 JPNIA1686GB
					• Lighting switch 1ST • When meter illumination is minimum	12.0 V
11 (O)	12 (W)	Sound signal front speaker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
13 (L)	14 (P)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
16 (O)	15 (GR)	Steering switch signal B	Input	Ignition switch ON	Keep pressing SEEK DOWN switch	1.0 V
					Keep pressing VOL DOWN switch	2.2 V
					Except for above	3.3 V
18 (L)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage

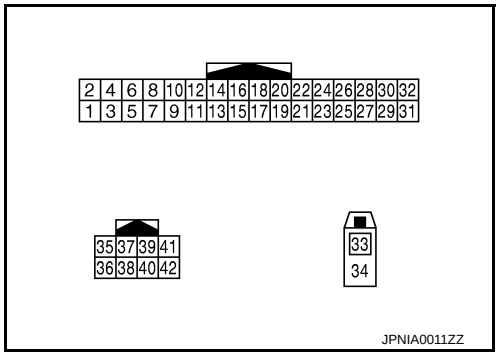
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
21 (R)	25 (W)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected	 SKIB3609E
23 (B)	27 (G)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected	 SKIB3609E
28	—	Shield	—	—	—	—
47 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
48 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
49 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
54 (V)	Ground	TEL ON signal	Input	Ignition switch ON	While using hands-free phone system	0 V
					While not using hands-free phone system	5.0 V
55 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
56 (BR)	57 (Y)	Sound signal (TEL voice, voice guidance)	Input	Ignition switch ON	During voice guide output with the switch pressed	 SKIB3609E
58	—	Shield	—	—	—	—
70	Ground	Antenna amp. ON signal	Output	Ignition switch ON	—	12.0 V
71	—	Antenna signal	Input	—	—	—

TEL ADAPTER UNIT

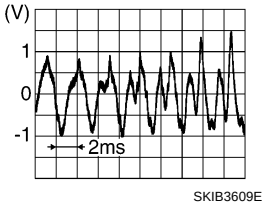
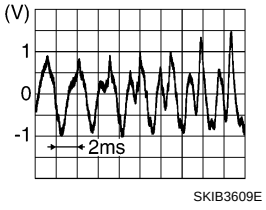
Reference Value

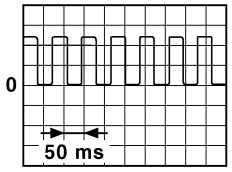
INFOID:0000000006382983

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (BR)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
3 (W)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
7 (B)	8	Microphone signal	Input	Ignition switch ON	Give a voice.	
9 (BR)	10 (Y)	Sound signal (TEL voice, voice guidance)	Output	Ignition switch ON	During voice guide output with the switch pressed.	
11 (O)	Ground	TEL ON signal	Output	Ignition switch ON	While using hands-free phone system.	0 V
					While not using hands-free phone system.	5.0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
12 (W)	14 (GR)	Steering switch signal A	Input	Ignition switch ON	Keep pressing switch.	0 V
					Keep pressing SEEK UP switch.	1.2 V
					Keep pressing SEEK DOWN switch.	2.5 V
					Except for above.	5.0 V
13 (Y)	14 (GR)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch.	0 V
					Keep pressing VOL UP switch.	1.2 V
					Keep pressing switch.	2.5 V
					Keep pressing SOURCE switch.	3.7 V
					Except for above.	5.0 V
17 (W)	19 (GR)	Steering switch signal A	Output	Ignition switch ON	Keep pressing SOURCE switch.	0.2 V
					Keep pressing SEEK UP switch.	1.0 V
					Keep pressing VOL UP switch.	2.2 V
					Except for above.	3.3 V
18 (L)	19 (GR)	Steering switch signal B	Output	Ignition switch ON	Keep pressing SEEK DOWN switch.	1.0 V
					Keep pressing VOL DOWN switch.	2.2 V
					Except for above.	3.3 V
20 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
21 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
27 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
28 (G)	Ground	Vehicle speed signal (2-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).  JSNIA0015GB
29 (W)	Ground	Microphone power supply	Output	Ignition switch ON	—	5.0 V

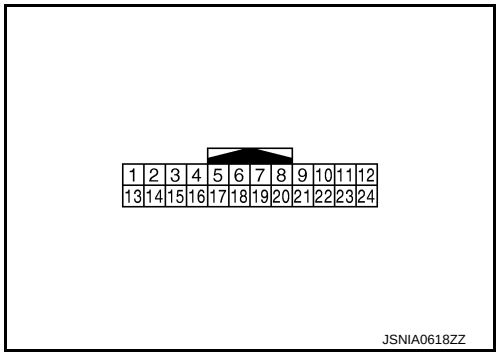
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
33	—	TEL antenna signal	Input	—	Not connected to TEL antenna connector.	5.0 V
34	—	Shield	—	—	—	—
35 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
36 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—

IPOD ADAPTER

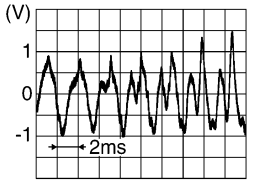
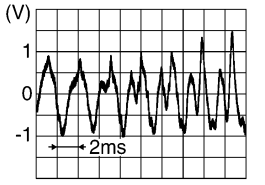
Reference Value

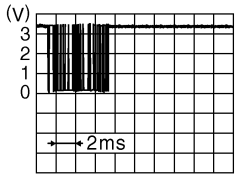
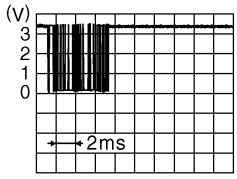
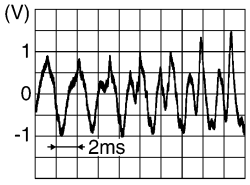
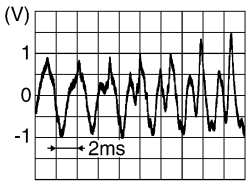
INFOID:0000000006382978

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (R)	13 (W)	iPod sound signal LH	Output	Ignition switch ON	When iPod mode is selected.	 SKIB3609E
2 (B)	14 (G)	iPod sound signal RH	Output	Ignition switch ON	When iPod mode is selected.	 SKIB3609E
3 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
4 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
5 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
6 (GR)	—	USB D+ signal	—	—	—	—
7 (V)	—	USB D– signal	—	—	—	—
8 (G)	Ground	iPod battery charge 12 V	Output	Ignition switch ON	Connected to iPod®	12.0 V

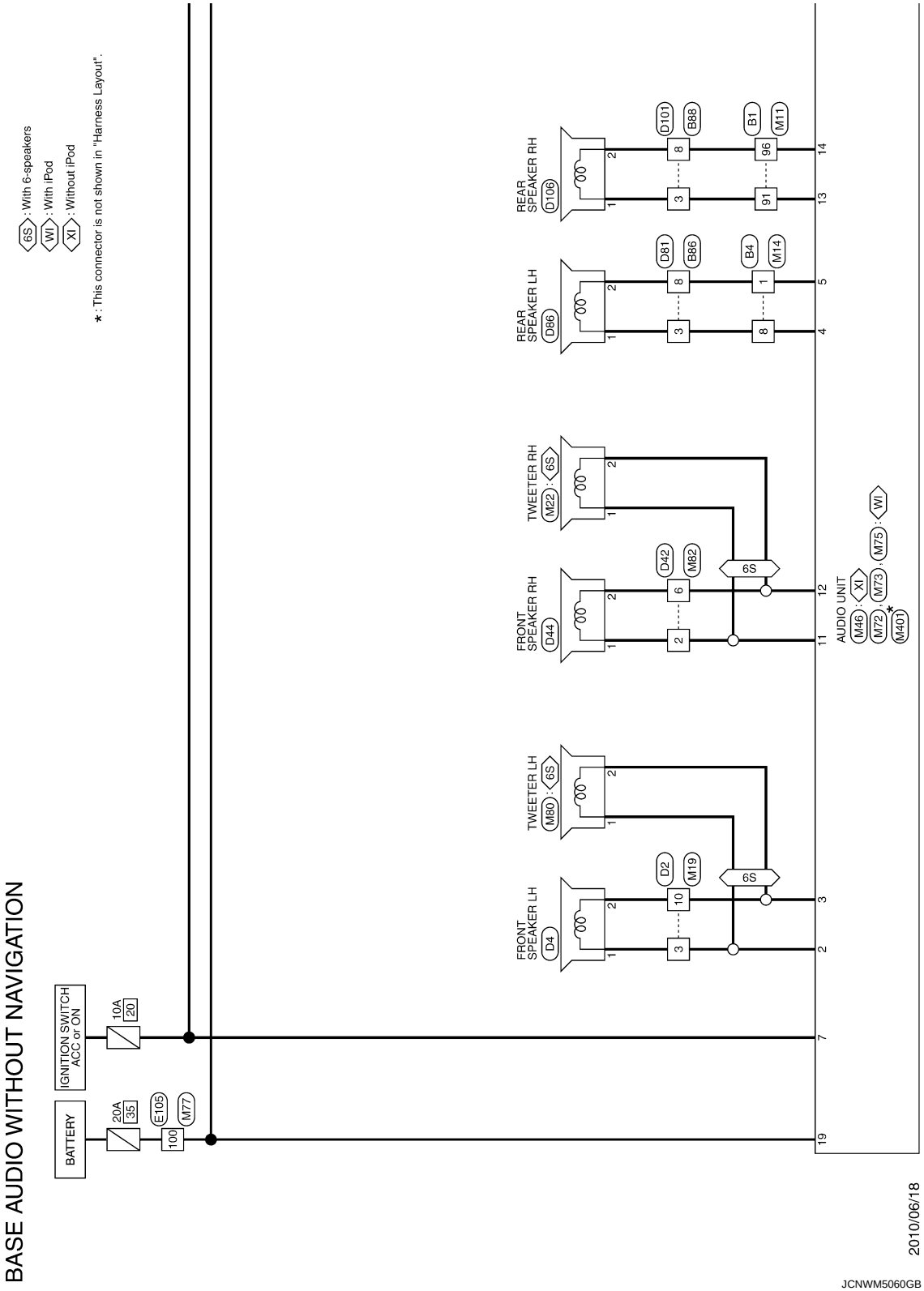
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (R)	Ground	Communication signal (iPod adapter→iPod®)	Output	Ignition switch ON	The wave pattern is displayed just after iPod connection.	 JPNIA0462GB **NOTE:** After the wave pattern display, the value continues Approx 3.3 V
10 (L)	Ground	Communication signal (iPod®→iPod adapter)	Input	Ignition switch ON	Connected to iPod®	 JPNIA0462GB
11 (BR)	Ground	ACCESSORY-IDENTIFY	—	Ignition switch ON	Connected to iPod®	0 V
12 (W)	23 (B)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	 SKIB3609E
15	—	Shield	—	—	—	—
16 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
17 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
19	—	Shield	—	—	—	—
20 (P)	Ground	iPod battery charge 5 V	Output	Ignition switch ON	Connected to iPod®	5.0 V
21 (Y)	Ground	iPod connection recognition signal	Input	Ignition switch ON	Not connected to iPod®	4.0 V
					Connected to iPod®	0 V
22 (LG)	Ground	ACCESSORY-DETECT	—	Ignition switch ON	Connected to iPod®	0 V
24 (R)	23 (B)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	 SKIB3609E

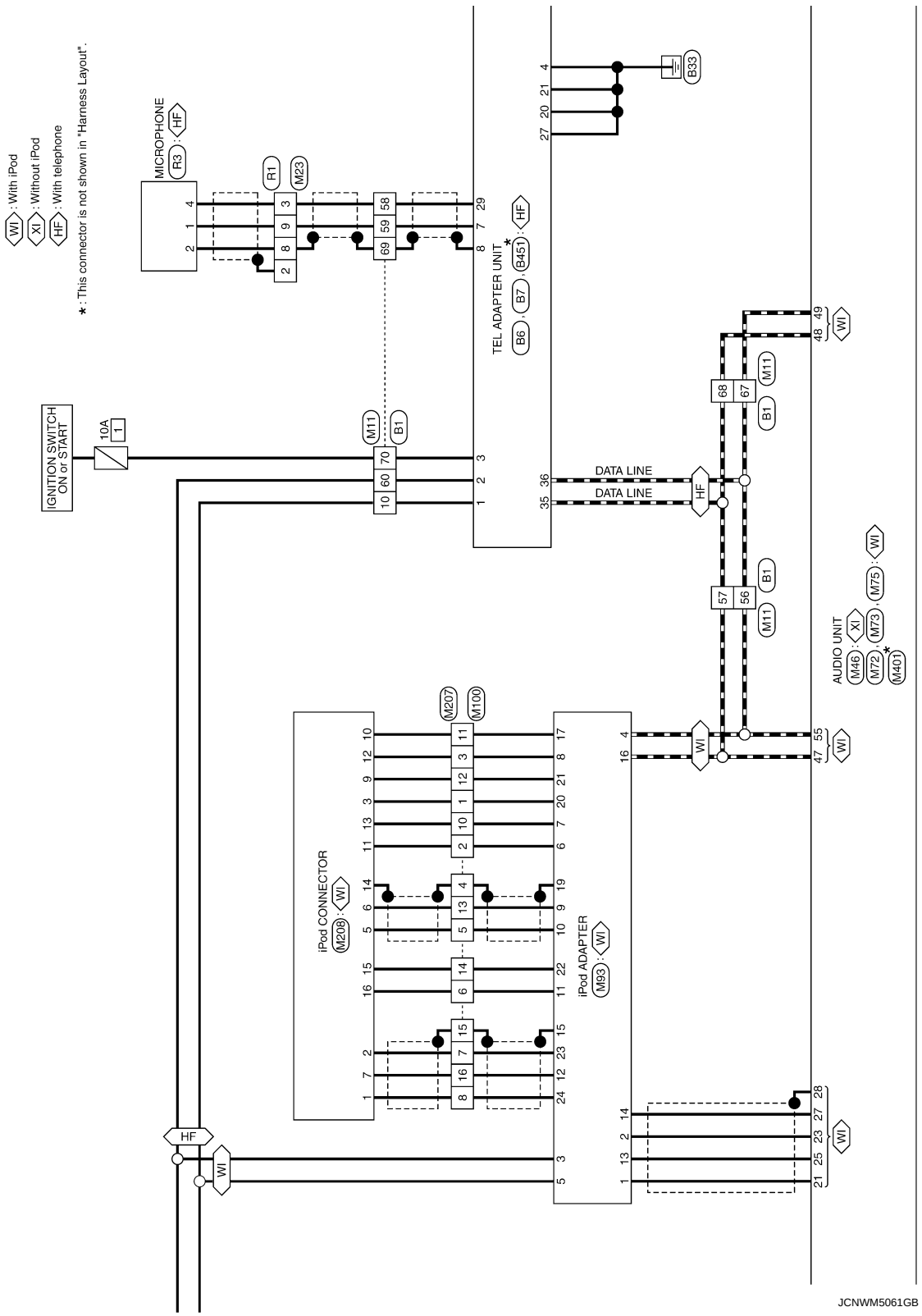
WIRING DIAGRAM

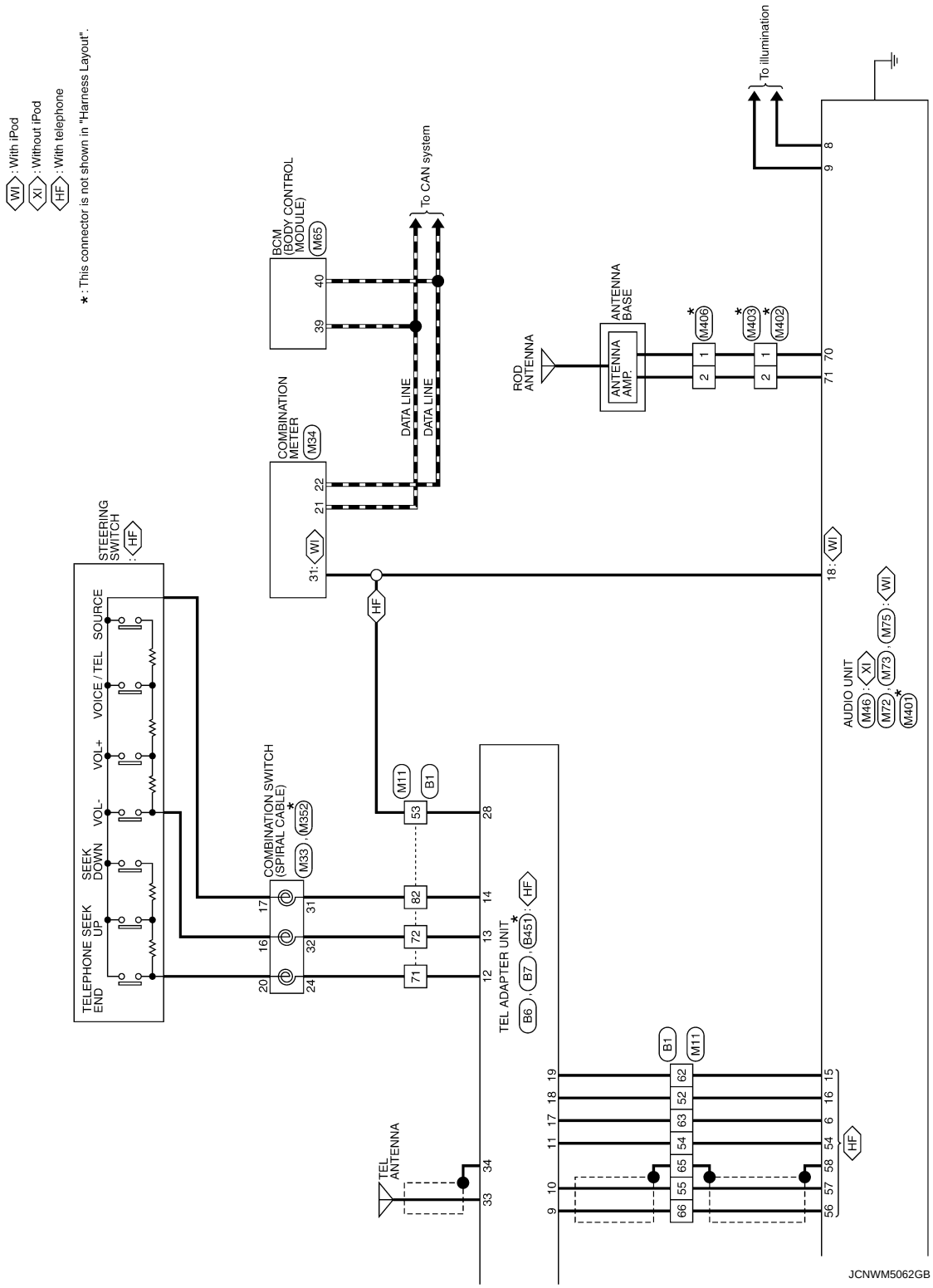
BASE AUDIO

Wiring Diagram

INFOID:0000000006307709




WI : With iPod
XI : Without iPod
HF : With telephone
*: This connector is not shown in "Harness Layout".
MICROPHONE
R3 : HF
R1
M23
TEL ADAPTER UNIT*
B6 , B7 , B451 : HF
B33
IGNITION SWITCH ON or START
10A
1
M11
B1
DATA LINE
DATA LINE
HF
AUDIO UNIT
M46 : XI
M72 , M73 , M75 : WI
M401*
iPod CONNECTOR
M208 : WI
M207
M100
iPod ADAPTER
M93 : WI
JCNWM5061GB


WI : With iPod
XI : Without iPod
HF : With telephone
* : This connector is not shown in "Harness Layout".
To illumination
To CAN system
BCM (BODY CONTROL MODULE) M65
COMBINATION METER M34
DATA LINE
ROD ANTENNA
ANTENNA BASE
ANTENNA AMP.
M406
M403
M402
STEERING SWITCH : HF
TELEPHONE SEEK UP
SEEK DOWN
VOL-
VOL+
VOICE / TEL
SOURCE
END
COMBINATION SWITCH (SPIRAL CABLE) M33 M352
TEL ADAPTER UNIT B6 B7 B451 HF
TEL ANTENNA
AUDIO UNIT XI M46 M72 M73 M75 WI M401
JCNWM5062GB

BASE AUDIO WITHOUT NAVIGATION

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	BR	–
3	G	–
4	L	–
6	BR	–
7	Y	–
8	LG	–
9	BR	–
10	BR	–
21	R	–
35	SHIELD	–
36	R	–
37	LG	–
38	SHIELD	–
39	O	–
40	G	–
41	R	–
45	L	–
46	W	–
47	SHIELD	–
48	V	–
49	W	–
50	SHIELD	–
52	L	–
53	L	– [With display audio]
53	G	– [With base audio or BOSE system]
54	O	–
55	Y	–
56	LG	–
57	SB	–
58	W	–
59	B	–
60	SB	–
62	GR	–
63	W	–
65	SHIELD	–
66	BR	–
67	LG	–
68	SB	–
69	SHIELD	–
70	W	–
71	W	–
72	Y	–
77	L	–
80	R	–
81	W	–
82	GR	–
86	Y	–
87	P	–
91	GR	–
92	R	–
93	W	–
94	G	–
95	O	–
96	Y	–
97	SB	–
98	Y	–
99	V	–
100	L	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

H.S.

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

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

Connector No.	B6
Connector Name	TEL ADAPTER UNIT
Connector Type	TH32FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	BAT
2	SB	ACC
3	W	IGN
4	B	GND
7	B	MICROPHONE SIGNAL (+)
8	SHIELD	MICROPHONE SIGNAL (–)
9	BR	SOUND SIGNAL (+)
10	Y	SOUND SIGNAL (–)
11	O	TEL ON SIGNAL
12	W	STEERING SW SIGNAL A
13	Y	STEERING SW SIGNAL B
14	GR	STEERING SW SIGNAL GND
17	W	STEERING SW SIGNAL A
18	L	STEERING SW SIGNAL B
19	GR	STEERING SW SIGNAL GND
20	B	CONTROL SIGNAL
21	B	CONTROL SIGNAL
22	B	CONTROL SIGNAL
23	B	CONTROL SIGNAL
24	B	CONTROL SIGNAL
27	B	CONTROL SIGNAL
28	L	VEHICLE SPEED SIGNAL (2-PULSE) [With display audio]
28	G	VEHICLE SPEED SIGNAL (2-PULSE) [With base audio or BOSE system]
29	W	MICROPHONE POWER

Terminal No.	Color of Wire	Signal Name [Specification]
35	SB	AV COMMUNICATION SIGNAL (H)
36	LG	AV COMMUNICATION SIGNAL (L)
39	LG	–
40	LG	–
41	SB	–
42	SB	–

Connector No.	B86
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	L	–
6	G	–
8	R	–
9	LG	–
10	Y	–
11	L	–

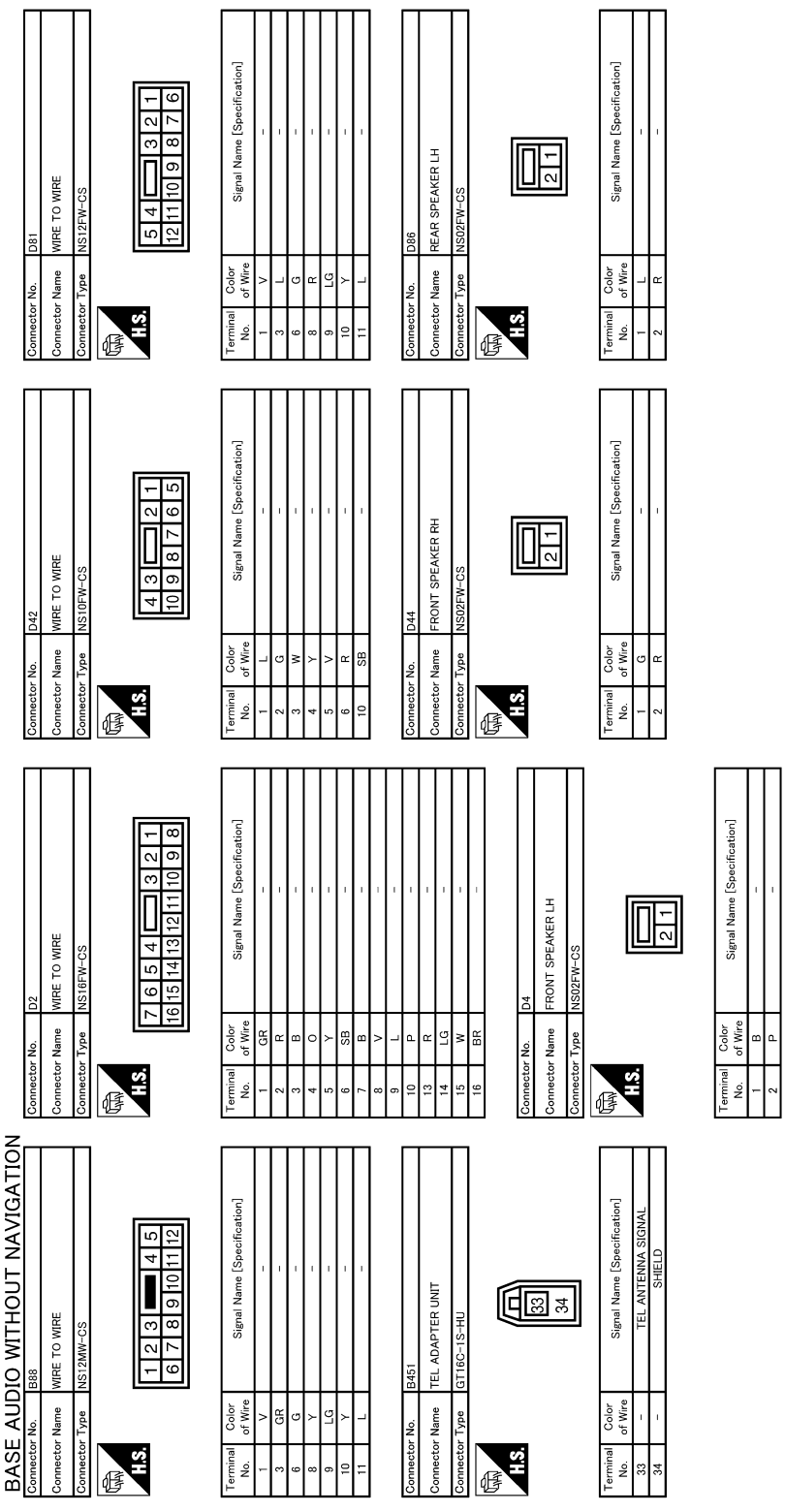
Connector No.	B7
Connector Name	TEL ADAPTER UNIT
Connector Type	TH08FW-NH

H.S.

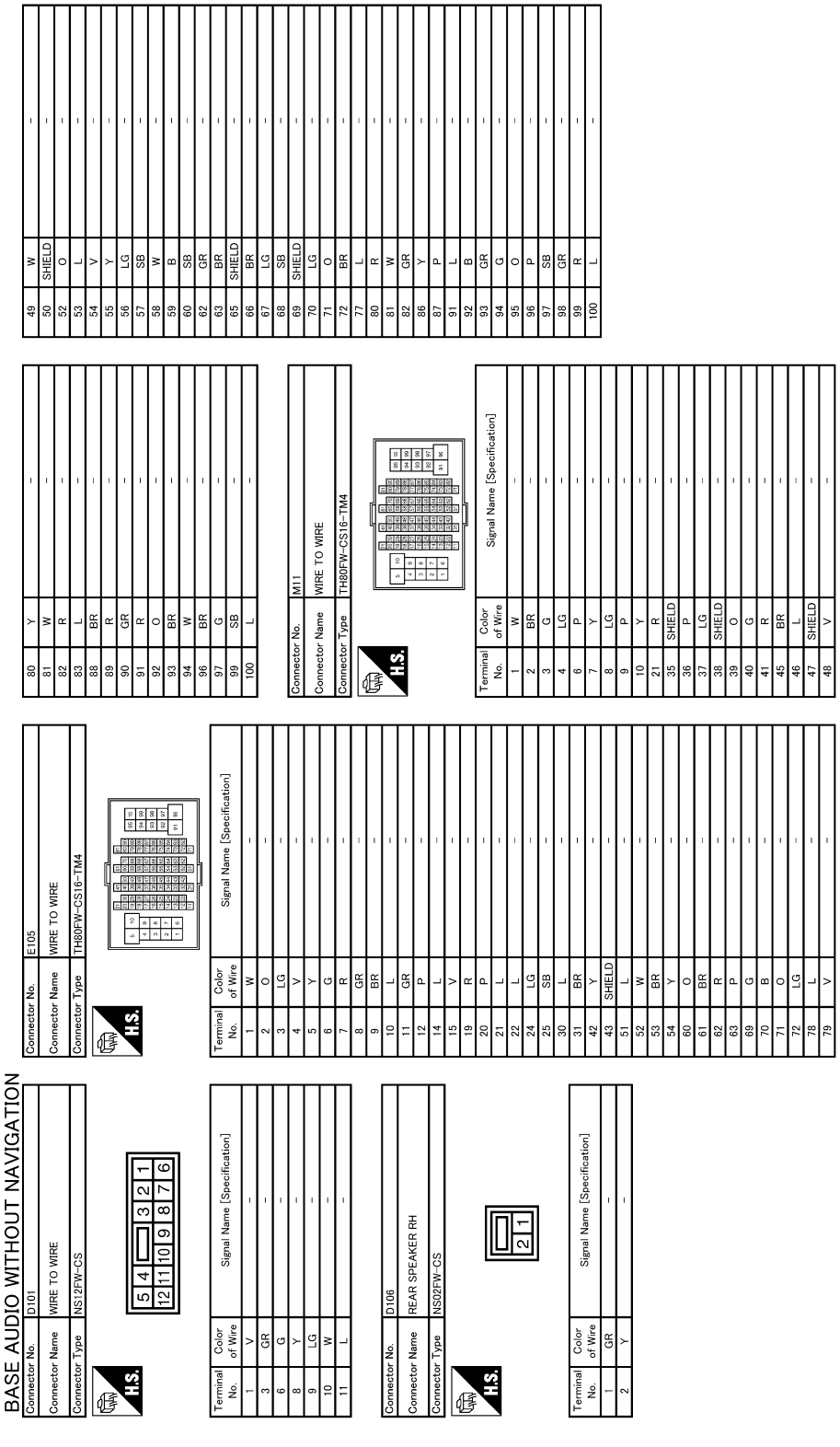
35	37	39	41
36	38	40	42

JCNWM5063GB

BASE AUDIO WITHOUT NAVIGATION



JCNWM5064GB



JCNWM5065GB

BASE AUDIO WITHOUT NAVIGATION

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

H.S.

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

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

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS18MW-CS

H.S.

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

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

9	L	–
10	G	–
13	GR	–
14	LG	–
15	W	–
16	L	–

Connector No.	M22
Connector Name	TWEETER RH
Connector Type	TK02FBR

H.S.

2	1

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

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
3	W	–
5	R	–
7	P	–
8	SHIELD	–
9	B	–
11	Y	–
12	Y	–

Connector No.	M33
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY-1V

H.S.

24	25	26	27
31	32	33	34

Terminal No.	Color of Wire	Signal Name [Specification]
24	BR	–
25	GR	–
26	SB	–
27	G	–
31	GR	–
32	O	–
33	R	–
34	Y	–

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	BATTERY POWER SUPPLY
2	O	IGNITION SIGNAL
3	B	GROUND
4	B	GROUND
5	BR	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
7	GR	OVERDRIVE CONTROL SWITCH SIGNAL
9	L	PADDLE SHIFTER SHIFT UP SIGNAL
10	G	PADDLE SHIFTER SHIFT DOWN SIGNAL
13	Y	ILLUMINATION CONTROL SIGNAL
15	LG	AIR BAG SIGNAL
16	O	ENGINE COOLANT TEMPERATURE SIGNAL
19	BR	AMBIENT SENSOR SIGNAL
20	SB	AMBIENT SENSOR GROUND
21	L	CAN-H
22	P	CAN-L
24	B	FUEL LEVEL SENSOR SIGNAL GROUND
25	SB	ALTERNATOR SIGNAL
26	V	PARKING BRAKE SWITCH SIGNAL
27	BR	BRAKE FLUID LEVEL SWITCH SIGNAL
28	B	SECURITY SIGNAL
29	W	WASHER LEVEL SWITCH SIGNAL
30	Y	VEHICLE SPEED SIGNAL (2-PULSE)
31	L	VEHICLE SPEED SIGNAL (8-PULSE)
34	G	FUEL LEVEL SENSOR SIGNAL
35	O	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
36	G	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)
37	P	NON-MANUAL MODE SIGNAL
38	O	MANUAL MODE SHIFT DOWN SIGNAL
39	V	MANUAL MODE SHIFT UP SIGNAL
40	LG	MANUAL MODE SIGNAL

Connector No.	M46
Connector Name	AUDIO UNIT
Connector Type	TH18FW-CS2

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
2	R	SOUND SIGNAL FRONT SPEAKER LH (+)
3	G	SOUND SIGNAL FRONT SPEAKER LH (-)
4	V	SOUND SIGNAL REAR SPEAKER LH (+)
5	LG	SOUND SIGNAL REAR SPEAKER LH (-)
7	SB	ACC
8	Y	ILLUMINATION CONTROL SIGNAL (-)
9	R	ILLUMINATION CONTROL SIGNAL (+)
11	O	SOUND SIGNAL FRONT SPEAKER RH (+)
12	W	SOUND SIGNAL FRONT SPEAKER RH (-)
13	L	SOUND SIGNAL REAR SPEAKER RH (+)
14	P	SOUND SIGNAL REAR SPEAKER RH (-)
19	Y	BATTERY

JCNWM5066GB

BASE AUDIO WITHOUT NAVIGATION

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	KEY RING OUTPUT
2	G	INPUT 5
3	Y	INPUT 4
4	W	INPUT 3
5	R	INPUT 2
6	P	INPUT 1
7	L	KEY CYC UNLOCK
8	R	KEY CYL LOCK SW
9	R	BRAKE SW
10	SB	RR DEF SW
11	SB	ACC
12	P	DR SW AS
13	LG	DR SW RR
14	G	AUTO LIGHT SENS INPUT
17	W	SENS POWER SUPPLY
18	O	KEYLESS TUNER SENS GND
19	V	KEYLESS TUNER POWER
20	GR	KEYLESS TUNER SIGNAL
21	G	IMMOBI ANT (CLOCK)
23	B	SECURITY IND OUT PUT
25	BR	IMMOBI ANT (RX, TX)
27	Y	AIRCON SW
28	LG	BLOWER FAN SW
29	W	HAZARD SW
30	G	BACK DOOR OPEN SW
32	BR	OUTPUT 5
33	GR	OUTPUT 4
34	L	OUTPUT 3
35	B	OUTPUT 2
36	V	OUTPUT 1
37	LG	KEY SW
38	G	IGN
39	L	CAN-H
40	P	CAN-L

Connector No.	M72
Connector Name	AUDIO UNIT
Connector Type	TH18FW-CS2

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
2	R	SOUND SIGNAL FRONT SPEAKER LH (+)
3	G	SOUND SIGNAL FRONT SPEAKER LH (-)
4	V	SOUND SIGNAL REAR SPEAKER LH (+)
5	LG	SOUND SIGNAL REAR SPEAKER LH (-)
6	BR	STRG SW A
7	SB	ACC
8	Y	ILLUMINATION CONTROL SIGNAL (-)
9	R	ILLUMINATION CONTROL SIGNAL (+)
11	O	SOUND SIGNAL FRONT SPEAKER RH (+)
12	W	SOUND SIGNAL FRONT SPEAKER RH (-)
13	L	SOUND SIGNAL REAR SPEAKER RH (+)
14	P	SOUND SIGNAL REAR SPEAKER RH (-)
15	GR	STRG SW GND
16	O	STRG SW B
18	L	VEHICLE SPEED (8-PULSE)
19	Y	BATTERY

Connector No.	M73
Connector Name	AUDIO UNIT
Connector Type	TH08FW-NH

H.S.

21	22	23	24
25	26	27	28

Terminal No.	Color of Wire	Signal Name [Specification]
21	R	iPod SOUND SIGNAL LH (+)
23	B	iPod SOUND SIGNAL RH (+)
25	W	iPod SOUND SIGNAL LH (-)
27	G	iPod SOUND SIGNAL RH (-)
28	SHIELD	SHIELD

Connector No.	M75
Connector Name	AUDIO UNIT
Connector Type	TH16FW-NH

H.S.

43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58

Terminal No.	Color of Wire	Signal Name [Specification]
47	SB	AV COMM (H)
48	SB	AV COMM (H)
49	LG	AV COMM (L)
54	V	TEL ON
55	LG	AV COMM (L)
56	BR	SOUND SIGNAL (+)
57	Y	SOUND SIGNAL (-)
58	SHIELD	SHIELD

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

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

19	R	–
20	P	–
21	O	–
22	L	–
24	BR	–
25	W	–
30	L	–
31	W	–
42	O	–
43	SHIELD	–
51	W	–
52	SB	–
53	L	–
54	Y	–
60	O	–
61	BR	–
62	G	–
63	P	–
69	W	–
70	B	–
71	P	–
72	O	–
78	SB	–
79	V	–
80	L	–
81	W	–
82	B	–
83	LG	–
88	BR	–
89	G	–
90	GR	–
91	R	–
92	L	–
93	P	–
94	W	–
96	BR	–
97	G	–
99	SB	–
100	Y	–

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BASE AUDIO WITHOUT NAVIGATION

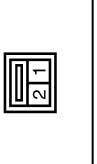
Connector No.	M80
Connector Name	TWEETER LH
Connector Type	TK02FBR

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	– [With BOSE system]
1	B	– [With base audio or display audio]
2	GR	– [With BOSE system]
2	P	– [With base audio or display audio]

Connector No.	M82
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	O	–
3	W	–
4	G	–
5	V	–
6	W	–
10	SB	–

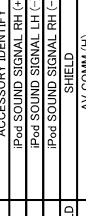
Connector No.	M93
Connector Name	iPod ADAPTER
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	iPod SOUND SIGNAL LH (+)
2	B	iPod SOUND SIGNAL RH (+)
3	SB	ACC
4	LG	AV COMM (L)
5	Y	BATTERY
6	GR	USB D+ SIGNAL
7	V	USB D– SIGNAL
8	G	iPod BATTERY CHARGE 12V
9	R	COMM (iPod ADAPTER↔iPod)
10	L	COMM (iPod↔iPod ADAPTER)
11	BR	ACCESSORY IDENTIFY
12	W	iPod SOUND SIGNAL RH (+)
13	W	iPod SOUND SIGNAL LH (–)
14	G	iPod SOUND SIGNAL RH (–)
15	SHIELD	SHIELD
16	SB	AV COMM (H)
17	B	GND
19	SHIELD	SHIELD
20	P	iPod BATTERY CHARGE 5V
21	Y	iPod CONNECTION RECOGNITION
22	LG	ACCESSORY DETECT
23	B	iPod SOUND SIGNAL GND
24	R	iPod SOUND SIGNAL LH (+)

Connector No.	M100
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH

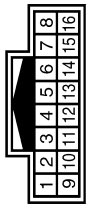
H.S.



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

Connector No.	M207
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH

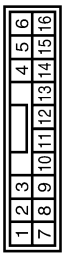
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	iPod SOUND SIGNAL LH (+)
2	B	iPod SOUND SIGNAL GND
3	P	iPod BATTERY CHARGE 5V
5	L	COMM (iPod→iPod ADAPTER)
6	R	COMM (iPod ADAPTER→iPod)
7	W	iPod SOUND SIGNAL RH (+)
9	Y	iPod CONNECTION RECOGNITION
10	B	GND
11	GR	USB D+ SIGNAL
12	G	iPod BATTERY CHARGE 12V
13	V	USB D– SIGNAL
14	SHIELD	SHIELD
15	LG	ACCESSORY DETECT
16	BR	ACCESSORY IDENTIFY

Connector No.	M208
Connector Name	iPod CONNECTOR
Connector Type	IP16FGY

H.S.



Connector No.	M352
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–
21	–	–

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BASE AUDIO WITHOUT NAVIGATION

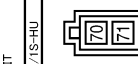
Connector No.	M401
Connector Name	AUDIO UNIT
Connector Type	GT13SH-2/1S-HU

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
70	–	ANTENNA AMP. ON SIGNAL
71	–	ANTENNA SIGNAL

Connector No.	M402
Connector Name	WIRE TO WIRE
Connector Type	GT13SC-1/1S-HU

H.S.



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

Connector No.	M403
Connector Name	WIRE TO WIRE
Connector Type	GT13SCN-1/1PP-HU

H.S.

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

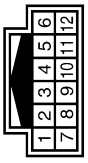
Connector No.	M406
Connector Name	ANTENNA BASE
Connector Type	GT13SSN-1/1PP-HU

H.S.

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

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	B/Y	–
2	SHIELD	–
3	W	–
5	GR	–
7	B/R	–
8	SHIELD	–
9	B	–
11	Y	–
12	O	–

Connector No.	R3
Connector Name	MICROPHONE
Connector Type	TK04FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	MICROPHONE SIGNAL (+)
2	R	MICROPHONE SIGNAL (–)
4	W	MICROPHONE POWER

JCNWM5069GB

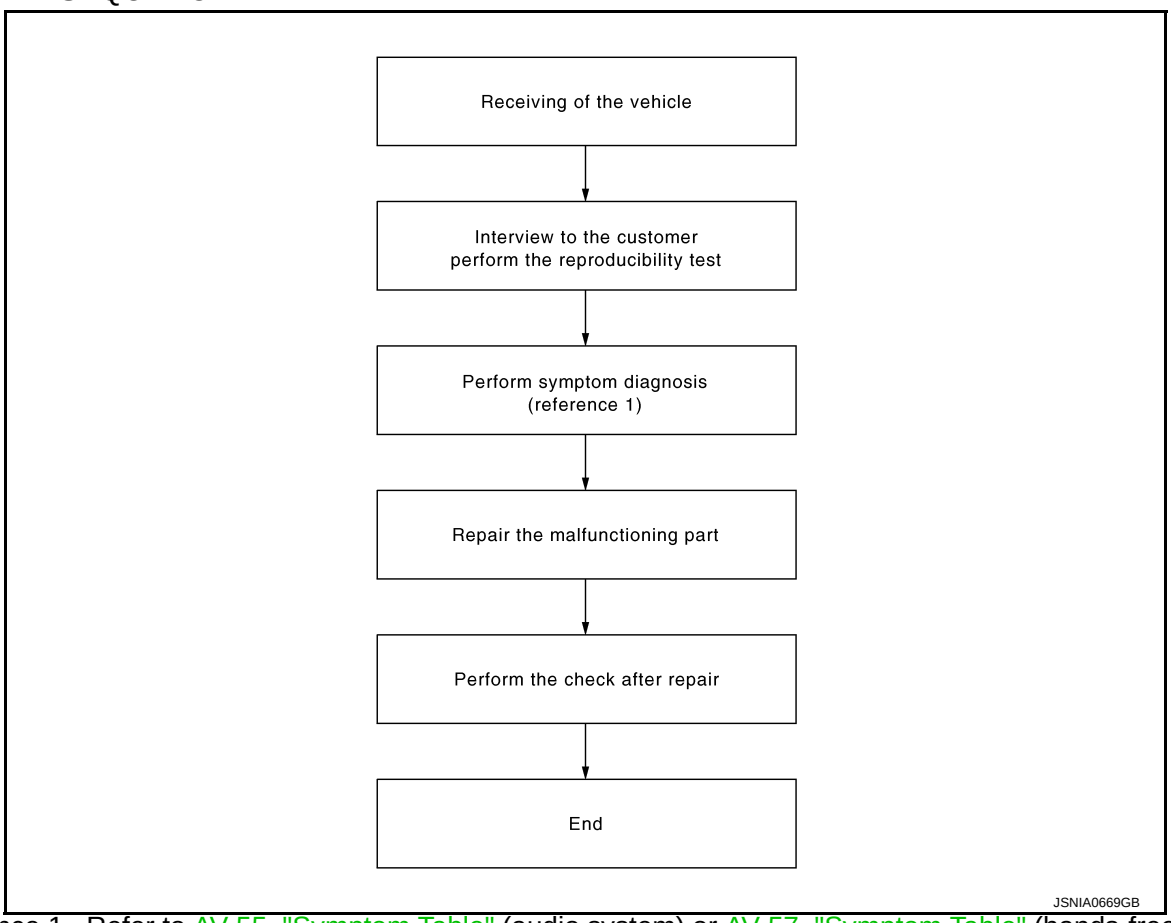
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000006398144

OVERALL SEQUENCE



Reference 1···Refer to AV-55, "Symptom Table" (audio system) or AV-57, "Symptom Table" (hands-free phone system).

DETAILED FLOW

1.CHECK SYMPTOM

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

>> GO TO 2.

2.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-55, "Symptom Table" (audio system) or AV-57, "Symptom Table" (hands-free phone system).

>> GO TO 3.

3.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

>> GO TO 4.

4.FINAL CHECK

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

Is there any symptom?

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

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:0000000006201426

1.CHECK FUSE

Check that the following fuses of the audio unit are not blown.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is inspection result OK?

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

2.CHECK AUDIO UNIT POWER SUPPLY CIRCUIT

Check voltage between the audio unit and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	M46*1	19	OFF	Battery voltage
	M72*2			
ACC power supply	M46*1	7	ACC	Battery voltage
	M72*2			

*1: Without iPod® connection function
*2: With iPod® connection function

Is inspection result OK?

YES >> INSPECTION END
NO >> Check harness between audio unit and fuse.

TEL ADAPTER UNIT

TEL ADAPTER UNIT : Diagnosis Procedure

INFOID:0000000006382984

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B6	1	OFF	Battery voltage
ACC power supply		2	ACC	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B6	4	OFF	Existed

Is the inspection result normal?

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

iPod ADAPTER

iPod ADAPTER : Diagnosis Procedure

INFOID:0000000006382985

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between iPod adapter harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	M93	5	OFF	Battery voltage
ACC power supply		3	ACC	

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check harness between iPod adapter and fuse.

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000006509373

TEL adapter unit supplies power to microphone. The microphone transmits the sound voice to the TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006509374

1.CHECK CONTINUITY BETWEEN TEL ADAPTER UNIT AND MICROPHONE CIRCUIT

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

TEL adapter unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
B6	7	R3	1	Existed
	8		2	
	29		4	

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	7		Not existed
	29		

Is inspection result OK?

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

2.CHECK VOLTAGE MICROPHONE VCC

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

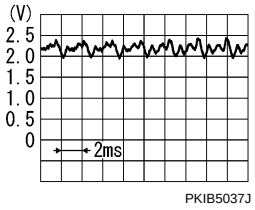
(+)		(–)	Voltage (Approx.)
TEL adapter unit			
Connector	Terminal		
B6	29	Ground	5.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".

3.CHECK MICROPHONE SIGNAL

1. Turn ignition switch OFF.
2. Connect microphone connector.
3. Turn ignition switch ON.
4. Check signal between TEL adapter unit harness connector.

TEL adapter unit				Condition	Reference value
(+)		(–)			
Connector	Terminal	Connector	Terminal		
B6	7	B6	8	Give a voice.	

PKIB5037J

Is inspection result OK?

YES >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".
NO >> Replace microphone. Refer to AV-68, "Exploded View".

CONTROL SIGNAL CIRCUIT

Description

INFOID:0000000006376345

TEL adapter unit identifies the vehicle model according to the control signal and performs the control.

Diagnosis Procedure

INFOID:0000000006376346

1.CHECK CONTINUITY CONTROL SIGNAL CIRCUIT

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

TEL adapter unit			Continuity
Connector	Terminals		
B6	20	Ground	Existed
	21		
	27		

Is the inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".
NO >> Repair harness or connector.

STEERING SWITCH SIGNAL A CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)

Description

INFOID:0000000006415625

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006511183

1.CHECK STEERING SWITCH SIGNAL A (STEERING SWITCH TO TEL ADAPTER UNIT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TEL adapter unit connector and spiral cable connector.
3. Check continuity between TEL adapter unit harness connector and spiral cable harness connector.

TEL adapter unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
B6	12	M33	24	Existed

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	12		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK TEL ADAPTER UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
TEL adapter unit				
Connector	Terminal	Connector	Terminal	
B6	12	B6	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-47, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-71, "Exploded View".

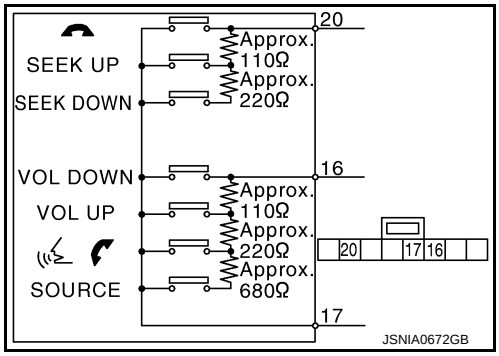
Component Inspection

INFOID:0000000006415641

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH SIGNAL B CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)

Description

INFOID:0000000006415626

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006569330

1.CHECK STEERING SWITCH SIGNAL B (STEERING SWITCH TO TEL ADAPTER UNIT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TEL adapter unit connector and spiral cable connector.
3. Check continuity between TEL adapter unit harness connector and spiral cable harness connector.

TEL adapter unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
B6	13	M33	32	Existed

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	13		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK TEL ADAPTER UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
TEL adapter unit				
Connector	Terminal	Connector	Terminal	
B6	13	B6	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-49, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-71, "Exploded View".

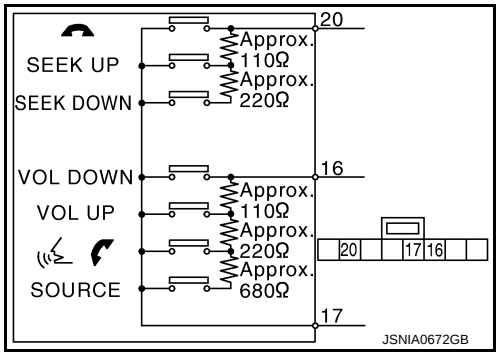
Component Inspection

INFOID:0000000006415643

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH SIGNAL GND CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)

Description

INFOID:0000000006415627

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006511189

1.CHECK STEERING SWITCH SIGNAL GROUND CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)

1. Turn ignition switch OFF.
2. Disconnect TEL adapter unit connector and spiral cable connector.
3. Check continuity between TEL adapter unit harness connector and spiral cable harness connector.

TEL adapter unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
B6	14	M33	31	Existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK GROUND CIRCUIT

1. Connect TEL adapter unit connector.
2. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	14		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".

4.CHECK STEERING SWITCH

Check steering switch. Refer to AV-50, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-71, "Exploded View"

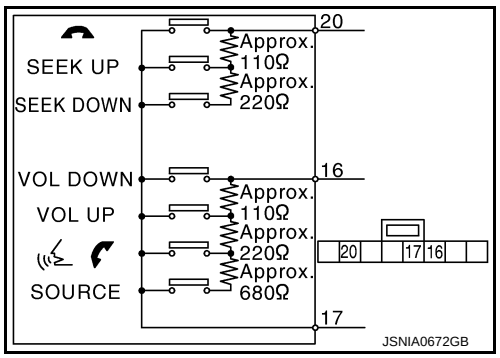
Component Inspection

INFOID:0000000006415644

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH SIGNAL A CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

Description

INFOID:0000000006415628

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006376357

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

1. Turn ignition switch OFF.
2. Disconnect audio unit connector and TEL adapter unit connector.
3. Check continuity between audio unit harness connector and TEL adapter unit harness connector.

Audio unit		TEL adapter unit		Continuity
Connector	Terminal	Connector	Terminal	
M72	6	B6	17	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M72	6		Not existed

Is inspection result normal?

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

2.CHECK AUDIO UNIT VOLTAGE

1. Connect audio unit connector and TEL adapter unit connector.
2. Turn ignition switch ON.
3. Check voltage between audio unit harness connector terminals.

(+)		(–)		Voltage (Approx.)
Audio unit				
Connector	Terminal	Connector	Terminal	
M72	6	M72	15	3.3 V

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".
NO >> Replace audio unit. Refer to AV-61, "Removal and Installation".

STEERING SWITCH SIGNAL B CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

Description

INFOID:0000000006415629

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006376359

1. CHECK STEERING SWITCH SIGNAL B CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

1. Turn ignition switch OFF.
2. Disconnect audio unit connector and TEL adapter unit connector.
3. Check continuity between audio unit harness connector and TEL adapter unit harness connector.

Audio unit		TEL adapter unit		Continuity
Connector	Terminal	Connector	Terminal	
M72	16	B6	18	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M72	16		Not existed

Is inspection result normal?

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

2. CHECK AUDIO UNIT VOLTAGE

1. Connect audio unit connector and TEL adapter unit connector.
2. Turn ignition switch ON.
3. Check voltage between audio unit harness connector terminals.

(+)		(–)		Voltage (Approx.)
Audio unit				
Connector	Terminal	Connector	Terminal	
M72	16	M72	15	3.3 V

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".
NO >> Replace audio unit. Refer to AV-61, "Removal and Installation".

STEERING SWITCH SIGNAL GND CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

Description

INFOID:0000000006415630

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006376361

1.CHECK STEERING SWITCH SIGNAL GROUND CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

1. Turn ignition switch OFF.
2. Disconnect audio unit connector and TEL adapter unit connector.
3. Check continuity between audio unit harness connector and TEL adapter unit harness connector.

Audio unit		TEL adapter unit		Continuity
Connector	Terminal	Connector	Terminal	
M72	15	B6	19	Existed

Is inspection result normal?

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

2.CHECK GROUND CIRCUIT

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

Audio unit		Ground	Continuity
Connector	Terminal		
M72	15		Existed

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-66, "Exploded View".
NO >> Replace audio unit. Refer to AV-61, "Removal and Installation".

SYMPTOM DIAGNOSIS

AUDIO SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000006376362

AUDIO SYSTEM

Symptoms	Check items	Possible malfunction location / Action to take
Audio sound is not heard.	No sound from all speakers.	Audio unit power supply and ground circuit. Refer to AV-41, "AUDIO UNIT : Diagnosis Procedure".
	Sound is not heard only from the specific places.	Sound signal circuit of malfunctioning system.
AM/FM radio is not received.	Other audio sounds are normal.	• Antenna amp. ON signal circuit. • Antenna base • Antenna feeder

RELATED TO iPod®

Trouble Diagnosis Chart by Symptom

Connect another iPod® and check if the symptom is reproduced or not. If the symptom is reproduced, diagnose the vehicle. If no malfunction is detected, replace the iPod harness.

NOTE:

- It is unable to read a connection between iPod® and iPod harness.
- Charging of iPod® with no 5 V charging circuit is not supported. (e.g. iPod 1G mechanical scroll wheel, iPod Classic 2G touch-sensitive wheel, and iPod Classic 3G 4 touch button)

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
There is no sound from the iPod®.	Other audio sounds are normal.	• iPod sound signal circuit between audio unit and iPod adapter. • iPod sound signal circuit between iPod® and iPod adapter.
“iPod No connect” is displayed when “iPod” switch is pressed.	• iPod battery charging is normal. • iPod software and hardware version are displayed when performing audio unit self-diagnosis.	Communication circuit between iPod® and iPod adapter.
	• iPod battery charging is normal. • iPod software and hardware version are not displayed when performing audio unit self-diagnosis.	AV communication circuit between audio unit and iPod adapter.
	iPod battery charge does not work.	iPod adapter power supply and ground circuit. Refer to AV-42, "iPod ADAPTER : Diagnosis Procedure".
iPod® cannot charge the battery.	Not chargeable even when connecting other iPod®. Refer to NOTE.	iPod battery charge 5 V circuit between iPod® and iPod adapter.

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

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. (steering switch to TEL adapter unit) Refer to AV-50, "Diagnosis Procedure".
“SOURCE”, “SEEK UP”, “VOL UP”, “SEEK DOWN” and “VOL DOWN” switches are not operated.	Steering switch signal ground circuit. (TEL adapter unit to audio unit) Refer to AV-54, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch. Refer to AV-71, "Exploded View".

Symptoms	Possible malfunction location / Action to take
“”, “SEEK UP” and “SEEK DOWN” switches are not operated.	Steering switch signal A circuit. (steering switch to TEL adapter unit) Refer to AV-46, "Diagnosis Procedure".
“SEEK UP” and “SEEK DOWN” switches are not operated.	Steering switch signal A circuit. (TEL adapter unit to audio unit) Refer to AV-52, "Diagnosis Procedure".
“”, “SOURCE”, “VOL UP” and “VOL DOWN” switches are not operated.	Steering switch signal B circuit. (steering switch to TEL adapter unit) Refer to AV-48, "Diagnosis Procedure".
“SOURCE”, “VOL UP” and “VOL DOWN” switches are not operated.	Steering switch signal B circuit. (TEL adapter unit to audio unit) Refer to AV-53, "Diagnosis Procedure".

HANDS-FREE PHONE SYMPTOMS

Symptom Table

INFOID:0000000006404208

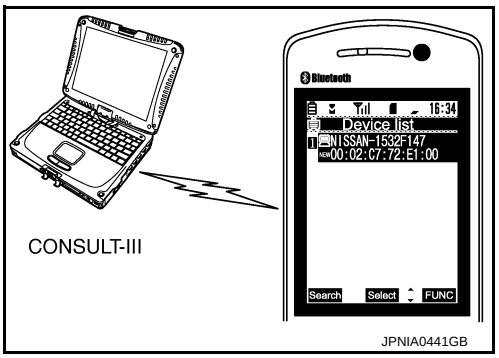
RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is corresponding type (Bluetooth™ enabled) when the hands-free related malfunction vehicle is in service before performing a diagnosis.
- There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or cellular phone. Check to ensure the customer's phone is supported by checking the phone compatibility for the hands-free system.

Simple Check for Bluetooth™ Communication

If cellular phone and TEL adapter unit cannot be connected with Bluetooth™ communication, following procedure allows the technician to judge which device has malfunction.

1. Turn on a cellular phone, not connecting Bluetooth™ communication.
2. Start CONSULT-III, then start Windows®.
3. Set CONSULT-III near a cellular phone.
4. When operated Bluetooth™ registration by cellular phone, check if CONSULT-III* would be displayed on the device name.
   (If other Bluetooth™device is located near cellular phone, a name of the device would be displayed also.)
   NOTE:
   *:Displayed device name is “NISSAN-********”.



- If no device name is displayed, cellular phone is malfunction. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Possible malfunction location/Action to take
Does not recognize cellular phone connection.	Repeat the registration of cellular phone.	TEL adapter unit
Hands-free phone cannot be established.	• Both the reception and the speech cannot be performed. • Audio can be operated by steering switch.	• TEL adapter unit power supply and ground circuit. Refer to AV-41, "TEL ADAPTER UNIT : Diagnosis Procedure". • Control signal circuit. Refer to AV-45, "Diagnosis Procedure". • AV communication circuit between audio unit and TEL adapter unit.
	• Both the reception and the speech cannot be performed. • Audio can be operated by steering switch.	TEL ON signal circuit.
The other party's voice cannot be heard by hands-free phone.	Audio system sound is normal.	Sound signal (TEL voice, TEL guidance) circuit
	Audio system sound does not sound.	Refer to AV-55, "Symptom Table".
Originating sound is not heard by the other party with hands-free phone communication.	Voice recognition function is normal.	TEL adapter unit
	Voice recognition function does not work.	Microphone signal circuit. Refer to AV-43, "Diagnosis Procedure".

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. (steering switch to TEL adapter unit) Refer to AV-50, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch.
“ ”, “SOURCE”, “SEEK UP” and “SEEK DOWN” switches are not operated.	Steering switch signal A circuit. (steering switch to TEL adapter unit) Refer to AV-46, "Diagnosis Procedure".
“”, “VOL UP” and “VOL DOWN” switches are not operated.	Steering switch signal B circuit. (steering switch to TEL adapter unit) Refer to AV-48, "Diagnosis Procedure".

NORMAL OPERATING CONDITION

Description

INFOID:0000000006404211

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 that noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment. Then determine the cause.

NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA) or could be incorrectly mastered by the customer on a computer.
- Check that 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.

Symptoms	Cause and Counter measure
Cannot play	Check that the disc was inserted correctly.
	Check that the disc is scratched or dirty.
	Check if there is condensation inside the player. If there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the CD player will play correctly after it returns to the normal temperature.
	Files with extensions other than ".MP3", ".WMA", ".mp3", or ".wma" 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 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 disc is protected by copyright.
Poor sound quality	Check if the disc is scratched or dirty.
	Bit rate may be too low.
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA 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, etc., might not match the specifications. Try using the slowest writing speed.
Skipping with high bit rate files	Skipping may occur with large quantities of data, such as for high bit rate data.
Move immediately to the next song when playing.	When a non-MP3/WMA file has been given an extension of ".MP3", ".WMA", ".mp3" or ".wma", or when play is prohibited by copyright protection, there will be approximately 5 seconds of no sound and then 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 writing software. Therefore, the files might not play in the desired order.

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

NOTE:

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from a time difference between the broadcast waves directly from the station arriving at the antenna and the waves reflected by mountains or buildings.

RELATED TO TELEPHONE

Symptoms	Cause and Counter measure
System fails to interpret the command correctly.	1. Ensure that the command format is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at a 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. Refer to AV-19, "Diagnosis Description".
The system consistently selects the wrong entry from the phone book.	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.

REMOVAL AND INSTALLATION

AUDIO UNIT

Removal and Installation

INFOID:0000000006404221

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove audio unit mounting screws.
3. Pull out audio unit, remove harness clip, and then disconnect antenna feeder and harness connectors.
4. Remove audio unit and bracket as a unit.
5. Remove brackets from audio unit.

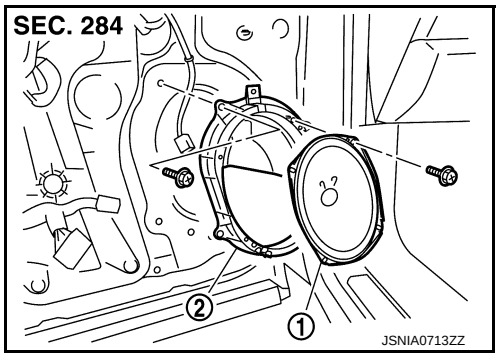
INSTALLATION

Install in the reverse order of removal.

FRONT SPEAKER

Exploded View

INFOID:0000000006401049



1. Front speaker
2. Bracket

Removal and Installation

INFOID:0000000006401050

REMOVAL

1. Remove front door finisher. Refer to INT-13, "FRONT DOOR FINISHER : Exploded View".
2. Remove front door speaker from bracket.

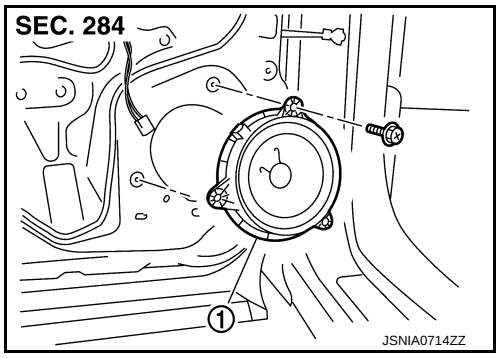
INSTALLATION

Install in the reverse order of removal.

REAR SPEAKER

Exploded View

INFOID:0000000006401051



1. Rear speaker

Removal and Installation

INFOID:0000000006401052

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "REAR DOOR FINISHER : Exploded View".
2. Remove rear speaker.

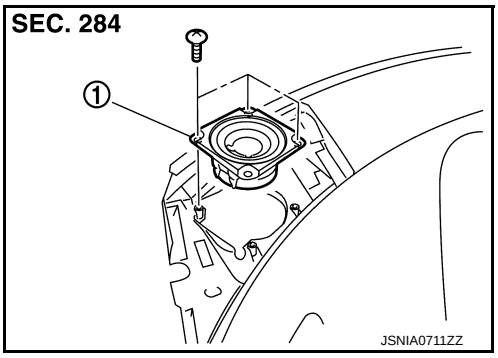
INSTALLATION

Install in the reverse order of removal.

TWEETER

Exploded View

INFOID:0000000006502490



1. Tweeter

Removal and Installation

INFOID:0000000006502491

REMOVAL

1. Remove instrument panel. Refer to IP-13, "Exploded View".
2. Remove tweeter from instrument panel.

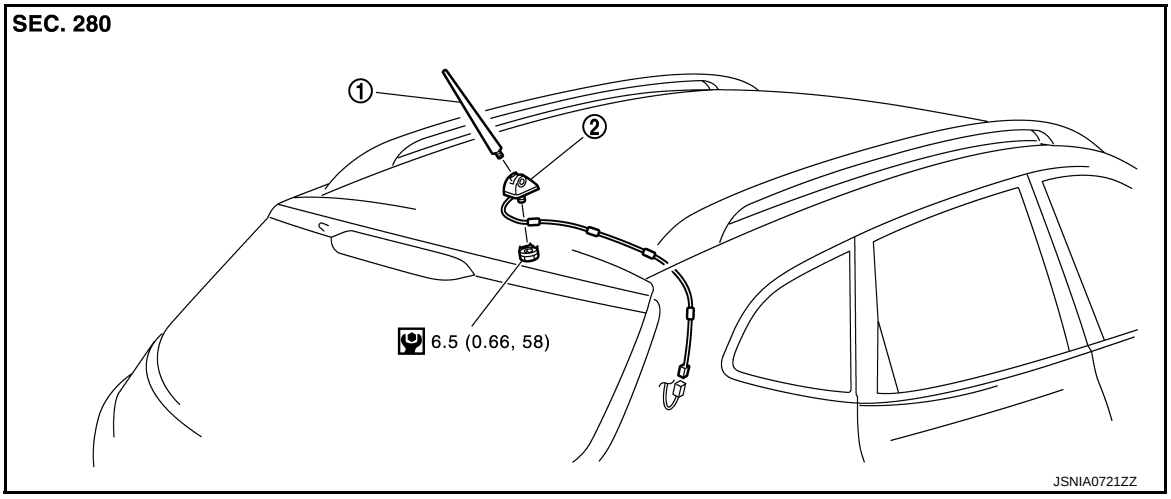
INSTALLATION

Install in the reverse order of removal.

RADIO ANTENNA

Exploded View

INFOID:0000000006401079



1. Antenna rod
2. Antenna base

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000006401080

REMOVAL

1. Remove headlining assembly. Refer to INT-25, "NORMAL ROOF : Exploded View" (normal roof models) or INT-28, "SUNROOF : Exploded View" (sunroof models).
2. Remove nuts, and then remove antenna base.

INSTALLATION

Install in the reverse order of removal.

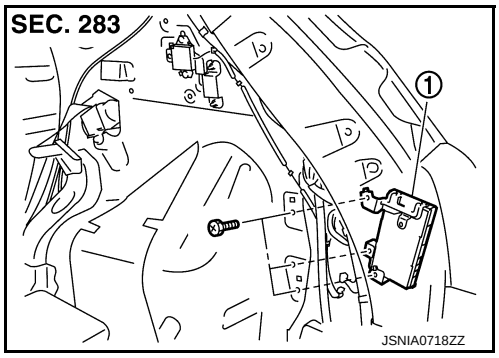
CAUTION:

If the antenna base mounting nut is tightened looser than the specified torque, then this will lower the sensitivity of the antenna. On the other hand, if the nut is tightened tighter than the specified torque, then this will deform the roof panel.

TEL ADAPTER UNIT

Exploded View

INFOID:0000000006401081



1. TEL adapter unit

Removal and Installation

INFOID:0000000006401082

REMOVAL

1. Remove luggage side lower finisher (RH). Refer to INT-32, "Exploded View".
2. Remove TEL adapter unit.

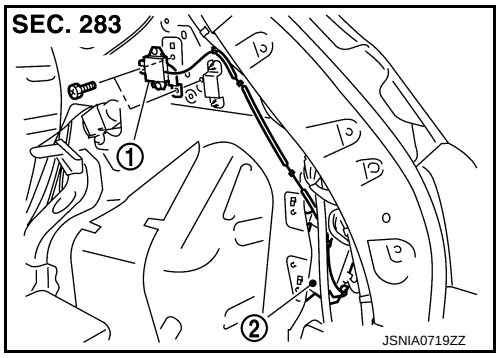
INSTALLATION

Install in the reverse order of removal.

TEL ANTENNA

Exploded View

INFOID:0000000006401083



1. TEL antenna
2. TEL adapter unit

Removal and Installation

INFOID:0000000006401084

REMOVAL

1. Remove luggage side upper finisher (RH). Refer to INT-32, "Exploded View".
2. Remove TEL antenna.

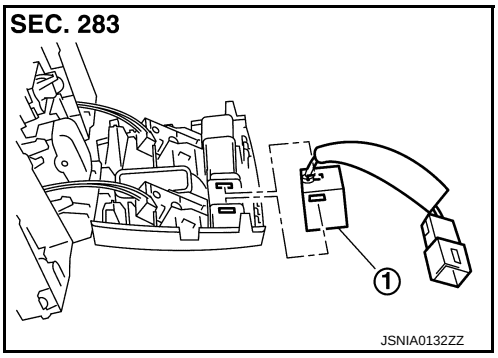
INSTALLATION

Install in the reverse order of removal.

MICROPHONE

Exploded View

INFOID:0000000006401085



1. Microphone

Removal and Installation

INFOID:0000000006401086

REMOVAL

1. Remove map lamp assembly. Refer to INT-25, "NORMAL ROOF : Exploded View" (normal roof models) or INT-28, "SUNROOF : Exploded View" (sunroof models).
2. Remove microphone from map lamp assembly.

INSTALLATION

Install in the reverse order of removal.

IPOD ADAPTER

Removal and Installation

INFOID:0000000006404224

REMOVAL

1. Remove glove box assembly. Refer to IP-13, "Exploded View".
2. Remove iPod adapter connector and screw.
3. Remove iPod adapter and bracket from the vehicle as a single unit.
4. Remove bracket screw to remove iPod adapter.

INSTALLATION

Install in the reverse order of removal.

IPOD CONNECTOR

Removal and Installation

INFOID:0000000006404227

REMOVAL

1. Remove center console assembly. Refer to IP-22, "Exploded View".
2. Push the pawl from the back of center console assembly to remove iPod connector.

INSTALLATION

Install in the reverse order of removal.

STEERING SWITCH

Exploded View

INFOID:0000000006570532

Refer to SR-36, "Exploded View" (for Mexico) or SR-11, "Exploded View" (except for Mexico).

Removal and Installation

INFOID:0000000006570533

REMOVAL

Refer to SR-36, "Removal and Installation" (for Mexico) or SR-11, "Removal and Installation" (except for Mexico).

INSTALLATION

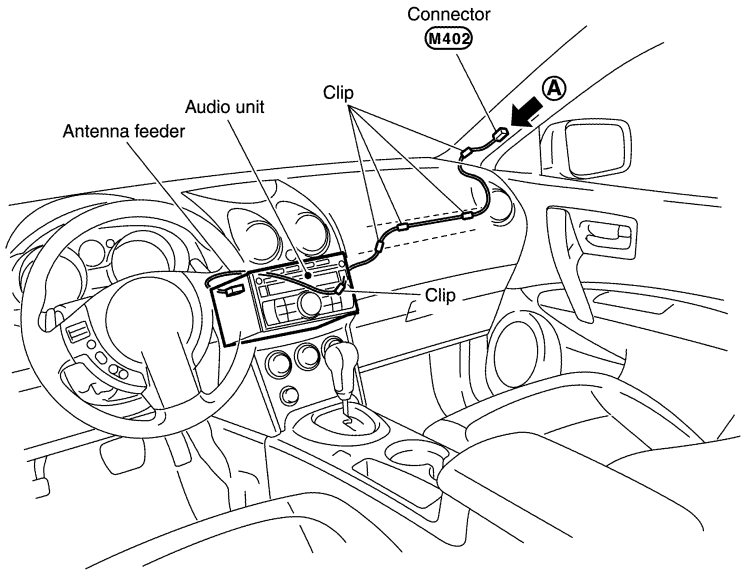
Install in the reverse order of removal.

ANTENNA FEEDER

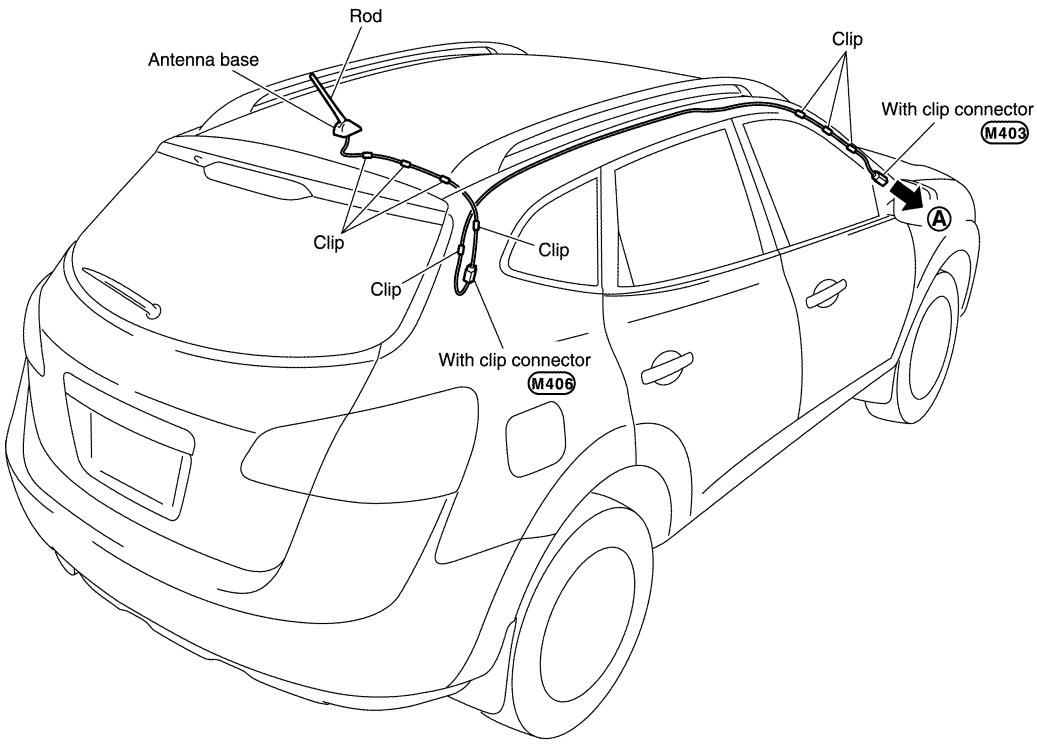
Feeder Layout

INFOID:0000000006415654

SEC. 280



Instrument panel driver side



Rear view of vehicle

JSNIA3490GB

PRECAUTION

PRECAUTIONS

FOR MEXICO

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

INFOID:0000000006307686

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. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “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:

- **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.**

EXCEPT FOR MEXICO

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

INFOID:0000000006276254

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

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “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:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with**

a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precaution for Trouble Diagnosis

INFOID:0000000006307669

AV COMMUNICATION SYSTEM

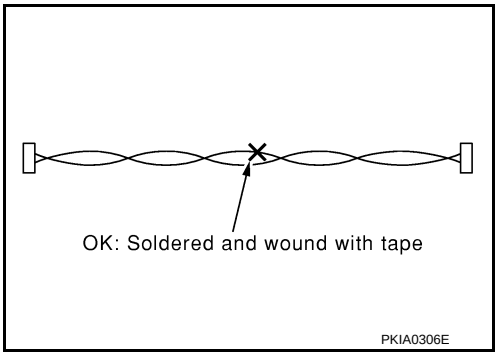
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

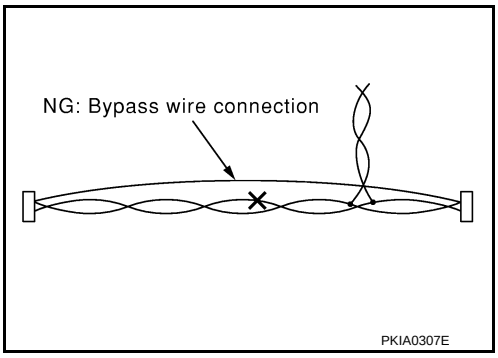
INFOID:0000000006307670

AV COMMUNICATION SYSTEM

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



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

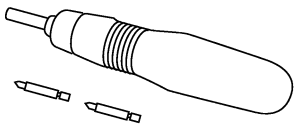


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000006307676

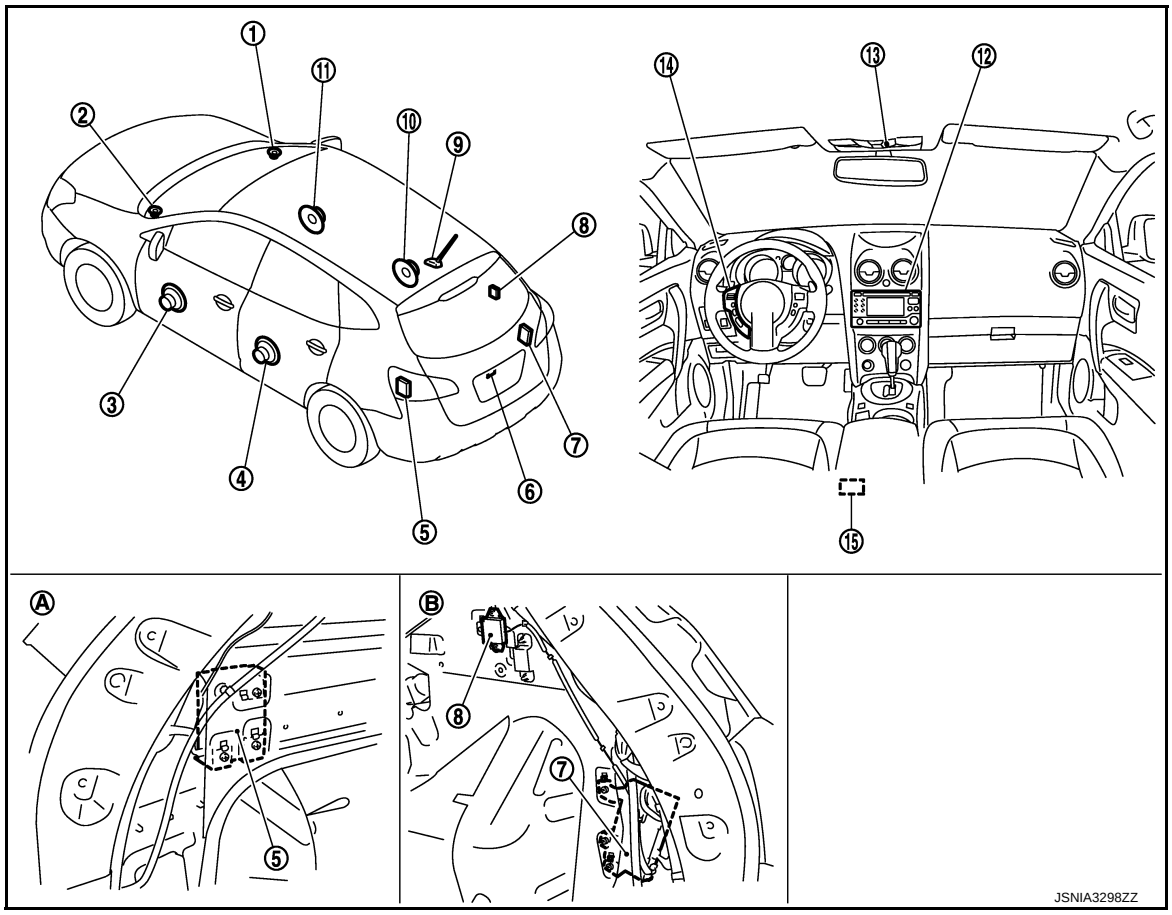
Tool name	Description
Power tool  PBIC0191E	Loosening screws

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000006276205



1. Tweeter RH
2. Tweeter LH
3. Front speaker LH
4. Rear speaker LH
5. Satellite radio tuner
6. Rear view camera
7. TEL adapter unit
8. TEL antenna
9. Antenna base (antenna amp. and-satellite antenna)
10. Rear speaker RH
11. Front speaker RH
12. Audio unit
13. Microphone
14. Steering switch
15. USB connector

A. Luggage side LH
B. Luggage side RH

Component Description

INFOID:0000000006276206

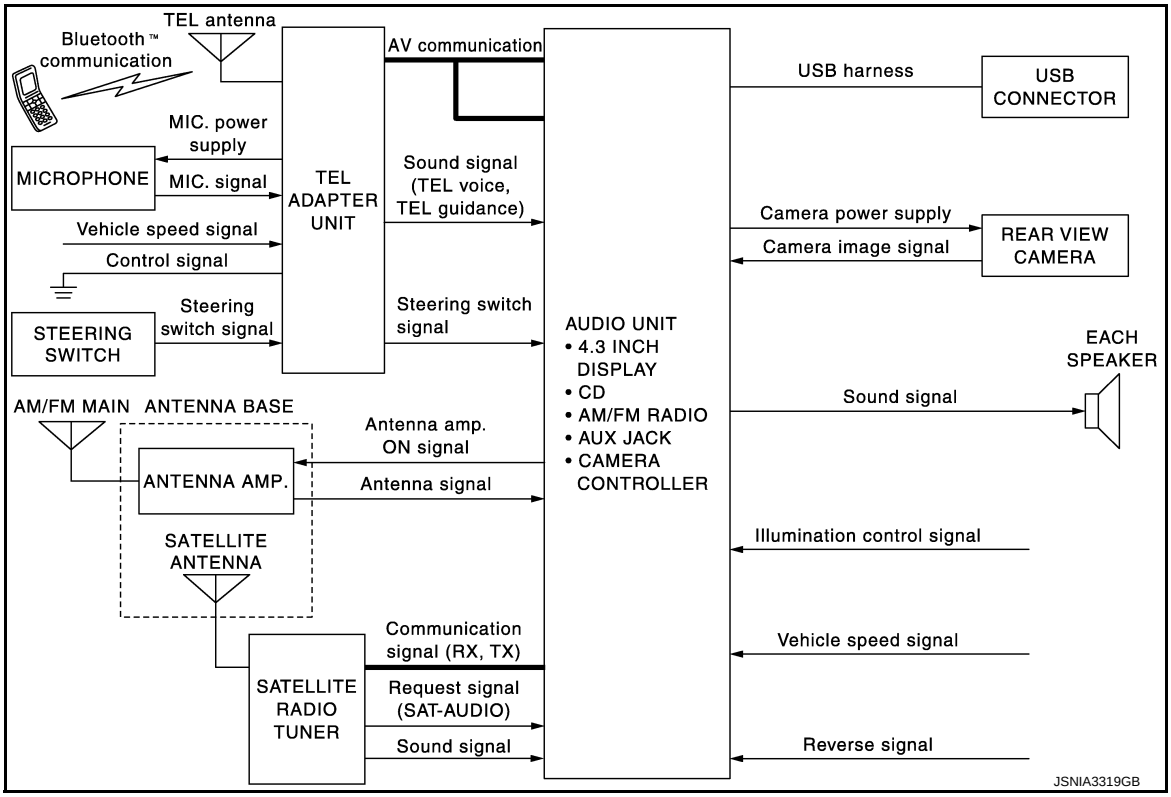
Part name	Description
Audio unit	• Controls audio, hands-free phone, USB connection, AUX connection, satellite radio and rear view monitor functions. • Display unit is built in to audio unit.
Front speaker	• Outputs sound signal from audio unit. • Outputs high, mid and low range sounds.
Tweeter	• Outputs sound signal from audio unit. • Outputs high range sounds.
Rear speaker	• Outputs sound signal from audio unit. • Outputs high, mid and low range sounds.

Part name	Description
Steering switch	• Operation for audio and hands-free phone are possible. • Steering switch signal (operation signal) is output to TEL adapter unit. • Steering switch signal (operation signal) is output to audio unit via TEL adapter unit.
Antenna base	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted. ANTENNA AMP. • Radio signal received by rod antenna is amplified and transmitted to audio unit. • Power (antenna amp. ON signal) is supplied from audio unit. SATELLITE RADIO ANTENNA • Receives satellite radio waves and outputs it to audio unit.
Satellite radio tuner	• Receives radio signals from satellite radio antenna (satellite radio antenna is built into antenna base). • Sends sound signals to audio unit.
TEL adapter unit	• Inputs the steering switch signal (operation signal) from the steering switch. • Outputs the steering switch signal (operation signal) to audio unit. • Inputs the TEL voice signal from TEL antenna during reception and outputs it to the audio unit. • Inputs the TEL voice signal from microphone during speech recognition and outputs it to the TEL antenna. • Audio unit and TEL adapter unit exchange data by AV communication.
TEL antenna	Receives the TEL voice signal and outputs it to the TEL adapter unit.
Microphone	• Used for hands-free phone operation. • Microphone signal is transmitted to TEL adapter unit. • Power (microphone VCC) is supplied from TEL adapter unit.
USB connector	Sound signal of USB input is transmitted to audio unit.
Rear view camera	• Camera power supply is input from AV control unit. • The image of vehicle rear view is transmitted to AV control unit.

SYSTEM

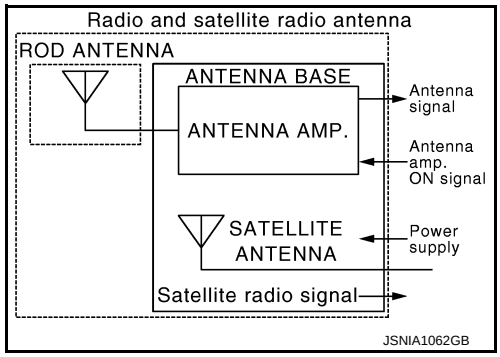
System Diagram

INFOID:0000000006276203



NOTE:

An antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.



System Description

INFOID:0000000006276204

DISPLAY AUDIO SYSTEM

Display audio system is equipped with the following functions (display unit is built in to audio unit).

FUNCTION NAME
Audio function
Hands-free phone function
Rear view monitor function

Operating Signal

Display audio system operation can be performed with audio switch and steering switch.

AUDIO FUNCTION

Audio functions

FUNCTION
AM/FM radio
Satellite radio
CD
Auxiliary input
USB connection
Speed sensitive volume

AM/FM Radio
- AM/FM radio tuner is built into audio unit.
- Radio signals are received by rod antenna, next they are amplified by antenna amp., and finally the they are input to audio unit. (Antenna amp. is built into antenna base.)
- Audio unit outputs the sound signal to each speaker.

Satellite Radio
- Radio signals are supplied to satellite radio tuner from the satellite radio antenna. (satellite radio antenna is built into antenna base.)
- The satellite radio tuner sends sound signal to the audio unit.
- Audio unit outputs the sound signal to each speaker.

CD
- CD function is built into audio unit.
- Audio unit outputs sound signal to each speaker when CD is inserted to audio unit.

Auxiliary input
- When the external device is connected to the auxiliary (AUX) input jack of the audio unit, the external device inputs a sound signal to the audio unit.
- When AUX mode is selected, audio unit outputs sound signal to each speaker.

USB Connection
- iPod® or music files in USB memory can be played.
- iPod® sound signals are transmitted from USB connector to each speaker via audio unit.
- iPod® is recharged when connected to USB connector.

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

NOTE:

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

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

HANDS-FREE PHONE FUNCTION

- The connection between cellular phone and TEL adapter unit is performed with Bluetooth™ communication.
- The voice guidance signal is input from the TEL adapter unit to the audio unit and output to the front speaker when operating the telephone.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-87, "Diagnosis Description".

When Receiving A Call

TEL voice signal received with the cellular phone is input from TEL antenna via TEL adapter unit to audio unit with Bluetooth™ communication and output to the front speaker. The operation is performed with the steering switch or voice recognition function.

When A Call Is Originated

Speech sound (TEL voice signal) is input from the microphone to the TEL adapter unit. It is input from the TEL antenna via Bluetooth™ communication to the cellular phone. It is transmitted to the phone on the other side. The operation is performed with the steering switch or voice recognition function.

REAR VIEW MONITOR FUNCTION

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

- The audio unit combines a warning message and fixed guide lines with an image received from the rear view camera to display a rear view camera image on the screen.

DIAGNOSIS SYSTEM (AUDIO UNIT)

Description

INFOID:0000000006404232

The audio unit diagnosis function starts up with audio switch operation and the audio unit performs a diagnosis for each unit in the system during the on board diagnosis.

On Board Diagnosis Function

INFOID:0000000006404116

ON BOARD DIAGNOSIS

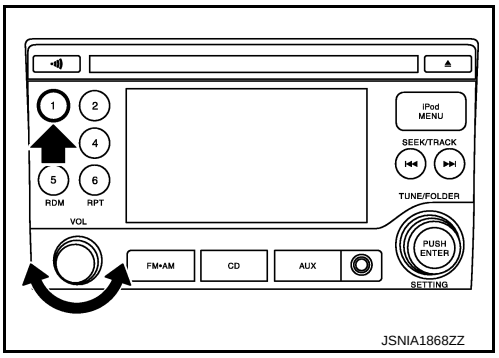
- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- Self-diagnosis mode performs the audio unit diagnosis, and it indicates the results to the display.
- The confirmation/adjustment mode allows the technician to check, modify or adjust the vehicle signals and set values, as well as to monitor the system error records. 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		Audio unit diagnosis.
Confirmation/ Adjustment	Display Diagnosis	The following check functions are available: color tone check by color bar display, light and shade check by gray scale display.
	Vehicle Signals	Diagnosis of signals can be performed for vehicle speed, lights, reverse and vehicle recognition.
	Speaker Test	The connection of a speaker can be confirmed by test tone.
	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.
	Camera System	Guiding line position that overlaps rear view camera image can be adjusted.
	AV COMM Diagnosis	The communication condition of each unit of display audio system can be monitored.
	Delete Unit Connection Log	Not used for this vehicle.
	Initialize Setting	Initializes the audio unit memory.

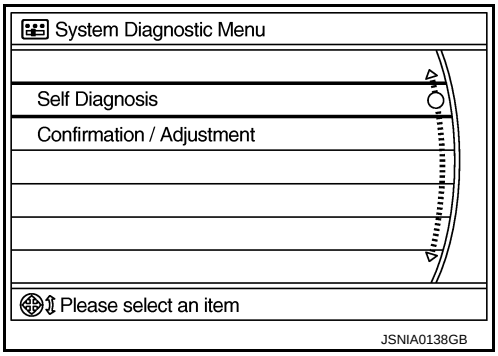
STARTING PROCEDURE

1. Start the engine.
2. Turn the audio system OFF.
3. While pressing the “1” button, turn the volume control dial clockwise or counterclockwise for 40 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)



4. Shifting from current screen to system initial screen is performed by pressing “iPod MENU” button.

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

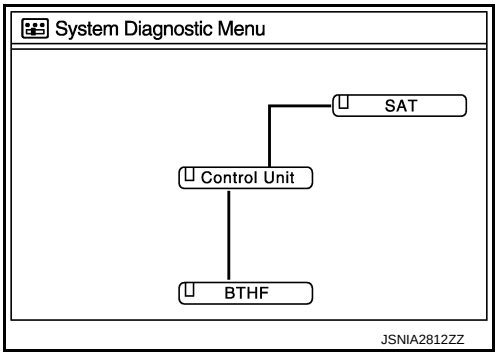


SELF-DIAGNOSIS MODE

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

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

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

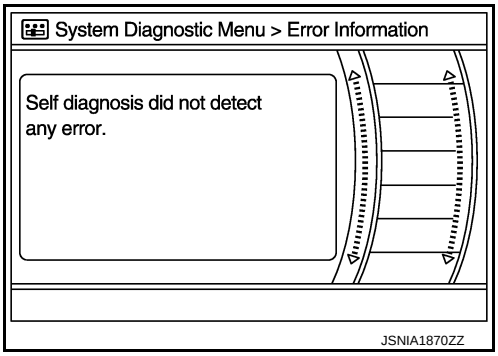


Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction Note	Red	Green

NOTE:
Control unit (audio unit) and is displayed in red.

- Replace audio unit if “Self-Diagnosis did not run because of a control unit malfunction” is indicated. The symptom is audio unit internal error. Refer to AV-139, "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 audio unit and each unit and the internal operation of the audio unit.
- If there is malfunction to the switch of the audio unit because the start condition of the diagnosis function is switch operation, the on board diagnosis function cannot be started.

SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

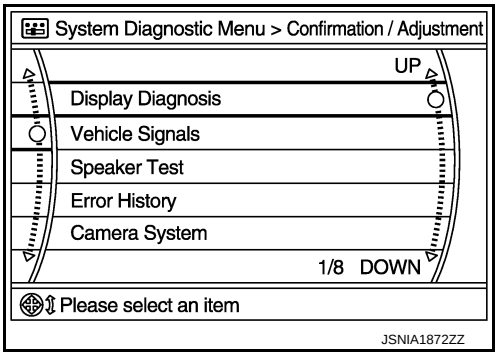
Screen switch	Description	Possible malfunction location / Action to take
Control unit	Malfunction is detected in audio unit power supply and ground circuits.	Check audio unit power supply and ground circuits. When detecting no malfunction in those components, replace audio unit. Refer to AV-139, "Removal and Installation".

A Connecting Cable Between Units Is Displayed In Yellow.

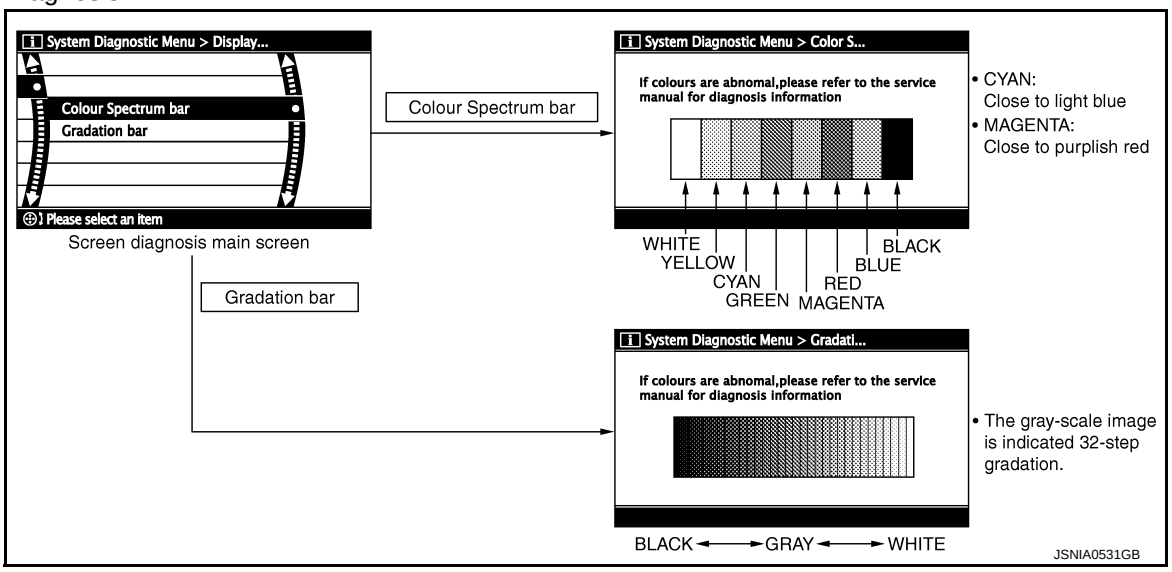
Area with yellow connection lines	Description	Possible malfunction location / Action to take
Control unit ⇔ SAT	When either one of the following items is detected: • satellite radio tuner power supply and ground circuits are malfunctioning. • serial communication circuits between audio unit and satellite radio tuner are malfunctioning. • request signal circuit between audio unit and satellite radio tuner are malfunctioning.	• Satellite radio tuner power supply and ground circuit. • Serial communication circuit between audio unit and satellite radio tuner. • Request signal circuit between audio unit and satellite radio tuner.
Control unit ⇔ BTHF	When either one of the following items is detected: • TEL adapter unit power supply and ground circuits are malfunctioning. • AV communication circuits between audio unit and TEL adapter unit are malfunctioning.	• TEL adapter unit power supply and ground circuits. • AV communication circuits between audio unit and TEL adapter unit.

CONFIRMATION/ADJUSTMENT MODE

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

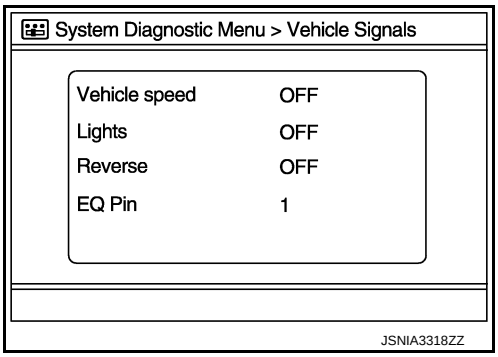


Display Diagnosis



Vehicle Signals

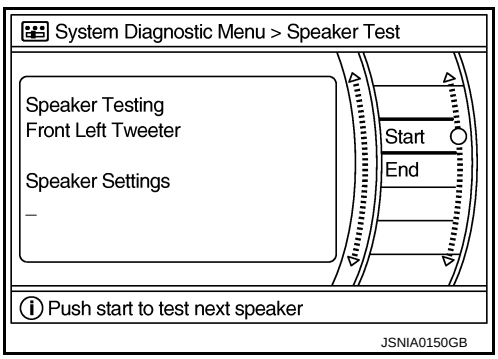
A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



Diagnosis item	Display	Vehicle status	Remarks
Vehicle speed	ON	Vehicle speed > 0 km/h (0 MPH)	Changes in indication may be delayed. This is normal.
	OFF	Vehicle speed = 0 km/h (0 MPH)	
Lights	ON	Lighting switch is ON	—
	OFF	Lighting switch is OFF	
Reverse	ON	Shift position is in “R”	Changes in indication may be delayed. This is normal.
	OFF	Shift position is in other than “R”	
EQ Pin	1	—	Status of EQ profile selection signal. “1” is displayed for this vehicle.

Speaker Test

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



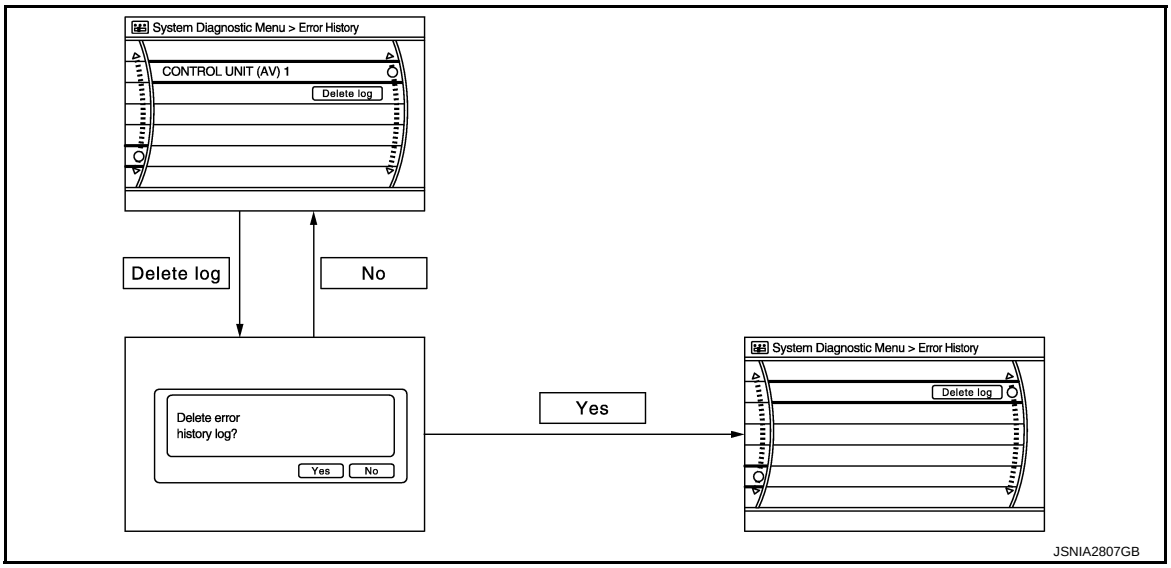
Error History

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

Count up method A
- The counter is set to 40 if an error occurs. 1 is subtracted from the counter if the condition is normal at a next ignition ON cycle.
- The counter lower limit is 1. The counter can be reset (no error record display) with the “Delete log” switch.

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

Display type of occurrence frequency	Error history display item
Count up method A	AV communication line, CONTROL UNIT (AV)
Count up method B	CAN Controller Memory Error



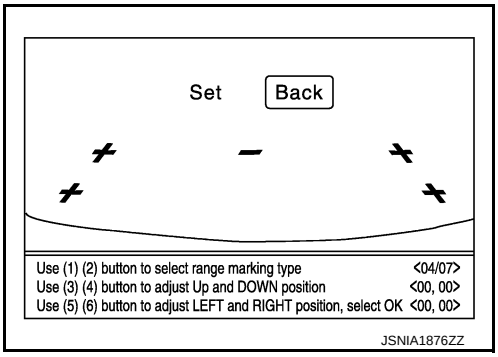
Error item
Some error items may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items

Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace the audio unit. Refer to AV-139, "Removal and Installation"
CAN Controller Memory Error	AV control unit malfunction is detected.	

Error item	Description	Possible malfunction factor/Action to take
SAT Connection Error	When either one of the following items is detected: • satellite radio tuner power supply and ground circuits are malfunctioning. • serial communication circuits between audio unit and satellite radio tuner are malfunctioning. • request signal circuit between audio unit and satellite radio tuner are malfunctioning.	• Satellite radio tuner power supply and ground circuit. • Communication circuit between audio unit and satellite radio tuner. • Request signal circuit between audio unit and satellite radio tuner.
• AV COMM CIRCUIT • H/F Unit Connection Error	When either one of the following items is detected: • TEL adapter unit power supply and ground circuits are malfunctioning. • AV communication circuits between audio unit and TEL adapter unit are malfunctioning.	• TEL adapter unit power supply and ground circuits. • AV communication circuits between audio unit control unit and TEL adapter unit.

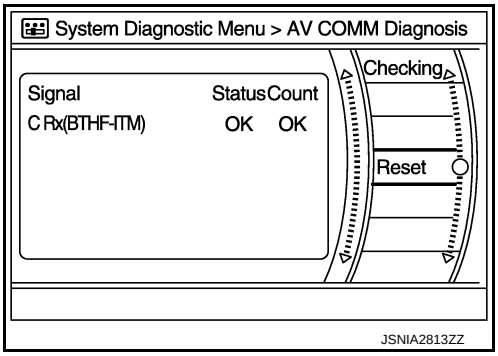
Camera System

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



AV COMM Diagnosis

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

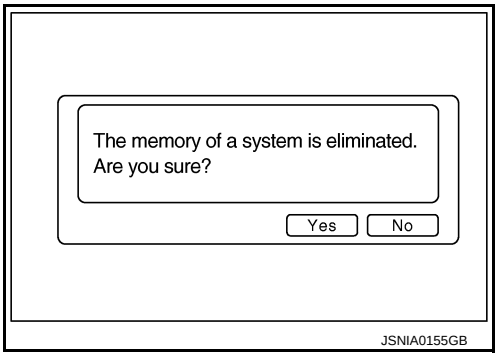


Items	Status (Current)	Counter (Past)
C Rx(BTHF-ITM)	OK / ???	OK / 0 – 39

NOTE:
“???” indicates UNKWN.

Initialize Settings

Deletes data stored from the audio unit.



DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

Description

INFOID:0000000006397653

During on board diagnosis the diagnosis function of TEL adapter unit starts with the operation of the steering switch and performs the diagnosis when ignition switch ACC.

Diagnosis Description

INFOID:0000000006397654

ON BOARD DIAGNOSIS ITEM

The on board diagnosis has 3 modes: the self-diagnosis mode that performs the trouble diagnosis, the speaker adaptation data deleting mode and the hands-free phone system initialization mode.

CAUTION:

- **Perform the diagnosis with the vehicle stopped.**
- **Perform STEP2 if necessary.**

STEP	MODE	Description
STEP1	Self-diagnosis	The self-diagnosis mode performs the microphone test and the diagnosis of TEL adapter unit, TEL antenna and steering unit, and then reads out the results with the sound and indicates them on the display.
STEP2	Speaker adaptation data deleting	The speaker adaptation data deleting mode can delete the speaker adaptation data.
	Hands-free phone system initialization	Hands-free phone system initialization mode can perform the initialization of hands-free phone system.

Self-diagnosis results

Self-diagnosis mode reads out the self-diagnosis results.

NOTE:

- Error count is read out simultaneously when reading out the DTC name.
- The errors are read out continuously when some errors occur at the same time.

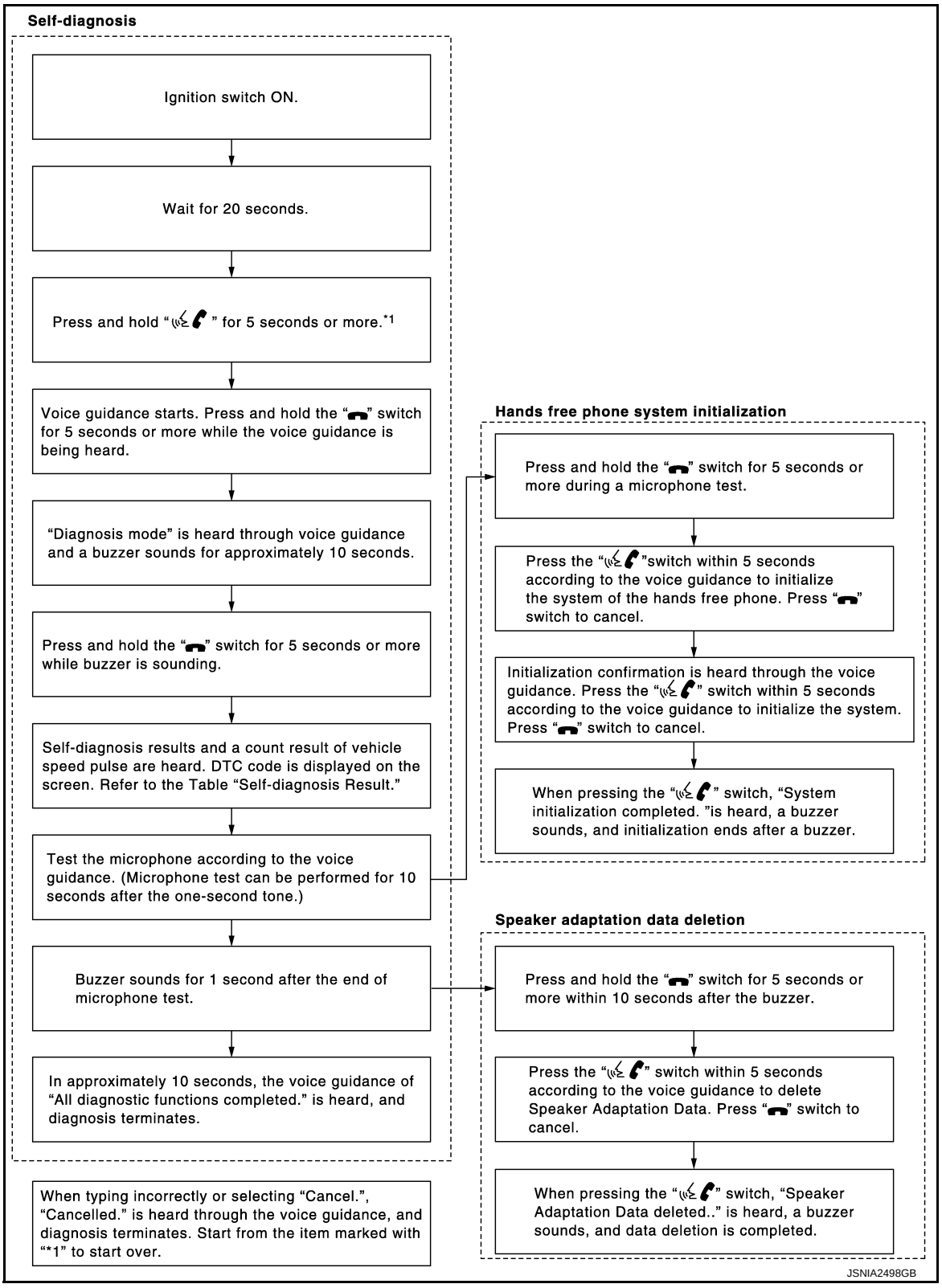
Self-diagnosis results

DTC	DTC name	Possible causes
DTC 10000	INTERNAL FAILURE	TEL adapter unit
DTC 01000	ANT. SHORT TO BATT OR OPEN	TEL antenna
DTC 00100	ANT. SHORT TO GROUND	
DTC 00010	STEERING REMOTE BUTTON STUCK A	Steering switch
DTC 00001	STEERING REMOTE BUTTON STUCK B	
DTC 00000	THERE ARE NO FAILURE RECORDS TO REPORT	—

The Details of Error Count

The error count guides “0” when the error occurs. The next time it counts up “1” if it is normal with the ignition switch ON. It continues the count up unless the initialization of hands-free phone system is performed.

FLOW CHART OF TROUBLE DIAGNOSIS



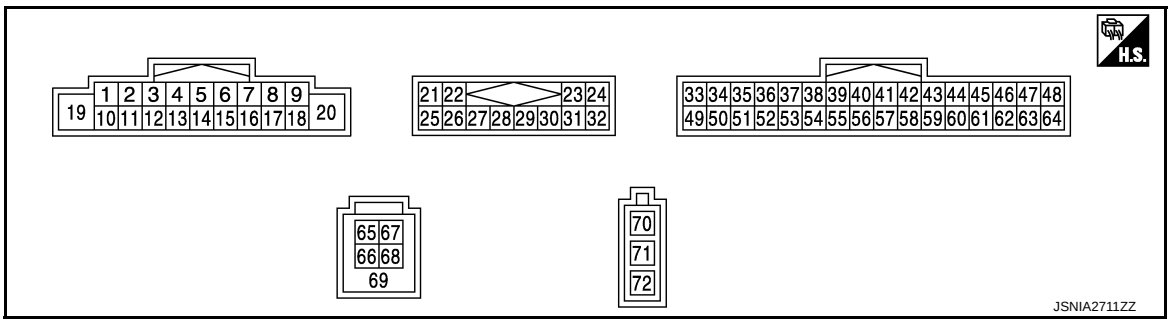
ECU DIAGNOSIS INFORMATION

AUDIO UNIT

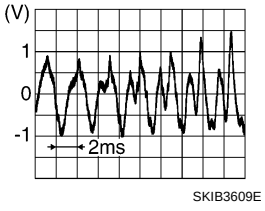
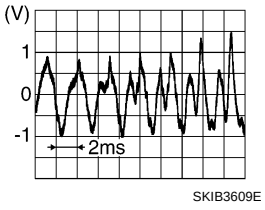
Reference Value

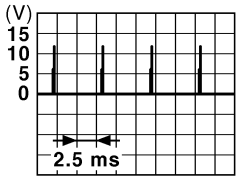
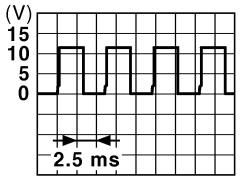
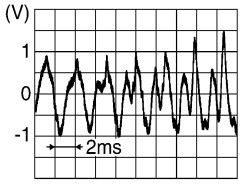
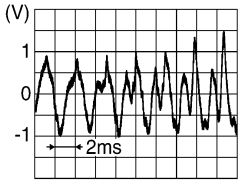
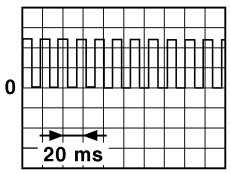
INFOID:0000000006276245

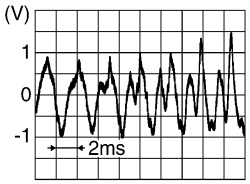
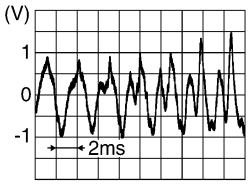
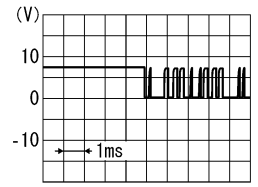
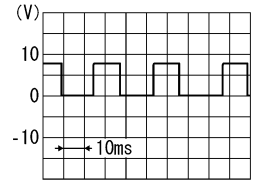
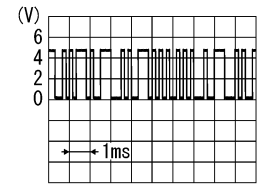
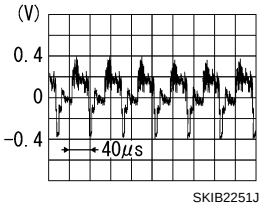
TERMINAL LAYOUT

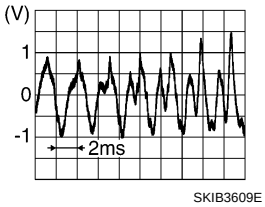


PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
2 (R)	3 (G)	Sound signal front speaker LH	Output	Ignition switch ON	Sound output.	
4 (V)	5 (LG)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output.	
6 (BR)	15 (GR)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch.	0 V
					Keep pressing SEEK UP switch.	0.9 V
					Keep pressing VOL UP switch.	1.9 V
					Except for above.	3.3 V
7 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (R)	8 (Y)	Illumination control signal	Input	Ignition switch OFF	• Lighting switch 1ST. • When meter illumination is maximum.	 JPNIA1687GB
					• Lighting switch 1ST. • When meter illumination is step 11.	 JPNIA1686GB
					• Lighting switch 1ST. • When meter illumination is minimum.	12.0 V
11 (O)	12 (W)	Sound signal front speaker RH	Output	Ignition switch ON	Sound output.	 SKIB3609E
13 (L)	14 (P)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output.	 SKIB3609E
16 (O)	15 (GR)	Steering switch signal B	Input	Ignition switch ON	Keep pressing SEEK DOWN switch.	0.9 V
					Keep pressing VOL DOWN switch.	1.9 V
					Except for above.	3.3 V
18 (L)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH).	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
20 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
21 (L)	25 (R)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected.	 SKIB3609E
22 (W)	26 (G)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected.	 SKIB3609E
23 (L)	Ground	Communication signal (AUDIO TO SAT)	Output	Ignition switch ON	When satellite radio mode is selected.	 SKIA9301J
27	—	Shield	—	—	—	—
28	—	Shield	—	—	—	—
30 (Y)	Ground	Request signal (SAT TO AUDIO)	Input	Ignition switch ON	When satellite radio mode is selected.	 SKIA9299J
31 (B)	Ground	Communication signal (SAT TO AUDIO)	Input	Ignition switch ON	When satellite radio mode is selected.	 PKIB5039J
33	—	Shield	—	—	—	—
34 (W)	Ground	Camera image signal	Input	Ignition switch ON	At camera image is displayed.	 SKIB2251J

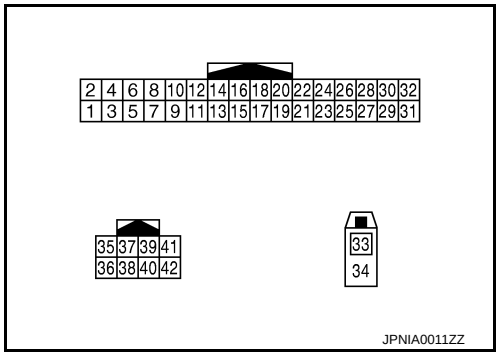
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
35 (R)	Ground	Camera power supply	Output	Ignition switch ON	At camera image is displayed.	6.0 V
					Except for above.	0 V
36 (B)	Ground	Camera ground	—	Ignition switch ON	—	0 V
37 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
38 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
40 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
41 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
42 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
43	—	Shield	—	—	—	—
44 (BR)	45 (Y)	Sound signal (TEL voice, voice guidance)	Input	Ignition switch ON	During voice guide output with the switch pressed.	 SKIB3609E
51 (G)	Ground	Reverse signal	Input	Ignition switch ON	Shift position is in R.	12.0 V
					Shift position is in other than R.	0 V
53 (B)	Ground	EQ4	—	Ignition switch ON	—	0 V
65 (G)	—	USB ground	—	—	—	—
66 (R)	—	USB D– signal	—	—	—	—
67 (W)	—	V BUS signal	—	—	—	—
68 (L)	—	USB D+ signal	—	—	—	—
69	—	Shield	—	—	—	—
70	Ground	Antenna amp. ON signal	Output	Ignition switch ON	—	12.0 V
71	—	Antenna signal	Input	—	—	—

TEL ADAPTER UNIT

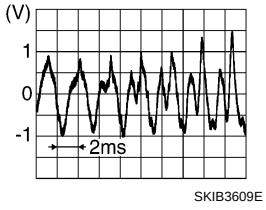
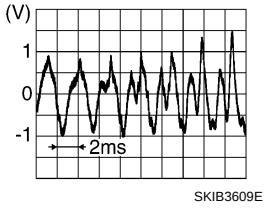
Reference Value

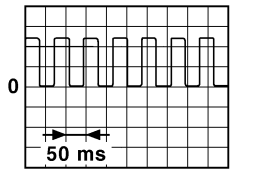
INFOID:0000000006376337

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (BR)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
3 (W)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
7 (B)	8	Microphone signal	Input	Ignition switch ON	Give a voice.	
9 (BR)	10 (Y)	Sound signal (TEL voice, voice guidance)	Output	Ignition switch ON	During voice guide output with the switch pressed.	
12 (W)	14 (GR)	Steering switch signal A	Input	Ignition switch ON	Keep pressing switch.	0 V
					Keep pressing SEEK UP switch.	1.2 V
					Keep pressing SEEK DOWN switch.	2.5 V
					Except for above.	5.0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
13 (Y)	14 (GR)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch.	0 V
					Keep pressing VOL UP switch.	1.2 V
					Keep pressing switch.	2.5 V
					Keep pressing SOURCE switch.	3.7 V
					Except for above.	5.0 V
17 (W)	19 (GR)	Steering switch signal A	Output	Ignition switch ON	Keep pressing SOURCE switch.	0 V
					Keep pressing SEEK UP switch.	0.9 V
					Keep pressing SEEK DOWN switch.	1.9 V
					Except for above.	3.3 V
18 (L)	19 (GR)	Steering switch signal B	Output	Ignition switch ON	Keep pressing VOL DOWN switch.	0.9 V
					Keep pressing VOL UP switch.	1.9 V
					Except for above.	3.3 V
21 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
22 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
23 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
24 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
28 (L)	Ground	Vehicle speed signal (2-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).  JSNIA0015GB
29 (R)	Ground	Microphone power supply	Output	Ignition switch ON	—	5.0 V
33	—	TEL antenna signal	Input	—	Not connected to TEL antenna connector.	5.0 V
34	—	Shield	—	—	—	—

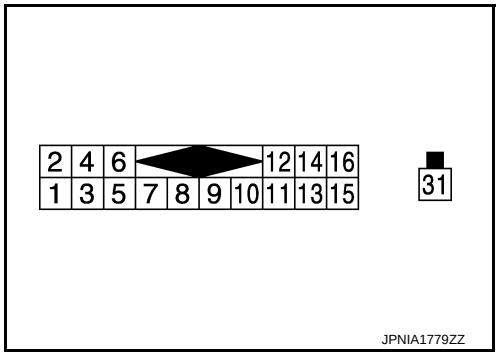
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
35 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
36 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—

SATELLITE RADIO TUNER

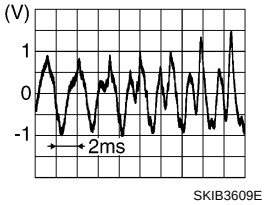
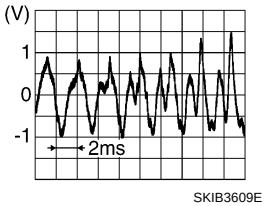
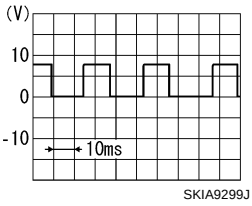
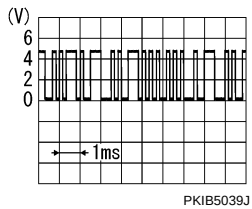
Reference Value

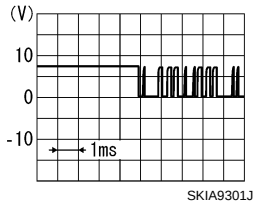
INFOID:0000000006276247

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
2 (L)	1 (R)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected.	
4 (W)	3 (G)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected.	
5	—	Shield	—	—	—	—
6	—	Shield	—	—	—	—
8 (Y)	Ground	Request signal (SAT→ AUDIO)	Output	Ignition switch ON	When satellite radio mode is selected.	
9 (G)	Ground	Communication signal (SAT→ AUDIO)	Output	Ignition switch ON	When satellite radio mode is selected.	

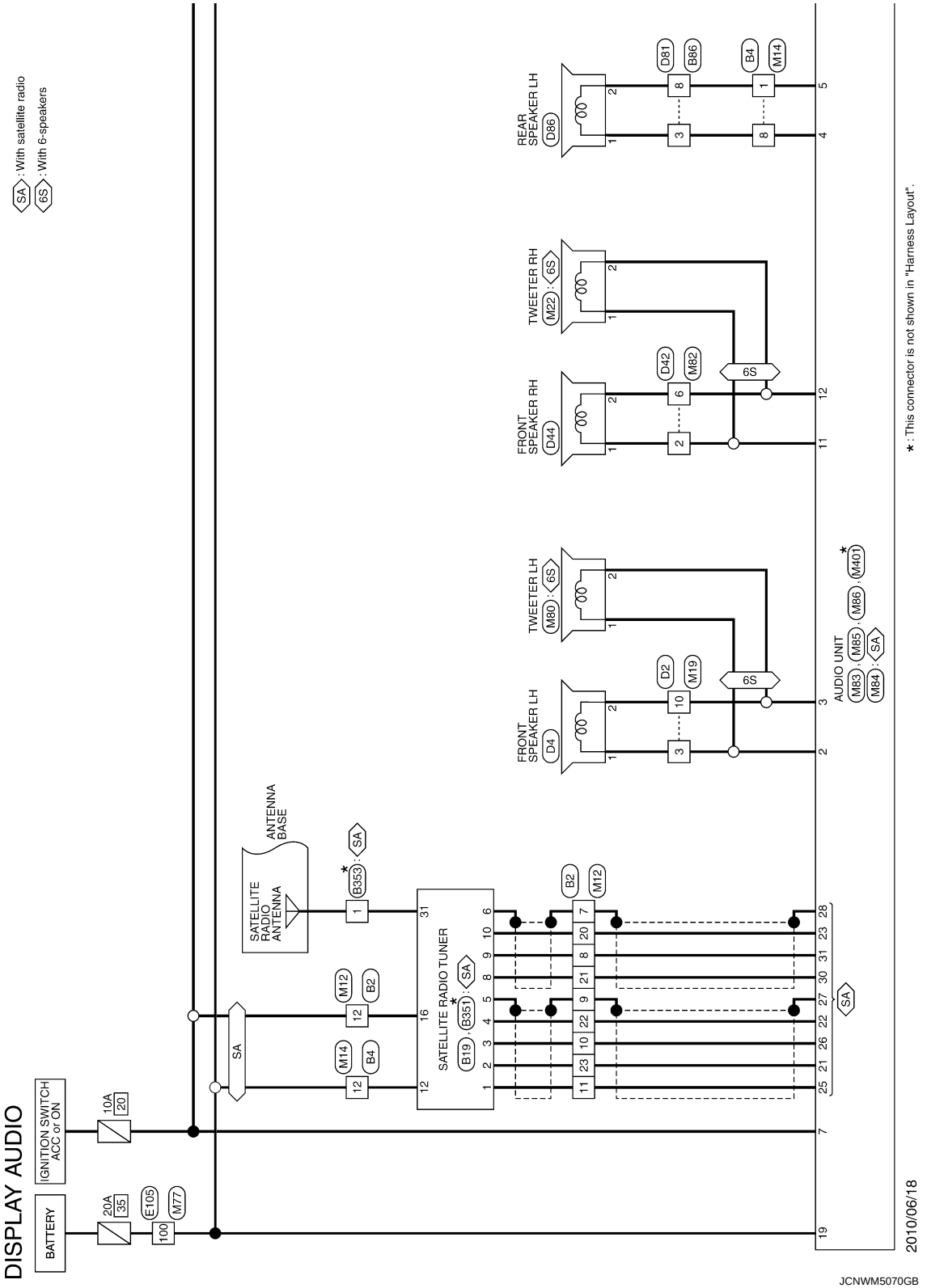
Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
10 (L)	Ground	Communication signal (AUDIO → SAT)	Input	Ignition switch ON	When satellite radio mode is selected.	 SKIA9301J
12 (BR)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
16 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
31	—	Satellite radio antenna signal	Input	—	—	—

WIRING DIAGRAM

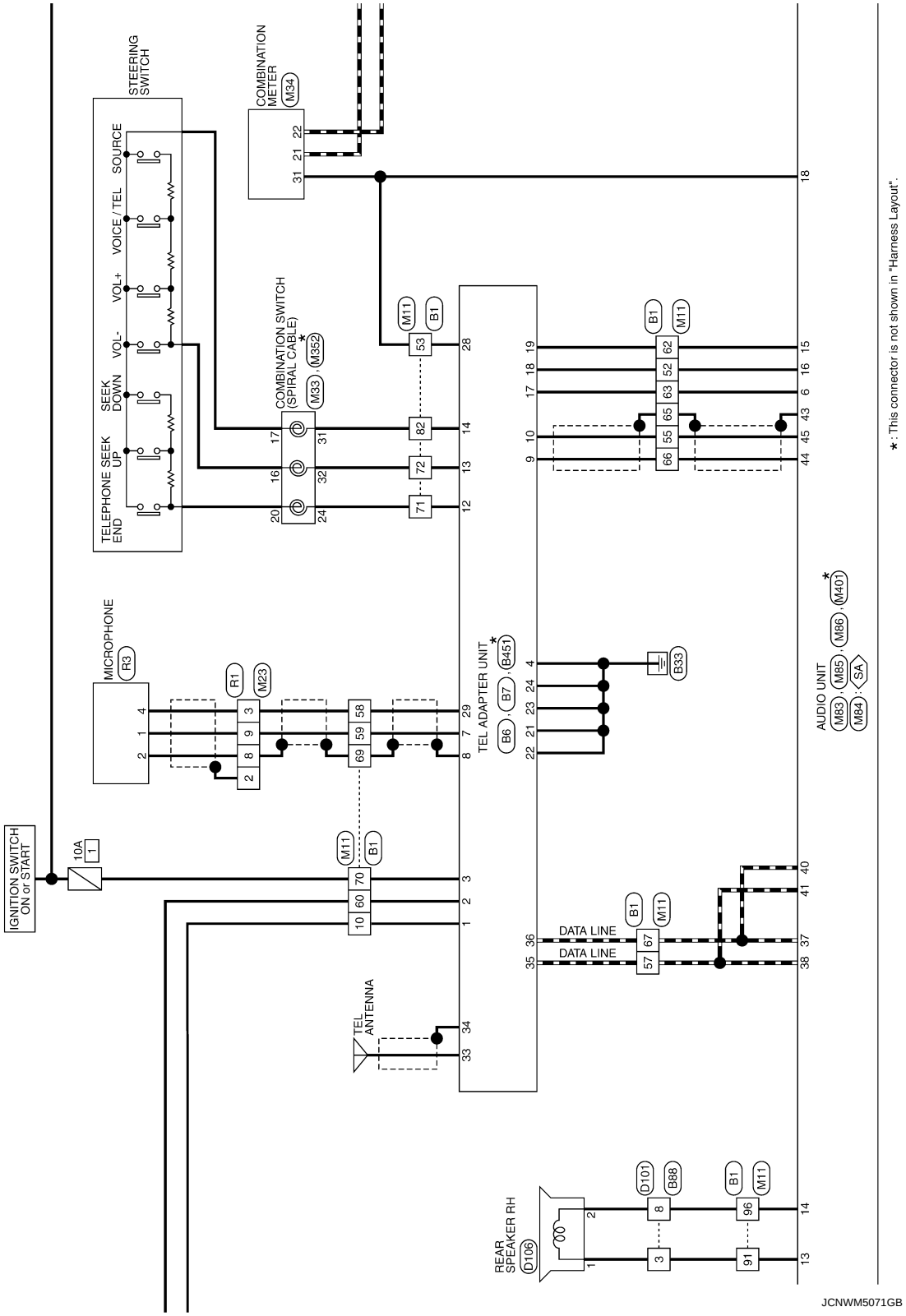
DISPLAY AUDIO

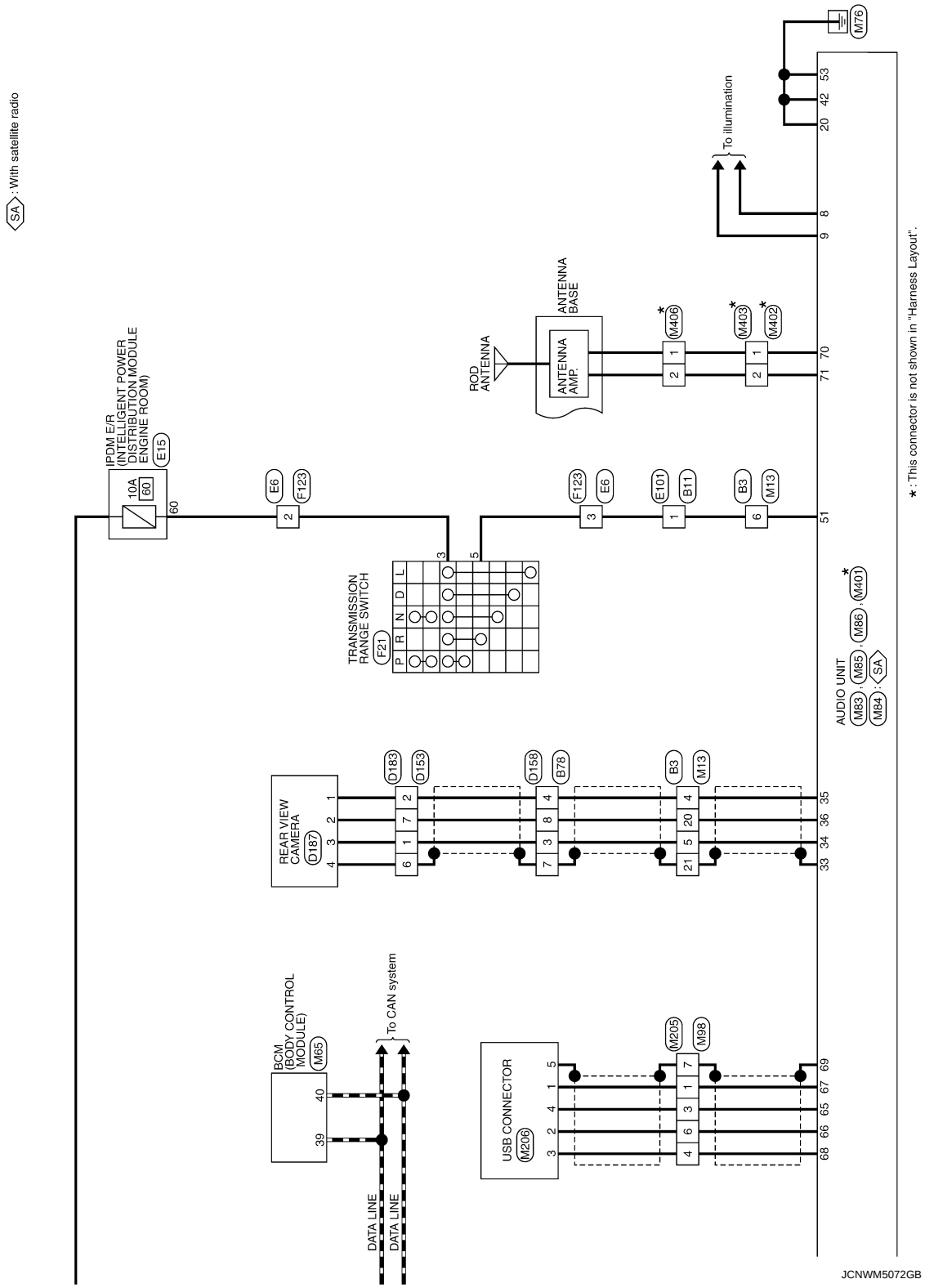
Wiring Diagram

INFOID:0000000006307706



JCNWM5070GB


SA : With satellite radio
STEERING SWITCH
SOURCE
VOICE / TEL
VOL+
VOL-
SEEK DOWN
SEEK UP
TELEPHONE END
COMBINATION METER
M34
COMBINATION SWITCH (SPIRAL CABLE)
M33
M352
MICROPHONE
R3
R1
M23
TEL ADAPTER UNIT
B6
B7
B451
AUDIO UNIT
M83
M85
M86
M401
SA
M84
B33
IGNITION SWITCH ON or START
10A
1
TEL ANTENNA
DATA LINE
DATA LINE
REAR SPEAKER RH
D106
D101
B88
M11
B1
: This connector is not shown in "Harness Layout".
JCNWM5071GB

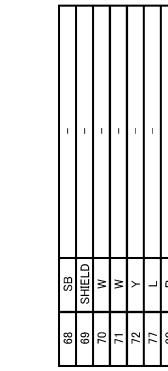

SA : With satellite radio
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E15
10A 60
60
E6 2
F123
F123 3
E6
E101 1
B11
B3 6
M13
51
TRANSMISSION RANGE SWITCH F21
P R N D L
3
5
ROD ANTENNA
ANTENNA BASE
ANTENNA AMP.
M406 2 1
M403 2 1
M402
70 71
To illumination
M76
53 42 20 8 9
AUDIO UNIT M83, M85, M86, M401, M84, SA
REAR VIEW CAMERA D187
D183 D153
D158 B78
B3 M13
1 2 3 4
6 1 7 2
7 3 8 4
21 5 20 4
33 34 36 35
BCM (BODY CONTROL MODULE) M65
40 39
To CAN system
DATA LINE
DATA LINE
USB CONNECTOR M206
M205 M98
3 2 4 1 5
4 6 3 1 7
68 66 65 67 69
* : This connector is not shown in "Harness Layout".
JCNWM5072GB

DISPLAY AUDIO

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

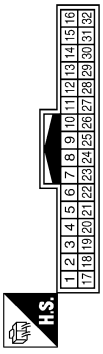
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	BR	–
3	G	–
4	L	–
6	BR	–
7	Y	–
8	LG	–
9	BR	–
10	BR	–
21	R	–
35	SHIELD	–
36	R	–
37	LG	–
38	SHIELD	–
39	O	–
40	G	–
41	R	–
45	L	–
46	W	–
47	SHIELD	–
48	V	–
49	W	–
50	SHIELD	–
52	L	– [With display audio]
53	G	– [With base audio or BOSE system]
54	O	–
55	Y	–
56	LG	–
57	SB	–
58	W	–
59	B	–
60	SB	–
62	GR	–
63	W	–
65	SHIELD	–
66	BR	–
67	LG	–
68	SB	–
69	SHIELD	–
70	W	–
71	W	–
72	Y	–
77	L	–
80	R	–
81	W	–
82	GR	–
86	Y	–
87	P	–
91	GR	–
92	R	–
93	W	–
94	G	–
95	O	–
96	Y	–
97	SB	–
98	Y	–
99	V	–
100	L	–

Connector No.	B2
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
7	SHIELD	–
8	G	–
9	SHIELD	–
10	G	–
11	R	–
12	SB	–
20	L	–
21	Y	–
22	W	–
23	L	–

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

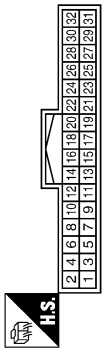


Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	G	–
4	R	–
5	W	–
6	G	–
10	G	–
13	Y	–
14	BR	–
15	P	–
16	W	–
17	LG	–
18	R	–
19	SB	–
20	B	–
21	SHIELD	–
26	P	–
29	L	–
30	O	–
31	GR	–
32	LG	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

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

Connector No.	B6
Connector Name	TEL ADAPTER UNIT
Connector Type	TH32FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	BAT
2	SB	ACC
3	W	IGN
4	B	GND
7	B	MICROPHONE SIGNAL (+)
8	SHIELD	MICROPHONE SIGNAL (–)
9	BR	SOUND SIGNAL (+)
10	Y	SOUND SIGNAL (–)
11	O	TEL ON SIGNAL
12	W	STEERING SW SIGNAL A
13	Y	STEERING SW SIGNAL B
14	GR	STEERING SW SIGNAL GND
17	W	STEERING SW SIGNAL A
18	L	STEERING SW SIGNAL B
19	GR	STEERING SW SIGNAL GND
20	B	CONTROL SIGNAL
21	B	CONTROL SIGNAL
22	B	CONTROL SIGNAL
23	B	CONTROL SIGNAL
24	B	CONTROL SIGNAL
27	B	CONTROL SIGNAL
28	L	VEHICLE SPEED SIGNAL (2-PULSE) [With display audio]
28	G	VEHICLE SPEED SIGNAL (2-PULSE) [With base audio or BOSE system]
29	W	MICROPHONE POWER

JCNWM5073GB

DISPLAY AUDIO

Connector No.	B7
Connector Name	TEL ADAPTER UNIT
Connector Type	TH08FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
35	SB	AV COMMUNICATION SIGNAL (H)
36	LG	AV COMMUNICATION SIGNAL (L)
39	LG	–
40	LG	–
41	SB	–
42	SB	–

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
5	L	–
8	R	–
9	Y	–
12	BR	–
13	O	–
22	G	– [For Mexico]
22	SB	– [Except for Mexico]
23	SB	– [For Mexico]
23	G	– [Except for Mexico]
51	GR	–
52	SHIELD	–
53	L	–
54	B	–
62	Y	–
63	R	–

96	G	–

Connector No.	B19
Connector Name	SATELLITE RADIO TUNER
Connector Type	A16FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	SOUND SIGNAL LH (–)
2	L	SOUND SIGNAL LH (+)
3	G	SOUND SIGNAL RH (–)
4	W	SOUND SIGNAL RH (+)
5	SHIELD	SHIELD
6	SHIELD	SHIELD
8	Y	REQUEST SIGNAL (SAT TO AUDIO)
9	G	COMMUNICATION SIGNAL (SAT–AUDIO)
10	L	COMMUNICATION SIGNAL (AUDIO–SAT)
12	BR	BAT
16	SB	ACC

Connector No.	B78
Connector Name	WIRE TO WIRE
Connector Type	TH08MW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	–
3	W	–
4	R	–
7	SHIELD	–
8	B	–

Connector No.	B86
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	L	–
6	G	–
8	R	–
9	LG	–
10	Y	–
11	L	–

Connector No.	B88
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	GR	–
6	G	–
8	Y	–
9	LG	–
10	Y	–
11	L	–

Connector No.	B351
Connector Name	SATELLITE RADIO TUNER
Connector Type	FAKRA JACK

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
31	–	–

Connector No.	B353
Connector Name	ANTENNA BASE
Connector Type	GT16C-1PP-HU

H.S.

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

Connector No.	B451
Connector Name	TEL ADAPTER UNIT
Connector Type	GT16C-1S-HU

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
33	–	TEL ANTENNA SIGNAL
34	–	SHIELD

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Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
2	R	–
3	B	–
4	O	–
5	Y	–
6	SB	–
7	B	–
8	V	–
9	L	–
10	P	–
13	R	–
14	LG	–
15	W	–
16	BR	–

Connector No.	D4
Connector Name	FRONT SPEAKER LH
Connector Type	NS02FW-CS

H.S.

2	1

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
2	P	–

Connector No.	D42
Connector Name	WIRE TO WIRE
Connector Type	NS10FW-CS

H.S.

4	3		2	1
10	9	8	7	6	5

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

Connector No.	D44
Connector Name	FRONT SPEAKER RH
Connector Type	NS02FW-CS

H.S.

2	1

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

Connector No.	D81
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	L	–
6	G	–
8	R	–
9	LG	–
10	Y	–
11	L	–

Connector No.	D86
Connector Name	REAR SPEAKER LH
Connector Type	NS02FW-CS

H.S.

2	1

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

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	GR	–
6	G	–
8	Y	–
9	LG	–
10	W	–
11	L	–

Connector No.	D106
Connector Name	REAR SPEAKER RH
Connector Type	NS02FW-CS

H.S.

2	1

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

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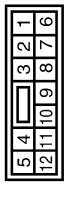
DISPLAY AUDIO

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Type	NS12FBR-CS

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	W	–
4	SB	–
5	SB	–
6	SHIELD	–
7	B	–
8	LG	–
9	V	–
10	R	–
11	O	–
12	G	–

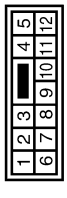
Connector No.	D158
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	–
3	W	–
4	R	–
7	SHIELD	–
8	B	–

Connector No.	D183
Connector Name	WIRE TO WIRE
Connector Type	NS12MBR-CS

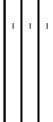
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	W	–
4	SB	–
5	SB	–
6	B	–
7	L	–
8	LG	–
9	V	–
10	R	–
11	O	–
12	G	–

Connector No.	D187
Connector Name	REAR VIEW CAMERA
Connector Type	TH04MW-NH

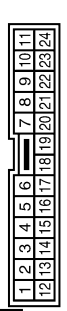
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	CAMERA POWER SUPPLY
2	L	CAMERA GND
3	W	CAMERA IMAGE SIGNAL
4	B	SHIELD

Connector No.	E6
Connector Name	WIRE TO WIRE
Connector Type	TK24MW-1V

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	–
2	SB	–
3	G	–
4	LG	–
5	L	–
6	BR	–
8	O	–
10	LG	–
11	Y	–
12	P	–
13	L	–
15	LG	–
16	R	–
18	L	–
19	Y	–
20	W	–
21	GR	–
23	W	–
24	L	–

Connector No.	E15
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS16FW-CS

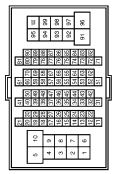
H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
47	BR	–
48	R	–
50	G	–

51	L	–
52	P	–
55	O	–
56	SB	–
57	V	–
58	LG	–
59	BR	–
60	SB	–
61	R	–

Connector No.	E101
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
5	L	–
8	R	–
9	Y	–
12	BR	–
13	O	–
22	G	–
23	SB	–
51	GR	–
52	SHIELD	–
53	L	–
54	B	–
62	Y	–
63	R	–
96	O	–

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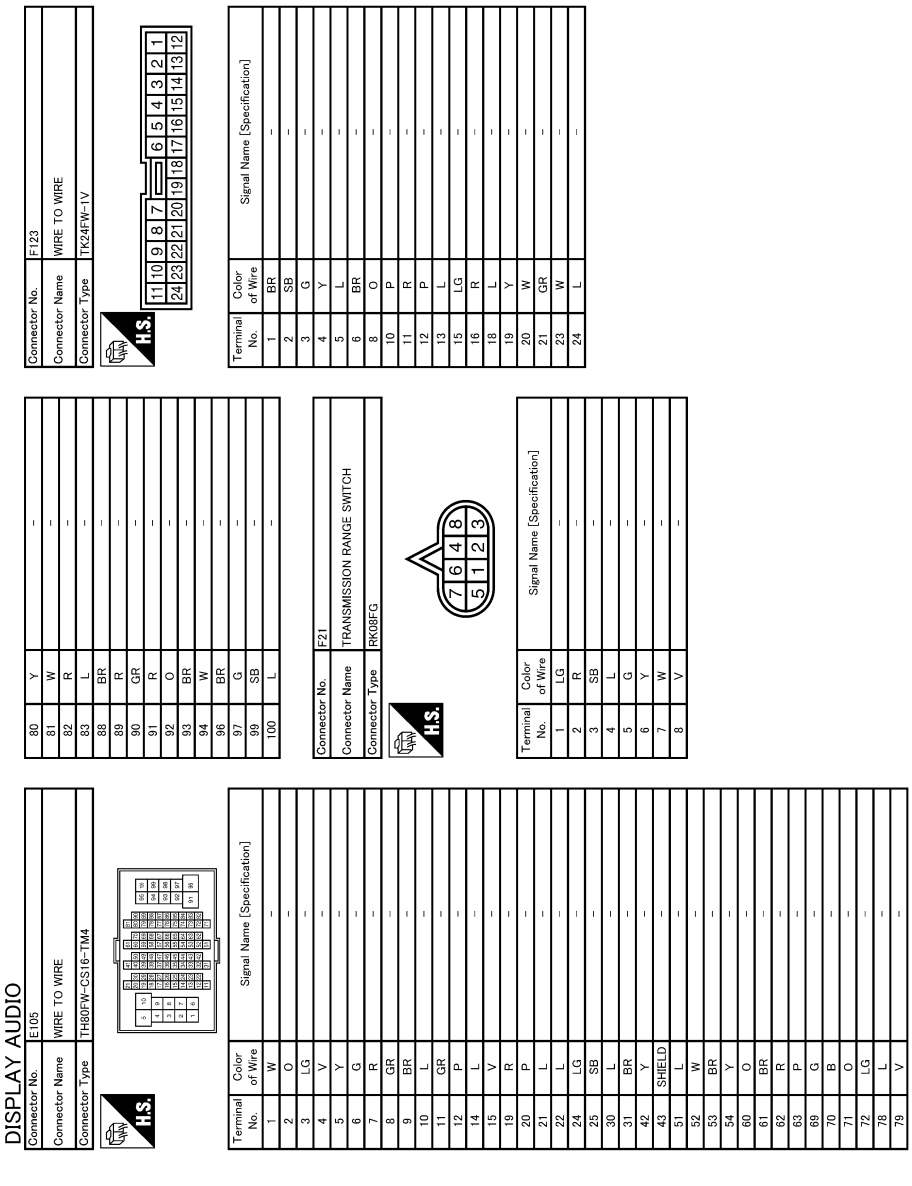

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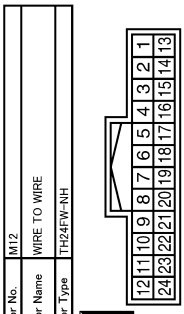
Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

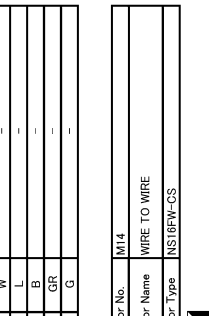
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	BR	–
3	G	–
4	LG	–
6	P	–
7	Y	–
8	LG	–
9	P	–
10	Y	–
21	R	–
35	SHIELD	–
36	P	–
37	LG	–
38	SHIELD	–
39	O	–
40	G	–
41	R	–
45	BR	–
46	L	–
47	SHIELD	–
48	V	–
49	W	–
50	SHIELD	–
52	O	–
53	L	–
54	V	–
55	Y	–
56	LG	–
57	SB	–
58	W	–
59	B	–
60	SB	–
62	GR	–
63	BR	–
65	SHIELD	–
66	BR	–
67	LG	–
68	SB	–
69	SHIELD	–
70	LG	–
71	O	–
72	BR	–
77	L	–
80	R	–
81	W	–
82	GR	–
86	Y	–
87	P	–
91	L	–
92	B	–
93	GR	–
94	G	–
95	O	–
96	P	–
97	SB	–
98	GR	–
99	R	–
100	L	–

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
7	SHIELD	–
8	B	–
9	SHIELD	–
10	G	–
11	R	–
12	SB	–
20	L	–
21	Y	–
22	W	–
23	L	–

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	Y	–
4	R	–
5	W	–
6	G	–
10	W	–
13	Y	–
14	O	–
15	W	–
16	V	–
17	LG	–
18	BR	–
19	SB	–
20	B	–
21	SHIELD	–
26	W	–
29	L	–
30	B	–
31	GR	–
32	G	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	P	–

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

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

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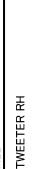
Connector No.	M22
Connector Name	TWEETER RH
Connector Type	TK02FBR

H.S.

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

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH

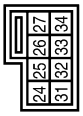
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
3	W	–
5	R	–
7	P	–
8	SHIELD	–
9	B	–
11	Y	–
12	Y	–

Connector No.	M33
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY-1V

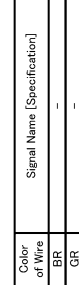
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
24	BR	–
25	GR	–
26	SB	–
27	G	–
31	GR	–
32	O	–
33	R	–
34	Y	–

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

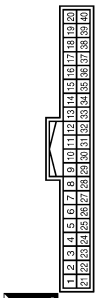
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	BATTERY POWER SUPPLY
2	O	IGNITION SIGNAL
3	B	GROUND
4	B	GROUND
5	BR	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
7	GR	OVERDRIVE CONTROL SWITCH SIGNAL
9	L	PADDLE SHIFTER SHIFT UP SIGNAL
10	G	PADDLE SHIFTER SHIFT DOWN SIGNAL
13	Y	ILLUMINATION CONTROL SIGNAL
15	LG	AIR BAG SIGNAL
16	O	ENGINE COOLANT TEMPERATURE SIGNAL
19	BR	AMBIENT SENSOR SIGNAL
20	SB	AMBIENT SENSOR GROUND
21	L	CAN-H
22	P	CAN-L
24	B	FUEL LEVEL SENSOR SIGNAL GROUND
25	SB	ALTERNATOR SIGNAL
26	V	PARKING BRAKE SWITCH SIGNAL
27	BR	BRAKE FLUID LEVEL SWITCH SIGNAL
28	B	SECURITY SIGNAL
29	W	WASHER LEVEL SWITCH SIGNAL
30	Y	VEHICLE SPEED SIGNAL (2-PULSE)
31	L	VEHICLE SPEED SIGNAL (8-PULSE)
34	G	FUEL LEVEL SENSOR SIGNAL
35	O	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
36	G	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)
37	P	NON-MANUAL MODE SIGNAL
38	O	MANUAL MODE SHIFT DOWN SIGNAL
39	V	MANUAL MODE SHIFT UP SIGNAL
40	LG	MANUAL MODE SIGNAL

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	KEY RING OUTPUT
2	G	INPUT 5
3	Y	INPUT 4
4	W	INPUT 3
5	R	INPUT 2
6	P	INPUT 1
7	L	KEY CYC UNLOCK
8	R	KEY CYL LOCK SW
9	R	BRAKE SW
10	SB	RR DEF SW
11	SB	ACC
12	P	DR SW AS
13	LG	DR SW RR
14	G	AUTO LIGHT SENS INPUT
17	W	SENS POWER SUPPLY
18	O	KEYLESS TUNER SENS GND
19	V	KEYLESS TUNER POWER
20	GR	KEYLESS TUNER SIGNAL
21	G	IMMOBI ANT (CLOCK)
23	B	SECURITY IND OUT PUT
25	BR	IMMOBI ANT (RX, TX)
27	Y	AIRCON SW
28	LG	BLOWER FAN SW
29	W	HAZARD SW
30	G	BACK DOOR OPEN SW
32	BR	OUTPUT 5
33	GR	OUTPUT 4
34	L	OUTPUT 3
35	B	OUTPUT 2
36	V	OUTPUT 1
37	LG	KEY SW
38	G	IGN
39	L	CAN-H
40	P	CAN-L

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Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	–
2	O	–
3	LG	–
4	Y	–
5	Y	–
6	G	–
7	R	–
8	GR	–
9	BR	–
10	L	–
11	GR	–
12	P	–
14	SB	–
15	V	–
19	R	–
20	P	–
21	O	–
22	L	–
24	BR	–
25	W	–
30	L	–
31	W	–
42	O	–
43	SHIELD	–
51	W	–
52	SB	–
53	L	–
54	Y	–
60	O	–
61	BR	–
62	G	–
63	P	–
69	W	–
70	B	–
71	P	–
72	O	–
78	SB	–
79	V	–
80	L	–
81	W	–
82	B	–
83	LG	–
88	BR	–
89	G	–
90	GR	–
91	R	–
92	L	–
93	P	–
94	W	–
96	BR	–
97	G	–
99	SB	–
100	Y	–

Connector No.	M80
Connector Name	TWEETER LH
Connector Type	TK02FBR

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	– [With BOSE system]
1	B	– [With base audio or display audio]
2	GR	– [With BOSE system]
2	P	– [With base audio or display audio]

Connector No.	M82
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS

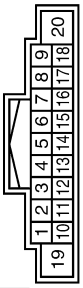
H.S.

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

2	O	–
3	W	–
4	G	–
5	V	–
6	W	–
10	SB	–

Connector No.	M83
Connector Name	AUDIO UNIT
Connector Type	TH18FW-CS2

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
2	R	SOUND SIGNAL FRONT SPEAKER LH (+)
3	G	SOUND SIGNAL FRONT SPEAKER LH (–)
4	V	SOUND SIGNAL REAR SPEAKER LH (+)
5	LG	SOUND SIGNAL REAR SPEAKER LH (–)
6	BR	STRG SW A
7	SB	ACC
8	Y	ILLUMINATION CONTROL SIGNAL (–)
9	R	ILLUMINATION CONTROL SIGNAL (+)
11	O	SOUND SIGNAL FRONT SPEAKER RH (+)
12	W	SOUND SIGNAL FRONT SPEAKER RH (–)
13	L	SOUND SIGNAL REAR SPEAKER RH (+)
14	P	SOUND SIGNAL REAR SPEAKER RH (–)
15	GR	STRG SW GND
16	O	STRG SW B
18	L	VEHICLE SPEED (8–PULSE)
19	Y	BATTERY
20	B	GND

Connector No.	M84
Connector Name	AUDIO UNIT
Connector Type	A12FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
21	L	SATELLITE RADIO SOUND SIGNAL LH (+)
22	W	SATELLITE RADIO SOUND SIGNAL RH (+)
23	L	COMM (AUDIO—SAT)
25	R	SATELLITE RADIO SOUND SIGNAL LH (–)
26	G	SATELLITE RADIO SOUND SIGNAL RH (–)
27	SHIELD	SHIELD
28	SHIELD	SHIELD
30	Y	REQUEST SIGNAL (SAT→AUDIO)
31	B	COMM (SAT→AUDIO)

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DISPLAY AUDIO

Connector No.	M85
Connector Name	AUDIO UNIT
Connector Type	TH32FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
33	SHIELD	SHIELD
34	W	CAMERA IMAGE SIGNAL
35	R	CAMERA POWER SUPPLY
36	B	CAMERA GND
37	LG	AV COMM (L)
38	SB	AV COMM (H)
40	LG	AV COMM (L)
41	SB	AV COMM (H)
42	B	GND
43	SHIELD	SHIELD
44	BR	SOUND SIGNAL (+)
45	Y	SOUND SIGNAL (-)
51	G	REVERSE SIGNAL
53	B	EQ 4

Connector No.	M86
Connector Name	AUDIO UNIT
Connector Type	HAA04FL

H.S.

65 67
66 68
69

Terminal No.	Color of Wire	Signal Name [Specification]
65	G	USB GND
66	R	USB D- SIGNAL
67	W	V BUS SIGNAL
68	L	USB D+ SIGNAL
69	SHIELD	SHIELD

Connector No.	M98
Connector Name	WIRE TO WIRE
Connector Type	CP06FGY

H.S.

7
1 2
3 4
5 6

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
3	G	–
4	L	–
6	R	–
7	SHIELD	–

Connector No.	M205
Connector Name	WIRE TO WIRE
Connector Type	CP06MGY-S

H.S.

7
2 1
4 3
6 5

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
3	G	–
4	L	–
6	R	–
7	SHIELD	–

Connector No.	M206
Connector Name	USB CONNECTOR
Connector Type	GT17H-4S-HU

H.S.

1 2 3 4 5

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

Connector No.	M352
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY

H.S.

14 15 16 17 18 19 20 21

Terminal No.	Color of Wire	Signal Name [Specification]
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–
21	–	–

Connector No.	M401
Connector Name	AUDIO UNIT
Connector Type	GT13SH-2/1S-HU

H.S.

70 71

Terminal No.	Color of Wire	Signal Name [Specification]
70	–	ANTENNA AMP. ON SIGNAL
71	–	ANTENNA SIGNAL

Connector No.	M402
Connector Name	WIRE TO WIRE
Connector Type	GT13SC-1/1S-HU

H.S.

1 2

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

Connector No.	M403
Connector Name	WIRE TO WIRE
Connector Type	GT13SGN-1/1PP-HU

H.S.

1 2

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

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DISPLAY AUDIO

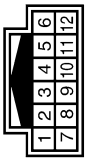
Connector No.	M406
Connector Name	ANTENNA BASE
Connector Type	GT13SSN-1/1PP-HU

H.S.

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

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	B/Y	–
2	SHIELD	–
3	W	–
5	GR	–
7	B/R	–
8	SHIELD	–
9	B	–
11	Y	–
12	O	–

Connector No.	R3
Connector Name	MICROPHONE
Connector Type	TK04FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	MICROPHONE SIGNAL (+)
2	R	MICROPHONE SIGNAL (–)
4	W	MICROPHONE POWER

JCNWM5082GB

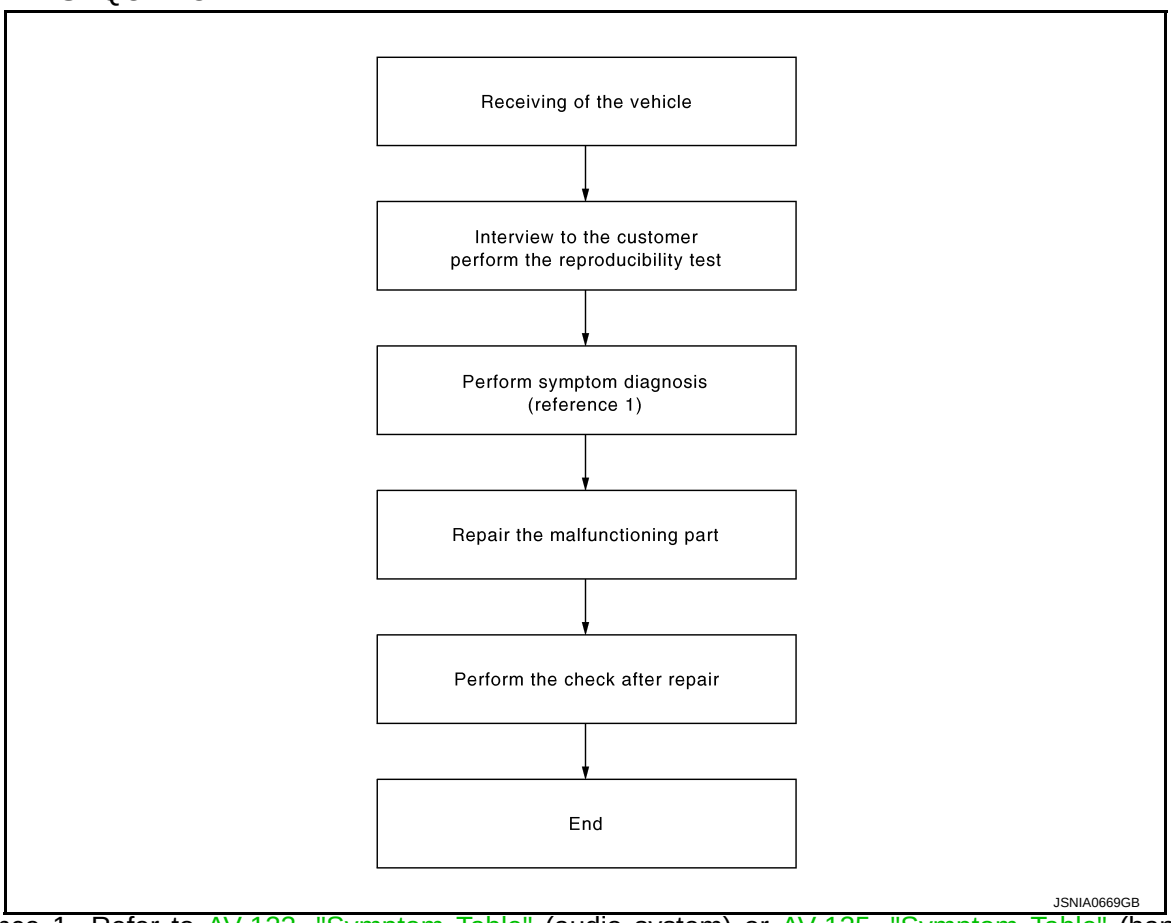
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000006398143

OVERALL SEQUENCE



Reference 1···Refer to AV-133, "Symptom Table" (audio system) or AV-135, "Symptom Table" (hands-free phone system).

DETAILED FLOW

1.CHECK SYMPTOM

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

>> GO TO 2.

2.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-133, "Symptom Table" (audio system) or AV-135, "Symptom Table" (hands-free phone system).

>> GO TO 3.

3.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

>> GO TO 4.

4.FINAL CHECK

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

Is there any symptom?

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

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:0000000006276217

1.CHECK FUSE

Check that the following fuses of the audio unit are not blown.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is inspection result OK?

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

2.CHECK AUDIO UNIT POWER SUPPLY CIRCUIT

Check voltage between the audio unit and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	M83	19	OFF	Battery voltage
ACC power supply		7	ACC	Battery voltage

Is inspection result OK?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector	Terminal	Ignition switch position	Continuity
Ground	M83	20	OFF	Existed
	M85	42		

Is the inspection result normal?

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

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:0000000006276218

1.CHECK FUSES

Check that the following fuses of the satellite radio tuner are not blown.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is inspection result OK?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between the satellite radio tuner and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	B19	12	OFF	Battery voltage
ACC power supply		16	ACC	Battery voltage

Is inspection result OK?

YES >> INSPECTION END
NO >> Check harness between satellite radio tuner and fuse.

TEL ADAPTER UNIT

TEL ADAPTER UNIT : Diagnosis Procedure

INFOID:0000000006513809

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B6	1	OFF	Battery voltage
ACC power supply		2	ACC	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B6	4	OFF	Existed

Is the inspection result normal?

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

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000006417069

TEL adapter unit supplies power to microphone. The microphone transmits the sound voice to the TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006521208

1.CHECK CONTINUITY BETWEEN TEL ADAPTER UNIT AND MICROPHONE CIRCUIT

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

TEL adapter unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
B6	7	R3	1	Existed
	8		2	
	29		4	

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	7		Not existed
	29		

Is inspection result OK?

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

2.CHECK VOLTAGE MICROPHONE VCC

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

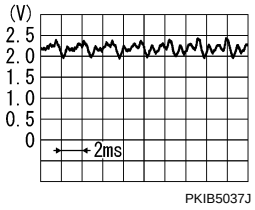
(+)		(–)	Voltage (Approx.)
TEL adapter unit			
Connector	Terminal		
B6	29	Ground	5.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".

3.CHECK MICROPHONE SIGNAL

1. Turn ignition switch OFF.
2. Connect microphone connector.
3. Turn ignition switch ON.
4. Check signal between TEL adapter unit harness connector.

TEL adapter unit				Condition	Reference value
(+)		(–)			
Connector	Terminal	Connector	Terminal		
B6	7	B6	8	Give a voice.	

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Is inspection result OK?

YES >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".
NO >> Replace microphone. Refer to AV-147, "Exploded View".

CONTROL SIGNAL CIRCUIT

Description

INFOID:0000000006376280

TEL adapter unit identifies the vehicle model according to the control signal and performs the control.

Diagnosis Procedure

INFOID:0000000006376281

1.CHECK CONTINUITY CONTROL SIGNAL CIRCUIT

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

TEL adapter unit			Continuity
Connector	Terminals		
B6	20	Ground	Existed
	21		
	23		
	24		

Is the inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".
NO >> Repair harness or connector.

CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006276235

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

Diagnosis Procedure

INFOID:0000000006276236

1.CHECK CONTINUITY CAMERA POWER SUPPLY CIRCUIT

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

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M85	35	D187	1	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M85	35		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE CAMERA POWER SUPPLY

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

(+)		(–)	Condition	Voltage (Approx.)
Audio unit				
Connector	Terminal			
M85	35	Ground	Shift position is in “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace audio unit. Refer to AV-139, "Removal and Installation".

3.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

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

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M85	34	D187	3	Existed

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

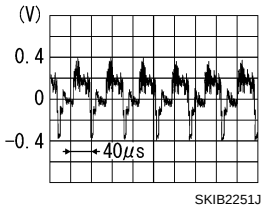
Audio unit		Ground	Continuity
Connector	Terminal		
M85	34		Not existed

Is inspection result normal?

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

4. CHECK CAMERA IMAGE SIGNAL

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

(+)		(–)	Condition	Reference value
Audio unit				
Connector	Terminal			
M85	34	Ground	At camera image is displayed.	

SKIB2251J

Is inspection result normal?

YES >> Replace audio unit. Refer to AV-139, "Removal and Installation".
NO >> Replace rear view camera. Refer to AV-149, "Removal and Installation".

STEERING SWITCH SIGNAL A CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)

Description

INFOID:0000000006276220

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006276221

1.CHECK STEERING SWITCH SIGNAL A (STEERING SWITCH TO TEL ADAPTER UNIT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TEL adapter unit connector and spiral cable connector.
3. Check continuity between TEL adapter unit harness connector and spiral cable harness connector.

TEL adapter unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
B6	12	M33	24	Existed

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	12		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK TEL ADAPTER UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
TEL adapter unit				
Connector	Terminal	Connector	Terminal	
B6	12	B6	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-121, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-148, "Exploded View".

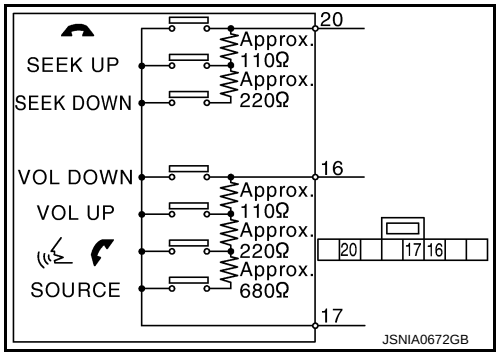
Component Inspection

INFOID:0000000006398155

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH SIGNAL B CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)

Description

INFOID:0000000006276223

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006276224

1.CHECK STEERING SWITCH SIGNAL B (STEERING SWITCH TO TEL ADAPTER UNIT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TEL adapter unit connector and spiral cable connector.
3. Check continuity between TEL adapter unit harness connector and spiral cable harness connector.

TEL adapter unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
B6	13	M33	32	Existed

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	13		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK TEL ADAPTER UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
TEL adapter unit				
Connector	Terminal	Connector	Terminal	
B6	13	B6	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-123, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-148, "Exploded View".

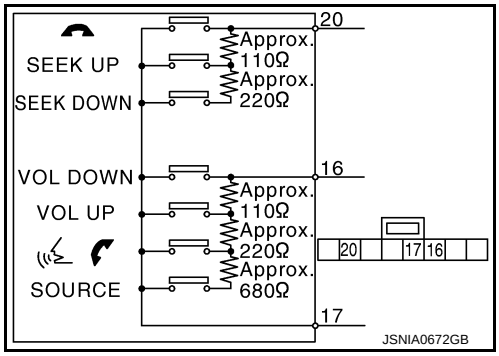
Component Inspection

INFOID:0000000006398157

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH SIGNAL GND CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)

Description

INFOID:0000000006276226

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006276227

1.CHECK STEERING SWITCH SIGNAL GROUND CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)

1. Turn ignition switch OFF.
2. Disconnect TEL adapter unit connector and spiral cable connector.
3. Check continuity between TEL adapter unit harness connector and spiral cable harness connector.

TEL adapter unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
B6	14	M33	31	Existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK GROUND CIRCUIT

1. Connect TEL adapter unit connector.
2. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	14		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".

4.CHECK STEERING SWITCH

Check steering switch. Refer to AV-124, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-148, "Exploded View"

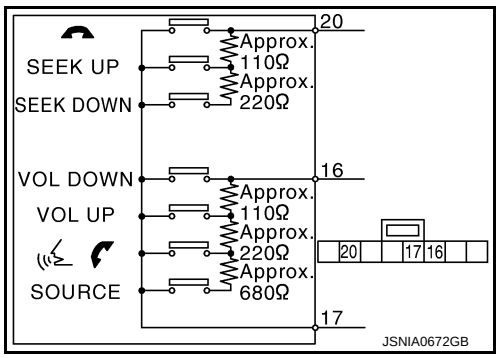
Component Inspection

INFOID:0000000006398158

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH SIGNAL A CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

Description

INFOID:0000000006276229

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006276230

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

1. Turn ignition switch OFF.
2. Disconnect audio unit connector and TEL adapter unit connector.
3. Check continuity between audio unit harness connector and TEL adapter unit harness connector.

Audio unit		TEL adapter unit		Continuity
Connector	Terminal	Connector	Terminal	
M83	6	B6	17	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M83	6		Not existed

Is inspection result normal?

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

2.CHECK AUDIO UNIT VOLTAGE

1. Connect audio unit connector and TEL adapter unit connector.
2. Turn ignition switch ON.
3. Check voltage between audio unit harness connector terminals.

(+)		(–)		Voltage (Approx.)
Audio unit				
Connector	Terminal	Connector	Terminal	
M83	6	M83	15	3.3 V

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".
NO >> Replace audio unit. Refer to AV-139, "Removal and Installation".

STEERING SWITCH SIGNAL B CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

Description

INFOID:0000000006276231

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006276232

1. CHECK STEERING SWITCH SIGNAL B CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

1. Turn ignition switch OFF.
2. Disconnect audio unit connector and TEL adapter unit connector.
3. Check continuity between audio unit harness connector and TEL adapter unit harness connector.

Audio unit		TEL adapter unit		Continuity
Connector	Terminal	Connector	Terminal	
M83	16	B6	18	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M83	16		Not existed

Is inspection result normal?

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

2. CHECK AUDIO UNIT VOLTAGE

1. Connect audio unit connector and TEL adapter unit connector.
2. Turn ignition switch ON.
3. Check voltage between audio unit harness connector terminals.

(+)		(–)		Voltage (Approx.)
Audio unit				
Connector	Terminal	Connector	Terminal	
M83	16	M83	15	3.3 V

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".
NO >> Replace audio unit. Refer to AV-139, "Removal and Installation".

STEERING SWITCH SIGNAL GND CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

Description

INFOID:0000000006276233

- Transmits the steering switch signal to TEL adapter unit.
- Transmits the steering switch signal to audio unit via TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006276234

1.CHECK STEERING SWITCH SIGNAL GROUND CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)

1. Turn ignition switch OFF.
2. Disconnect audio unit connector and TEL adapter unit connector.
3. Check continuity between audio unit harness connector and TEL adapter unit harness connector.

Audio unit		TEL adapter unit		Continuity
Connector	Terminal	Connector	Terminal	
M83	15	B6	19	Existed

Is inspection result normal?

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

2.CHECK GROUND CIRCUIT

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

Audio unit		Ground	Continuity
Connector	Terminal		
M83	15		Existed

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-145, "Exploded View".
NO >> Replace audio unit. Refer to AV-139, "Removal and Installation".

COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:0000000006276237

Satellite radio tuner and audio unit are connected with a serial communication. They transmit the operation signal from audio unit to satellite radio tuner.

Diagnosis Procedure

INFOID:0000000006276238

1.CHECK CONTINUITY COMMUNICATION SIGNAL (AUDIO–SAT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner connector and audio unit connector.
3. Check continuity between satellite radio tuner harness connector and audio unit harness connector.

Satellite radio tuner		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B19	9	M84	31	Existed
	10		23	Existed

4. Check continuity between satellite radio tuner harness connector and ground.

Satellite radio tuner		Ground	Continuity
Connector	Terminal		
B19	9		Not existed
	10		

Is inspection result OK?

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

2.CHECK AUDIO UNIT

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

Audio unit		Ground	Voltage (Approx.)
Connector	Terminal		
M84	31		4.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace audio unit. Refer to AV-139, "Removal and Installation".

3.CHECK SATELLITE RADIO TUNER

1. Turn ignition switch OFF.
2. Disconnect audio unit connector, and connect satellite radio tuner connector.
3. Turn ignition switch ON.
4. Check voltage between satellite radio tuner harness connector and ground.

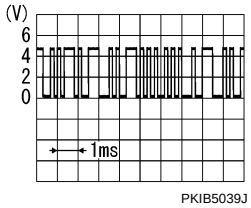
Satellite radio tuner		Ground	Voltage (Approx)
Connector	Terminal		
B19	10		7.5 V

Is inspection result OK?

YES >> GO TO 4.
NO >> Replace satellite radio tuner. Refer to AV-143, "Exploded View".

4.CHECK COMMUNICATION SIGNAL (SAT TO AUDIO)

1. Turn ignition switch OFF.
2. Connect audio unit connector.
3. Turn ignition switch ON.
4. Check signal between satellite radio tuner harness connector and ground.

Satellite radio tuner		Ground	Condition	Reference value
Connector	Terminal			
B19	9		When satellite radio mode is selected.	

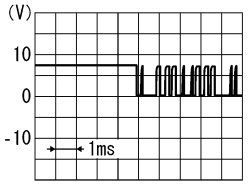
PKIB5039J

Is inspection result OK?

YES >> GO TO 5.
NO >> Replace satellite radio tuner. Refer to AV-143, "Exploded View".

5.CHECK COMMUNICATION SIGNAL (AUDIO TO SAT)

Check signal between audio unit harness connector and ground.

Audio unit		Ground	Condition	Reference value
Connector	Terminal			
M84	23		When satellite radio mode is selected.	

SKIA9301J

Is inspection result OK?

YES >> INSPECTION END
NO >> Replace audio unit. Refer to AV-139, "Removal and Installation".

REQUEST SIGNAL CIRCUIT (SAT TO AUDIO)

Description

INFOID:0000000006276239

Request signal transmits the signal to recognize the connection of satellite radio tuner from satellite radio tuner to audio unit.

Diagnosis Procedure

INFOID:0000000006276240

1.CHECK CONTINUITY REQUEST SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect satellite radio tuner connector and audio unit connector.
3. Check continuity between satellite radio tuner harness connector and audio unit harness connector.

Satellite radio tuner		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B19	8	M84	30	Existed

4. Check continuity between satellite radio tuner harness connector and ground.

Satellite radio tuner		Ground	Continuity
Connector	Terminal		
B19	8		Not existed

Is inspection result OK?

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

2.CHECK AUDIO UNIT

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

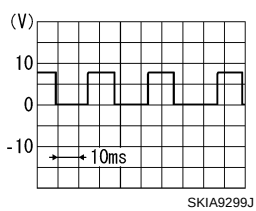
Audio unit		Ground	Voltage (Approx.)
Connector	Terminal		
M84	30		4.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace audio unit. Refer to AV-139, "Removal and Installation".

3.CHECK CONTINUITY REQUEST SIGNAL

1. Turn ignition switch OFF.
2. Connect satellite radio tuner connector.
3. Turn ignition switch ON.
4. Check signal between satellite radio tuner harness connector and ground.

Satellite radio tuner		Ground	Condition	Reference value
Connector	Terminal			
B19	8		When satellite radio mode is selected	

SKIA9299J

Is inspection result OK?

YES >> INSPECTION END
NO >> Replace satellite radio tuner. Refer to AV-143, "Exploded View".

SYMPTOM DIAGNOSIS

AUDIO SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000006276251

AUDIO SYSTEM

Symptoms	Check items	Possible malfunction location / Action to take
The audio system does not turn ON.	—	Audio unit power supply and ground circuit. Refer to AV-113, "AUDIO UNIT : Diagnosis Procedure".
Audio sound is not heard or volume is small.	Sound is not heard only from the specific places.	Sound signal circuit of malfunctioning system.
AM/FM radio is not received.	Other audio sounds are normal.	• Antenna amp. ON signal circuit. • Antenna base • Antenna feeder
Satellite radio is not received.	it change to satellite radio mode.	• Satellite radio sound signal circuit • Satellite radio antenna (antenna base)
	it does not change to satellite radio mode.	• Satellite radio tuner power supply and ground circuit. Refer to AV-113, "SATELLITE RADIO TUNER : Diagnosis Procedure". • Request signal circuit. Refer to AV-131, "Diagnosis Procedure". • Communication circuit between audio unit and satellite radio tuner. Refer to AV-129, "Diagnosis Procedure".

RELATED TO USB

NOTE:
Check that there is no malfunction of USB equipment main body before performing a diagnosis.

Symptoms	Check items	Possible malfunction location / Action to take
iPod® or USB memory can not be recognized.	—	• USB harness malfunction. • USB connector malfunction.

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

RELATED TO CAMERA

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
Camera image is not shown.	The guide line display is normal.	Camera image signal circuit. Refer to AV-118, "Diagnosis Procedure".
Camera image does not switch.	“Reverse” is not turned ON on “Vehicle Signals” screen of “Confirmation/Adjustment”.	Reverse signal circuit malfunction.
	“Reverse” is turned ON on “Vehicle Signals” screen of “Confirmation/Adjustment”.	Replace audio unit. Refer to AV-139, "Removal and Installation".

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. (steering switch to TEL adapter unit) Refer to AV-124, "Diagnosis Procedure".
“SOURCE”, “SEEK UP”, “VOL UP”, “SEEK DOWN” and “VOL DOWN” switches are not operated.	Steering switch signal ground circuit. (TEL adapter unit to audio unit) Refer to AV-128, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch. Refer to AV-148, "Exploded View".

Symptoms	Possible malfunction location / Action to take
“”, “SEEK UP” and “SEEK DOWN” switches are not operated.	Steering switch signal A circuit. (steering switch to TEL adapter unit) Refer to AV-120, "Diagnosis Procedure".
“SEEK UP” and “SEEK DOWN” switches are not operated.	Steering switch signal A circuit. (TEL adapter unit to audio unit) Refer to AV-126, "Diagnosis Procedure".
“”, “SOURCE”, “VOL UP” and “VOL DOWN” switches are not operated.	Steering switch signal B circuit. (steering switch to TEL adapter unit) Refer to AV-122, "Diagnosis Procedure".
“SOURCE”, “VOL UP” and “VOL DOWN” switches are not operated.	Steering switch signal B circuit. (TEL adapter unit to audio unit) Refer to AV-127, "Diagnosis Procedure".

HANDS-FREE PHONE SYMPTOMS

Symptom Table

INFOID:0000000006404209

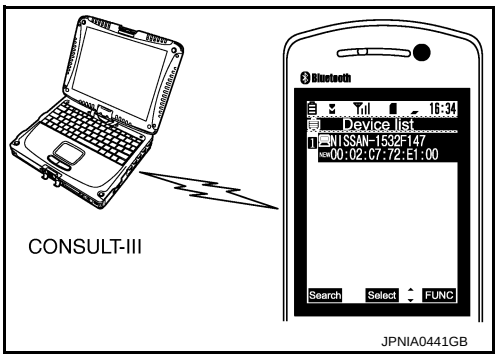
RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is corresponding type (Bluetooth™ enabled) when the hands-free related malfunction vehicle is in service before performing a diagnosis.
- There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or cellular phone. Check to ensure the customer's phone is supported by checking the phone compatibility for the hands-free system.

Simple Check for Bluetooth™ Communication

If cellular phone and TEL adapter unit cannot be connected with Bluetooth™ communication, following procedure allows the technician to judge which device has malfunction.

1. Turn on a cellular phone, not connecting Bluetooth™ communication.
2. Start CONSULT-III, then start Windows®.
3. Set CONSULT-III near a cellular phone.
4. When operated Bluetooth™ registration by cellular phone, check if CONSULT-III* would be displayed on the device name.
   (If other Bluetooth™device is located near cellular phone, a name of the device would be displayed also.)
   NOTE:
   *:Displayed device name is “NISSAN-********”.



- If no device name is displayed, cellular phone is malfunction. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Possible malfunction location/Action to take
Does not recognize cellular phone connection.	Repeat the registration of cellular phone.	TEL adapter unit
Hands-free phone cannot be established.	• Both the reception and the speech cannot be performed. • Audio cannot be operated by steering switch.	• TEL adapter unit power supply and ground circuit. Refer to AV-114, "TEL ADAPTER UNIT : Diagnosis Procedure". • Control signal circuit Refer to AV-117, "Diagnosis Procedure".
	• Both the reception and the speech cannot be performed. • Audio can be operated by steering switch.	AV communication circuit between audio unit and TEL adapter unit.
The other party's voice cannot be heard by hands-free phone.	Audio system sound is normal.	Sound signal (TEL voice, TEL guidance) circuit
	Audio system sound does not sound.	Refer to AV-133, "Symptom Table".
Originating sound is not heard by the other party with hands-free phone communication.	Voice recognition function is normal.	TEL adapter unit
	Voice recognition function does not work.	Microphone signal circuit. Refer to AV-115, "Diagnosis Procedure".

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. (steering switch to TEL adapter unit) Refer to AV-124, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch. Refer to AV-148, "Exploded View".
" ", "SOURCE", "SEEK UP" and "SEEK DOWN" switches are not operated.	Steering switch signal A circuit. (steering switch to TEL adapter unit) Refer to AV-120, "Diagnosis Procedure".
" ", "VOL UP" and "VOL DOWN" switches are not operated.	Steering switch signal B circuit. (steering switch to TEL adapter unit) Refer to AV-122, "Diagnosis Procedure".

NORMAL OPERATING CONDITION

Description

INFOID:0000000006404210

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 that noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment. Then determine the cause.

NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA) or could be incorrectly mastered by the customer on a computer.
- Check that 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.

Symptoms	Cause and Counter measure
Cannot play	Check if the disc or USB device was inserted correctly.
	Check that the disc 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.
	Files with extensions other than ".MP3 (.mp3)", ".WMA (.wma)", ".AAC (.aac)" or ".M4A (.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 compressed audio 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 disc or USB device is protected by copyright.
Poor sound quality	Check if the disc 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 disc or USB device, 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, etc., might not match the specifications. Try using the slowest writing speed.
Skipping with high bit rate files	Skipping may occur with large quantities of data, such as for high bit rate data.
Move immediately to the next song when playing.	If an unsupported compressed audio file has been given a supported extension like ".MP3", 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 writing software, so the files might not play in the desired order.
	Random/Shuffle may be active on the audio system or on a USB device.

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 TELEPHONE

Symptoms	Cause and Counter measure
System fails to interpret the command correctly.	1. Ensure that the command format is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at a 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. Refer to AV-87, "Diagnosis Description".
The system consistently selects the wrong entry from the phone book.	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.

REMOVAL AND INSTALLATION

AUDIO UNIT

Removal and Installation

INFOID:0000000006401033

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove audio unit mounting screws.
3. Pull out audio unit, remove harness clip, and then disconnect antenna feeder and harness connectors.
4. Remove audio unit and bracket as a unit.
5. Remove brackets from audio unit.

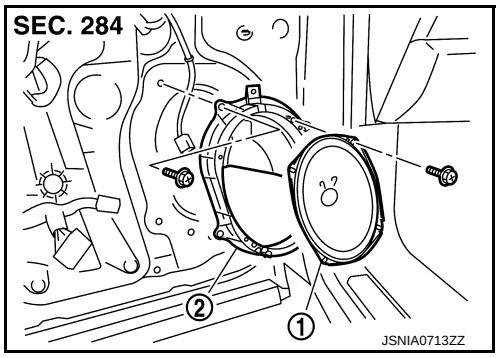
INSTALLATION

Install in the reverse order of removal.

FRONT SPEAKER

Exploded View

INFOID:0000000006401035



1. Front speaker
2. Bracket

Removal and Installation

INFOID:0000000006401036

REMOVAL

1. Remove front door finisher. Refer to INT-13, "FRONT DOOR FINISHER : Exploded View".
2. Remove front door speaker from bracket.

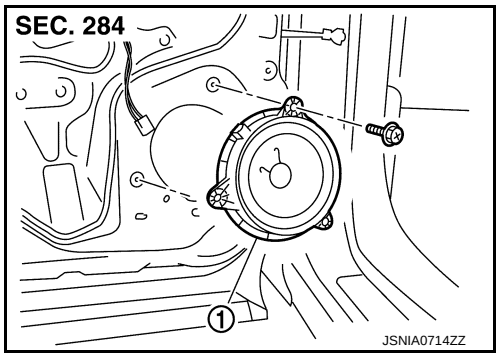
INSTALLATION

Install in the reverse order of removal.

REAR SPEAKER

Exploded View

INFOID:0000000006401037



1. Rear speaker

Removal and Installation

INFOID:0000000006401038

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "REAR DOOR FINISHER : Exploded View".
2. Remove rear speaker.

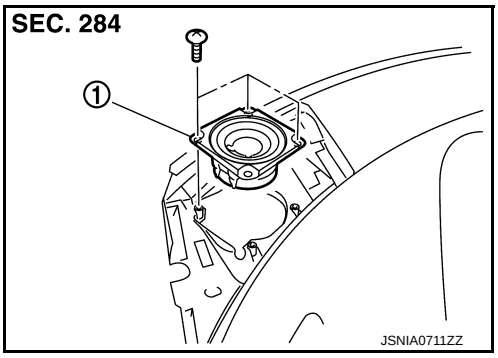
INSTALLATION

Install in the reverse order of removal.

TWEETER

Exploded View

INFOID:0000000006401039



1. Tweeter

Removal and Installation

INFOID:0000000006401040

REMOVAL

1. Remove instrument panel. Refer to IP-13, "Exploded View".
2. Remove tweeter from instrument panel.

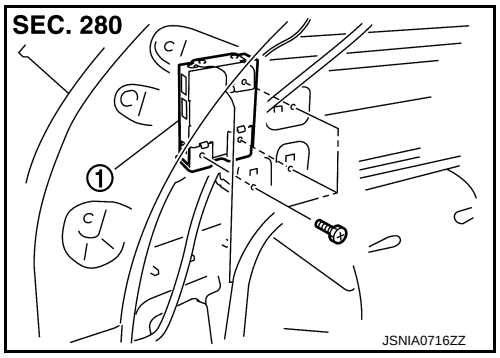
INSTALLATION

Install in the reverse order of removal.

SATELLITE RADIO TUNER

Exploded View

INFOID:0000000006369992



1. Satellite radio tuner

Removal and Installation

INFOID:0000000006369993

REMOVAL

1. Remove luggage side lower finisher (LH). Refer to INT-32, "Exploded View".
2. Remove satellite radio tuner.

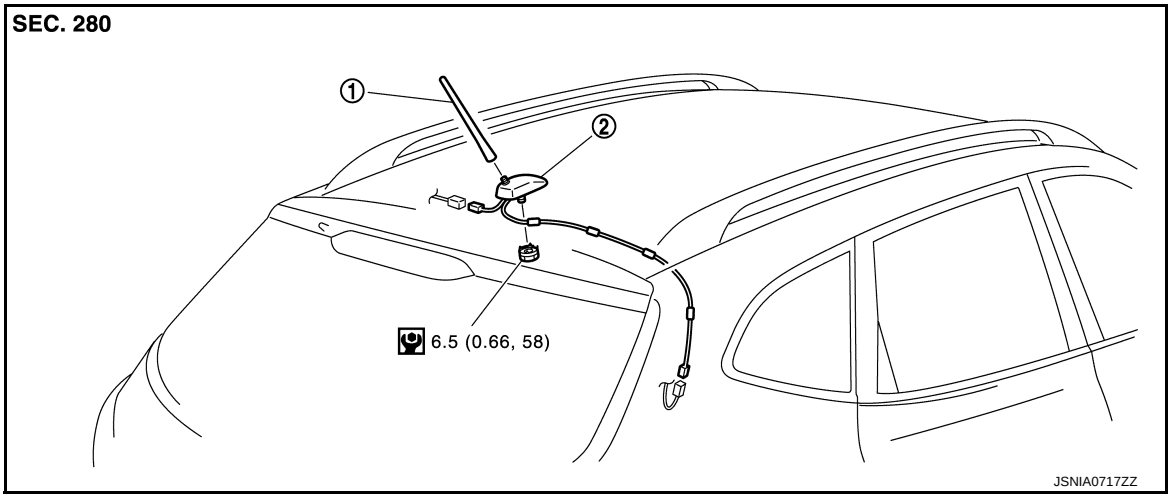
INSTALLATION

Install in the reverse order of removal.

RADIO & SATELLITE RADIO ANTENNA

Exploded View

INFOID:0000000006370057



1. Antenna rod
2. Antenna base

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000006370058

REMOVAL

1. Remove headlining assembly. Refer to INT-25, "NORMAL ROOF : Exploded View" (normal roof models) or INT-28, "SUNROOF : Exploded View" (sunroof models).
2. Remove nuts, and then remove antenna base.

INSTALLATION

Install in the reverse order of removal.

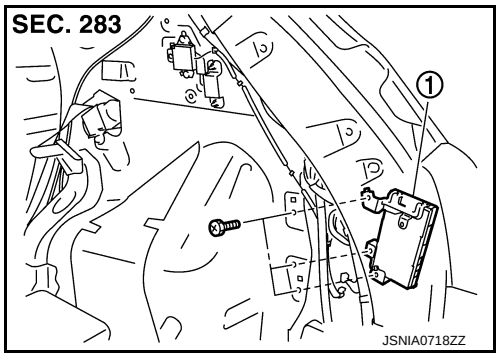
CAUTION:

If the antenna base mounting nut is tightened looser than the specified torque, then this will lower the sensitivity of the antenna. On the other hand, if the nut is tightened tighter than the specified torque, then this will deform the roof panel.

TEL ADAPTER UNIT

Exploded View

INFOID:0000000006401041



1. TEL adapter unit

Removal and Installation

INFOID:0000000006401042

REMOVAL

1. Remove luggage side lower finisher (RH). Refer to INT-32, "Exploded View".
2. Remove TEL adapter unit.

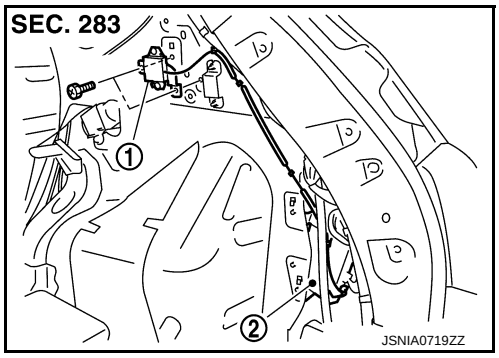
INSTALLATION

Install in the reverse order of removal.

TEL ANTENNA

Exploded View

INFOID:0000000006401043



1. TEL antenna
2. TEL adapter unit

Removal and Installation

INFOID:0000000006401044

REMOVAL

1. Remove luggage side upper finisher (RH). Refer to INT-32, "Exploded View".
2. Remove TEL antenna.

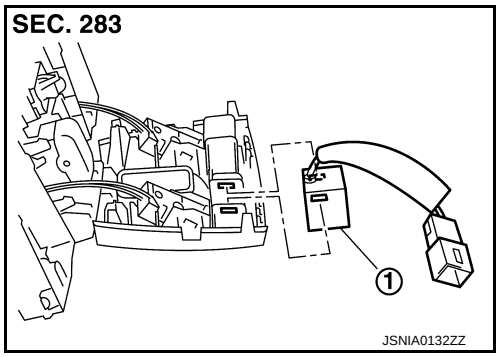
INSTALLATION

Install in the reverse order of removal.

MICROPHONE

Exploded View

INFOID:0000000006401045



1. Microphone

Removal and Installation

INFOID:0000000006401046

REMOVAL

1. Remove map lamp assembly. Refer to INT-25, "NORMAL ROOF : Exploded View" (normal roof models) or INT-28, "SUNROOF : Exploded View" (sunroof models).
2. Remove microphone from map lamp assembly.

INSTALLATION

Install in the reverse order of removal.

STEERING SWITCH

Exploded View

INFOID:0000000006401089

Refer to SR-36, "Exploded View" (for Mexico) or SR-11, "Exploded View" (except for Mexico).

Removal and Installation

INFOID:0000000006401090

REMOVAL

Refer to SR-36, "Removal and Installation" (for Mexico) or SR-11, "Removal and Installation" (except for Mexico).

INSTALLATION

Install in the reverse order of removal.

REAR VIEW CAMERA

Removal and Installation

INFOID:0000000006401047

REMOVAL

1. Remove back door finisher. Refer to INT-35, "Exploded View".
2. Remove rear view camera screws to remove rear view camera.

INSTALLATION

Install in the reverse order of removal.

NOTE:

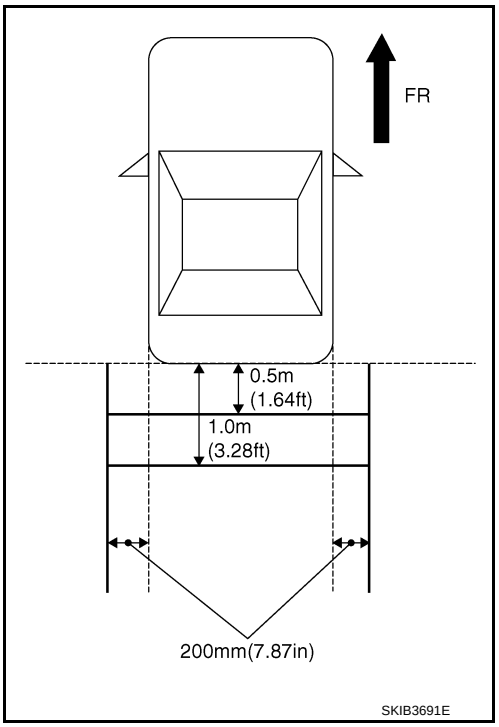
Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to AV-149, "Adjustment".

Adjustment

INFOID:0000000006276269

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

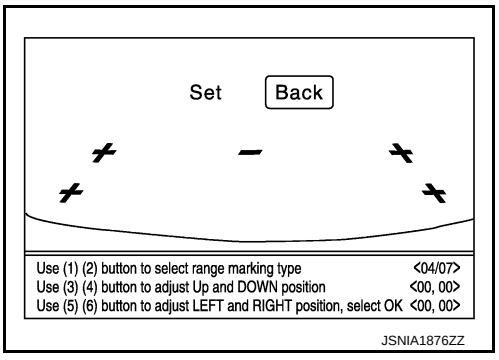
1. Draw lines on rearward area of the vehicle passing through the following points: 200 mm (7.87 in) from both sides of the vehicle, and 0.5 m (1.64 ft), 1.0 m (3.28 ft) from the rear end of the bumper.
2. Set into “Camera system” mode of Confirmation / Adjustment mode.



3. Press “1” or “2” switches, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

Selected pattern : 7

4. Make fine adjustment to the correction line of the rear of the vehicle with “3”, “4”, “5” or “6” switches so that its position is aligned with the guiding line. Press “PUSH ENTER” switch and record the adjusted guiding line position to the camera control unit.



Up/Down adjustment range : (–20) – (20)

Left/Right adjustment range : (–20) – (20)

CAUTION:

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

USB CONNECTOR

Removal and Installation

INFOID:0000000006401048

REMOVAL

1. Remove center console assembly. Refer to IP-22, "Exploded View".
2. Push the pawl from the back of center console assembly to remove USB connector.

INSTALLATION

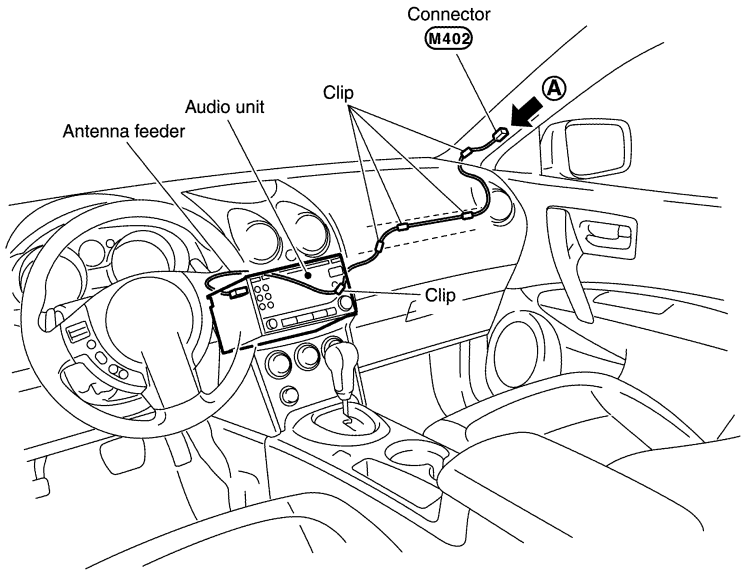
Install in the reverse order of removal.

ANTENNA FEEDER

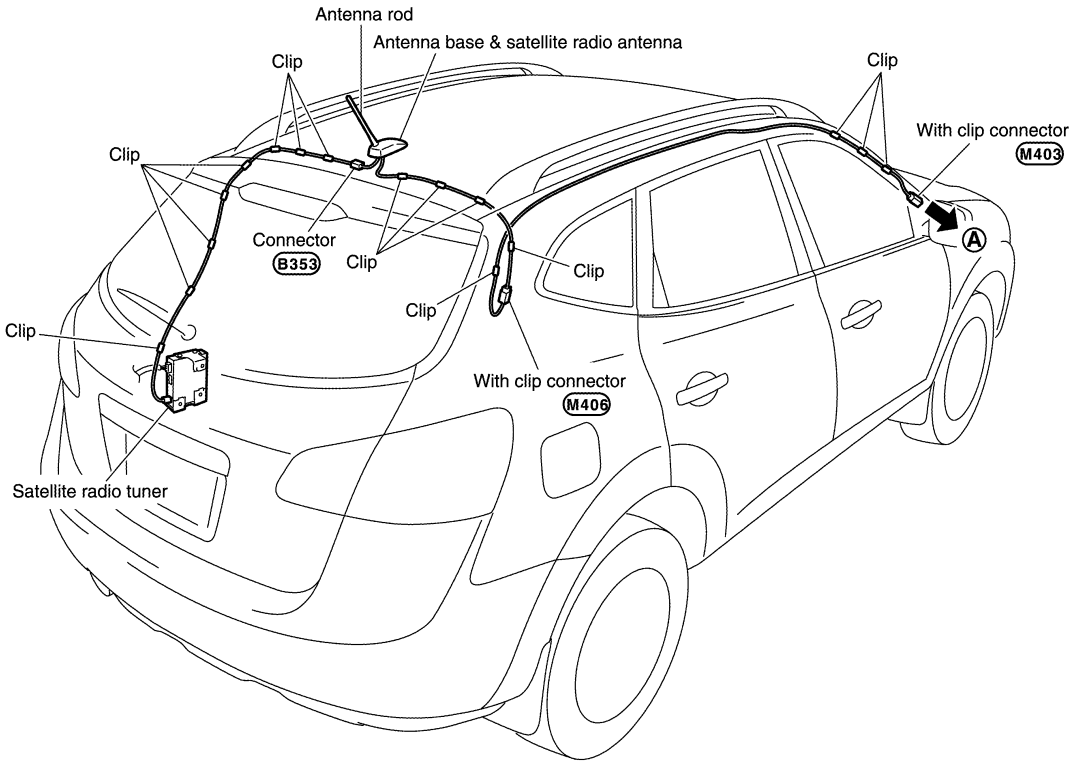
Feeder Layout

INFOID:0000000006276280

SEC. 280



Instrument panel driver side



Rear view of vehicle

JSNIA3491GB

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006307666

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

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “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:

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

Precaution for Trouble Diagnosis

INFOID:0000000006307671

AV COMMUNICATION SYSTEM

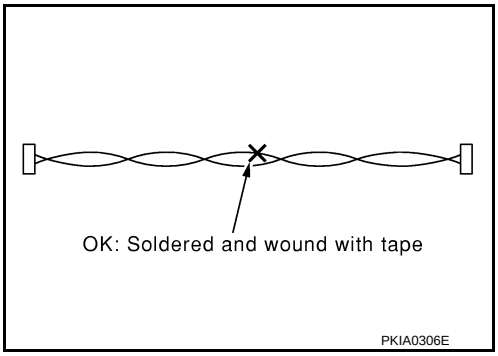
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

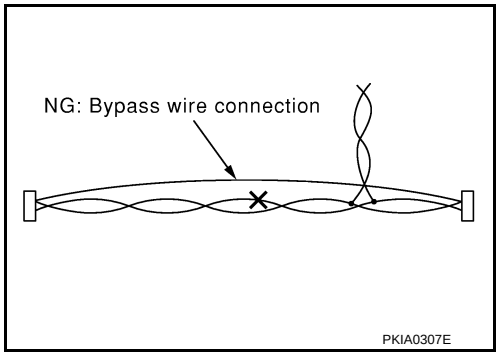
INFOID:0000000006307672

AV COMMUNICATION SYSTEM

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



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

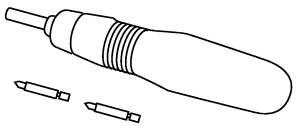


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000006307665

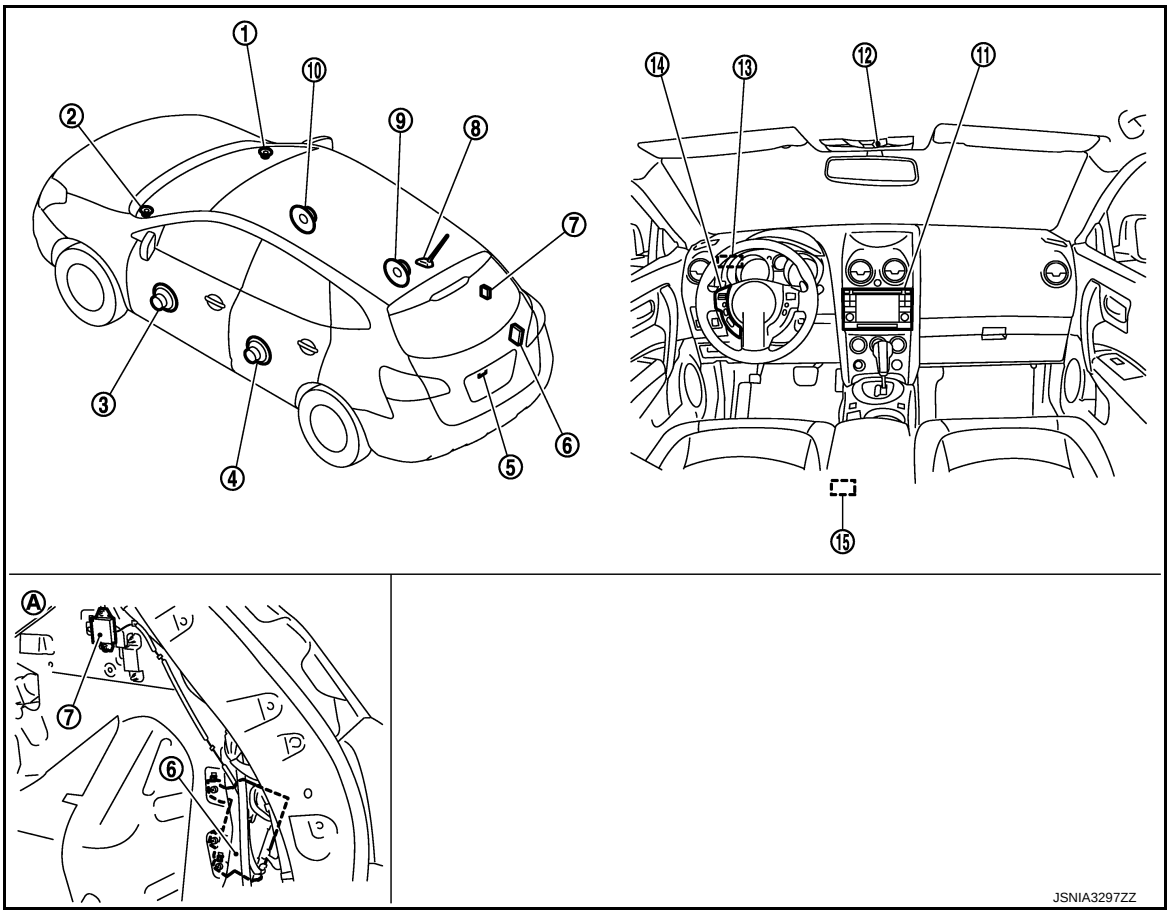
Tool name	Description
Power tool  PBIC0191E	Loosening screws

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000006314457



1. Tweeter RH
2. Tweeter LH
3. Front speaker LH
4. Rear speaker LH
5. Rear view camera
6. TEL adapter unit
7. TEL antenna
8. Antenna base (antenna amp. and satellite antenna)
9. Rear speaker RH
10. Front speaker RH
11. NAVI control unit
12. Microphone
13. GPS antenna
14. Steering switch
15. USB connector and AUX jack

A. Luggage side RH

Component Description

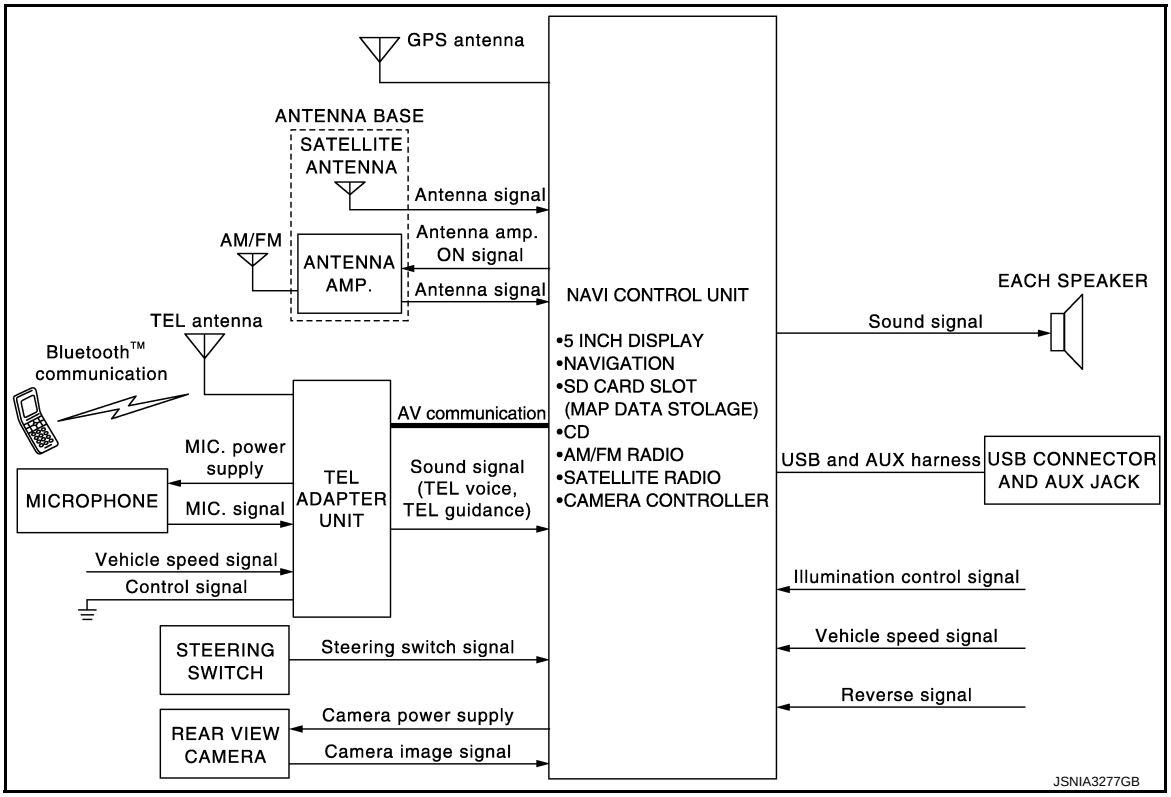
INFOID:0000000006276019

Part name	Description
NAVI control unit	• Operational switch of navigation system and audio system are integrated. • Includes the audio, navigation, satellite radio, rear view monitor, USB connection and AUX connection functions. • Map data can be loaded from the SD-card inserted in the built-in SD-card slot. • Sound signals are output to each speaker. • It inputs the illumination signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake). • Touch panel function can be operated for each system by touching a display directly. • It supplies power to rear view camera. • Camera image signal is input from rear view camera.
Map SD-card	A collection of Map data.
Front speaker	• Outputs sound signal from NAVI control unit. • Outputs high, mid and low range sounds.
Tweeter	• Outputs sound signal from NAVI control unit. • Outputs high range sounds.
Rear speaker	• Outputs sound signal from NAVI control unit. • Outputs high, mid and low range sounds.
Steering switch	• Operations for audio and hands-free phone are possible. • Steering switch signal (operation signal) is output to NAVI control unit.
TEL adapter unit	• Inputs the TEL voice signal from TEL antenna and outputs it to the NAVI control unit. • It is connected with the NAVI control unit via AV communication and controlled with the NAVI control unit.
Microphone	• Used for hands-free phone operation. • Microphone signal is transmitted to TEL adapter unit. • Power (microphone VCC) is supplied from TEL adapter unit.
GPS antenna	GPS signal is received and transmitted to NAVI control unit.
Antenna base	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted. ANTENNA AMP. • Radio signal received by rod antenna is amplified and transmitted to NAVI control unit. • Power (antenna amp. ON signal) is supplied from NAVI control unit. SATELLITE RADIO ANTENNA • Receives satellite radio waves and outputs it to NAVI control unit.
Rear view camera	• Camera power supply is input from NAVI control unit. • The image of vehicle rear view is transmitted to NAVI control unit.
USB connector and AUX jack	• Sound signal of auxiliary input is transmitted to NAVI control unit. • Sound signal of USB input is transmitted to NAVI control unit.

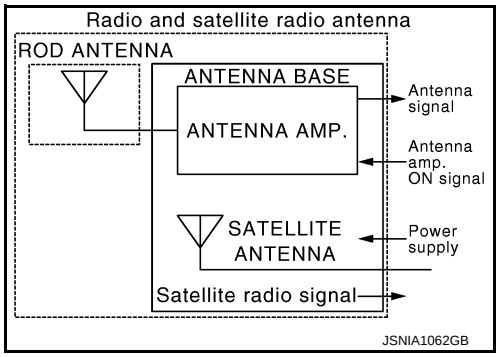
SYSTEM

System Diagram

INFOID:0000000006276020



NOTE:
An antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.



System Description

INFOID:0000000006276021

Refer to Owner's Manual for navigation and audio system operating instructions.
Audio function and display are built into NAVI control unit.
This navigation has the following functions.

- Map data on SD-card.
- Full support for playback of music from iPod® and USB device.
- High resolution color 5 inch display with touch panel function.
- FM/AM twin digital tuner.
- USB mass storage connection.
- Satellite radio.
- Hands-free phone system.

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

NAVIGATION SYSTEM FUNCTION

Description

- The navigation system can be operated by control panel of the NAVI control unit and display (touch panel) of the NAVI control unit.

- Guide sound during the operation of the navigation system is output from NAVI control unit to 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 NAVI control unit.

POSITION DETECTION PRINCIPLE

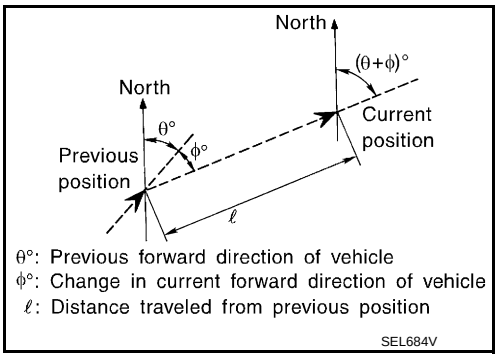
The navigation system periodically calculates the vehicle's current position according to the following three signals:

- 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.

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.

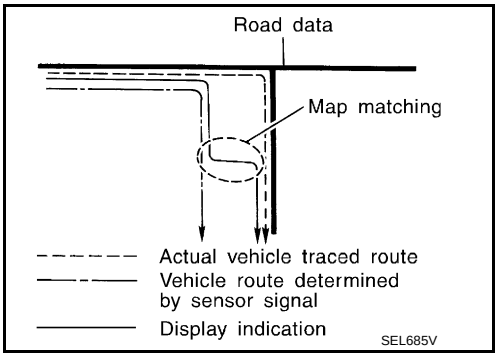
More accurate traveling direction is detected because priorities are set for the signals from these two devices according to the situation.

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.

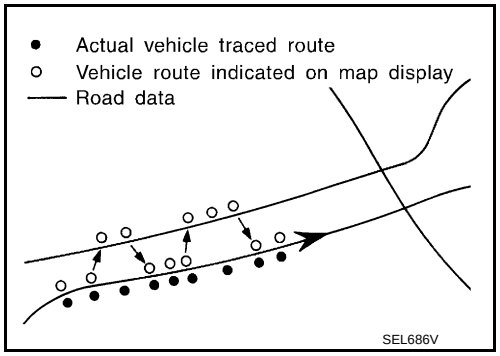
NOTE:

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

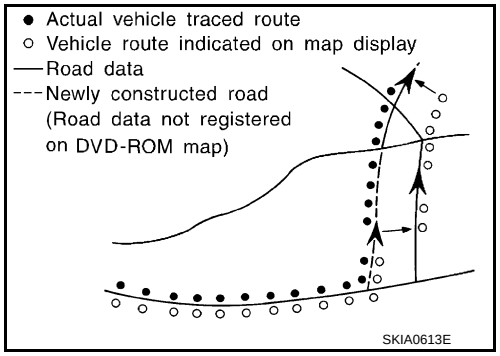


The vehicle position may not be corrected under the following circumstances and after driving for a certain time when GPS information is difficult to receive. In this case, the vehicle mark on the display must be corrected manually.

- 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.

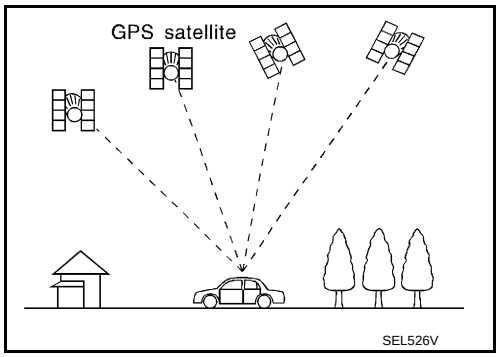


- Map-matching does not function correctly when a road on which the vehicle is driving is new and not recorded in the map SD-card, or when road pattern stored in the map data and the actual road pattern are different due to repair.
  The map-matching function may find another road and position the vehicle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

SATELLITE RADIO FUNCTION

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

AUXILIARY INPUT FUNCTION

- Sound can be output from an external device by connecting a device with USB connector and AUX jack.

- AUX sound signals are transmitted to each speaker via NAVI control unit.

REAR VIEW MONITOR FUNCTION

Camera Image Operation Principle

- The NAVI control unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits camera images to the NAVI control unit when power is supplied from the NAVI control unit.
- The NAVI control unit combines a warning message and fixed guide lines with an image received from the rear view camera to display a rear view camera image on the screen.

USB CONNECTION FUNCTION

- iPod® or music files in USB memory can be played.
- Sound signals are transmitted from USB connector and AUX jack to the NAVI control unit and to each speaker.
- iPod® is recharged when connected to USB connector and AUX jack.

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

NOTE:

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

SPEED SENSITIVE VOLUME SYSTEM

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

HANDS-FREE PHONE SYSTEM

- TEL adapter unit is controlled with AV communication from NAVI control unit.
- The connection between cellular phone and TEL adapter unit is performed with Bluetooth™ communication.
- The voice guidance signal is input from the TEL adapter unit to the NAVI control unit and output to the front speaker when operating the cellular phone.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-164, "Diagnosis Description".

When A Call Is Originated

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

When Receiving A Call

- Voice sound is input to own cellular phone from the other party.
- TEL voice signal is input to TEL adapter unit by establishing Bluetooth™ communication from cellular phone, and the signal is output to front speaker.

DIAGNOSIS SYSTEM (NAVI CONTROL UNIT)

Diagnosis Description

INFOID:0000000006397649

On-Board Diagnosis Item

- On-board diagnosis is performed in service test mode.
- On-board diagnosis checks if the system operates normally.

Service test mode

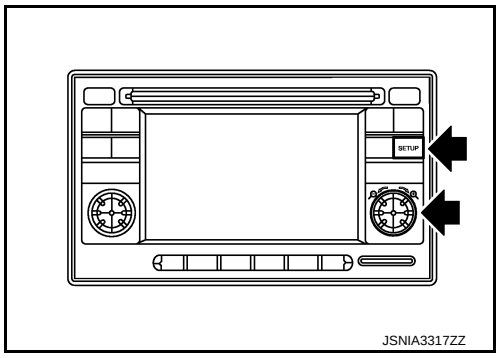
Mode		Item	Content
Service version		—	The version data of the parts is shown displayed.
Service radio	FM monitor	—	The Change Mediator monitors the dynamic values of the current tuner. If the band is switched within the radio monitor context, the active monitor is switched as well.
	AM monitor	—	
	XM monitor	—	The version data is displayed.
	XM functions	• Clear XM Chipset NVM • Reset all XM settings • XM CBM debug mode ON/OFF • External Diag mode ON/OFF	The current system status is displayed.
Service configuration	Touch Display Calibration	—	The function allows connection of the position detection accuracy of the touch panel.

Mode		Item	Content
Service system status	Running system status	• SD card slot access • Power Supply • Speed Signal • Direction Signal • Illumination Signal • GPS Antenna • BTHFU Status • Radio Antenna • USB Device • iPod® firmware version • Steering wheel key	The current system status is displayed.
	System history	• SD-card Slot - Sub-Unit Connection Malfunction • Programming Error • Radio-Antenna Circuit Malfunction • FM-Antenna 1 Connection Malfunction • GPS Antenna Circuit Malfunction • CD-Drive Mechanical Malfunction • CD Read Malfunction • Power Supply voltage: Lower Limit Exceeded • Power Supply voltage: Upper Limit Exceeded • Reduced system Functionality due to over temperature • Display switched OFF due to over temperature • SD card removed without being de-mounted • Codeplug missing	The history of the system status is reported in the report memory, displayed.
	Speaker test 100 Hz	—	This activates a sequence of test tone outputs to the four speaker lines one after the other for 1 second. The frequency can be chosen by user selection (100 Hz and 4 kHz).
	Speaker test 4 kHz		
	Display test	—	This provides a test sequence where test displays (plain colored display: e.g. white, black, red, blue, green) are shown one after the other. The respective color is shown for an indicated period of time (parameter). After the display test, the design of the display previously available is stored. While the screen shows a plain colored display, a pixel malfunction may be detected.

Mode	Item	Content
Service system configuration	• 2/4 pulse speed • Clock ON/OFF • Camera guidelines • Equalizing settings • RF tuning • Antenna type • Sound system • Sub Out • Steering wheel	The device is configured by a connected hardware circuit. The parameter is influenced.
Self test	• SD-card Access Malfunction • Radio-Antenna Circuit Malfunction • GPS Antenna Circuit Malfunction • XM Antenna Circuit Malfunction	A system self test is executed: the result is stored into the error memory which is shown afterwards as a list of codes of the detected malfunctions.

METHOD OF STARTING

1. Start the engine.
2. Turn OFF audio.
3. While pressing the “SET UP” switch, turn the MENU dial counterclockwise 3 clicks or more first, then clockwise and counterclockwise 3 clicks or more, respectively. (After the diagnosis mode starts, the initial screen of the diagnosis mode appears.)



JSNIA3317ZZ

END ON-BOARD DIAGNOSIS

Turn OFF ignition switch.

DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

Description

INFOID:0000000006397651

During on board diagnosis the diagnosis function of TEL adapter unit starts with the operation of the steering switch and performs the diagnosis when ignition switch ACC.

Diagnosis Description

INFOID:0000000006397652

ON BOARD DIAGNOSIS ITEM

The on board diagnosis has 3 modes: the self-diagnosis mode that performs the trouble diagnosis, the speaker adaptation data deleting mode and the hands-free phone system initialization mode.

CAUTION:

- **Perform the diagnosis with the vehicle stopped.**
- **Perform STEP2 if necessary.**

STEP	MODE	Description
STEP1	Self-diagnosis	The self-diagnosis mode performs the microphone test and the diagnosis of TEL adapter unit, TEL antenna and steering unit, and then reads out the results with the sound and indicates them on the display.
STEP2	Speaker adaptation data deleting	The speaker adaptation data deleting mode can delete the speaker adaptation data.
	Hands-free phone system initialization	Hands-free phone system initialization mode can perform the initialization of hands-free phone system.

Self-diagnosis results

Self-diagnosis mode reads out the self-diagnosis results.

NOTE:

- Error count is read out simultaneously when reading out the DTC name.
- The errors are read out continuously when some errors occur at the same time.

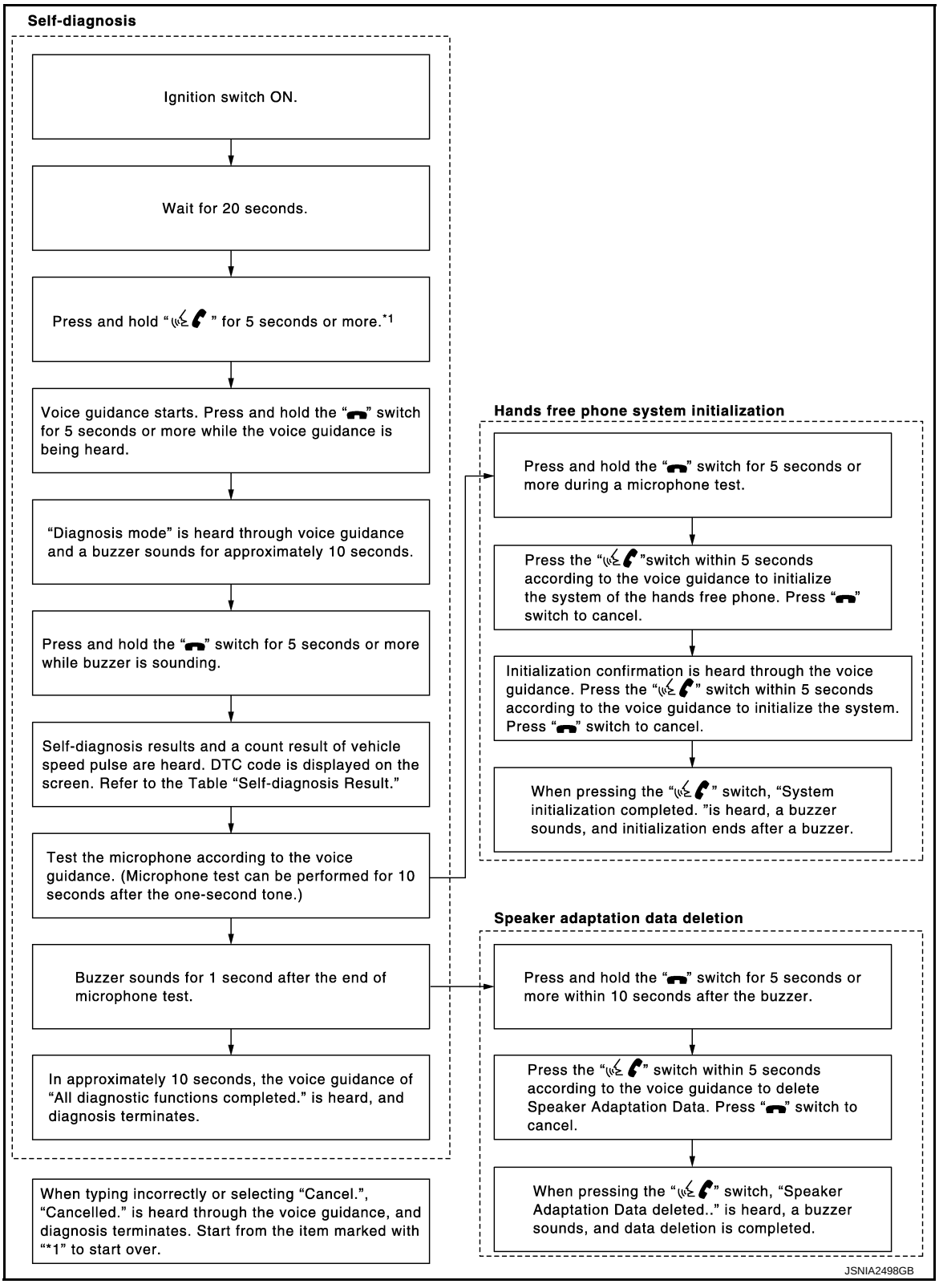
Self-diagnosis results

DTC	DTC name	Possible causes
DTC 10000	INTERNAL FAILURE	TEL adapter unit
DTC 01000	ANT. SHORT TO BATT OR OPEN	TEL antenna
DTC 00100	ANT. SHORT TO GROUND	
DTC 00010	STEERING REMOTE BUTTON STUCK A	Steering switch
DTC 00001	STEERING REMOTE BUTTON STUCK B	
DTC 00000	THERE ARE NO FAILURE RECORDS TO REPORT	—

The Details of Error Count

The error count guides “0” when the error occurs. The next time it counts up “1” if it is normal with the ignition switch ON. It continues the count up unless the initialization of hands-free phone system is performed.

FLOW CHART OF TROUBLE DIAGNOSIS



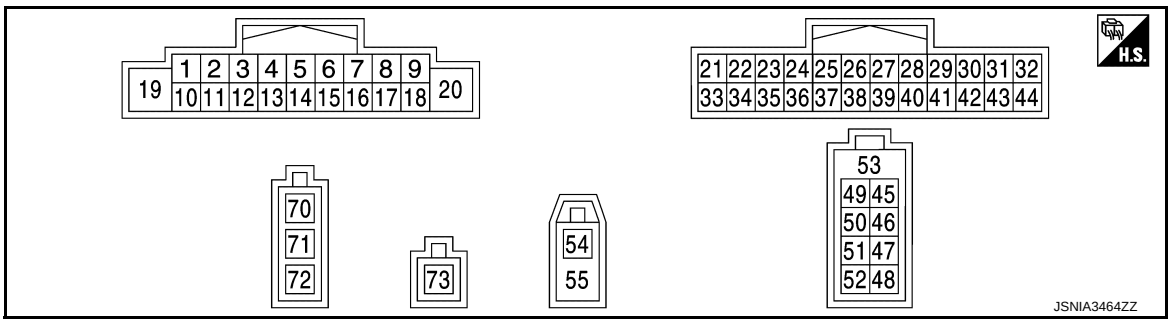
ECU DIAGNOSIS INFORMATION

NAVI CONTROL UNIT

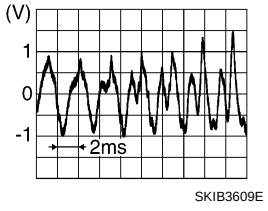
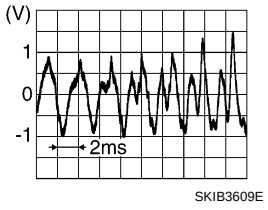
Reference Value

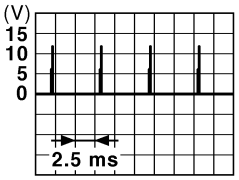
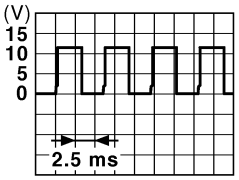
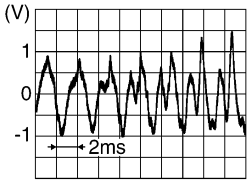
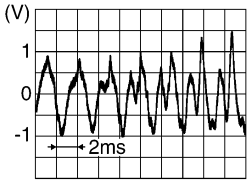
INFOID:0000000006276023

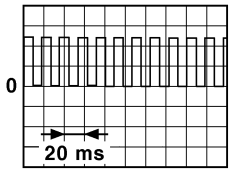
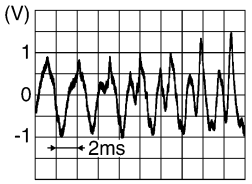
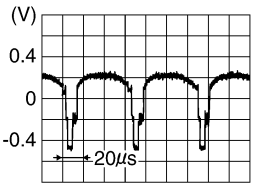
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
2 (R)	3 (G)	Sound signal front speaker LH	Output	Ignition switch ON	Sound output.	 SKIB3609E
4 (V)	5 (LG)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output.	 SKIB3609E
6 (BR)	15 (GR)	Steering switch signal A	Input	Ignition switch ON	Keep pressing switch	0 V
					Keep pressing SEEK UP switch	1.4 V
					Keep pressing SEEK DOWN switch	2.5 V
					Except for above.	5.0 V
7 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (W)	8 (Y)	Illumination control signal	Input	Ignition switch ON	• Lighting switch 1ST • When meter illumination is maximum	 JPNIA1687GB
					• Lighting switch 1ST • When meter illumination is step 11	 JPNIA1686GB
					• Lighting switch 1ST • When meter illumination is minimum	12 V
11 (O)	12 (W)	Sound signal front speaker RH	Output	Ignition switch ON	Sound output.	 SKIB3609E
13 (L)	14 (P)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output.	 SKIB3609E
16 (O)	15 (GR)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch.	0 V
					Keep pressing VOL UP switch.	1.4 V
					Keep pressing switch	2.5 V
					Keep pressing VOL UP switch.	3.4 V
					Except for above.	5.0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (L)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
22 (B)	Ground	EQ1	—	Ignition switch ON	—	0 V
23 (B)	Ground	EQ3	—	Ignition switch ON	—	0 V
25 (G)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever is in R position.	12.0 V
					Selector lever is in other than R position.	0 V
34 (BR)	35 (Y)	Sound signal (TEL voice, voice guidance)	Output	Ignition switch ON	During voice guide output with the switch pressed.	 SKIB3609E
36 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
37	—	Shield	—	—	—	—
38 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
39 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
41 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image displayed	 SKIB0827E
42	—	Shield	—	—	—	—

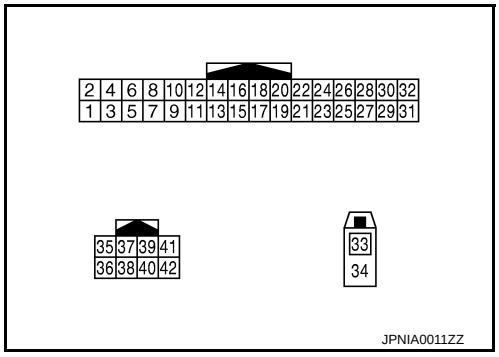
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
43 (R)	Ground	Camera power supply	Output	Ignition switch ON	At rear view camera image is displayed.	6.0 V
					Except for above.	0 V
44 (B)	Ground	Camera ground	—	Ignition switch ON	—	0 V
45 (G)	—	USB ground	—	—	—	—
46 (R)	—	USB D– signal	Input/ Output	—	—	—
47 (L)	—	USB D+ signal	Input/ Output	—	—	—
48 (W)	—	V BUS signal	Output	—	—	—
49 (W)	—	AUX sound signal LH	Input	—	—	—
50 (G)	—	AUX sound signal RH	Input	—	—	—
51 (R)	—	AUX sound signal ground	—	—	—	—
53	—	Shield	—	—	—	—
54	Ground	GPS antenna signal	Input	ON	Not connected to GPS antenna connector.	5.0 V
55	—	Shield	—	—	—	—
70	Ground	Antenna amp. ON signal	Output	Ignition switch ON	—	12.0 V
71	—	Antenna signal	Input	—	—	—
73	—	Satellite radio antenna signal	Input	—	—	—

TEL ADAPTER UNIT

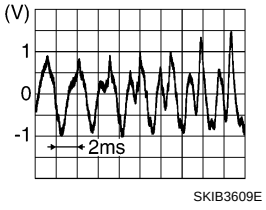
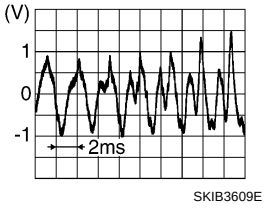
Reference Value

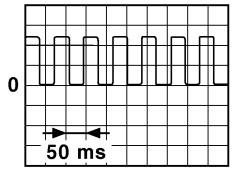
INFOID:0000000006523931

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (BR)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
3 (W)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
7 (B)	8	Microphone signal	Input	Ignition switch ON	Give a voice.	
9 (BR)	10 (Y)	Sound signal (TEL voice, voice guidance)	Output	Ignition switch ON	During voice guide output with the switch pressed.	
20 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
22 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V

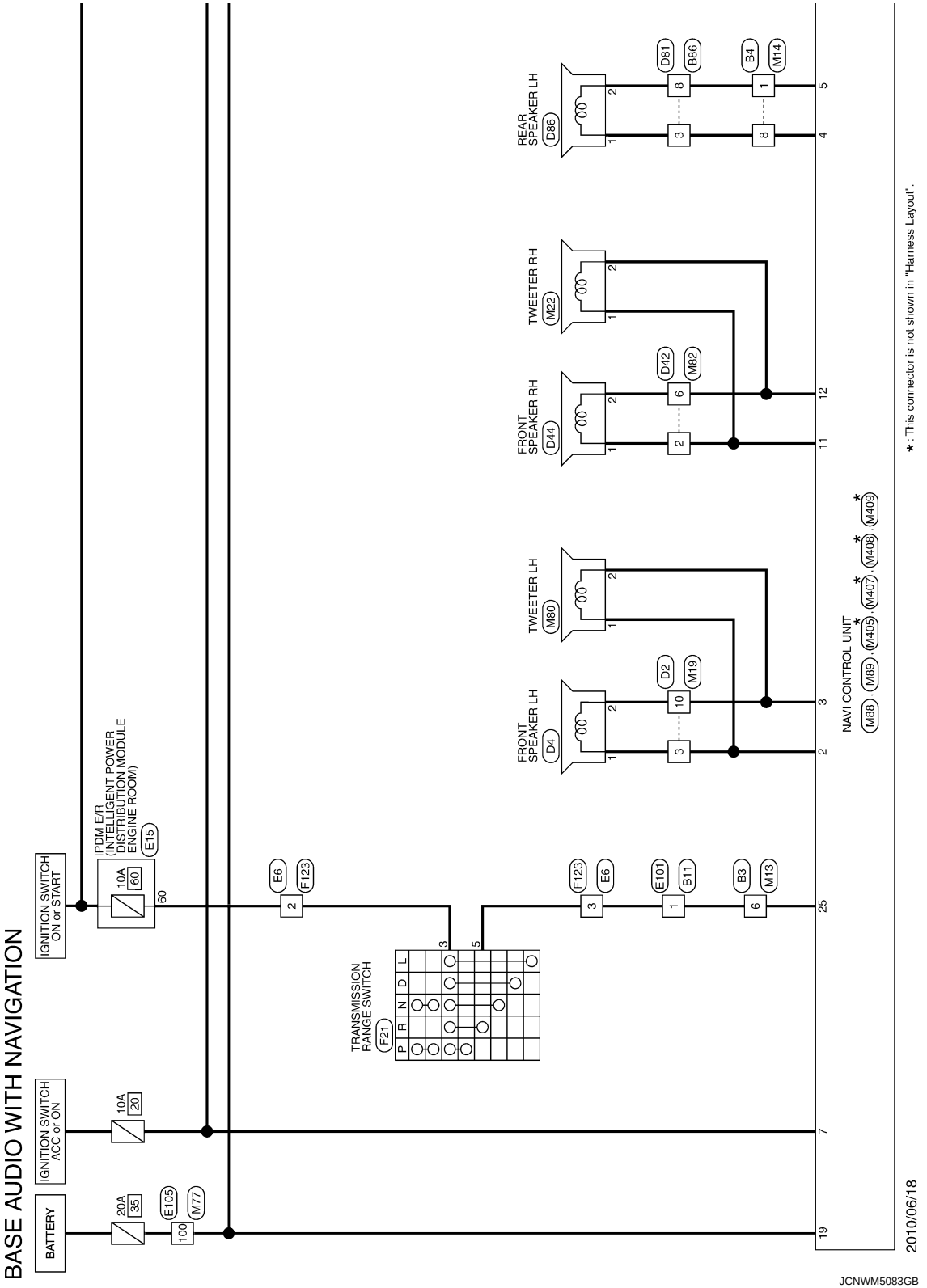
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
23 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
27 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
28 (G)	Ground	Vehicle speed signal (2-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0015GB
29 (W)	Ground	Microphone power supply	Output	Ignition switch ON	—	5.0 V
33	—	TEL antenna signal	Input	—	Not connected to TEL antenna connector.	5.0 V
34	—	Shield	—	—	—	—
35 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
36 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
39 (LG)	—	Data line	—	—	—	—
40 (LG)	—	Data line	—	—	—	—
41 (SB)	—	Data line	—	—	—	—
42 (SB)	—	Data line	—	—	—	—

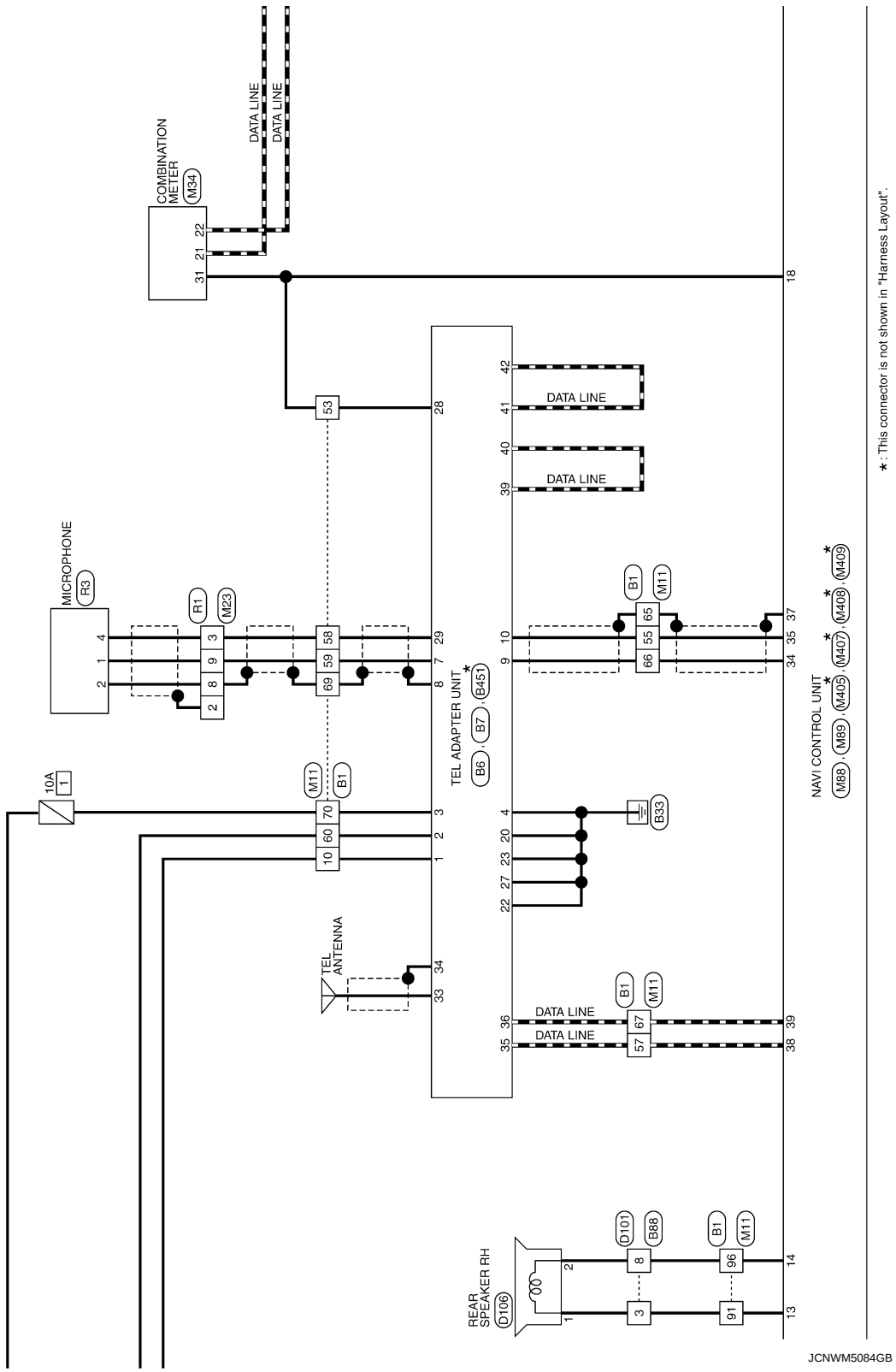
WIRING DIAGRAM

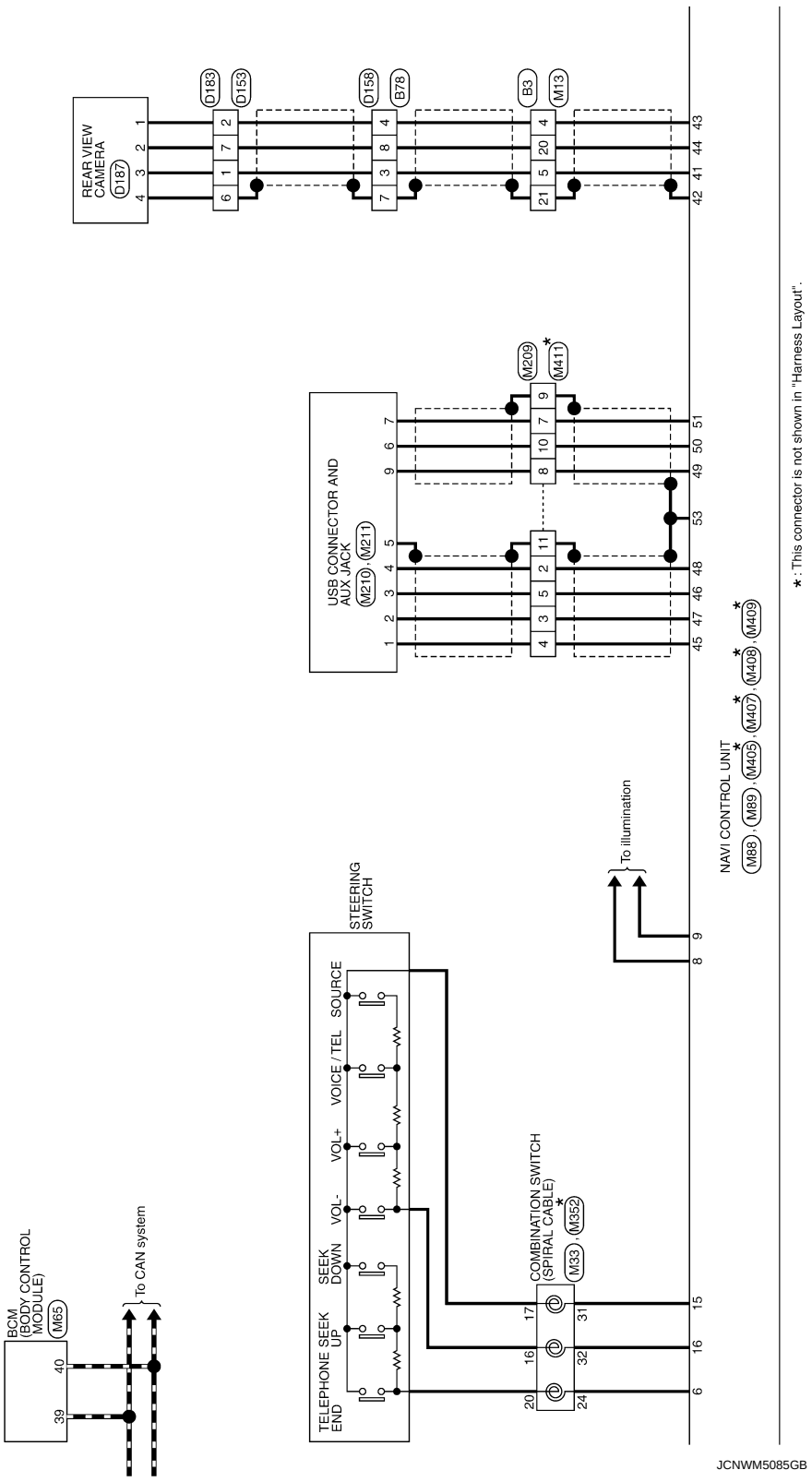
BASE AUDIO WITH NAVIGATION

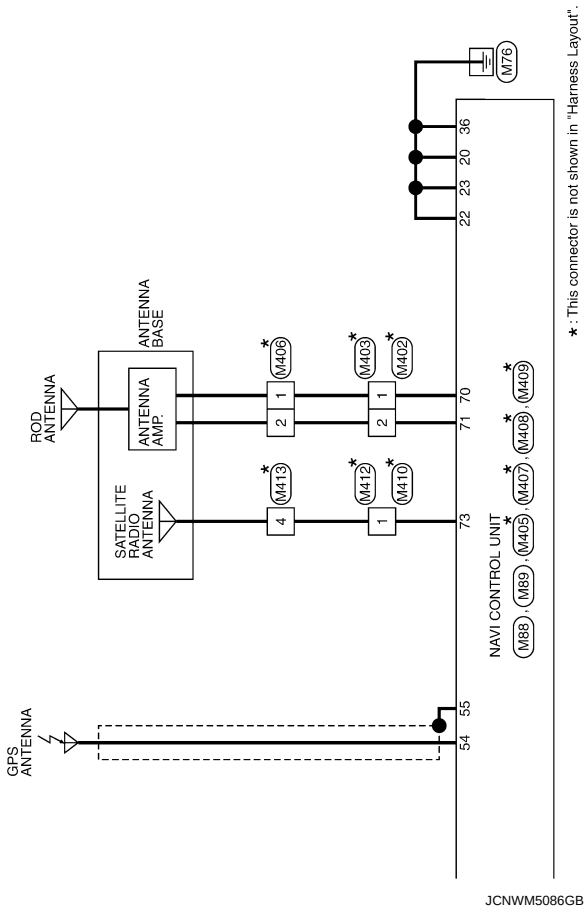
Wiring Diagram

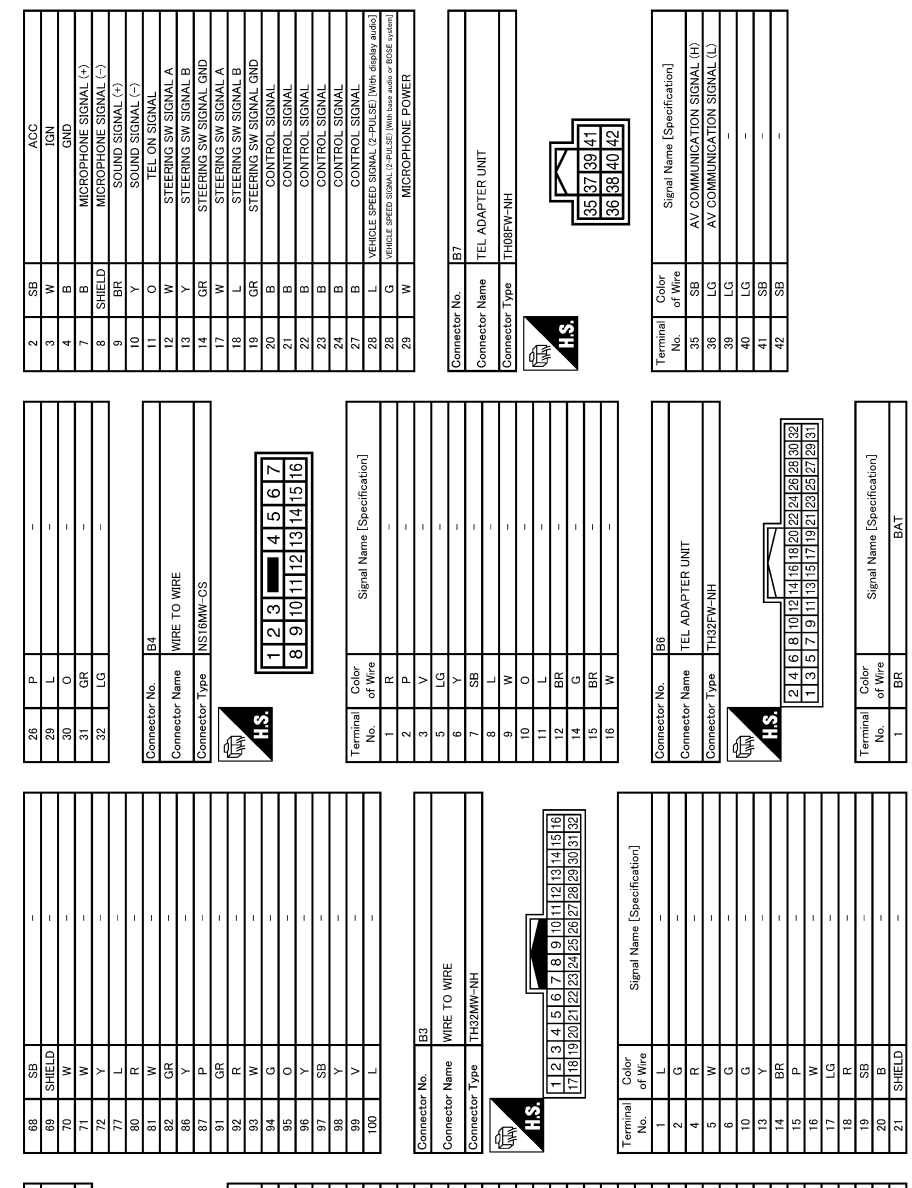
INFOID:0000000006276024




COMBINATION METER
M34
DATA LINE
DATA LINE
DATA LINE
DATA LINE
DATA LINE
DATA LINE
MICROPHONE
R3
R1
M23
TEL ADAPTER UNIT
B6
B7
B451
NAVI CONTROL UNIT
M88
M89
M405
M407
M408
M409
10A
TEL ANTENNA
B33
REAR SPEAKER RH
D106
D101
B88
M11
B1
53
70
60
10
58
59
69
67
57
65
55
66
96
91
★: This connector is not shown in "Harness Layout".
JCNWM5084GB

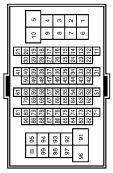

REAR VIEW CAMERA
D187
D183
D153
D158
B78
B3
M13
USB CONNECTOR AND AUX JACK
M210, M211
M209
M411
NAVI CONTROL UNIT
M88, M89, M405, M407, M408, M409
To illumination
STEERING SWITCH
TELEPHONE SEEK UP
SEEK DOWN
VOL-
VOL+
VOICE / TEL
SOURCE
END
COMBINATION SWITCH (SPIRAL CABLE)
M33, M352
BCM (BODY CONTROL MODULE)
M65
To CAN system
★: This connector is not shown in "Harness Layout".
JCNWM5085GB


M76
36
20
23
22
ANTENNA BASE
ROD ANTENNA
ANTENNA AMP.
SATELLITE RADIO ANTENNA
M406
M403
M402
M413
M412
M410
1
2
4
70
71
73
NAVI CONTROL UNIT
M409
M408
M407
M405
M88
M89
GPS ANTENNA
55
54
★: This connector is not shown in "Harness Layout".
JCNWM5086GB


BASE AUDIO WITH NAVIGATION
Connector No. B1
Connector Name WIRE TO WIRE
Connector Type TH80MW-CS16-TM4
H.S.
Terminal No. | Color of Wire | Signal Name [Specification]
1 W –
2 BR –
3 G –
4 L –
6 BR –
7 Y –
8 LG –
9 BR –
10 BR –
21 R –
35 SHIELD –
36 R –
37 LG –
38 SHIELD –
39 O –
40 G –
41 R –
45 L –
46 W –
47 SHIELD –
48 V –
49 W –
50 SHIELD –
52 L –
53 L – [With display audio]
53 G – [With base audio or BOSE system]
54 O –
55 Y –
56 LG –
57 SB –
58 W –
59 B –
60 SB –
62 GR –
63 W –
65 SHIELD –
66 BR –
67 LG –
68 SB –
69 SHIELD –
70 W –
71 W –
72 Y –
77 L –
80 R –
81 W –
82 GR –
86 Y –
87 P –
91 GR –
92 R –
93 W –
94 G –
95 O –
96 Y –
97 SB –
98 Y –
99 V –
100 L –
Connector No. B3
Connector Name WIRE TO WIRE
Connector Type TH32MW-NH
H.S.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
Terminal No. | Color of Wire | Signal Name [Specification]
1 L –
2 G –
4 R –
5 W –
6 G –
10 G –
13 Y –
14 BR –
15 P –
16 W –
17 LG –
18 R –
19 SB –
20 B –
21 SHIELD –
26 P –
29 L –
30 O –
31 GR –
32 LG –
Connector No. B4
Connector Name WIRE TO WIRE
Connector Type NS16MW-CS
H.S.
1 2 3 4 5 6 7
8 9 10 11 12 13 14 15 16
Terminal No. | Color of Wire | Signal Name [Specification]
1 R –
2 P –
3 V –
5 LG –
6 Y –
7 SB –
8 L –
9 W –
10 O –
11 L –
12 BR –
14 G –
15 BR –
16 W –
Connector No. B6
Connector Name TEL ADAPTER UNIT
Connector Type TH32FW-NH
H.S.
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31
Terminal No. | Color of Wire | Signal Name [Specification]
1 BR BAT
2 SB ACC
3 W IGN
4 B GND
7 B MICROPHONE SIGNAL (+)
8 SHIELD MICROPHONE SIGNAL (–)
9 BR SOUND SIGNAL (+)
10 Y SOUND SIGNAL (–)
11 O TEL ON SIGNAL
12 W STEERING SW SIGNAL A
13 Y STEERING SW SIGNAL B
14 GR STEERING SW SIGNAL GND
17 W STEERING SW SIGNAL A
18 L STEERING SW SIGNAL B
19 GR STEERING SW SIGNAL GND
20 B CONTROL SIGNAL
21 B CONTROL SIGNAL
22 B CONTROL SIGNAL
23 B CONTROL SIGNAL
24 B CONTROL SIGNAL
27 B CONTROL SIGNAL
28 L VEHICLE SPEED SIGNAL (2-PULSE) [With display audio]
28 G VEHICLE SPEED SIGNAL (2-PULSE) [With base audio or BOSE system]
29 W MICROPHONE POWER
Connector No. B7
Connector Name TEL ADAPTER UNIT
Connector Type TH08FW-NH
H.S.
35 37 39 41
36 38 40 42
Terminal No. | Color of Wire | Signal Name [Specification]
35 SB AV COMMUNICATION SIGNAL (H)
36 LG AV COMMUNICATION SIGNAL (L)
39 LG –
40 LG –
41 SB –
42 SB –
JCNWM5087GB

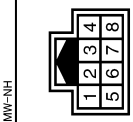
BASE AUDIO WITH NAVIGATION

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



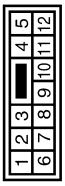
Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
5	L	–
8	R	–
9	Y	–
12	BR	–
13	O	–
22	G	– [For Mexico]
22	SB	– [Except for Mexico]
23	SB	– [For Mexico]
23	G	– [Except for Mexico]
51	GR	–
52	SHIELD	–
53	L	–
54	B	–
62	Y	–
63	R	–
96	G	–

Connector No.	B78
Connector Name	WIRE TO WIRE
Connector Type	TH08MW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	–
3	W	–
4	R	–
7	SHIELD	–
8	B	–

Connector No.	B86
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	L	–
6	G	–
8	R	–
9	LG	–
10	Y	–
11	L	–

Connector No.	B88
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
3	G	–
6	G	–
8	Y	–
9	LG	–
10	Y	–
11	L	–

Connector No.	B451
Connector Name	TEL ADAPTER UNIT
Connector Type	GT16C-IS-HU

Terminal No.	Color of Wire	Signal Name [Specification]
33	–	TEL ANTENNA SIGNAL
34	–	SHIELD

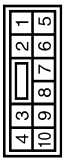
Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
2	R	–
3	B	–
4	O	–
5	Y	–
6	SB	–
7	B	–
8	V	–
9	L	–
10	P	–
13	R	–
14	LG	–
15	W	–
16	BR	–

Connector No.	D4
Connector Name	FRONT SPEAKER LH
Connector Type	NS02FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
2	P	–

Connector No.	D42
Connector Name	WIRE TO WIRE
Connector Type	NS10FW-CS



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

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BASE AUDIO WITH NAVIGATION

Connector No.	D44
Connector Name	FRONT SPEAKER RH
Connector Type	NS02FW-CS

H.S.

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

Connector No.	D81
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	L	–
6	G	–
8	R	–
9	LG	–
10	Y	–
11	L	–

Connector No.	D86
Connector Name	REAR SPEAKER LH
Connector Type	NS02FW-CS

H.S.

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

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	GR	–
6	G	–
8	Y	–
9	LG	–
10	W	–
11	L	–

Connector No.	D106
Connector Name	REAR SPEAKER RH
Connector Type	NS02FW-CS

H.S.

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

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Type	NS12FBR-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	W	–
4	SB	–
5	SB	–
6	SHIELD	–
7	B	–
8	LG	–
9	V	–
10	R	–
11	O	–
12	G	–

Connector No.	D158
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-NH

H.S.

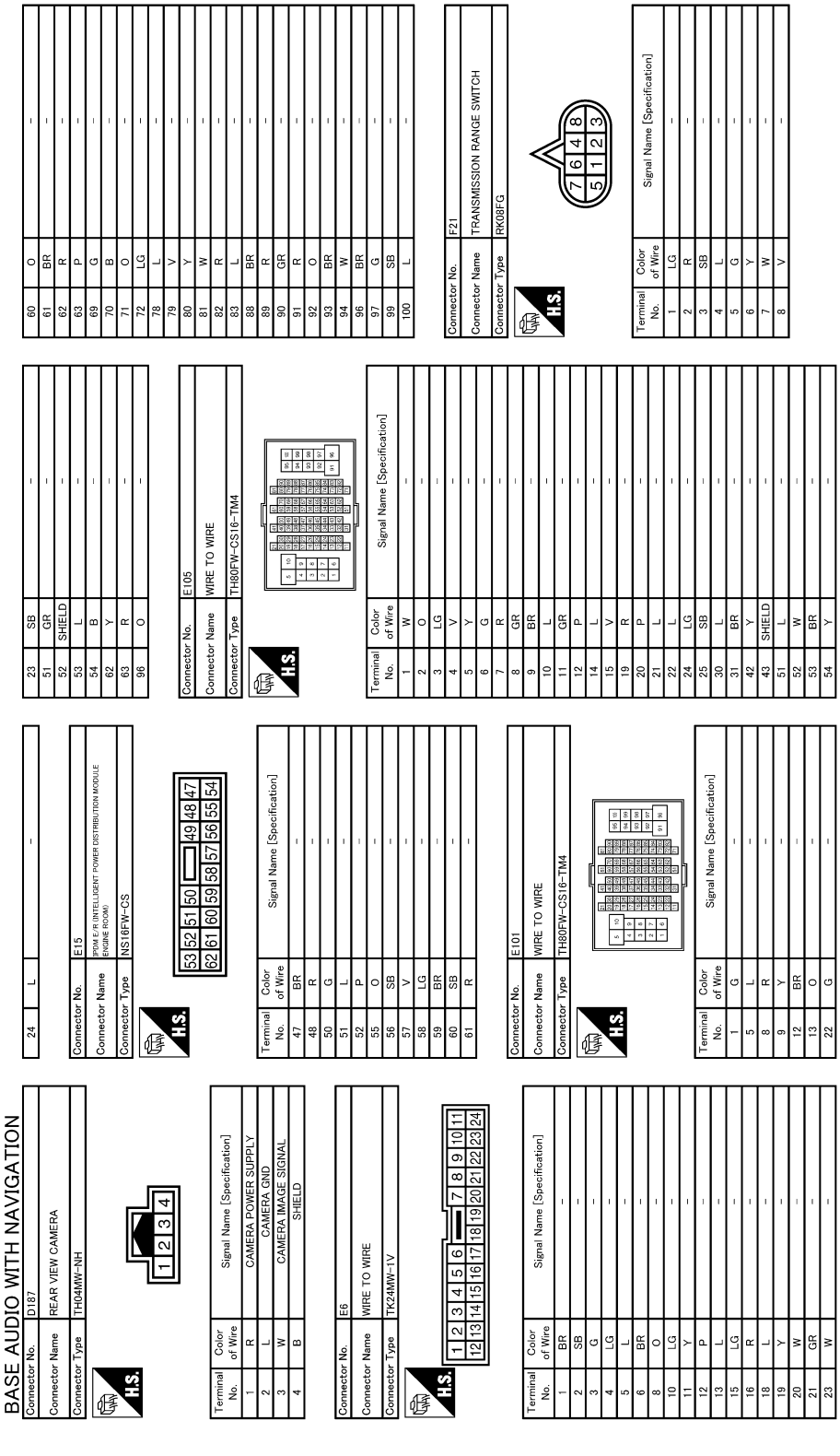
Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	–
3	W	–
4	R	–
7	SHIELD	–
8	B	–

Connector No.	D183
Connector Name	WIRE TO WIRE
Connector Type	NS12MBR-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	W	–
4	SB	–
5	SB	–
6	B	–
7	L	–
8	LG	–
9	V	–
10	R	–
11	O	–
12	G	–

JCNWM5089GB


BASE AUDIO WITH NAVIGATION
Connector No. D187
Connector Name REAR VIEW CAMERA
Connector Type TH04MW-NH
H.S.
1 2 3 4
Terminal No. | Color of Wire | Signal Name [Specification]
1 | R | CAMERA POWER SUPPLY
2 | L | CAMERA GND
3 | W | CAMERA IMAGE SIGNAL
4 | B | SHIELD
Connector No. E6
Connector Name WIRE TO WIRE
Connector Type TK24MW-1V
H.S.
1 2 3 4 5 6 7 8 9 10 11
12 13 14 15 16 17 18 19 20 21 22 23 24
Terminal No. | Color of Wire | Signal Name [Specification]
1 | BR | –
2 | SB | –
3 | G | –
4 | LG | –
5 | L | –
6 | BR | –
8 | O | –
10 | LG | –
11 | Y | –
12 | P | –
13 | L | –
15 | LG | –
16 | R | –
18 | L | –
19 | Y | –
20 | W | –
21 | GR | –
23 | W | –
24 | L | –
Connector No. E15
Connector Name BCM (F, R) (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type NS16FW-CS
H.S.
53 52 51 50 49 48 47
62 61 60 59 58 57 56 55 54
Terminal No. | Color of Wire | Signal Name [Specification]
47 | BR | –
48 | R | –
50 | G | –
51 | L | –
52 | P | –
55 | O | –
56 | SB | –
57 | V | –
58 | LG | –
59 | BR | –
60 | SB | –
61 | R | –
Connector No. E101
Connector Name WIRE TO WIRE
Connector Type TH80FW-CS16-TM4
H.S.
Terminal No. | Color of Wire | Signal Name [Specification]
1 | G | –
5 | L | –
8 | R | –
9 | Y | –
12 | BR | –
13 | O | –
22 | G | –
24 | L | –
Connector No. E105
Connector Name WIRE TO WIRE
Connector Type TH80FW-CS16-TM4
H.S.
Terminal No. | Color of Wire | Signal Name [Specification]
1 | W | –
2 | O | –
3 | LG | –
4 | V | –
5 | Y | –
6 | G | –
7 | R | –
8 | GR | –
9 | BR | –
10 | L | –
11 | GR | –
12 | P | –
14 | L | –
15 | V | –
19 | R | –
20 | P | –
21 | L | –
22 | L | –
24 | LG | –
25 | SB | –
30 | L | –
31 | BR | –
42 | Y | –
43 | SHIELD | –
51 | L | –
52 | W | –
53 | BR | –
54 | Y | –
23 | SB | –
51 | GR | –
52 | SHIELD | –
53 | L | –
54 | B | –
62 | Y | –
63 | R | –
96 | O | –
60 | O | –
61 | BR | –
62 | R | –
63 | P | –
69 | G | –
70 | B | –
71 | O | –
72 | LG | –
78 | L | –
79 | V | –
80 | Y | –
81 | W | –
82 | R | –
83 | L | –
88 | BR | –
89 | R | –
90 | GR | –
91 | R | –
92 | O | –
93 | BR | –
94 | W | –
96 | BR | –
97 | G | –
99 | SB | –
100 | L | –
Connector No. F21
Connector Name TRANSMISSION RANGE SWITCH
Connector Type RK08FG
H.S.
7 6 4 8
5 1 2 3
Terminal No. | Color of Wire | Signal Name [Specification]
1 | LG | –
2 | R | –
3 | SB | –
4 | L | –
5 | G | –
6 | Y | –
7 | W | –
8 | V | –
24 | L | –
JCNWM5090GB

BASE AUDIO WITH NAVIGATION

Connector No.	F123
Connector Name	WIRE TO WIRE
Connector Type	TK24FW-1V

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	–
2	SB	–
3	G	–
4	Y	–
5	L	–
6	BR	–
8	O	–
10	P	–
11	R	–
12	P	–
13	L	–
15	LG	–
16	R	–
18	L	–
19	Y	–
20	W	–
21	GR	–
23	W	–
24	L	–

4	LG	–
6	P	–
7	Y	–
8	LG	–
9	P	–
10	Y	–
21	R	–
35	SHIELD	–
36	P	–
37	LG	–
38	SHIELD	–
39	O	–
40	G	–
41	R	–
45	BR	–
46	L	–
47	SHIELD	–
48	V	–
49	W	–
50	SHIELD	–
52	O	–
53	L	–
54	V	–
55	Y	–
56	LG	–
57	SB	–
58	W	–
59	B	–
60	SB	–
62	GR	–
63	BR	–
65	SHIELD	–
66	BR	–
67	LG	–
68	SB	–
69	SHIELD	–
70	LG	–
71	O	–
72	BR	–
77	L	–
80	R	–
81	W	–
82	GR	–
86	Y	–
87	P	–
91	L	–
92	B	–
93	GR	–
94	G	–
95	O	–
96	P	–
97	SB	–

98	GR	–
99	R	–
100	L	–

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

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

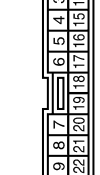
Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	Y	–
4	R	–
5	W	–
6	G	–
10	W	–
13	Y	–
14	O	–
15	W	–
16	V	–
17	LG	–
18	BR	–
19	SB	–
20	B	–
21	SHIELD	–
26	W	–
29	L	–
30	B	–
31	GR	–
32	G	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

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

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

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	BR	–
3	G	–

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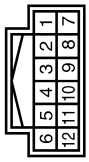
Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

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

Connector No.	M22
Connector Name	TWEETER RH
Connector Type	TK02FBR

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

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH

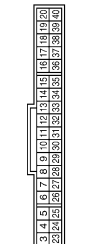


Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
3	W	–
5	R	–
7	P	–
8	SHIELD	–
9	B	–
11	Y	–
12	Y	–

Connector No.	M33
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY-1V

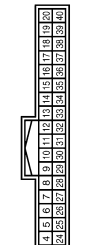
Terminal No.	Color of Wire	Signal Name [Specification]
24	BR	–
25	GR	–
26	SB	–
27	G	–
31	GR	–
32	O	–
33	R	–
34	Y	–

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	BATTERY POWER SUPPLY
2	O	IGNITION SIGNAL
3	B	GROUND
4	B	GROUND
5	BR	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
7	GR	OVERDRIVE CONTROL SWITCH SIGNAL
9	L	PADDLE SHIFTER SHIFT UP SIGNAL
10	G	PADDLE SHIFTER SHIFT DOWN SIGNAL
13	Y	ILLUMINATION CONTROL SIGNAL
15	LG	AIR BAG SIGNAL
16	O	ENGINE COOLANT TEMPERATURE SIGNAL
19	BR	AMBIENT SENSOR SIGNAL
20	SB	AMBIENT SENSOR GROUND
21	L	CAN-H
22	P	CAN-L
24	B	FUEL LEVEL SENSOR SIGNAL GROUND
25	SB	ALTERNATOR SIGNAL
26	V	PARKING BRAKE SWITCH SIGNAL
27	BR	BRAKE FLUID LEVEL SWITCH SIGNAL
28	B	SECURITY SIGNAL
29	W	WASHER LEVEL SWITCH SIGNAL
30	Y	VEHICLE SPEED SIGNAL (2-PULSE)
31	L	VEHICLE SPEED SIGNAL (8-PULSE)
34	G	FUEL LEVEL SENSOR SIGNAL
35	O	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
36	G	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)
37	P	NON-MANUAL MODE SIGNAL
38	O	MANUAL MODE SHIFT DOWN SIGNAL
39	V	MANUAL MODE SHIFT UP SIGNAL
40	LG	MANUAL MODE SIGNAL

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	KEY RING OUTPUT
2	G	INPUT 5
3	Y	INPUT 4
4	W	INPUT 3
5	R	INPUT 2
6	P	INPUT 1
7	L	KEY CYC UNLOCK
8	R	KEY CYL LOCK SW
9	R	BRAKE SW
10	SB	RR DEF SW
11	SB	ACC
12	P	DR SW AS
13	LG	DR SW RR
14	G	AUTO LIGHT SENS INPUT
17	W	SENS POWER SUPPLY
18	O	KEYLESS TUNER SENS GND
19	V	KEYLESS TUNER POWER
20	GR	KEYLESS TUNER SIGNAL
21	G	IMMOBI ANT (CLOCK)
23	B	SECURITY IND OUT PUT
25	BR	IMMOBI ANT (RX, TX)
27	Y	AIRCON SW
28	LG	BLOWER FAN SW
29	W	HAZARD SW
30	G	BACK DOOR OPEN SW
32	BR	OUTPUT 5
33	GR	OUTPUT 4
34	L	OUTPUT 3
35	B	OUTPUT 2
36	V	OUTPUT 1
37	LG	KEY SW
38	G	IGN
39	L	CAN-H
40	P	CAN-L

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Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	–
2	O	–
3	LG	–
4	Y	–
5	Y	–
6	G	–
7	R	–
8	GR	–
9	BR	–
10	L	–
11	GR	–
12	P	–
14	SB	–
15	V	–
19	R	–
20	P	–
21	O	–
22	L	–
24	BR	–
25	W	–
30	L	–
31	W	–
42	O	–
43	SHIELD	–
51	W	–
52	SB	–
53	L	–
54	Y	–
60	O	–
61	BR	–
62	G	–
63	P	–
69	W	–
70	B	–
71	P	–
72	O	–
78	SB	–
79	V	–
80	L	–
81	W	–
82	B	–
83	LG	–
88	BR	–
89	G	–
90	GR	–
91	R	–
92	L	–
93	P	–
94	W	–
96	BR	–
97	G	–
99	SB	–
100	Y	–

Connector No.	M80
Connector Name	TWEETER LH
Connector Type	TK02FBR

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	– [With BOSE system]
1	B	– [With base audio or display audio]
2	GR	– [With BOSE system]
2	P	– [With base audio or display audio]

Connector No.	M82
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	O	–
3	W	–
4	G	–
5	V	–
6	W	–
10	SB	–

Connector No.	M88
Connector Name	NAVI CONTROL UNIT
Connector Type	TH18FW-CS2

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	AMP. ON SIGNAL
2	R	SOUND SIGNAL FRONT LH (+) [With BOSE system]
2	R	SOUND SIGNAL FRONT SPEAKER LH (+) [Without BOSE system]
3	G	SOUND SIGNAL FRONT LH (–) [With BOSE system]
3	G	SOUND SIGNAL FRONT SPEAKER LH (–) [Without BOSE system]
4	V	SOUND SIGNAL REAR LH (+) [With BOSE system]
4	V	SOUND SIGNAL REAR SPEAKER LH (+) [Without BOSE system]
5	LG	SOUND SIGNAL REAR LH (–) [With BOSE system]
5	LG	SOUND SIGNAL REAR SPEAKER LH (–) [Without BOSE system]
6	BR	STRG SW A
7	SB	ACC
8	Y	ILLUMINATION CONTROL SIGNAL (–)
9	R	ILLUMINATION CONTROL SIGNAL (+)
11	O	SOUND SIGNAL FRONT RH (+) [With BOSE system]
11	O	SOUND SIGNAL FRONT SPEAKER RH (+) [Without BOSE system]
12	W	SOUND SIGNAL FRONT (–) [With BOSE system]
12	W	SOUND SIGNAL FRONT SPEAKER RH (–) [Without BOSE system]
13	L	SOUND SIGNAL REAR RH (+) [With BOSE system]
13	L	SOUND SIGNAL REAR SPEAKER RH (+) [Without BOSE system]
14	P	SOUND SIGNAL REAR RH (–) [With BOSE system]
14	P	SOUND SIGNAL REAR SPEAKER RH (–) [Without BOSE system]
15	GR	STRG SW GND
16	O	STRG SW B
18	L	VEHICLE SPEED (8–PULSE)
19	Y	BATTERY
20	B	GND

Connector No.	M89
Connector Name	NAVI CONTROL UNIT
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
21	B	EQ 1
22	B	EQ 2
23	B	EQ 3
25	G	REVERSE SIGNAL
34	BR	SOUND SIGNAL (+)
35	Y	SOUND SIGNAL (–)
36	B	GND
37	SHIELD	SHIELD
38	SB	AV COMM (H)
39	LG	AV COMM (L)
41	W	CAMERA IMAGE SIGNAL
42	SHIELD	SHIELD
43	R	CAMERA POWER SUPPLY
44	B	CAMERA GND

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BASE AUDIO WITH NAVIGATION

Connector No.	M209
Connector Name	WIRE TO WIRE
Connector Type	GT17VSN-10DP-HU

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–
3	L	–
4	G	–
5	R	–
7	R	–
8	W	–
9	SHIELD	–
10	G	–
11	SHIELD	–

Connector No.	M210
Connector Name	USB CONNECTOR AND AUX JACK
Connector Type	GT17H-4S-HU

H.S.

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

Connector No.	M211
Connector Name	USB CONNECTOR AND AUX JACK
Connector Type	TK04FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
6	G	AUX SOUND SIGNAL RH (+)
7	R	AUX SOUND SIGNAL GND
9	W	AUX SOUND SIGNAL LH (+)

Connector No.	M352
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–
21	–	–

Connector No.	M402
Connector Name	WIRE TO WIRE
Connector Type	GT13SC-1/1S-HU

H.S.

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

Connector No.	M403
Connector Name	WIRE TO WIRE
Connector Type	GT13SCN-1/1PP-HU

H.S.

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

Connector No.	M405
Connector Name	NAVI CONTROL UNIT
Connector Type	GT13SH-2/1S-HU

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
70	–	ANTENNA AMP. ON SIGNAL
71	–	ANTENNA SIGNAL

Connector No.	M406
Connector Name	ANTENNA BASE
Connector Type	GT13SSN-1/1PP-HU

H.S.

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

Connector No.	M407
Connector Name	NAVI CONTROL UNIT
Connector Type	FAKRA PLUG

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
73	–	–

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BASE AUDIO WITH NAVIGATION

Connector No.	M408
Connector Name	NAVI CONTROL UNIT
Connector Type	GT17S-8DS-HU

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
45	G	USB GND
46	R	USB D− SIGNAL
47	L	USB D+ SIGNAL
48	W	V BUS SIGNAL
49	W	AUX SOUND SIGNAL LH (+)
50	G	AUX SOUND SIGNAL RH (+)
51	R	AUX SOUND SIGNAL GND
53	SHIELD	SHIELD

Connector No.	M409
Connector Name	NAVI CONTROL UNIT
Connector Type	FAKRA

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
54	–	GPS ANTENNA SIGNAL
55	–	SHIELD

Connector No.	M410
Connector Name	WIRE TO WIRE
Connector Type	GT16C-1S-HU

H.S.

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

Connector No.	M411
Connector Name	WIRE TO WIRE
Connector Type	GT17VS-10DS-HU

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–
3	L	–
4	G	–
5	R	–
7	R	–
8	W	–
9	SHIELD	–
10	G	–
11	SHIELD	–

Connector No.	M412
Connector Name	WIRE TO WIRE
Connector Type	GT16C-1PP-HU

H.S.

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

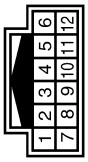
Connector No.	M413
Connector Name	ANTENNA BASE
Connector Type	GT16C-1PP-HU

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
4	–	–

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	B/Y	–
2	SHIELD	–
3	W	–
5	GR	–

7	B/R	–
8	SHIELD	–
9	B	–
11	Y	–
12	O	–

Connector No.	R3
Connector Name	MICROPHONE
Connector Type	TK04FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	MICROPHONE SIGNAL (+)
2	R	MICROPHONE SIGNAL (−)
4	W	MICROPHONE POWER

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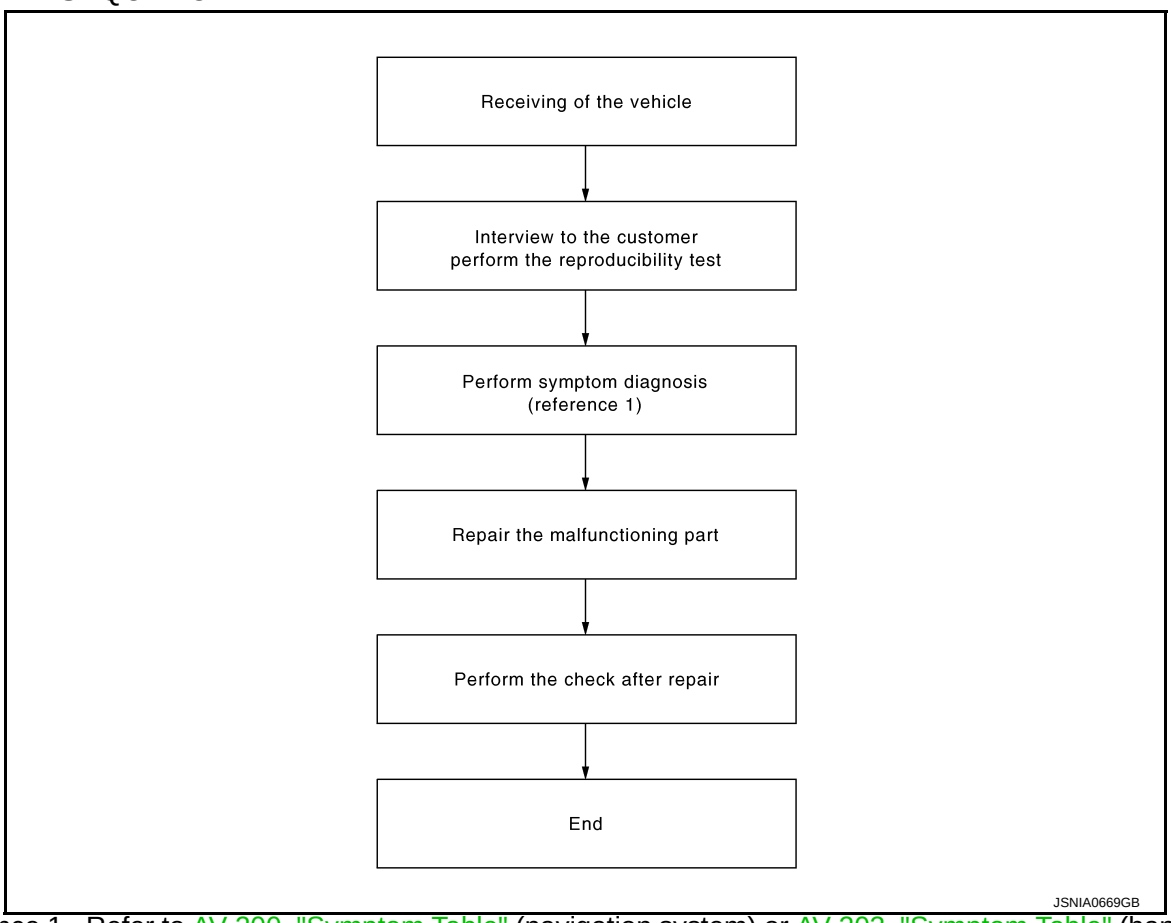
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000006398142

OVERALL SEQUENCE



Reference 1···Refer to AV-200, "Symptom Table" (navigation system) or AV-203, "Symptom Table" (hands-free phone system).

DETAILED FLOW

1.CHECK SYMPTOM

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

>> GO TO 2.

2.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-200, "Symptom Table" (navigation system) or AV-203, "Symptom Table" (hands-free phone system).

>> GO TO 3.

3.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

>> GO TO 4.

4. FINAL CHECK

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

Is there any symptom?

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

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

NAVI CONTROL UNIT

NAVI CONTROL UNIT : Diagnosis Procedure

INFOID:0000000006276028

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is inspection result OK?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between NAVI control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M88	19	OFF	Battery voltage
ACC power supply	M88	7	ACC	Battery voltage

Is inspection result OK?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M88	20	OFF	Existed.
	M89	36		

Is inspection result OK?

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

TEL ADAPTER UNIT

TEL ADAPTER UNIT : Diagnosis Procedure

INFOID:0000000006369732

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B6	1	OFF	Battery voltage
ACC power supply		2	ACC	

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B6	4	OFF	Existed

Is the inspection result normal?

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

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000006417068

TEL adapter unit supplies power to microphone. The microphone transmits the sound voice to the TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006276030

1.CHECK CONTINUITY BETWEEN TEL ADAPTER UNIT AND MICROPHONE CIRCUIT

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

TEL adapter unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
B6	7	R3	1	Existed
	8		2	
	29		4	

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	7		Not existed
	29		

Is inspection result OK?

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

2.CHECK VOLTAGE MICROPHONE VCC

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

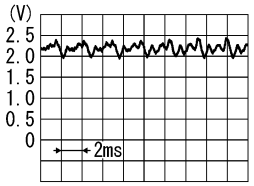
(+)		(–)	Voltage (Approx.)
TEL adapter unit			
Connector	Terminal		
B6	29	Ground	5.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace TEL adapter unit. Refer to AV-216, "Exploded View".

3.CHECK MICROPHONE SIGNAL

1. Turn ignition switch OFF.
2. Connect microphone connector.
3. Turn ignition switch ON.
4. Check signal between TEL adapter unit harness connector.

TEL adapter unit				Condition	Reference value
(+)		(–)			
Connector	Terminal	Connector	Terminal		
B6	7	B6	8	Give a voice.	 PKIB5037J

Is inspection result OK?

YES >> Replace TEL adapter unit. Refer to AV-216, "Exploded View".
NO >> Replace microphone. Refer to AV-218, "Exploded View".

CONTROL SIGNAL CIRCUIT

Description

INFOID:0000000006369733

TEL adapter unit identifies the vehicle model according to the control signal and performs the control.

Diagnosis Procedure

INFOID:0000000006570058

1.CHECK CONTINUITY CONTROL SIGNAL CIRCUIT

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

TEL adapter unit			Continuity
Connector	Terminals		
B6	20	Ground	Existed
	22		
	23		
	27		

Is the inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-216, "Exploded View".
NO >> Repair harness or connector.

CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006276031

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

Diagnosis Procedure

INFOID:0000000006276032

1.CHECK CONTINUITY CAMERA POWER SUPPLY CIRCUIT

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

NAVI control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M89	43	D187	1	Existed

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

NAVI control unit		Ground	Continuity
Connector	Terminal		
M89	43		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE CAMERA POWER SUPPLY

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

(+)		(–)	Condition	Voltage (Approx.)
NAVI control unit				
Connector	Terminal			
M89	43	Ground	Shift position is in “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace NAVI control unit. Refer to AV-209, "Removal and Installation".

3.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

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

NAVI control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M89	41	D187	3	Existed

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

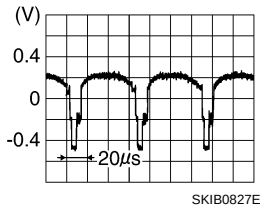
NAVI control unit		Ground	Continuity
Connector	Terminal		
M89	41		Not existed

Is inspection result normal?

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

4. CHECK CAMERA IMAGE SIGNAL

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

(+)		(–)	Condition	Reference value
NAVI control unit				
Connector	Terminal			
M89	41	Ground	At rear view camera image is displayed.	

SKIB0827E

Is inspection result normal?

YES >> Replace NAVI control unit. Refer to AV-209, "Removal and Installation".
NO >> Replace rear view camera. Refer to AV-220, "Removal and Installation".

STEERING SWITCH SIGNAL A CIRCUIT

Description

INFOID:0000000006276033

Transmits the steering switch signal to NAVI control unit.

Diagnosis Procedure

INFOID:0000000006276034

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT

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

NAVI control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M88	6	M33	24	Existed

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

NAVI control unit		Ground	Continuity
Connector	Terminal		
M88	6		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK NAVI CONTROL UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
NAVI control unit				
Connector	Terminal	Connector	Terminal	
M88	6	M88	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace NAVI control unit. Refer to AV-209, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-194, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-219, "Exploded View".

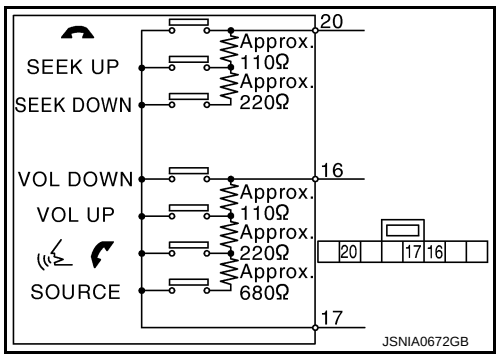
Component Inspection

INFOID:0000000006398152

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH SIGNAL B CIRCUIT

Description

INFOID:0000000006276036

Transmits the steering switch signal to NAVI control unit.

Diagnosis Procedure

INFOID:0000000006276037

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

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

NAVI control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M88	16	M33	32	Existed

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

NAVI control unit		Ground	Continuity
Connector	Terminal		
M88	16		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK NAVI CONTROL UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
NAVI control unit				
Connector	Terminal	Connector	Terminal	
M88	16	M88	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace NAVI control unit. Refer to AV-209, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-196, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-219, "Exploded View".

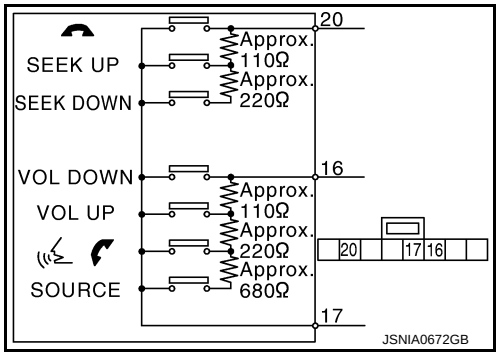
Component Inspection

INFOID:0000000006398153

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH GROUND CIRCUIT

Description

INFOID:0000000006276039

Transmits the steering switch signal to NAVI control unit.

Diagnosis Procedure

INFOID:0000000006276040

1.CHECK STEERING SWITCH SIGNAL GROUND CIRCUIT

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

NAVI control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M88	15	M33	31	Existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK GROUND CIRCUIT

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

NAVI control unit		Ground	Continuity
Connector	Terminal		
M88	15		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace NAVI control unit. Refer to AV-209, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-198, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-219, "Exploded View".

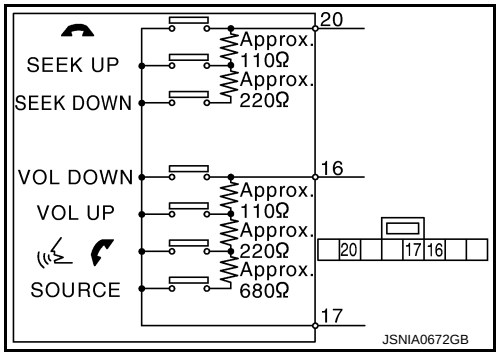
Component Inspection

INFOID:0000000006398154

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



SYMPTOM DIAGNOSIS

NAVIGATION SYSTEM

Symptom Table

INFOID:0000000006276042

RELATED TO NAVIGATION

NOTE:

Combined part of AV switch and NAVI control unit.

Symptoms	Check items		Probable malfunction location / Action to take
Display does not turn ON.	All switches cannot be operated.		NAVI control unit power supply and ground circuit. Refer to AV-187, "NAVI CONTROL UNIT : Diagnosis Procedure".
	All switches can be operated.		NAVI control unit
All switches cannot be operated.	Display does not turn ON.		NAVI control unit power supply and ground circuit. Refer to AV-187, "NAVI CONTROL UNIT : Diagnosis Procedure".
	Display turn ON.		NAVI control unit
Only specified switch cannot be operated.	–		NAVI control unit
Map screen is not displayed. (RGB image other than map is normal.)	• Check that the map SD-card is in the SD-card slot. • Check “SD Card Access” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“OK” is displayed for “SD Card Access”.	Map SD-card
		“OK” is not displayed for “SD Card Access”.	• NAVI control unit • Map SD-card
Voice guidance is not heard.	Audio sound is normal.		NAVI control unit
Display does not dim.	Check “Illumination Signal” in “SERVICE SYSTEM STATUS”, “SERVICE MENU”.	“Illumination Signal” reaches 100% when the lighting switch is ON.	NAVI control unit
		“Illumination Signal” does not reach 100% when the lighting switch is ON.	Illumination control signal circuit
Vehicle icon does not move.	Check “Speed Signal” in “SERVICE SYSTEM STATUS”, “SERVICE MENU”.	A value of “Speed Signal” changes according to vehicle speeds.	NAVI control unit
		A value of “Speed Signal” does not change according to vehicle speeds.	Vehicle speed signal circuit
Map matching is not complete GPS icon is not displayed	Check “GPS Antenna” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“Connected” is displayed for “GPS Antenna”.	NAVI control unit
		“Connected” is not displayed for “GPS Antenna”.	GPS antenna
Traffic information (XM Traffic) is not received.	Check “XM Antenna” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“Detected” is displayed for “XM Antenna”.	NAVI control unit
		“Detected” is not displayed for “XM Antenna”.	• Antenna base • Antenna feeder

RELATED TO AUDIO

Symptoms	Check items		Probable malfunction location / Action to take
Audio sound is not heard.	No sound from all speakers.		NAVI control unit power supply and ground circuit. Refer to AV-187, "NAVI CONTROL UNIT : Diagnosis Procedure".
	Sound is heard only from specific places.		Sound signal circuit of suspect system.
AM/FM radio is not received.	• Other audio sounds are normal. • Check “Radio Antenna” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“OK” is displayed for “Radio Antenna”.	NAVI control unit
		“OK” is not displayed for “Radio Antenna”.	• Antenna amp. ON signal circuit. • Antenna base • Antenna feeder
Speed sensitive volume system does not work.	Check “Speed Signal” in “SERVICE SYSTEM STATUS”, “SERVICE MENU”.	A value of “Speed Signal” changes according to vehicle speeds.	NAVI control unit
		A value of “Speed Signal” does not change according to vehicle speeds.	Vehicle speed signal circuit
Traffic information (XM Traffic) is not received.	Check “XM Antenna” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“Detected” is displayed for “XM Antenna”.	NAVI control unit
		“Detected” is not displayed for “XM Antenna”.	• Antenna base • Antenna feeder

RELATED TO USB

NOTE:

Check that there is no malfunction of USB equipment main body before performing a diagnosis.

Symptoms	Check items		Probable malfunction location / Action to take
iPod® or USB memory can not be recognized.	With iPod or USB memory Connected, check “USB Device” in “SERVICE STATUS”, “SERVICE MENU”.	iPod or USB memory name is displayed for “USB Device”.	• USB and AUX harness • USB connector and AUX jack • NAVI control unit
		“Removed” is displayed for “USB Device”.	• USB and AUX harness • USB connector and AUX jack

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

RELATED TO AUXILIARY INPUT

NOTE:

Check that there is no malfunction of AUX equipment main body before performing a diagnosis.

Symptoms	Check items	Probable malfunction location
No voice sound is heard when AUX mode is selected.	Voice sound is heard when other modes are selected.	• USB and AUX harness • USB connector and AUX jack

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. Refer to AV-198, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch
“SEEK UP”, “SEEK DOWN” and “☎” switches are not operated.	Steering switch signal A circuit. Refer to AV-194, "Diagnosis Procedure".

Symptoms	Possible malfunction location / Action to take
“ ”, “VOL UP”, “VOL DOWN” and “SOURCE” switches are not operated.	Steering switch signal B circuit. Refer to AV-196, "Diagnosis Procedure".
The steering switch operates improperly. (The above phenomena excluded.)	• EQ1 circuit • EQ3 circuit

RELATED TO CAMERA

Symptoms	Check items		Probable malfunction location / Action to take
Camera image is not shown.	The guide line display is normal.		• Rear view camera image signal circuit • Rear view camera power supply and ground circuits Refer to AV-192, "Diagnosis Procedure".
The screen is not switched to camera image.	Check “Direction Signal” in “SERVICE SYSTEM STATUS”, “SERVICE MENU”.	“Reverse” is displayed for “Direction Signal” when the shift lever is in R.	NAVI control unit
		“Reverse” is not displayed for “Direction Signal” when the shift lever is in R.	Reverse signal circuit
The guide line display is malfunctioning.	—		• EQ1 circuit • EQ3 circuit

HANDS-FREE PHONE SYMPTOMS

Symptom Table

INFOID:0000000006398146

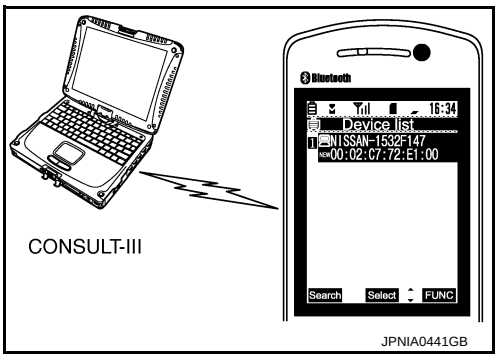
RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is corresponding type (Bluetooth™ enabled) when the hands-free related malfunction vehicle is in service before performing a diagnosis.
- There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or cellular phone. Check to ensure the customer's phone is supported by checking the phone compatibility for the hands-free system.

Simple Check for Bluetooth™ Communication

If cellular phone and TEL adapter unit cannot be connected with Bluetooth™ communication, following procedure allows the technician to judge which device has malfunction.

1. Turn on a cellular phone, not connecting Bluetooth™ communication.
2. Start CONSULT-III, then start Windows®.
3. Set CONSULT-III near a cellular phone.
4. When operated Bluetooth™ registration by cellular phone, check if CONSULT-III* would be displayed on the device name.
   (If other Bluetooth™device is located near cellular phone, a name of the device would be displayed also.)
   NOTE:
   *:Displayed device name is “NISSAN-********”.



- If no device name is displayed, cellular phone is malfunction. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Possible malfunction location/Action to take
Does not recognize cellular phone connection.	Repeat the registration of cellular phone.	TEL adapter unit
Hands-free phone cannot be established.	—	• TEL adapter unit power supply and ground circuit. Refer to AV-187, "TEL ADAPTER UNIT : Diagnosis Procedure". • Control signal circuit Refer to AV-191, "Diagnosis Procedure". • AV communication circuit between NAVI control unit and TEL adapter unit.
The other party's voice cannot be heard by hands-free phone.	Audio system sound is normal.	Sound signal (TEL voice, TEL guidance) circuit
	Audio system sound does not sound.	Refer to AV-200, "Symptom Table".
Originating sound is not heard by the other party with hands-free phone communication.	Voice recognition function is normal.	TEL adapter unit
	Voice recognition function does not work.	Microphone signal circuit. Refer to AV-189, "Diagnosis Procedure".

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. Refer to AV-198, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch. Refer to AV-219, "Exploded View".

Symptoms	Possible malfunction location / Action to take
“SEEK UP”, “SEEK DOWN” and “ ” switches are not operated.	Steering switch signal A circuit. Refer to AV-194, "Diagnosis Procedure".
“ ”, “VOL UP”, “VOL DOWN” and “SOURCE” switches are not operated.	Steering switch signal B circuit. Refer to AV-196, "Diagnosis Procedure".
The steering switch operates improperly. (The above phenomena excluded.)	• EQ1 circuit • EQ3 circuit

NORMAL OPERATING CONDITION

Description

INFOID:0000000006276043

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 display is turned off.	Press "☀/☽" to turn on 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 voice guidance volume level.
No map is displayed on the screen.	The map SD-card is not inserted.	Insert the map SD-card correctly.
	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 AUDIO

- The majority of the audio malfunctions are the result of outside causes (bad CD/cassette, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

NOTE:
- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

Symptom	Cause and Counter measure
Cannot play	Check if the CD was inserted correctly.
	Check if the CD is scratched or dirty.
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than ".MP3", ".WMA", ".mp3", or ".wma" 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 writing applications or other text editing applications.
	Check if the finalization process, such as session close and disc close, is done for the CD.
	Check if the CD is protected by copyright.

Symptom	Cause and Counter measure
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 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 file has been given an extension of ".MP3", ".WMA", ".mp3" or ".wma", or when play is prohibited by copyright protection, the player will skip to the next song.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.

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

NOTE:

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from a time difference between the broadcast waves directly from the station arriving at the antenna and the waves reflected by mountains or buildings.

MAP SD-CARD

Symptom	Possible cause	Possible solution
The message "Error" appears.	The SD-card is not recognized by the system.	Check the map SD-card data. Files can be lost.
		If you see any damage, replace the map SD-card.

RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
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 cancelled.	Turn on the route guidance.
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.
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 a global route calculation based on multiple route calculations.
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 point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets.	Reset the destination to a main or ordinary road, and recalculate the route.

Symptom	Possible cause	Possible solution
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect data on the map SD-card.	Updated information will be included in the next version of the map SD-card.
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 VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads and locations differ between 2D and 3D view.	This is because the quantity of the displayed information is reduced so that the screen does not become difficult to read. There is also a chance that the names of roads or locations may be displayed several times, and that the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is travelling on a new road, the vehicle icon is located on another nearby road.	The system automatically places the vehicle icon on the nearest available road, because the new road is not stored in the map data.	Updated road information will be included in the next version of the map SD-card.
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.
	The map data has an error 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 SD-card.

RELATED TO VOICE GUIDANCE

Symptom	Possible cause	Possible solution
Voice guidance is not available	In some cases, 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 voice guidance ON.
	Route guidance is set to off.	Route guidance is set to ON.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

RELATED TO TRAFFIC INFORMATION

Symptom	Possible cause	Possible solution
The traffic information is not displayed	The traffic information is not set to on.	Set the traffic information to on.
	You are in an area where traffic information is not available	Scroll to an area where traffic information is available
	You have not subscribed to XM NavTraffic or, your subscription to XM NavTraffic has expired.	Check your subscription status of XM NavTraffic.
	The map scale is set at a level where the display of icons is impossible.	Check that the map scale is set at a level in which the display of icons is possible.
With the automatic detour route search ON, no detour route is set to avoid congested areas.	There is no faster route compared to the current route, based on the road network and traffic information.	The automatic detour search is not intended for avoiding traffic jams. It searches for the fasted rote taking into consideration such things as traffic jams.
The route does not avoid road section with traffic information stating it is closed due to road construction.	The navigation system is designed not to avoid this event because the actual period of closure may differ from the declared roadwork period.	Observe the actual road condition and follow the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the detour distance to avoid the closed road section.
Traffic information displayed differs from information from other media (e.g. radio).	Other media may use different information sources.	Observe the actual road conditions and regulations. Always observe safe driving practices and follow all traffic regulations.

RELATED TO TELEPHONE

Symptoms	Cause and Counter measure
System fails to interpret the command correctly.	1. Ensure that the command format is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at a 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. Refer to AV-164, "Diagnosis Description".
The system consistently selects the wrong entry from the phone book.	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.

REMOVAL AND INSTALLATION

NAVI CONTROL UNIT

Removal and Installation

INFOID:0000000006401034

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove NAVI control unit mounting screws.
3. Pull out NAVI control unit, remove harness clip, and then disconnect antenna feeder and harness connectors.
4. Remove NAVI control unit and bracket as a unit.
5. Remove brackets from NAVI control unit.

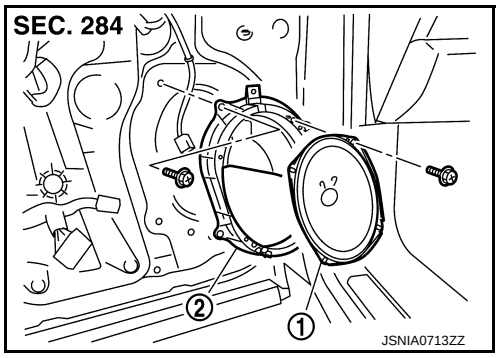
INSTALLATION

Install in the reverse order of removal.

FRONT SPEAKER

Exploded View

INFOID:0000000006401002



1. Front speaker
2. Bracket

Removal and Installation

INFOID:0000000006401003

REMOVAL

1. Remove front door finisher. Refer to INT-13, "FRONT DOOR FINISHER : Exploded View".
2. Remove front door speaker from bracket.

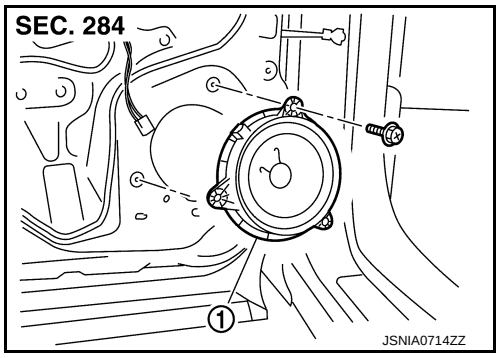
INSTALLATION

Install in the reverse order of removal.

REAR SPEAKER

Exploded View

INFOID:0000000006401004



1. Rear speaker

Removal and Installation

INFOID:0000000006401005

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "REAR DOOR FINISHER : Exploded View".
2. Remove rear speaker.

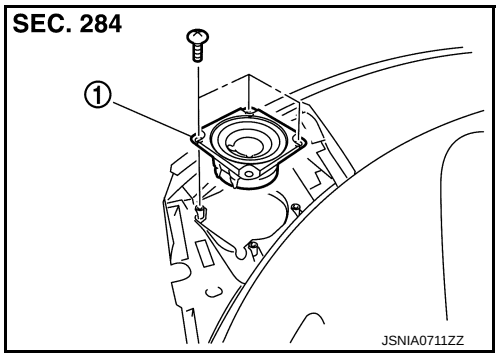
INSTALLATION

Install in the reverse order of removal.

TWEETER

Exploded View

INFOID:0000000006401019



1. Tweeter

Removal and Installation

INFOID:0000000006401020

REMOVAL

1. Remove instrument panel. Refer to IP-13, "Exploded View".
2. Remove tweeter from instrument panel.

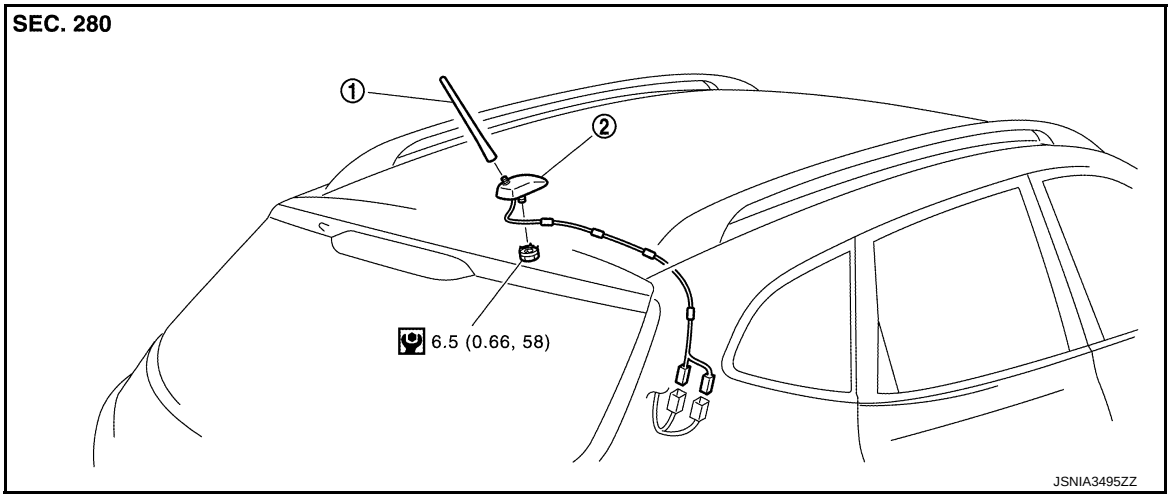
INSTALLATION

Install in the reverse order of removal.

RADIO & SATELLITE RADIO ANTENNA

Exploded View

INFOID:0000000006276048



1. Antenna rod
2. Antenna base

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000006276049

REMOVAL

1. Remove headlining assembly. Refer to INT-25, "NORMAL ROOF : Exploded View" (normal roof models) or INT-28, "SUNROOF : Exploded View" (sunroof models).
2. Remove nuts, and then remove antenna base.

INSTALLATION

Install in the reverse order of removal.

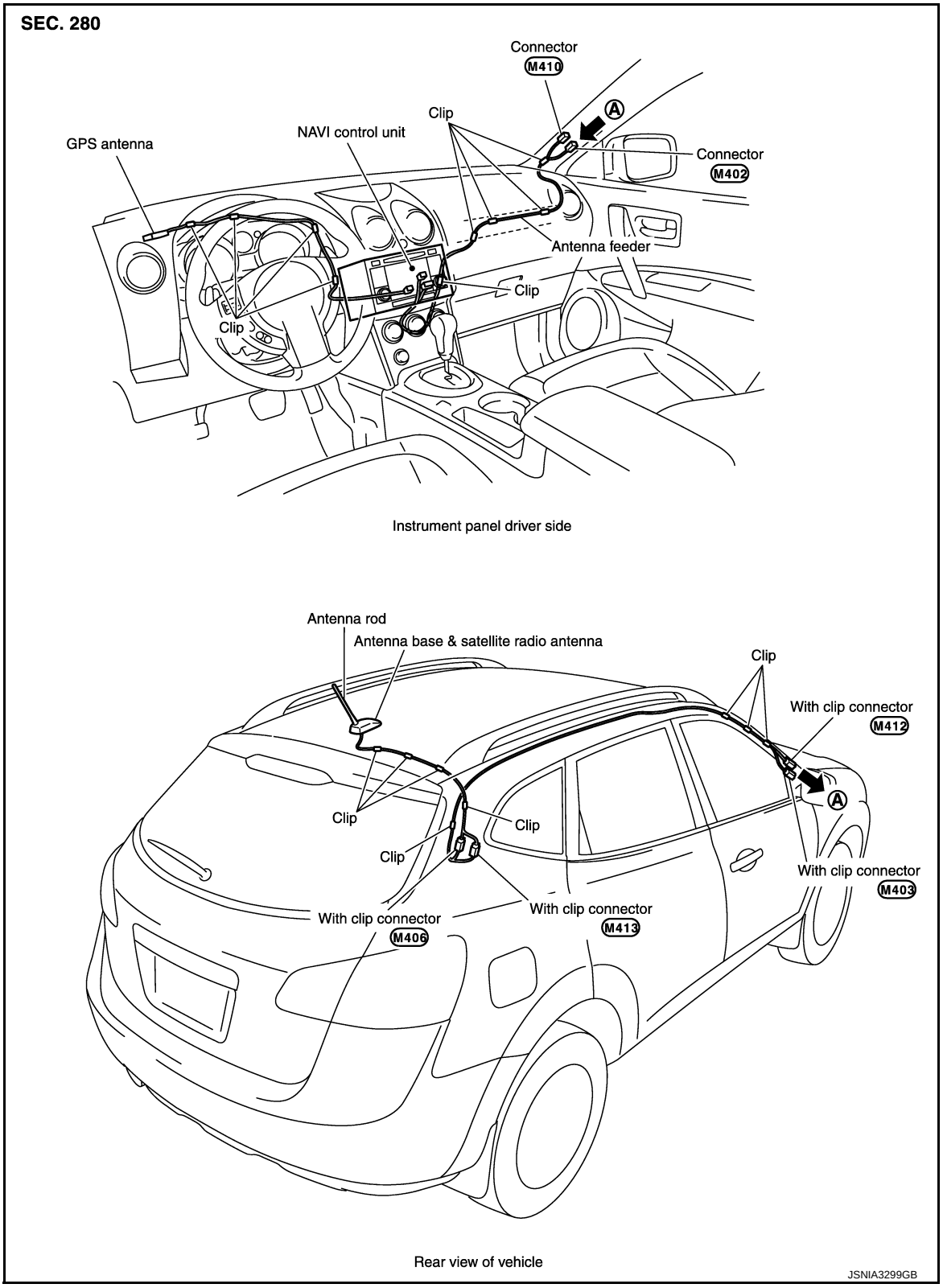
CAUTION:

If the antenna base mounting nut is tightened looser than the specified torque, then this will lower the sensitivity of the antenna. On the other hand, if the nut is tightened tighter than the specified torque, then this will deform the roof panel.

GPS ANTENNA

Feeder Layout

INFOID:0000000006401021



Removal and Installation

INFOID:0000000006401022

REMOVAL

1. Remove instrument panel. Refer to IP-13, "Exploded View".

2. Remove GPS antenna screw to remove GPS antenna.

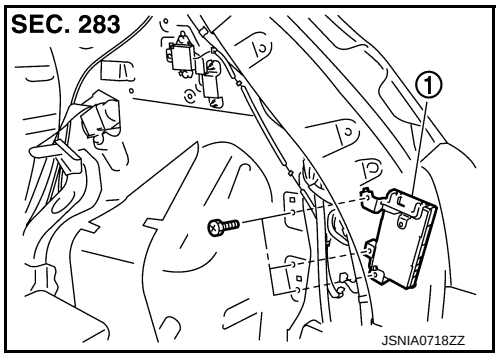
INSTALLATION

Install in the reverse order of removal.

TEL ADAPTER UNIT

Exploded View

INFOID:0000000006401023



1. TEL adapter unit

Removal and Installation

INFOID:0000000006401024

REMOVAL

1. Remove luggage side lower finisher (RH). Refer to INT-32, "Exploded View".
2. Remove TEL adapter unit.

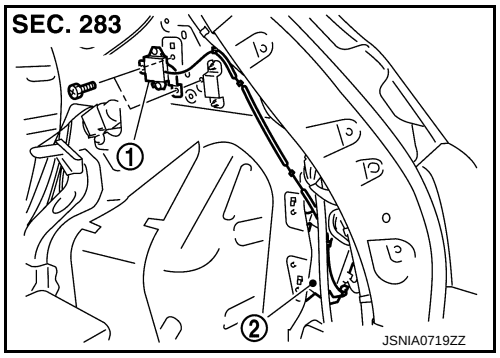
INSTALLATION

Install in the reverse order of removal.

TEL ANTENNA

Exploded View

INFOID:0000000006401025



1. TEL antenna
2. TEL adapter unit

Removal and Installation

INFOID:0000000006401026

REMOVAL

1. Remove luggage side upper finisher (RH). Refer to INT-32, "Exploded View".
2. Remove TEL antenna.

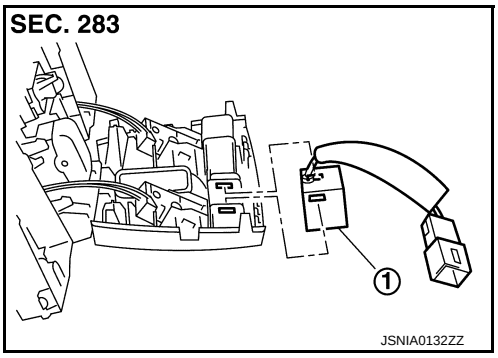
INSTALLATION

Install in the reverse order of removal.

MICROPHONE

Exploded View

INFOID:0000000006401027



1. Microphone

Removal and Installation

INFOID:0000000006401028

REMOVAL

1. Remove map lamp assembly. Refer to INT-25, "NORMAL ROOF : Exploded View" (normal roof models) or INT-28, "SUNROOF : Exploded View" (sunroof models).
2. Remove microphone from map lamp assembly.

INSTALLATION

Install in the reverse order of removal.

STEERING SWITCH

Exploded View

INFOID:0000000006401091

Refer to SR-11, "Exploded View".

Removal and Installation

INFOID:0000000006401092

REMOVAL

Refer to SR-11, "Removal and Installation".

INSTALLATION

Install in the reverse order of removal.

REAR VIEW CAMERA

Removal and Installation

INFOID:0000000006401031

REMOVAL

1. Remove back door finisher. Refer to INT-35, "Exploded View".
2. Remove rear view camera screws to remove rear view camera.

INSTALLATION

Install in the reverse order of removal.

USB CONNECTOR AND AUX JACK

Removal and Installation

INFOID:0000000006401032

REMOVAL

1. Remove center console assembly. Refer to IP-22, "Exploded View".
2. Push the pawl from the back of center console assembly to remove USB connector and AUX jack.

INSTALLATION

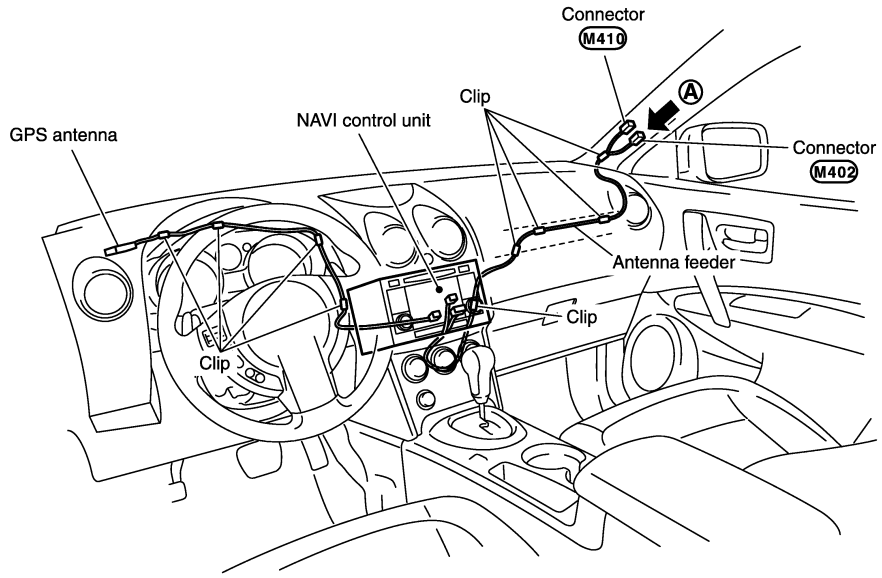
Install in the reverse order of removal.

ANTENNA FEEDER

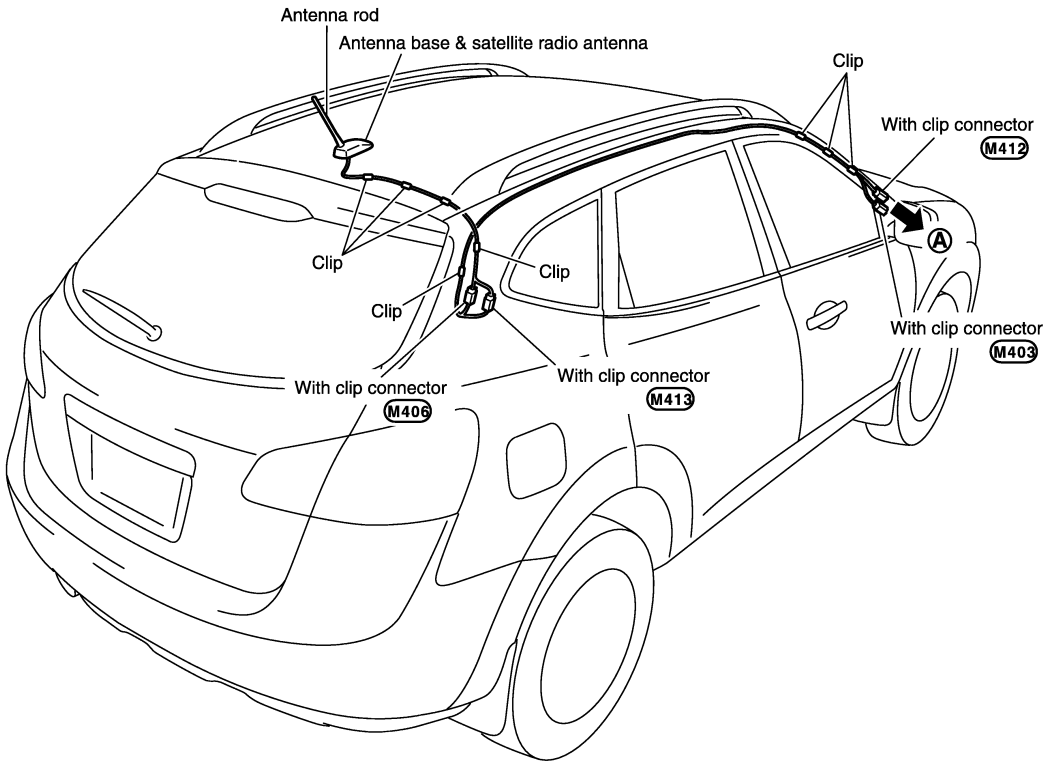
Feeder Layout

INFOID:0000000006276056

SEC. 280



Instrument panel driver side



Rear view of vehicle

JSNIA3299GB

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006275784

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

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “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:

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

Precaution for Trouble Diagnosis

INFOID:0000000006276255

AV COMMUNICATION SYSTEM

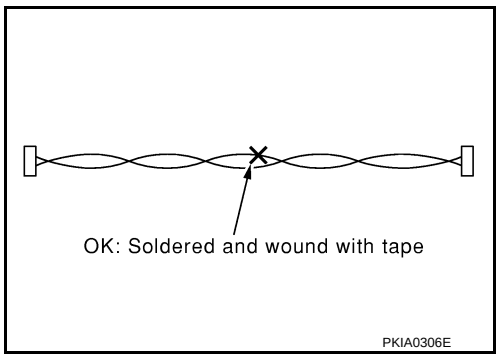
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

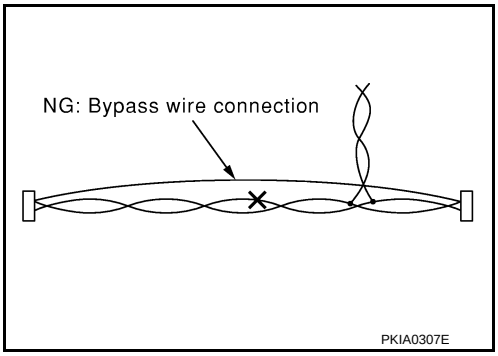
INFOID:0000000006276256

AV COMMUNICATION SYSTEM

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



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

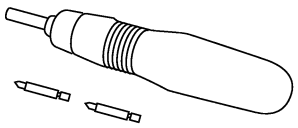


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000006276257

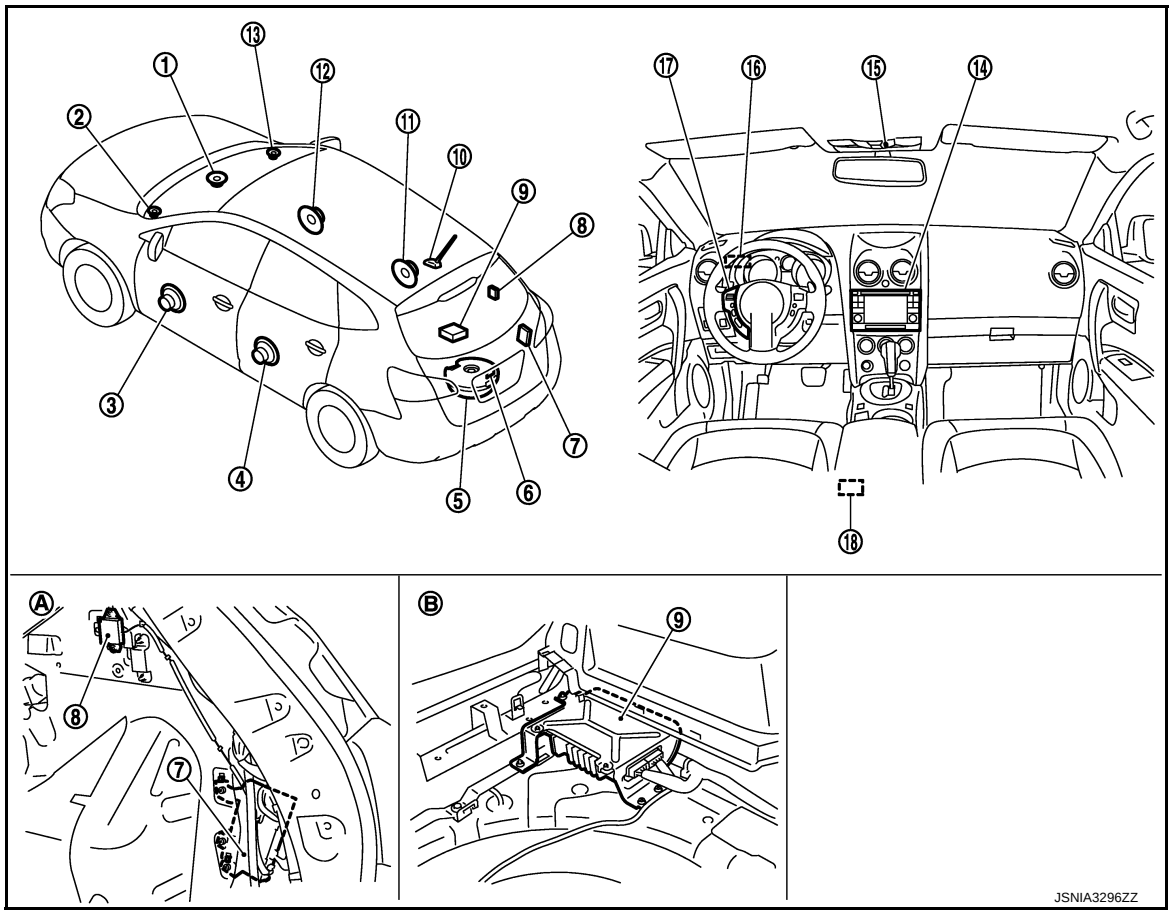
Tool name	Description
Power tool  PBIC0191E	Loosening screws

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000006275785



1. Center speaker
2. Tweeter LH
3. Front speaker LH
4. Rear speaker LH
5. Woofer
6. Rear view camera
7. TEL adapter unit
8. TEL antenna
9. BOSE amp.
10. Antenna base (antenna amp. and satellite antenna)
11. Rear speaker RH
12. Front speaker RH
13. Tweeter RH
14. NAVI control unit
15. Microphone
16. GPS antenna
17. Steering switch
18. USB connector and AUX jack

A. Luggage side RH
B. Luggage side RH

Component Description

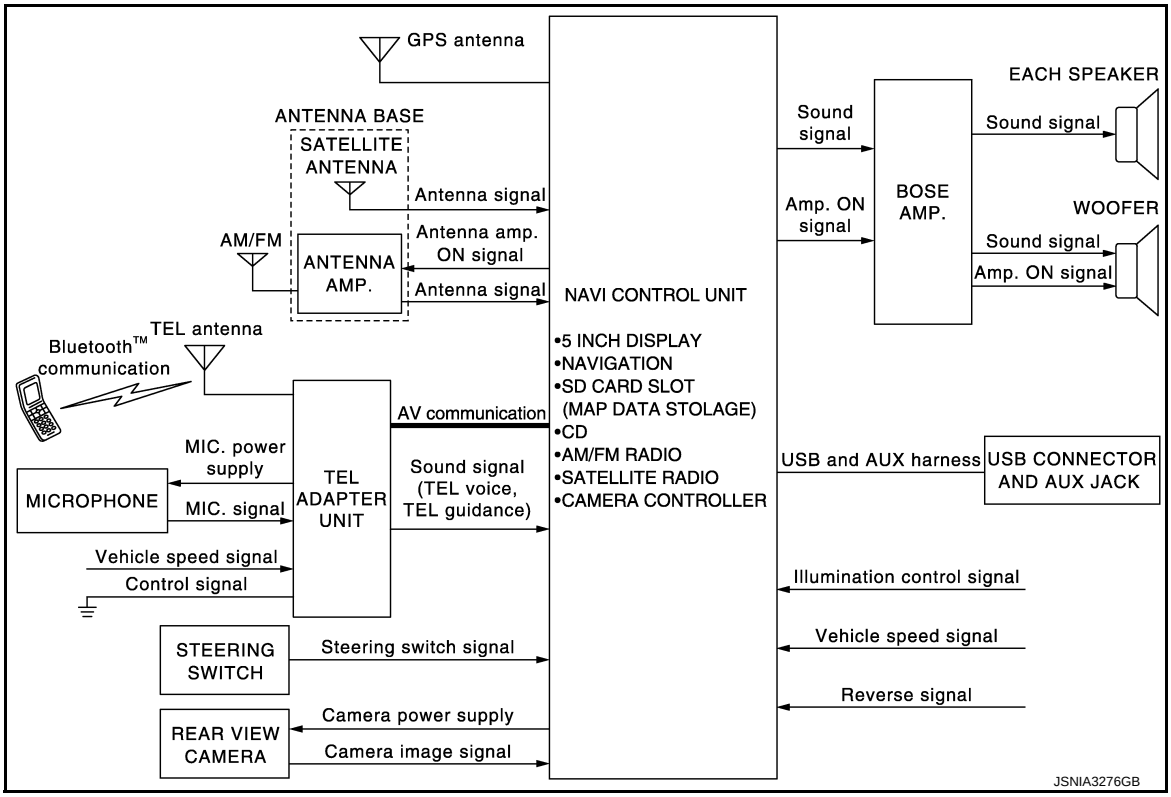
INFOID:0000000006275786

Part name	Description
NAVI control unit	• Operational switch of navigation system and audio system are integrated. • Includes the audio, navigation, satellite radio, rear view monitor, USB connection and AUX connection functions. • Map data can be loaded from the SD-card inserted in the built-in SD-card slot. • Sound signals are output to BOSE amp. • It inputs the illumination signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake). • Touch panel function can be operated for each system by touching a display directly. • It supplies power to rear view camera. • Camera image signal is input from rear view camera.
Map SD-card	A collection of Map data.
Front speaker	• Outputs sound signal from BOSE amp. • Outputs high, mid and low range sounds.
Tweeter	• Outputs sound signal from BOSE amp. • Outputs high range sounds.
Center speaker	• Outputs sound signal from BOSE amp. • Outputs high and mid range sounds.
Rear speaker	• Outputs sound signal from BOSE amp. • Outputs high, mid and low range sounds.
Woofer	• Woofer amp. ON signal is input from BOSE amp. • Outputs sound signal from BOSE amp. • Outputs low range sounds.
BOSE amp.	• Inputs BOSE amp. ON signal and sound signal from NAVI control unit. • Outputs sound signal to each speaker, and outputs woofer amp. ON signal and sound signal to woofer.
Steering switch	• Operations for audio and hands-free phone are possible. • Steering switch signal (operation signal) is output to NAVI control unit.
TEL adapter unit	• Inputs the TEL voice signal from TEL antenna and outputs it to the NAVI control unit. • It is connected with the NAVI control unit via AV communication and controlled with the NAVI control unit.
TEL antenna	Receives the TEL voice signal and outputs it to the TEL adapter unit.
Microphone	• Used for hands-free phone operation. • Microphone signal is transmitted to TEL adapter unit. • Power (microphone VCC) is supplied from TEL adapter unit.
GPS antenna	GPS signal is received and transmitted to NAVI control unit.
Antenna base	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted. ANTENNA AMP. • Radio signal received by rod antenna is amplified and transmitted to NAVI control unit. • Power (antenna amp. ON signal) is supplied from NAVI control unit. SATELLITE RADIO ANTENNA • Receives satellite radio waves and outputs it to NAVI control unit.
Rear view camera	• Camera power supply is input from NAVI control unit. • The image of vehicle rear view is transmitted to NAVI control unit.
USB connector and AUX jack	• Sound signal of auxiliary input is transmitted to NAVI control unit. • Sound signal of USB input is transmitted to NAVI control unit.

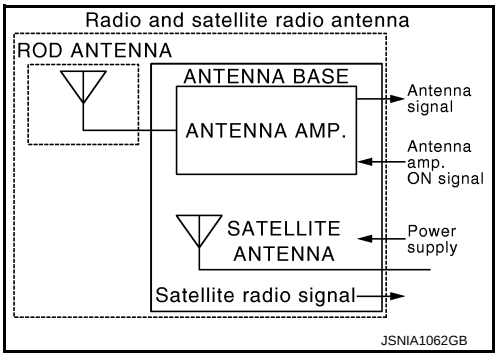
SYSTEM

System Diagram

INFOID:0000000006275787



NOTE:
An antenna base integrated with radio antenna amp. and satellite radio antenna is adopted.



System Description

INFOID:0000000006275788

Refer to Owner's Manual for navigation and audio system operating instructions.
Audio function and display are built into NAVI control unit.
This navigation has the following functions.

- Map data on SD-card.
- Full support for playback of music from iPod® and USB device.
- High resolution color 5 inch display with touch panel function.
- FM/AM twin digital tuner.
- USB mass storage connection.
- Satellite radio.
- Hands-free phone system.

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

NAVIGATION SYSTEM FUNCTION

Description

- The navigation system can be operated by control panel of the NAVI control unit and display (touch panel) of the NAVI control unit.

- Guide sound during the operation of the navigation system is output from NAVI control unit to 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 NAVI control unit.

POSITION DETECTION PRINCIPLE

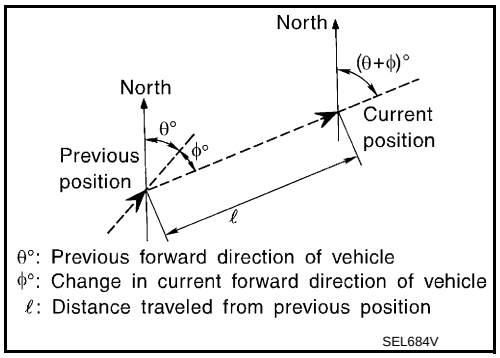
The navigation system periodically calculates the vehicle's current position according to the following three signals:

- 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.

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.

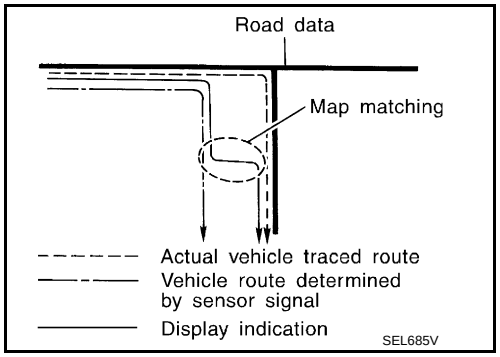
More accurate traveling direction is detected because priorities are set for the signals from these two devices according to the situation.

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.

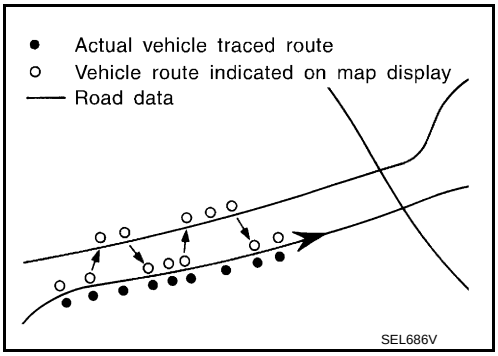
NOTE:

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

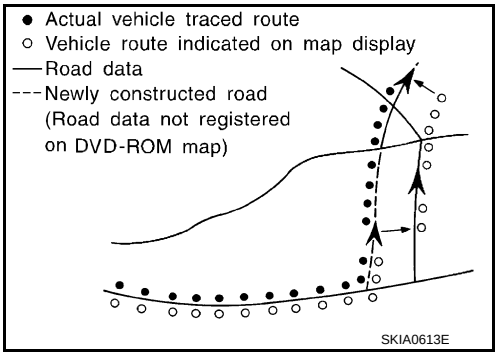


The vehicle position may not be corrected under the following circumstances and after driving for a certain time when GPS information is difficult to receive. In this case, the vehicle mark on the display must be corrected manually.

- 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.



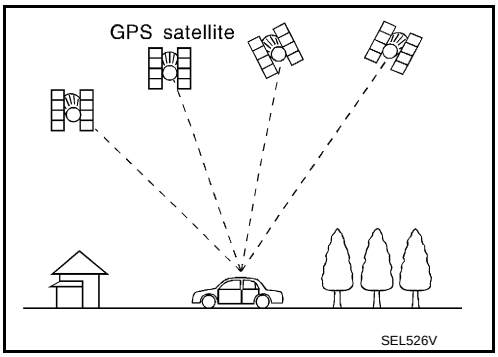
- Map-matching does not function correctly when a road on which the vehicle is driving is new and not recorded in the map SD-card, or when road pattern stored in the map data and the actual road pattern are different due to repair.
  The map-matching function may find another road and position the vehicle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

SATELLITE RADIO FUNCTION

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

AUXILIARY INPUT FUNCTION

- Sound can be output from an external device by connecting a device with USB connector and AUX jack.
- AUX sound signals are transmitted to each speaker via NAVI control unit and BOSE amp.

REAR VIEW MONITOR FUNCTION

Camera Image Operation Principle

- The NAVI control unit supplies power to the rear view camera when receiving a reverse signal.
- The rear view camera transmits camera images to the NAVI control unit when power is supplied from the NAVI control unit.
- The NAVI control unit combines a warning message and fixed guide lines with an image received from the rear view camera to display a rear view camera image on the screen.

USB CONNECTION FUNCTION

- iPod® or music files in USB memory can be played.
- Sound signals are transmitted from USB connector and AUX jack to the NAVI control unit and to each speaker via BOSE amp.
- iPod® is recharged when connected to USB connector and AUX jack.

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

NOTE:

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

SPEED SENSITIVE VOLUME SYSTEM

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

HANDS-FREE PHONE SYSTEM

- TEL adapter unit is controlled with AV communication from NAVI control unit.
- The connection between cellular phone and TEL adapter unit is performed with Bluetooth™ communication.
- The voice guidance signal is input from the TEL adapter unit to the NAVI control unit and output via BOSE amp. to the front speaker when operating the cellular phone.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-235, "Diagnosis Description".

When A Call Is Originated

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

When Receiving A Call

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

DIAGNOSIS SYSTEM (NAVI CONTROL UNIT)

Diagnosis Description

INFOID:0000000006275789

On-Board Diagnosis Item

- On-board diagnosis is performed in service test mode.
- On-board diagnosis checks if the system operates normally.

Service test mode

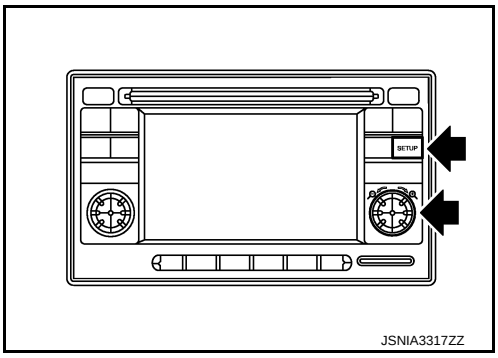
Mode		Item	Content
Service version		—	The version data of the parts is shown displayed.
Service radio	FM monitor	—	The Change Mediator monitors the dynamic values of the current tuner. If the band is switched within the radio monitor context, the active monitor is switched as well.
	AM monitor	—	
	XM monitor	—	The version data is displayed.
	XM functions	• Clear XM Chipset NVM • Reset all XM settings • XM CBM debug mode ON/OFF • External Diag mode ON/OFF	The current system status is displayed.
Service configuration	Touch Display Calibration	—	The function allows connection of the position detection accuracy of the touch panel.

Mode		Item	Content
Service system status	Running system status	• SD card slot access • Power Supply • Speed Signal • Direction Signal • Illumination Signal • GPS Antenna • BTHFU Status • Radio Antenna • USB Device • iPod® firmware version • Steering wheel key	The current system status is displayed.
	System history	• SD-card Slot - Sub-Unit Connection Malfunction • Programming Error • Radio-Antenna Circuit Malfunction • FM-Antenna 1 Connection Malfunction • GPS Antenna Circuit Malfunction • CD-Drive Mechanical Malfunction • CD Read Malfunction • Power Supply voltage: Lower Limit Exceeded • Power Supply voltage: Upper Limit Exceeded • Reduced system Functionality due to over temperature • Display switched OFF due to over temperature • SD card removed without being de-mounted • Codeplug missing	The history of the system status is reported in the report memory, displayed.
	Speaker test 100 Hz	—	This activates a sequence of test tone outputs to the four speaker lines one after the other for 1 second. The frequency can be chosen by user selection (100 Hz and 4 kHz).
	Speaker test 4 kHz		
	Display test	—	This provides a test sequence where test displays (plain colored display: e.g. white, black, red, blue, green) are shown one after the other. The respective color is shown for an indicated period of time (parameter). After the display test, the design of the display previously available is stored. While the screen shows a plain colored display, a pixel malfunction may be detected.

Mode	Item	Content
Service system configuration	• 2/4 pulse speed • Clock ON/OFF • Camera guidelines • Equalizing settings • RF tuning • Antenna type • Sound system • Sub Out • Steering wheel	The device is configured by a connected hardware circuit. The parameter is influenced.
Self test	• SD-card Access Malfunction • Radio-Antenna Circuit Malfunction • GPS Antenna Circuit Malfunction • XM Antenna Circuit Malfunction	A system self test is executed: the result is stored into the error memory which is shown afterwards as a list of codes of the detected malfunctions.

METHOD OF STARTING

1. Start the engine.
2. Turn OFF audio.
3. While pressing the “SET UP” switch, turn the MENU dial counterclockwise 3 clicks or more first, then clockwise and counterclockwise 3 clicks or more, respectively. (After the diagnosis mode starts, the initial screen of the diagnosis mode appears.)



JSNIA3317ZZ

END ON-BOARD DIAGNOSIS

Turn OFF ignition switch.

DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

Description

INFOID:0000000006397647

During on board diagnosis the diagnosis function of TEL adapter unit starts with the operation of the steering switch and performs the diagnosis when ignition switch ACC.

Diagnosis Description

INFOID:0000000006397648

ON BOARD DIAGNOSIS ITEM

The on board diagnosis has 3 modes: the self-diagnosis mode that performs the trouble diagnosis, the speaker adaptation data deleting mode and the hands-free phone system initialization mode.

CAUTION:

- **Perform the diagnosis with the vehicle stopped.**
- **Perform STEP2 if necessary.**

STEP	MODE	Description
STEP1	Self-diagnosis	The self-diagnosis mode performs the microphone test and the diagnosis of TEL adapter unit, TEL antenna and steering unit, and then reads out the results with the sound and indicates them on the display.
STEP2	Speaker adaptation data deleting	The speaker adaptation data deleting mode can delete the speaker adaptation data.
	Hands-free phone system initialization	Hands-free phone system initialization mode can perform the initialization of hands-free phone system.

Self-diagnosis results

Self-diagnosis mode reads out the self-diagnosis results.

NOTE:

- Error count is read out simultaneously when reading out the DTC name.
- The errors are read out continuously when some errors occur at the same time.

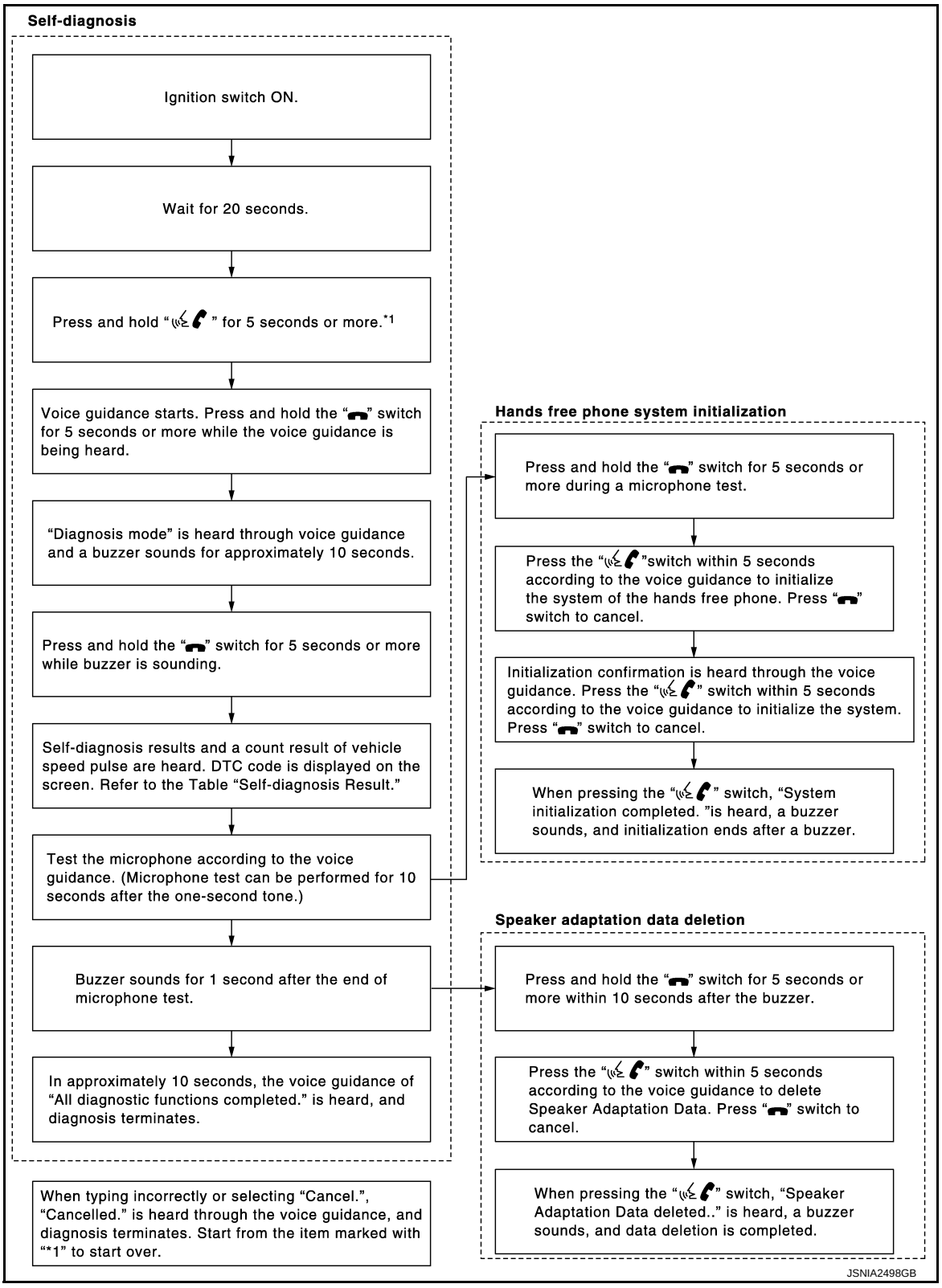
Self-diagnosis results

DTC	DTC name	Possible causes
DTC 10000	INTERNAL FAILURE	TEL adapter unit
DTC 01000	ANT. SHORT TO BATT OR OPEN	TEL antenna
DTC 00100	ANT. SHORT TO GROUND	
DTC 00010	STEERING REMOTE BUTTON STUCK A	Steering switch
DTC 00001	STEERING REMOTE BUTTON STUCK B	
DTC 00000	THERE ARE NO FAILURE RECORDS TO REPORT	—

The Details of Error Count

The error count guides “0” when the error occurs. The next time it counts up “1” if it is normal with the ignition switch ON. It continues the count up unless the initialization of hands-free phone system is performed.

FLOW CHART OF TROUBLE DIAGNOSIS



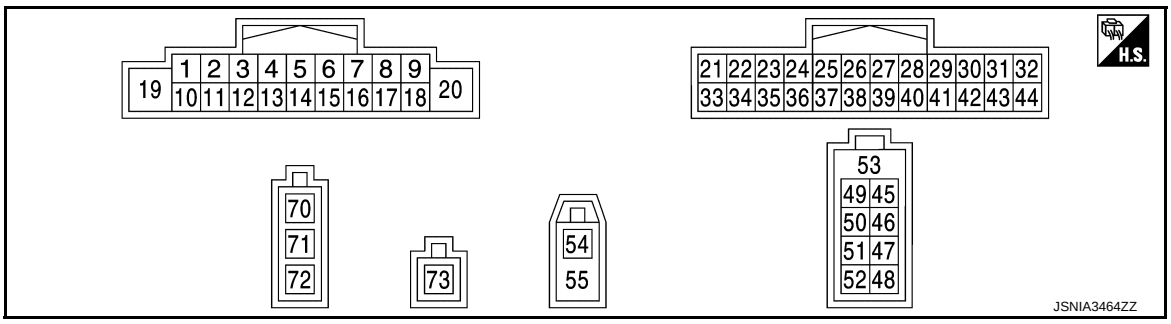
ECU DIAGNOSIS INFORMATION

NAVI CONTROL UNIT

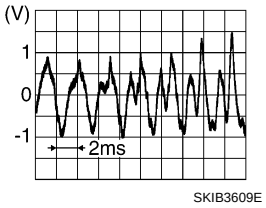
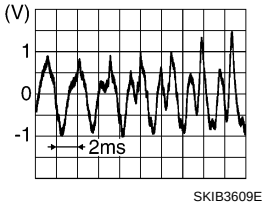
Reference Value

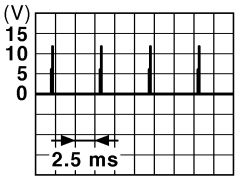
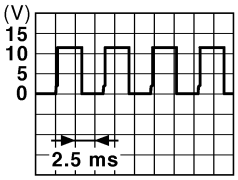
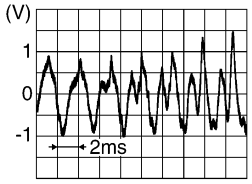
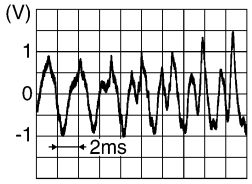
INFOID:0000000006275790

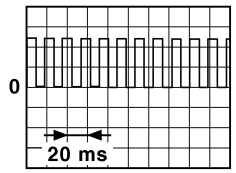
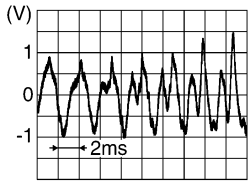
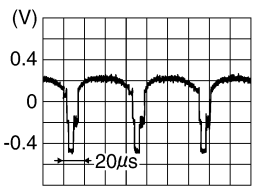
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (BR)	Ground	BOSE amp. ON signal	Output	Ignition switch ON	—	12.0 V
2 (R)	3 (G)	Sound signal front LH	Output	Ignition switch ON	Sound output.	 SKIB3609E
4 (V)	5 (LG)	Sound signal rear LH	Output	Ignition switch ON	Sound output.	 SKIB3609E
6 (BR)	15 (GR)	Steering switch signal A	Input	Ignition switch ON	Keep pressing switch	0 V
					Keep pressing SEEK UP switch	1.4 V
					Keep pressing SEEK DOWN switch	2.5 V
					Except for above.	5.0 V
7 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (W)	8 (Y)	Illumination control signal	Input	Ignition switch ON	• Lighting switch 1ST • When meter illumination is maximum	 JPNIA1687GB
					• Lighting switch 1ST • When meter illumination is step 11	 JPNIA1686GB
					• Lighting switch 1ST • When meter illumination is minimum	12 V
11 (O)	12 (W)	Sound signal front RH	Output	Ignition switch ON	Sound output.	 SKIB3609E
13 (L)	14 (P)	Sound signal rear RH	Output	Ignition switch ON	Sound output.	 SKIB3609E
16 (O)	15 (GR)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch.	0 V
					Keep pressing VOL UP switch.	1.4 V
					Keep pressing switch	2.5 V
					Keep pressing VOL UP switch.	3.4 V
					Except for above.	5.0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (L)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
21 (B)	Ground	EQ1	—	Ignition switch ON	—	0 V
23 (B)	Ground	EQ3	—	Ignition switch ON	—	0 V
25 (G)	Ground	Reverse signal	Input	Ignition switch ON	Selector lever is in R position.	12.0 V
					Selector lever is in other than R position.	0 V
34 (BR)	35 (Y)	Sound signal (TEL voice, voice guidance)	Output	Ignition switch ON	During voice guide output with the switch pressed.	 SKIB3609E
36 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
37	—	Shield	—	—	—	—
38 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
39 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
41 (W)	Ground	Camera image signal	Input	Ignition switch ON	At rear view camera image displayed	 SKIB0827E
42	—	Shield	—	—	—	—

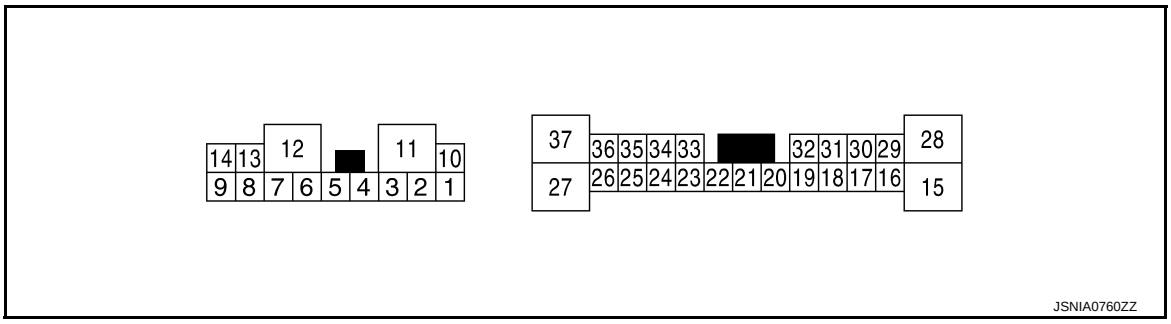
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
43 (R)	Ground	Camera power supply	Output	Ignition switch ON	At rear view camera image is displayed.	6.0 V
					Except for above.	0 V
44 (B)	Ground	Camera ground	—	Ignition switch ON	—	0 V
45 (G)	—	USB ground	—	—	—	—
46 (R)	—	USB D– signal	Input/ Output	—	—	—
47 (L)	—	USB D+ signal	Input/ Output	—	—	—
48 (W)	—	V BUS signal	Output	—	—	—
49 (W)	—	AUX sound signal LH	Input	—	—	—
50 (G)	—	AUX sound signal RH	Input	—	—	—
51 (R)	—	AUX sound signal ground	—	—	—	—
53	—	Shield	—	—	—	—
54	Ground	GPS antenna signal	Input	ON	Not connected to GPS antenna connector.	5.0 V
55	—	Shield	—	—	—	—
70	Ground	Antenna amp. ON signal	Output	Ignition switch ON	—	12.0 V
71	—	Antenna signal	Input	—	—	—
73	—	Satellite radio antenna signal	Input	—	—	—

BOSE AMP.

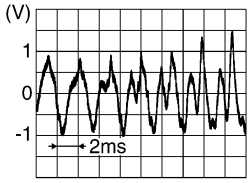
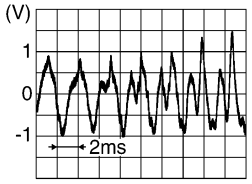
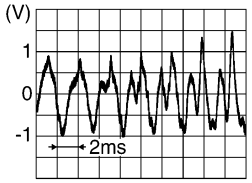
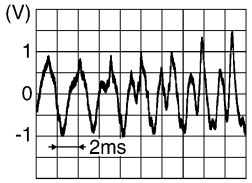
Reference Value

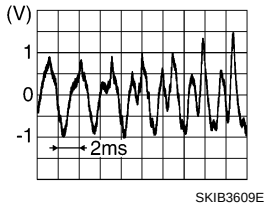
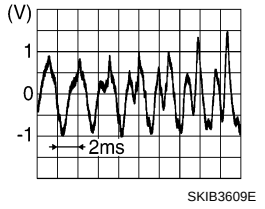
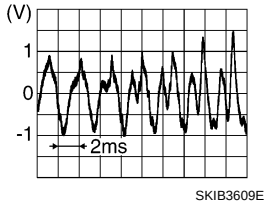
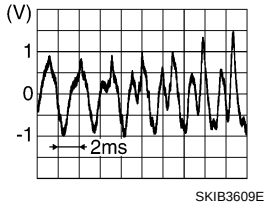
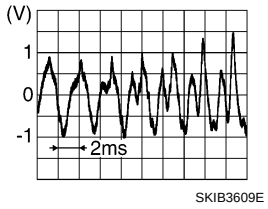
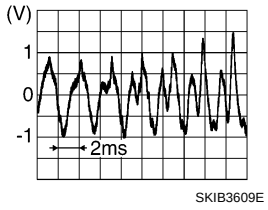
INFOID:0000000006569815

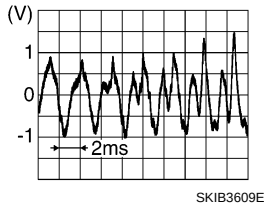
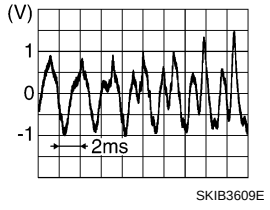
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (L)	10 (R)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
2 (GR)	3 (Y)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output	 SKIB3609E
4 (B)	5 (P)	Sound signal front speaker LH	Output	Ignition switch ON	Sound output	 SKIB3609E
6 (BR)	7 (GR)	Sound signal tweeter LH	Output	Ignition switch ON	Sound output	 SKIB3609E

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

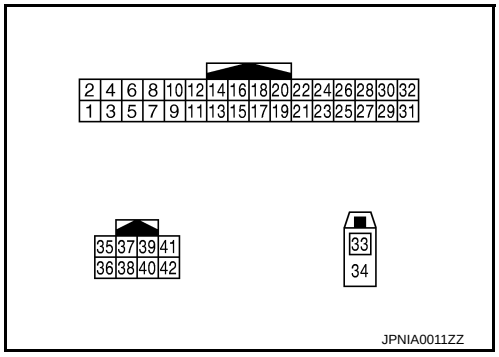
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
23 (W)	33 (R)	Sound signal rear RH	Input	Ignition switch ON	Sound output	 SKIB3609E
25 (G)	Ground	Woofer Amp. ON signal	Output	Ignition switch ACC	—	12.0 V
31 (L)	Ground	BOSE amp. ON signal	Input	Ignition switch ACC	—	12.0 V
37 (O)	27 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Sound output	 SKIB3609E

TEL ADAPTER UNIT

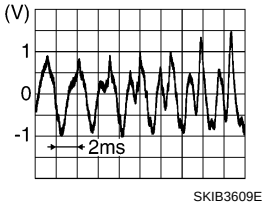
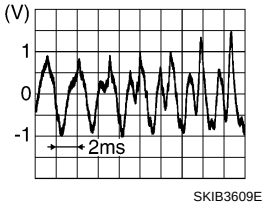
Reference Value

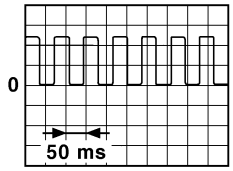
INFOID:0000000006276249

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (BR)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (SB)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
3 (W)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
7 (B)	8	Microphone signal	Input	Ignition switch ON	Give a voice.	
9 (BR)	10 (Y)	Sound signal (TEL voice, voice guidance)	Output	Ignition switch ON	During voice guide output with the switch pressed.	
20 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
22 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V

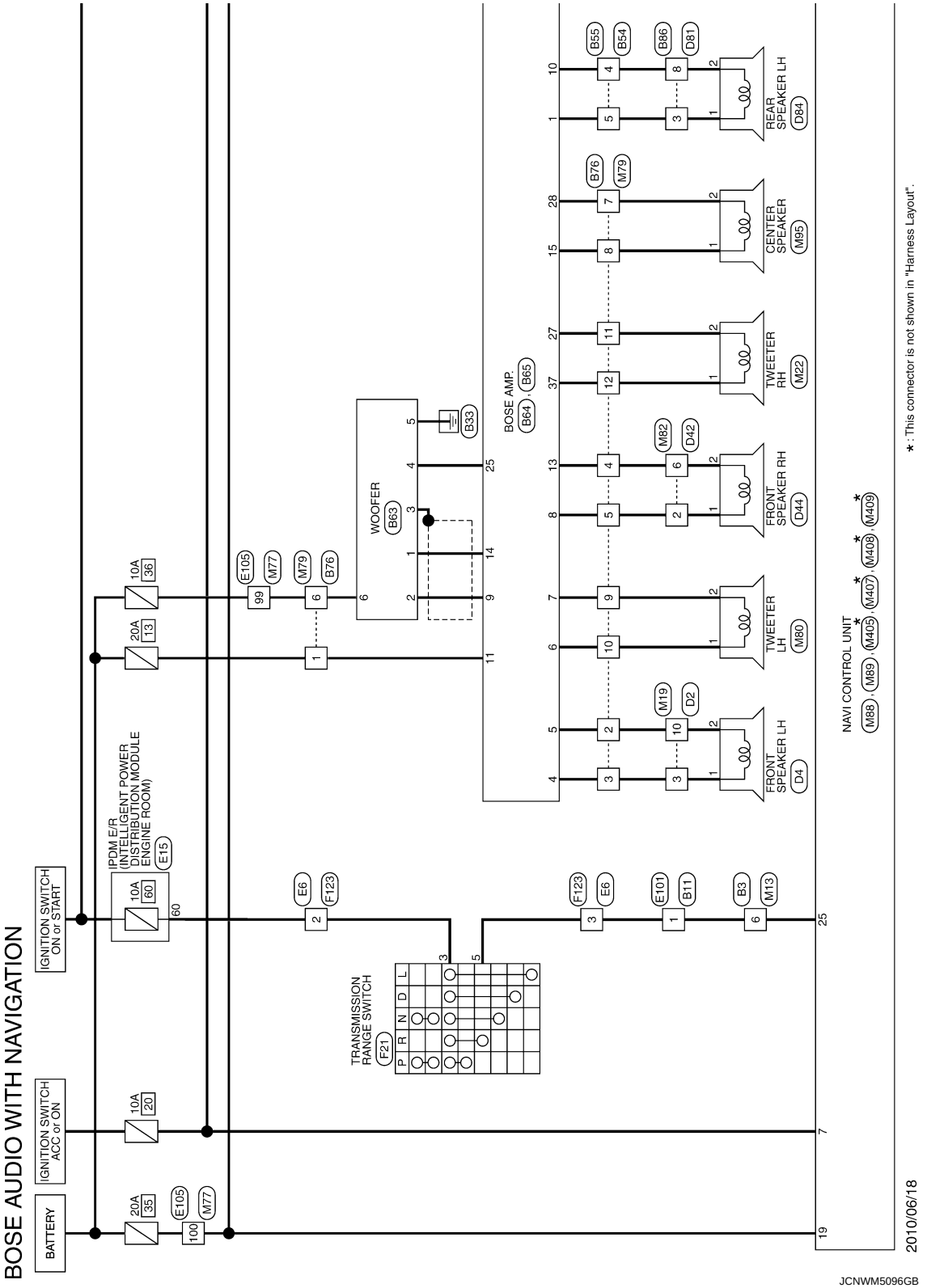
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
23 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
27 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V
28 (G)	Ground	Vehicle speed signal (2-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0015GB
29 (W)	Ground	Microphone power supply	Output	Ignition switch ON	—	5.0 V
33	—	TEL antenna signal	Input	—	Not connected to TEL antenna connector.	5.0 V
34	—	Shield	—	—	—	—
35 (SB)	—	AV communication signal (H)	Input/ Output	—	—	—
36 (LG)	—	AV communication signal (L)	Input/ Output	—	—	—
39 (LG)	—	Data line	—	—	—	—
40 (LG)	—	Data line	—	—	—	—
41 (SB)	—	Data line	—	—	—	—
42 (SB)	—	Data line	—	—	—	—

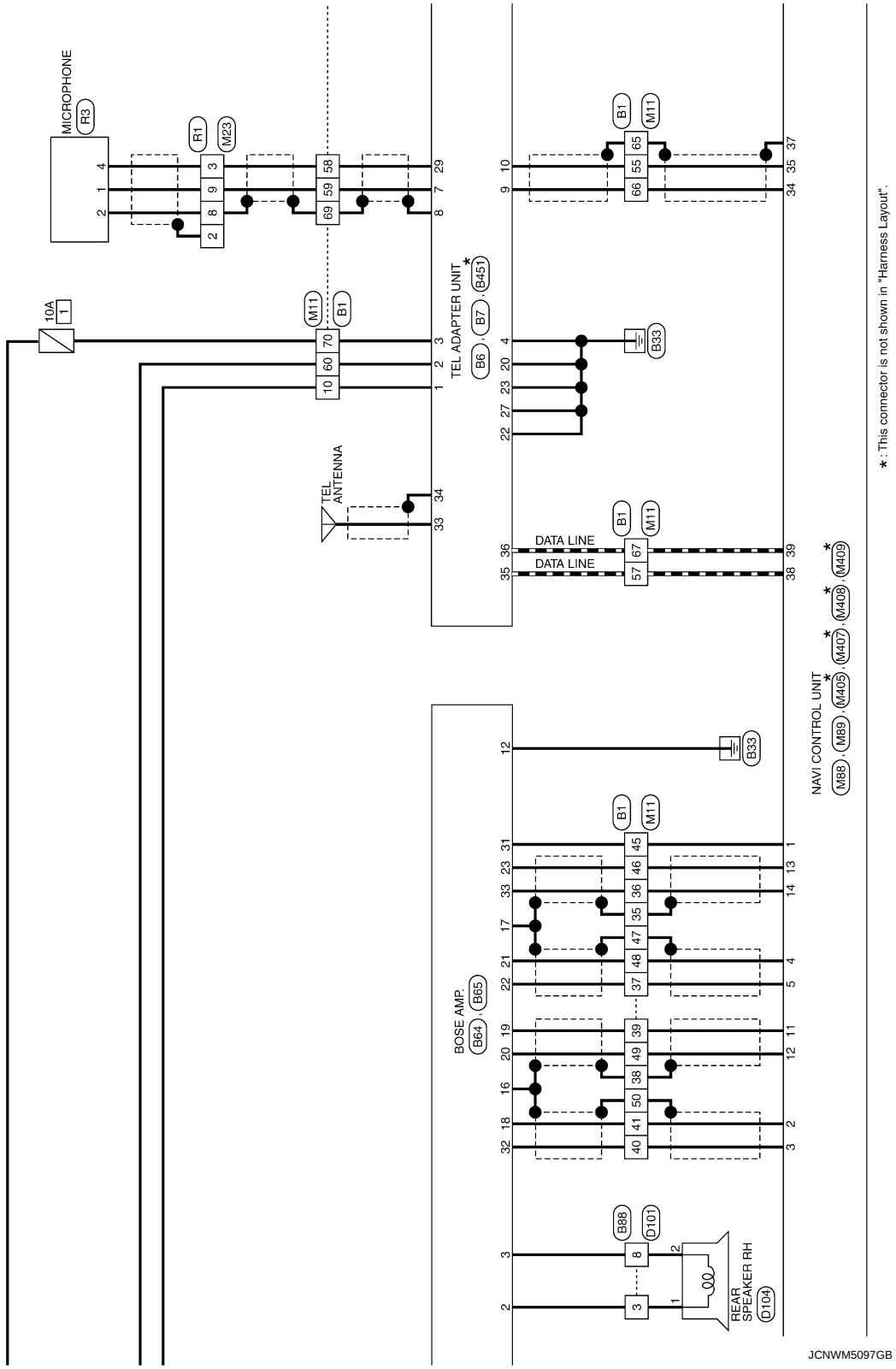
WIRING DIAGRAM

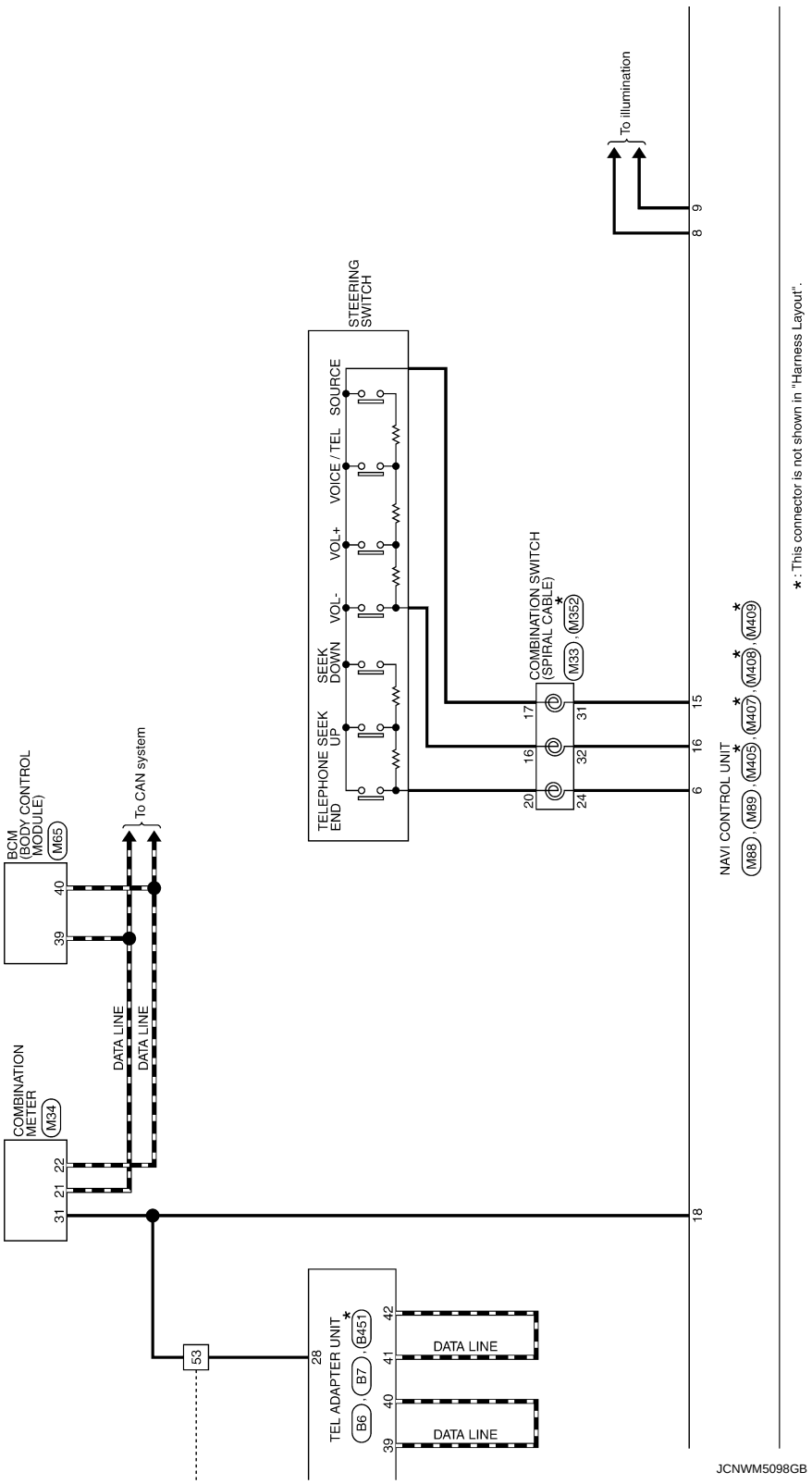
BOSE AUDIO WITH NAVIGATION

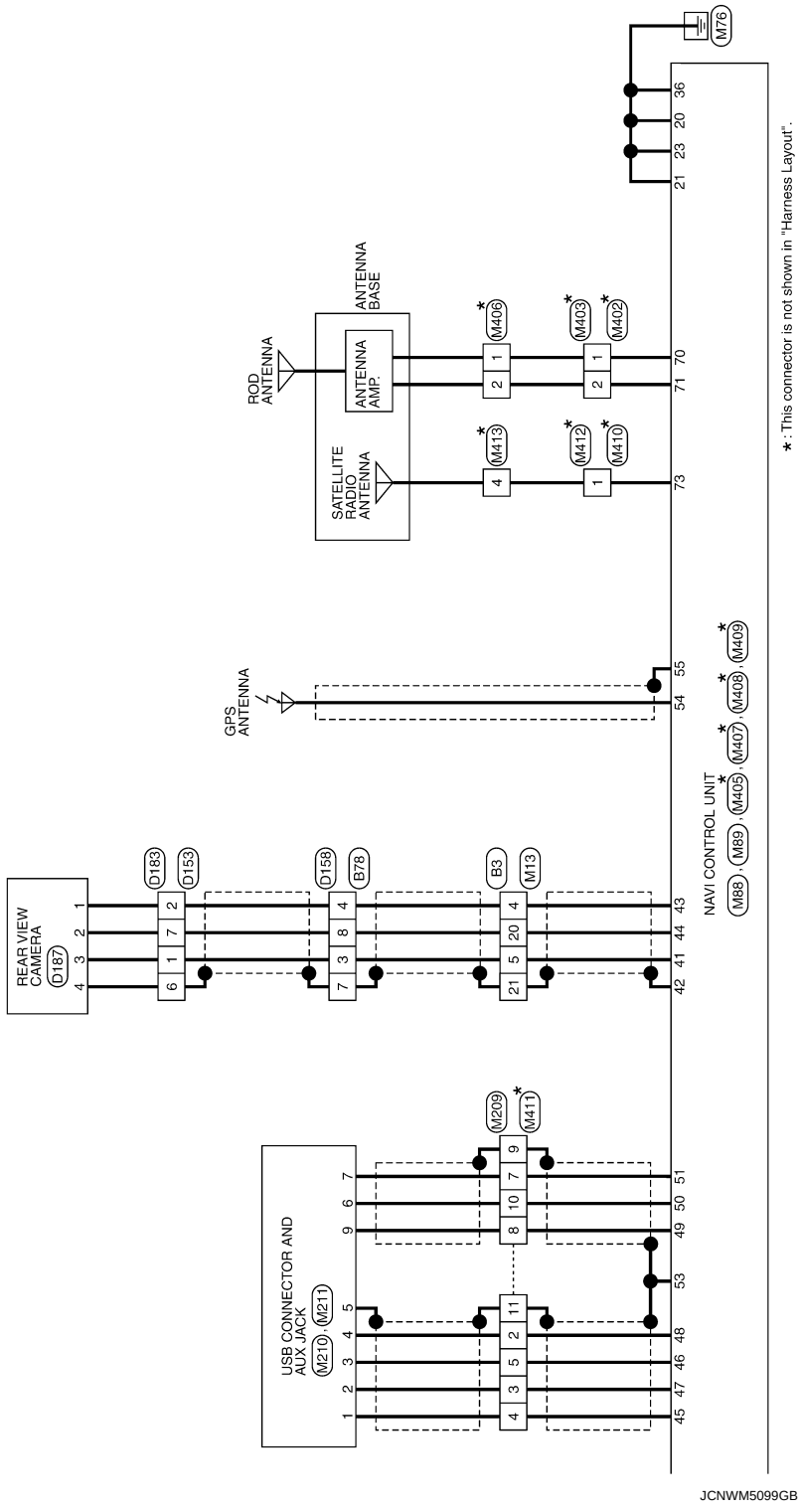
Wiring Diagram

INFOID:0000000006275791




MICROPHONE
R3
R1
M23
10A
1
M11
B1
TEL ADAPTER UNIT
B6, B7, B451
B33
TEL ANTENNA
DATA LINE
DATA LINE
NAVI CONTROL UNIT
M88, M89, M405, M407, M408, M409
BOSE AMP.
B64, B65
B88
D101
REAR SPEAKER RH
D104
★: This connector is not shown in "Harness Layout".
JCNWM5097GB


To illumination
8
9
STEERING SWITCH
TELEPHONE SEEK UP
SEEK DOWN
VOL-
VOL+
VOICE / TEL
SOURCE
COMBINATION SWITCH (SPIRAL CABLE)
M33
M352
16
17
20
31
32
24
15
16
6
NAVI CONTROL UNIT
M88, M89, M405, M407, M408, M409
BCM (BODY CONTROL MODULE)
M65
40
39
To CAN system
COMBINATION METER
M34
22
21
31
DATA LINE
DATA LINE
18
53
TEL ADAPTER UNIT
B6, B7, B451
28
42
41
40
39
DATA LINE
DATA LINE
★: This connector is not shown in "Harness Layout".
JCNWM5098GB

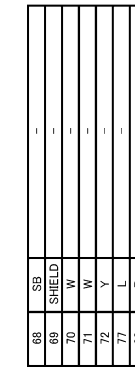

M76
36
20
23
21
ANTENNA BASE
ROD ANTENNA
ANTENNA AMP.
SATELLITE RADIO ANTENNA
M406
M403
M402
M413
M412
M410
2 1
4 1
70
71
73
GPS ANTENNA
55
54
M409
M408
M407
M405
M89
M88
NAVI CONTROL UNIT
REAR VIEW CAMERA
D187
D183
D153
D158
B78
B3
M13
43
44
41
42
USB CONNECTOR AND AUX JACK
M210
M211
M209
M411
51
50
49
53
48
46
47
45
★: This connector is not shown in "Harness Layout".
JCNWM5099GB

BOSE AUDIO WITH NAVIGATION

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

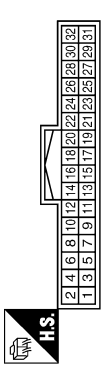
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	BR	–
3	G	–
4	L	–
6	BR	–
7	Y	–
8	LG	–
9	BR	–
10	BR	–
21	R	–
35	SHIELD	–
36	R	–
37	LG	–
38	SHIELD	–
39	O	–
40	G	–
41	R	–
45	L	–
46	W	–
47	SHIELD	–
48	V	–
49	W	–
50	SHIELD	–
52	L	–
53	L	– [With display audio]
53	G	– [With base audio or BOSE system]
54	O	–
55	Y	–
56	LG	–
57	SB	–
58	W	–
59	B	–
60	SB	–
62	GR	–
63	W	–
65	SHIELD	–
66	BR	–
67	LG	–
68	SB	–
69	SHIELD	–
70	W	–
71	W	–
72	Y	–
77	L	–
80	R	–
81	W	–
82	GR	–
86	Y	–
87	P	–
91	GR	–
92	R	–
93	W	–
94	G	–
95	O	–
96	Y	–
97	SB	–
98	Y	–
99	V	–
100	L	–

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH



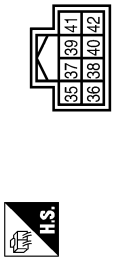
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	G	–
4	R	–
5	W	–
6	G	–
10	G	–
13	Y	–
14	BR	–
15	P	–
16	W	–
17	LG	–
18	R	–
19	SB	–
20	B	–
21	SHIELD	–
26	P	–
29	L	–
30	O	–
31	GR	–
32	LG	–

Connector No.	B6
Connector Name	TEL ADAPTER UNIT
Connector Type	TH32FW-NH



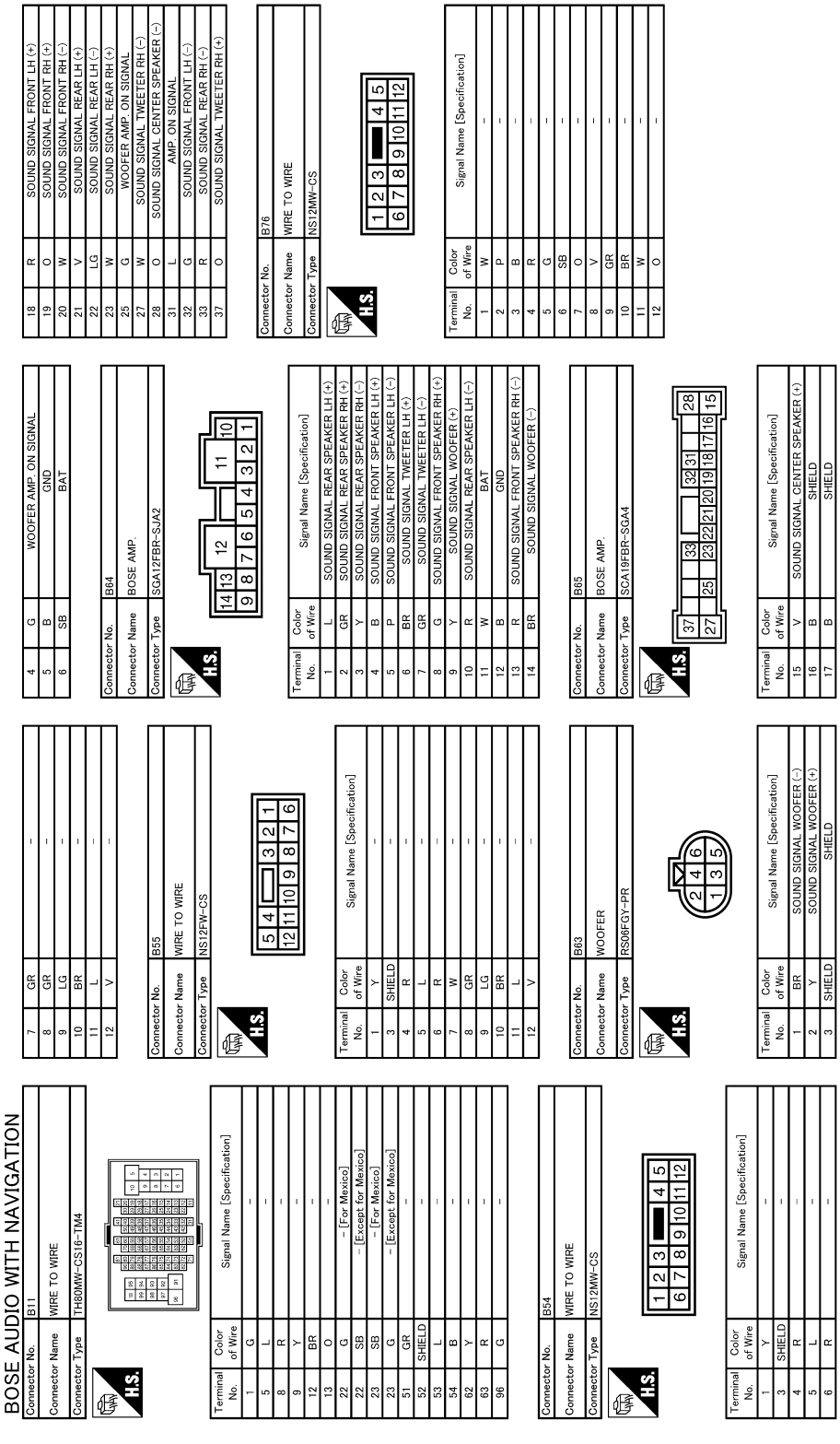
Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	BAT
2	SB	ACC
3	W	IGN
4	B	GND
7	B	MICROPHONE SIGNAL (+)
8	SHIELD	MICROPHONE SIGNAL (–)
9	BR	SOUND SIGNAL (+)
10	Y	SOUND SIGNAL (–)
11	O	TEL ON SIGNAL
12	W	STEERING SW SIGNAL A
13	Y	STEERING SW SIGNAL B
14	GR	STEERING SW SIGNAL GND
17	W	STEERING SW SIGNAL A
18	L	STEERING SW SIGNAL B
19	GR	STEERING SW SIGNAL GND
20	B	CONTROL SIGNAL
21	B	CONTROL SIGNAL
22	B	CONTROL SIGNAL
23	B	CONTROL SIGNAL
24	B	CONTROL SIGNAL
27	B	CONTROL SIGNAL
28	L	VEHICLE SPEED SIGNAL [2-PULSE] [With display audio]
28	G	VEHICLE SPEED SIGNAL [2-PULSE] [With base audio or BOSE system]
29	W	MICROPHONE POWER

Connector No.	B7
Connector Name	TEL ADAPTER UNIT
Connector Type	TH08FW-NH

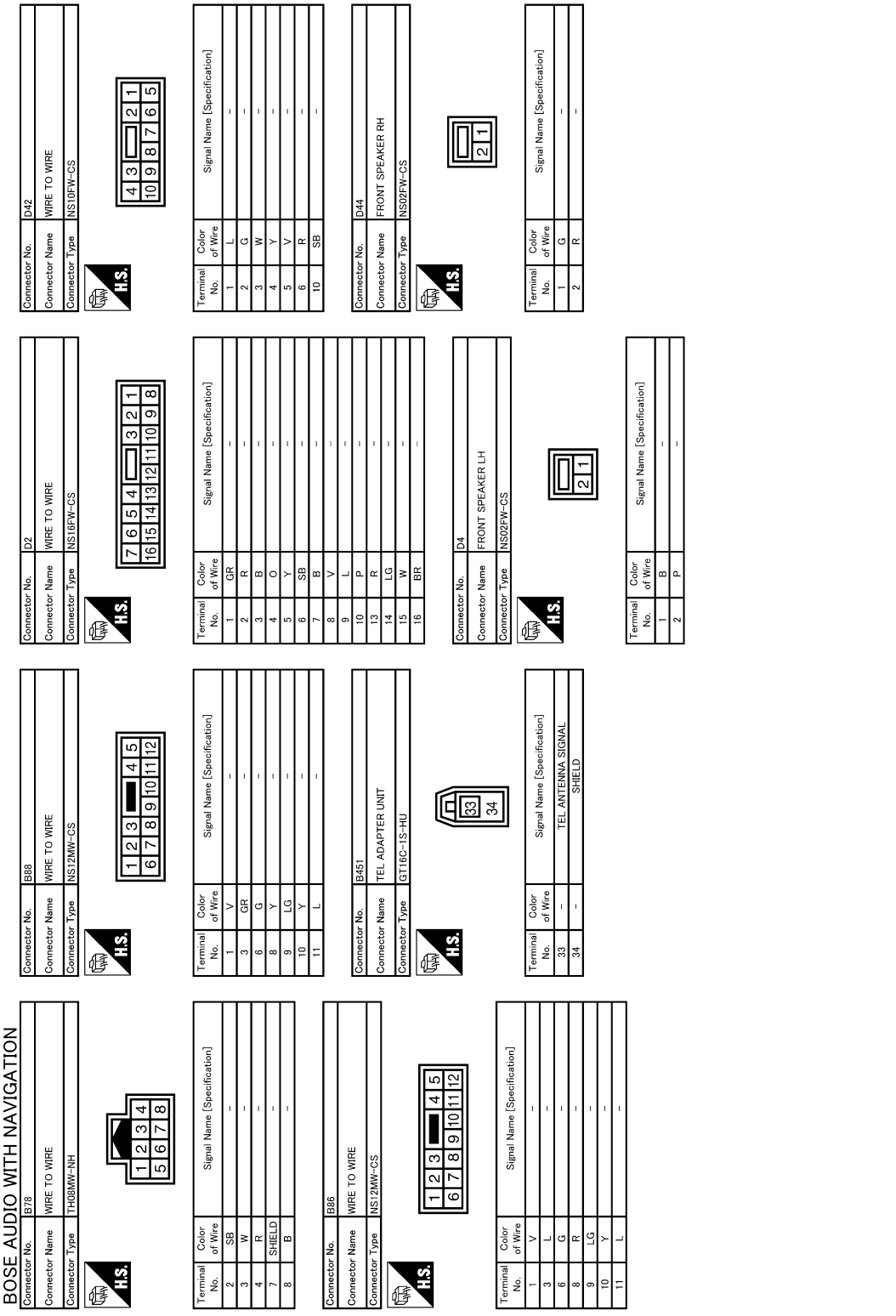


Terminal No.	Color of Wire	Signal Name [Specification]
35	SB	AV COMMUNICATION SIGNAL (H)
36	LG	AV COMMUNICATION SIGNAL (L)
39	LG	–
40	LG	–
41	SB	–
42	SB	–

JCNWM5100GB



JCNWM5101GB



JCNWM5102GB

BOSE AUDIO WITH NAVIGATION

Connector No.	D81
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	L	–
6	G	–
8	R	–
9	LG	–
10	Y	–
11	L	–

Connector No.	D84
Connector Name	REAR SPEAKER LH
Connector Type	NS02FBR-CS

H.S.

2	1

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

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
3	GR	–
6	G	–
8	Y	–
9	LG	–
10	W	–
11	L	–

Connector No.	D104
Connector Name	REAR SPEAKER RH
Connector Type	NS02FBR-CS

H.S.

2	1

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

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Type	NS12FBR-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	W	–
4	SB	–
5	SB	–
6	SHIELD	–
7	B	–
8	LG	–
9	V	–
10	R	–
11	O	–
12	G	–

Connector No.	D158
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-NH

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	–
3	W	–
4	R	–
7	SHIELD	–
8	B	–

Connector No.	D183
Connector Name	WIRE TO WIRE
Connector Type	NS12MBR-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	W	–
4	SB	–
5	SB	–
6	B	–
7	L	–
8	LG	–
9	V	–
10	R	–
11	O	–
12	G	–

Connector No.	D187
Connector Name	REAR VIEW CAMERA
Connector Type	TH04MW-NH

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	CAMERA POWER SUPPLY
2	L	CAMERA GND
3	W	CAMERA IMAGE SIGNAL
4	B	SHIELD

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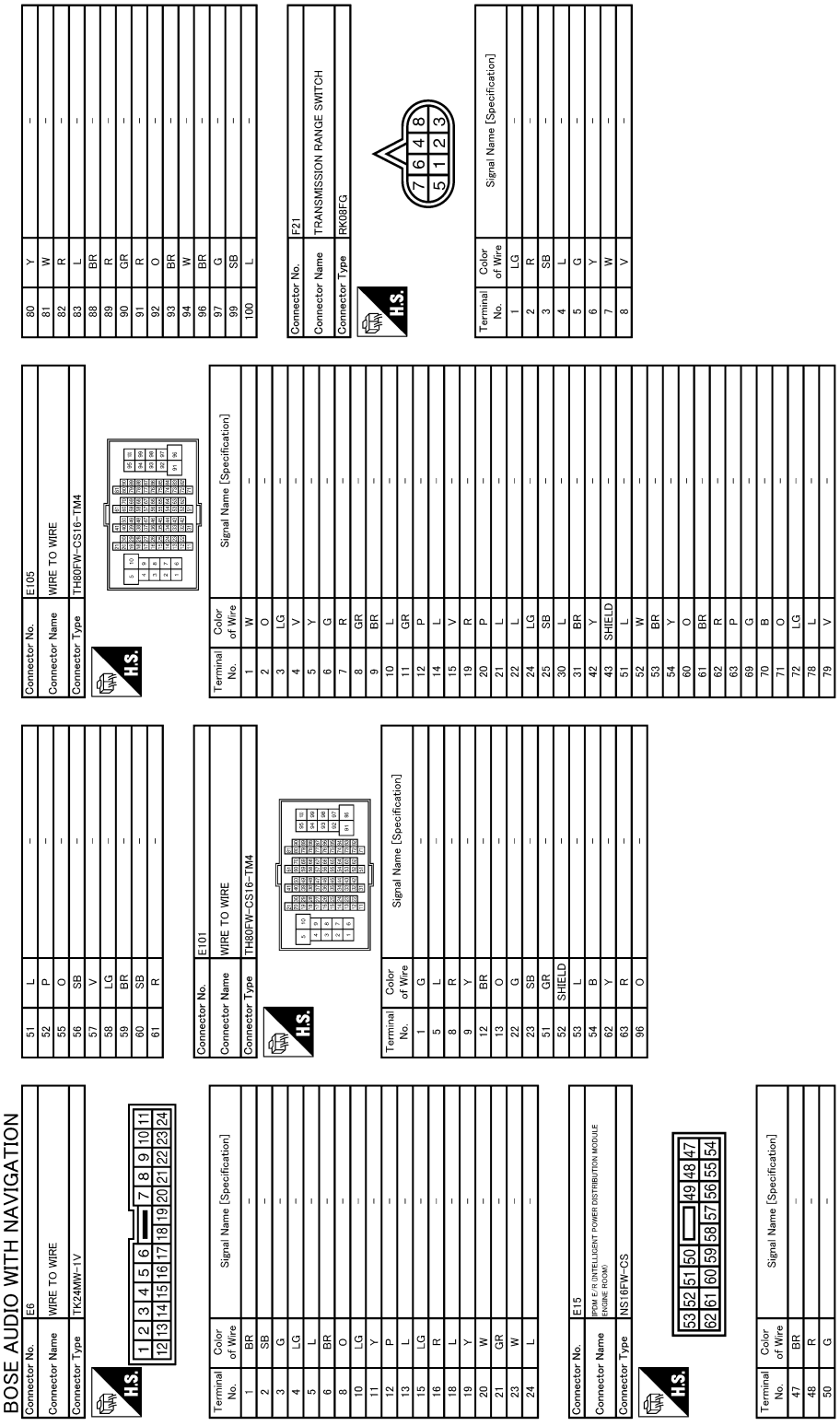

JCNWM5104GB

BOSE AUDIO WITH NAVIGATION

Connector No.	F123
Connector Name	WIRE TO WIRE
Connector Type	TK24FW-IV

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	–
2	SB	–
3	G	–
4	Y	–
5	L	–
6	BR	–
8	O	–
10	P	–
11	R	–
12	P	–
13	L	–
15	LG	–
16	R	–
18	L	–
19	Y	–
20	W	–
21	GR	–
23	W	–
24	L	–

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	BR	–
3	G	–
4	LG	–
6	P	–
7	Y	–
8	LG	–
9	P	–
10	Y	–
21	R	–
35	SHIELD	–
36	P	–
37	LG	–
38	SHIELD	–
39	O	–
40	G	–
41	R	–
45	BR	–
46	L	–
47	SHIELD	–
48	V	–
49	W	–
50	SHIELD	–
52	O	–
53	L	–
54	V	–
55	Y	–
56	LG	–
57	SB	–
58	W	–
59	B	–
60	SB	–
62	GR	–
63	BR	–
65	SHIELD	–
66	BR	–
67	LG	–
68	SB	–
69	SHIELD	–
70	LG	–
71	O	–
72	BR	–
77	L	–
80	R	–
81	W	–
82	GR	–
86	Y	–
87	P	–
91	L	–
92	B	–
93	GR	–
94	G	–
95	O	–
96	P	–
97	SB	–

98	GR	–
99	R	–
100	L	–

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	Y	–
4	R	–
5	W	–
6	G	–
10	W	–
13	Y	–
14	O	–
15	W	–
16	V	–
17	LG	–
18	BR	–
19	SB	–
20	B	–
21	SHIELD	–
26	W	–
29	L	–
30	B	–
31	GR	–
32	G	–

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

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

Connector No.	M22
Connector Name	TWEETER RH
Connector Type	TK02FBR

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

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BOSE AUDIO WITH NAVIGATION

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
3	W	–
5	R	–
7	P	–
8	SHIELD	–
9	B	–
11	Y	–
12	Y	–

Connector No.	M33
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY-1V

H.S.

24	25	26	27
31	32	33	34

Terminal No.	Color of Wire	Signal Name [Specification]
24	BR	–
25	GR	–
26	SB	–
27	G	–
31	GR	–
32	O	–
33	R	–
34	Y	–

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	BATTERY POWER SUPPLY
2	O	IGNITION SIGNAL
3	B	GROUND
4	B	GROUND
5	BR	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
7	GR	OVERDRIVE CONTROL SWITCH SIGNAL
9	L	PADDLE SHIFTER SHIFT UP SIGNAL
10	G	PADDLE SHIFTER SHIFT DOWN SIGNAL
13	Y	ILLUMINATION CONTROL SIGNAL
15	LG	AIR BAG SIGNAL
16	O	ENGINE COOLANT TEMPERATURE SIGNAL
19	BR	AMBIENT SENSOR SIGNAL
20	SB	AMBIENT SENSOR GROUND
21	L	CAN-H
22	P	CAN-L
24	B	FUEL LEVEL SENSOR SIGNAL GROUND
25	SB	ALTERNATOR SIGNAL
26	V	PARKING BRAKE SWITCH SIGNAL
27	BR	BRAKE FLUID LEVEL SWITCH SIGNAL
28	B	SECURITY SIGNAL
29	W	WASHER LEVEL SWITCH SIGNAL
30	Y	VEHICLE SPEED SIGNAL (2-PULSE)
31	L	VEHICLE SPEED SIGNAL (8-PULSE)
34	G	FUEL LEVEL SENSOR SIGNAL
35	O	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
36	G	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)
37	P	NON-MANUAL MODE SIGNAL
38	O	MANUAL MODE SHIFT DOWN SIGNAL
39	V	MANUAL MODE SHIFT UP SIGNAL
40	LG	MANUAL MODE SIGNAL

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	KEY RING OUTPUT
2	G	INPUT 5
3	Y	INPUT 4
4	W	INPUT 3
5	R	INPUT 2
6	P	INPUT 1
7	L	KEY CYC UNLOCK
8	R	KEY CYL LOCK SW
9	R	BRAKE SW
10	SB	RR DEF SW
11	SB	ACC
12	P	DR SW AS
13	LG	DR SW RR
14	G	AUTO LIGHT SENS INPUT
17	W	SENS POWER SUPPLY
18	O	KEYLESS TUNER SENS GND
19	V	KEYLESS TUNER POWER
20	GR	KEYLESS TUNER SIGNAL
21	G	IMMOBI ANT (CLOCK)
23	B	SECURITY IND OUT PUT
25	BR	IMMOBI ANT (RX, TX)
27	Y	AIRCON SW
28	LG	BLOWER FAN SW
29	W	HAZARD SW
30	G	BACK DOOR OPEN SW
32	BR	OUTPUT 5
33	GR	OUTPUT 4
34	L	OUTPUT 3
35	B	OUTPUT 2
36	V	OUTPUT 1
37	LG	KEY SW
38	G	IGN
39	L	CAN-H
40	P	CAN-L

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BOSE AUDIO WITH NAVIGATION

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	–
2	O	–
3	LG	–
4	Y	–
5	Y	–
6	G	–
7	R	–
8	GR	–
9	BR	–
10	L	–
11	GR	–
12	P	–
14	SB	–
15	V	–
19	R	–
20	P	–
21	O	–
22	L	–
24	BR	–
25	W	–
30	L	–
31	W	–
42	O	–
43	SHIELD	–
51	W	–
52	SB	–
53	L	–
54	Y	–
60	O	–
61	BR	–
62	G	–
63	P	–
69	W	–
70	B	–
71	P	–
72	O	–
78	SB	–
79	V	–

80	L	–
81	W	–
82	B	–
83	LG	–
88	BR	–
89	G	–
90	GR	–
91	R	–
92	L	–
93	P	–
94	W	–
96	BR	–
97	G	–
99	SB	–
100	Y	–

Connector No.	M79
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

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

Connector No.	M80
Connector Name	TWEETER LH
Connector Type	TK02FBR

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	– [With BOSE system]
1	B	– [With base audio or display audio]
2	GR	– [With BOSE system]
2	P	– [With base audio or display audio]

Connector No.	M82
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	O	–
3	W	–
4	G	–
5	V	–
6	W	–
10	SB	–

Connector No.	M88
Connector Name	NAVI CONTROL UNIT
Connector Type	TH18FW-CS2

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	AMP. ON SIGNAL
2	R	SOUND SIGNAL FRONT LH (+) [With BOSE system]
2	R	SOUND SIGNAL FRONT SPEAKER LH (+) [Without BOSE system]
3	G	SOUND SIGNAL FRONT LH (–) [With BOSE system]
3	G	SOUND SIGNAL FRONT SPEAKER LH (–) [Without BOSE system]
4	V	SOUND SIGNAL REAR LH (+) [With BOSE system]
4	V	SOUND SIGNAL REAR SPEAKER LH (+) [Without BOSE system]
5	LG	SOUND SIGNAL REAR LH (–) [With BOSE system]
5	LG	SOUND SIGNAL REAR SPEAKER LH (–) [Without BOSE system]
6	BR	STRG SW A
7	SB	ACC
8	Y	ILLUMINATION CONTROL SIGNAL (–)
9	R	ILLUMINATION CONTROL SIGNAL (+)
11	O	SOUND SIGNAL FRONT RH (+) [With BOSE system]
11	O	SOUND SIGNAL FRONT SPEAKER RH (+) [Without BOSE system]
12	W	SOUND SIGNAL FRONT (–) [With BOSE system]
12	W	SOUND SIGNAL FRONT SPEAKER RH (–) [Without BOSE system]
13	L	SOUND SIGNAL REAR RH (+) [With BOSE system]
13	L	SOUND SIGNAL REAR SPEAKER RH (+) [Without BOSE system]
14	P	SOUND SIGNAL REAR RH (–) [With BOSE system]
14	P	SOUND SIGNAL REAR SPEAKER RH (–) [Without BOSE system]
15	GR	STRG SW GND
16	O	STRG SW B
18	L	VEHICLE SPEED (6-PULSE)
19	Y	BATTERY
20	B	GND

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BOSE AUDIO WITH NAVIGATION

Connector No.	M69
Connector Name	NAVI CONTROL UNIT
Connector Type	TH24FW-NH

H.S.

21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44

Terminal No.	Color of Wire	Signal Name [Specification]
21	B	EQ 1
22	B	EQ 2
23	B	EQ 3
25	G	REVERSE SIGNAL
34	BR	SOUND SIGNAL (+)
35	Y	SOUND SIGNAL (–)
36	B	GND
37	SHIELD	SHIELD
38	SB	AV COMM (H)
39	LG	AV COMM (L)
41	W	CAMERA IMAGE SIGNAL
42	SHIELD	SHIELD
43	R	CAMERA POWER SUPPLY
44	B	CAMERA GND

Connector No.	M95
Connector Name	CENTER SPEAKER
Connector Type	TK02FBR

H.S.

2 1

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

Connector No.	M209
Connector Name	WIRE TO WIRE
Connector Type	GT17VSN-10DP-HU

H.S.

11
1 2
3 4
5 6
7 8
9 10

Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–
3	L	–
4	G	–
5	R	–
7	R	–
8	W	–
9	SHIELD	–
10	G	–
11	SHIELD	–

Connector No.	M210
Connector Name	USB CONNECTOR AND AUX JACK
Connector Type	GT17H-4S-HU

H.S.

5
4 2
3 1

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

Connector No.	M211
Connector Name	USB CONNECTOR AND AUX JACK
Connector Type	TK04FW

H.S.

9 7 6

Terminal No.	Color of Wire	Signal Name [Specification]
6	G	AUX SOUND SIGNAL RH (+)
7	R	AUX SOUND SIGNAL GND
9	W	AUX SOUND SIGNAL LH (+)

Connector No.	M352
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY

H.S.

14 15 16 17 18 19 20 21

Terminal No.	Color of Wire	Signal Name [Specification]
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–
21	–	–

Connector No.	M402
Connector Name	WIRE TO WIRE
Connector Type	GT13SC-1/1S-HU

H.S.

1 2

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

Connector No.	M403
Connector Name	WIRE TO WIRE
Connector Type	GT13SGN-1/1PP-HU

H.S.

1 2

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

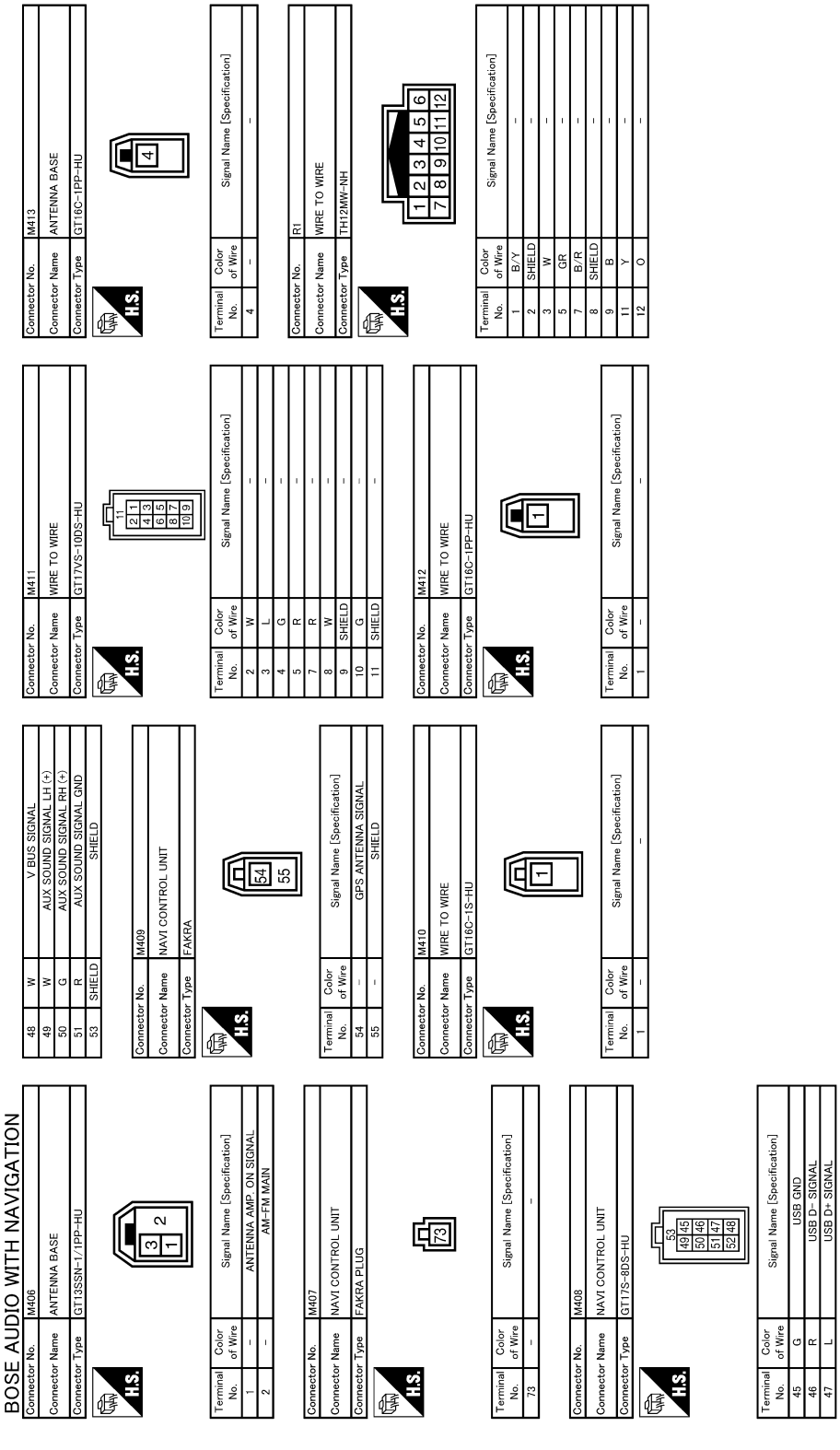
Connector No.	M405
Connector Name	NAVI CONTROL UNIT
Connector Type	GT13SH-2/1S-HU

H.S.

70 71

Terminal No.	Color of Wire	Signal Name [Specification]
70	–	ANTENNA AMP. ON SIGNAL
71	–	ANTENNA SIGNAL

JCNWM5108GB



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BOSE AUDIO WITH NAVIGATION

Connector No.	R3
Connector Name	MICROPHONE
Connector Type	TK04FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	MICROPHONE SIGNAL (+)
2	R	MICROPHONE SIGNAL (−)
4	W	MICROPHONE POWER

JCNWM5110GB

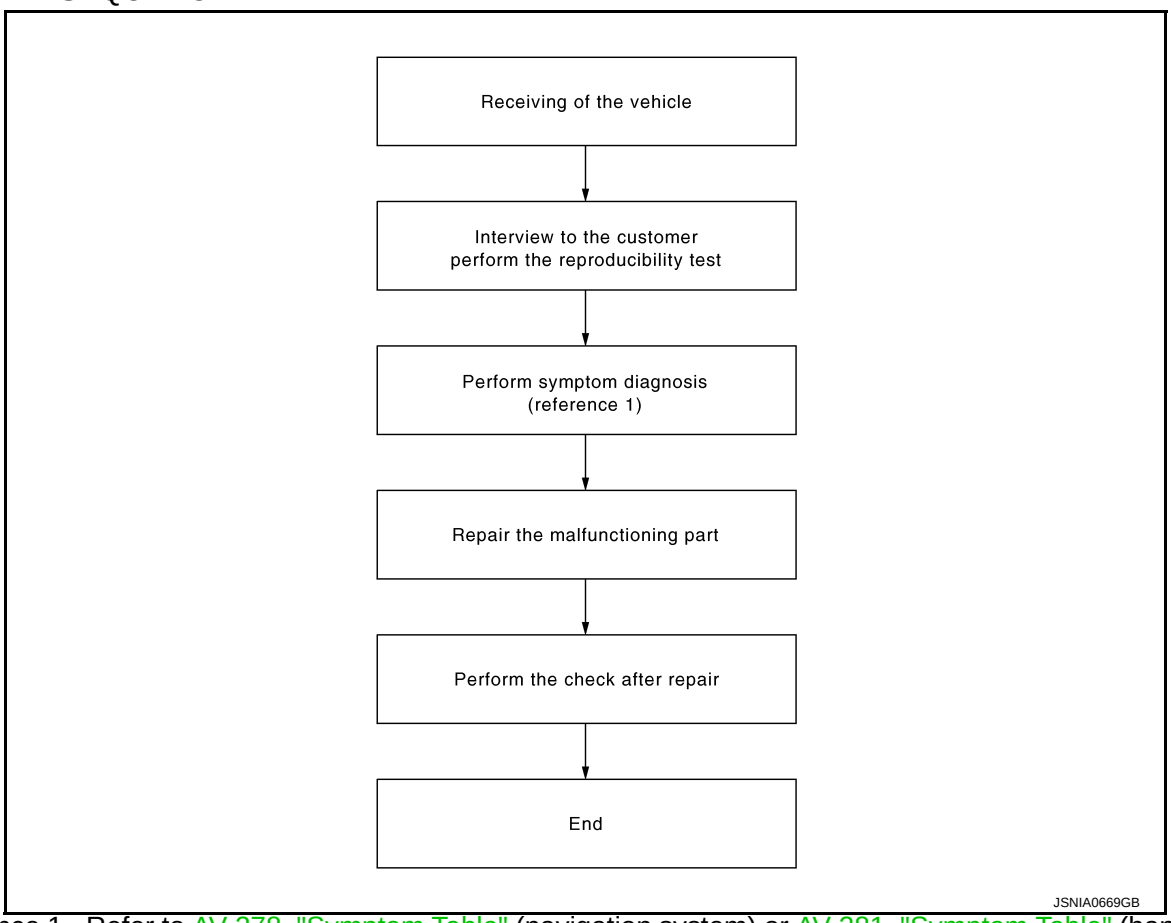
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000006276202

OVERALL SEQUENCE



Reference 1···Refer to AV-278, "Symptom Table" (navigation system) or AV-281, "Symptom Table" (hands-free phone system).

DETAILED FLOW

1.CHECK SYMPTOM

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

>> GO TO 2.

2.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-278, "Symptom Table" (navigation system) or AV-281, "Symptom Table" (hands-free phone system).

>> GO TO 3.

3.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

>> GO TO 4.

4. FINAL CHECK

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

Is there any symptom?

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

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

NAVI CONTROL UNIT

NAVI CONTROL UNIT : Diagnosis Procedure

INFOID:0000000006275795

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is inspection result OK?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between NAVI control unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M88	19	OFF	Battery voltage
ACC power supply	M88	7	ACC	Battery voltage

Is inspection result OK?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M88	20	OFF	Existed.
	M89	36		

Is inspection result OK?

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

BOSE AMP.

BOSE AMP. : Diagnosis Procedure

INFOID:0000000006417067

1.CHECK FUSE

Check that the following fuses of the BOSE amp. are not blown.

Power source	Fuse No.
Battery	13

Is inspection result OK?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between BOSE speaker amp harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	B64	11	OFF	Battery voltage

Is inspection result OK?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B64	12	OFF	Existed.

Is inspection result OK?

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

TEL ADAPTER UNIT

TEL ADAPTER UNIT : Diagnosis Procedure

INFOID:0000000006369729

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	35
Ignition switch ACC or ON	20

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	B6	1	OFF	Battery voltage
ACC power supply		2	ACC	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B6	4	OFF	Existed

Is the inspection result normal?

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

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000006382986

TEL adapter unit supplies power to microphone. The microphone transmits the sound voice to the TEL adapter unit.

Diagnosis Procedure

INFOID:0000000006275797

1.CHECK CONTINUITY BETWEEN TEL ADAPTER UNIT AND MICROPHONE CIRCUIT

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

TEL adapter unit		Microphone		Continuity
Connector	Terminal	Connector	Terminal	
B6	7	R3	1	Existed
	8		2	
	29		4	

4. Check continuity between TEL adapter unit harness connector and ground.

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B6	7		Not existed
	29		

Is inspection result OK?

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

2.CHECK VOLTAGE MICROPHONE VCC

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

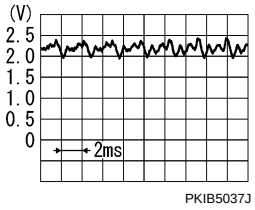
(+)		(–)	Voltage (Approx.)
TEL adapter unit			
Connector	Terminal		
B6	29	Ground	5.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace TEL adapter unit. Refer to AV-297, "Exploded View".

3.CHECK MICROPHONE SIGNAL

1. Turn ignition switch OFF.
2. Connect microphone connector.
3. Turn ignition switch ON.
4. Check signal between TEL adapter unit harness connector.

TEL adapter unit				Condition	Reference value
(+)		(–)			
Connector	Terminal	Connector	Terminal		
B6	7	B6	8	Give a voice.	

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Is inspection result OK?

YES >> Replace TEL adapter unit. Refer to AV-297, "Exploded View".
NO >> Replace microphone. Refer to AV-299, "Exploded View".

CONTROL SIGNAL CIRCUIT

Description

INFOID:0000000006369730

TEL adapter unit identifies the vehicle model according to the control signal and performs the control.

Diagnosis Procedure

INFOID:0000000006369731

1.CHECK CONTINUITY CONTROL SIGNAL CIRCUIT

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

TEL adapter unit			Continuity
Connector	Terminals		
B6	20	Ground	Existed
	22		
	23		
	27		

Is the inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-297, "Exploded View".
NO >> Repair harness or connector.

CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000006275798

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

Diagnosis Procedure

INFOID:0000000006275799

1.CHECK CONTINUITY CAMERA POWER SUPPLY CIRCUIT

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

NAVI control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M89	43	D187	1	Existed

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

NAVI control unit		Ground	Continuity
Connector	Terminal		
M89	43		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE CAMERA POWER SUPPLY

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

(+)		(–)	Condition	Voltage (Approx.)
NAVI control unit				
Connector	Terminal			
M89	43	Ground	Shift position is in “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace NAVI control unit. Refer to AV-287, "Removal and Installation".

3.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

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

NAVI control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M89	41	D187	3	Existed

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

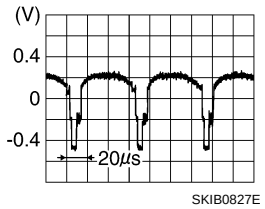
NAVI control unit		Ground	Continuity
Connector	Terminal		
M89	41		Not existed

Is inspection result normal?

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

4. CHECK CAMERA IMAGE SIGNAL

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

(+)		(–)	Condition	Reference value
NAVI control unit				
Connector	Terminal			
M89	41	Ground	At rear view camera image is displayed.	

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Is inspection result normal?

YES >> Replace NAVI control unit. Refer to AV-287, "Removal and Installation".
NO >> Replace rear view camera. Refer to AV-301, "Removal and Installation".

BOSE AMP. ON SIGNAL CIRCUIT

Description

INFOID:0000000006523742

When the audio system is turned on, a voltage signal is supplied from the NAVI control unit to the BOSE amp. When this signal is received, the BOSE amp. will turn on.

Diagnosis Procedure

INFOID:0000000006523743

1.CHECK CONTINUITY AMP. ON SIGNAL CIRCUIT

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

NAVI control unit		BOSE amp.		Continuity
Connector	Terminal	Connector	Terminal	
M88	1	B65	31	Existed

4. Check continuity between NAVI control unit harness connector terminal 1 and ground.

NAVI control unit		Ground	Continuity
Connector	Terminal		
M88	1		Not existed

Is inspection result OK?

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

2.CHECK VOLTAGE AMP. ON SIGNAL

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

NAVI control unit		Ground	Voltage (Approx.)
Connector	Terminal		
M88	1		12.0 V

Is inspection result OK?

YES >> Replace BOSE amp. Refer to AV-288, "Exploded View".
NO >> Replace NAVI control unit. Refer to AV-287, "Removal and Installation".

WOOFER AMP. ON SIGNAL CIRCUIT

Description

INFOID:0000000006276241

When the audio system is turned on, a voltage signal is supplied from the BOSE amp. to the woofer. When this signal is received, the woofer will turn on.

Diagnosis Procedure

INFOID:0000000006276242

1.CHECK CONTINUITY WOOFER AMP. ON SIGNAL CIRCUIT

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

BOSE amp.		Woofer		Continuity
Connector	Terminal	Connector	Terminal	
B65	25	B63	4	Existed

4. Check continuity between woofer harness connector and ground.

Woofer		Ground	Continuity
Connector	Terminal		
B63	4		Not existed

Is inspection result OK?

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

2.CHECK VOLTAGE AMP. ON SIGNAL

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

BOSE amp.		Ground	Voltage (Approx.)
Connector	Terminal		
B65	25		12.0 V

Is inspection result OK?

YES >> Replace woofer. Refer to AV-293, "Exploded View".
NO >> Replace BOSE amp.. Refer to AV-288, "Exploded View".

STEERING SWITCH SIGNAL A CIRCUIT

Description

INFOID:0000000006275800

Transmits the steering switch signal to NAVI control unit.

Diagnosis Procedure

INFOID:0000000006275801

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT

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

NAVI control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M88	6	M33	24	Existed

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

NAVI control unit		Ground	Continuity
Connector	Terminal		
M88	6		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK NAVI CONTROL UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
NAVI control unit				
Connector	Terminal	Connector	Terminal	
M88	6	M88	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace NAVI control unit. Refer to AV-287, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-272, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-300, "Exploded View".

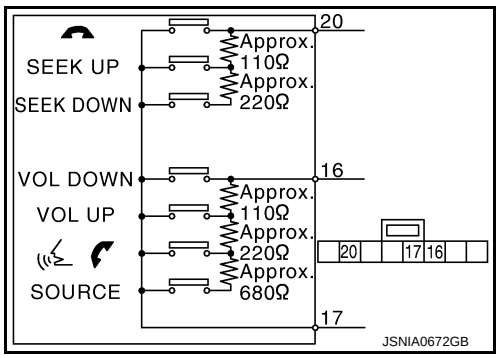
Component Inspection

INFOID:0000000006398149

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH SIGNAL B CIRCUIT

Description

INFOID:0000000006275803

Transmits the steering switch signal to NAVI control unit.

Diagnosis Procedure

INFOID:0000000006275804

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

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

NAVI control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M88	16	M33	32	Existed

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

NAVI control unit		Ground	Continuity
Connector	Terminal		
M88	16		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK NAVI CONTROL UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
NAVI control unit				
Connector	Terminal	Connector	Terminal	
M88	16	M88	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace NAVI control unit. Refer to AV-287, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-274, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-300, "Exploded View".

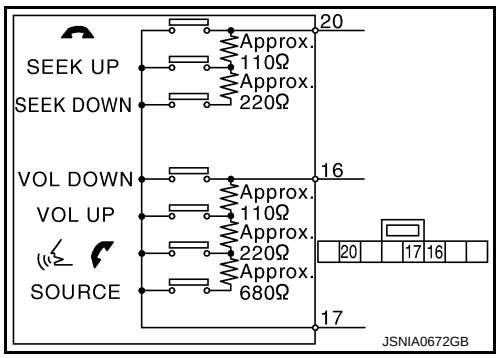
Component Inspection

INFOID:0000000006398150

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



STEERING SWITCH GROUND CIRCUIT

Description

INFOID:0000000006275806

Transmits the steering switch signal to NAVI control unit.

Diagnosis Procedure

INFOID:0000000006275807

1.CHECK STEERING SWITCH SIGNAL GROUND CIRCUIT

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

NAVI control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M88	15	M33	31	Existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable.

3.CHECK GROUND CIRCUIT

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

NAVI control unit		Ground	Continuity
Connector	Terminal		
M88	15		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace NAVI control unit. Refer to AV-287, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-276, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-300, "Exploded View".

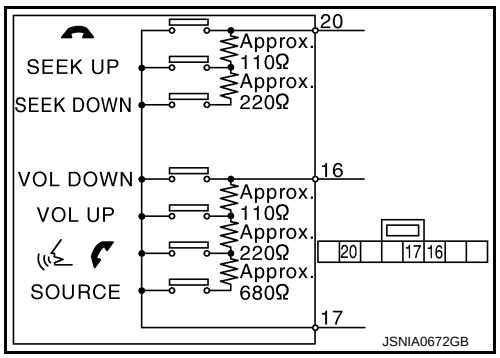
Component Inspection

INFOID:0000000006398151

Measure the resistance between the steering switch connector terminals 16 to 17 and 20 to 17.

Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
16	17	SOURCE switch ON	1000 – 1020
		switch ON	327 – 333
		VOL UP switch ON	109 – 111
		VOL DOWN switch ON	0
20		SEEK DOWN switch ON	327 – 333
		SEEK UP switch ON	109 – 111
		switch ON	0



SYMPTOM DIAGNOSIS

NAVIGATION SYSTEM

Symptom Table

INFOID:0000000006275809

RELATED TO NAVIGATION

NOTE:
Combined part of AV switch and NAVI control unit.

Symptoms	Check items		Probable malfunction location / Action to take
Display does not turn ON.	All switches cannot be operated.		NAVI control unit power supply and ground circuit. Refer to AV-263, "NAVI CONTROL UNIT : Diagnosis Procedure".
	All switches can be operated.		NAVI control unit
All switches cannot be operated.	Display does not turn ON.		NAVI control unit power supply and ground circuit. Refer to AV-263, "NAVI CONTROL UNIT : Diagnosis Procedure".
	Display turn ON.		NAVI control unit
Only specified switch cannot be operated.	–		NAVI control unit
Map screen is not displayed. (RGB image other than map is normal.)	• Check that the map SD-card is in the SD-card slot. • Check “SD Card Access” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“OK” is displayed for “SD Card Access”.	Map SD-card
		“OK” is not displayed for “SD Card Access”.	• NAVI control unit • Map SD-card
Voice guidance is not heard.	Audio sound is normal.		NAVI control unit
Display does not dim.	Check “Illumination Signal” in “SERVICE SYSTEM STATUS”, “SERVICE MENU”.	“Illumination Signal” reaches 100% when the lighting switch is ON.	NAVI control unit
		“Illumination Signal” does not reach 100% when the lighting switch is ON.	Illumination control signal circuit
Vehicle icon does not move.	Check “Speed Signal” in “SERVICE SYSTEM STATUS”, “SERVICE MENU”.	A value of “Speed Signal” changes according to vehicle speeds.	NAVI control unit
		A value of “Speed Signal” does not change according to vehicle speeds.	Vehicle speed signal circuit
Map matching is not complete GPS icon is not displayed	Check “GPS Antenna” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“Connected” is displayed for “GPS Antenna”.	NAVI control unit
		“Connected” is not displayed for “GPS Antenna”.	GPS antenna
Traffic information (XM Traffic) is not received.	Check “XM Antenna” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“Detected” is displayed for “XM Antenna”.	NAVI control unit
		“Detected” is not displayed for “XM Antenna”.	• Antenna base • Antenna feeder

RELATED TO AUDIO

Symptoms	Check items		Probable malfunction location / Action to take
Audio sound is not heard.	No sound from all speakers.		• NAVI control unit power supply and ground circuit. Refer to AV-263, "NAVI CONTROL UNIT : Diagnosis Procedure". • BOSE amp. power supply and ground circuit. Refer to AV-263, "BOSE AMP. : Diagnosis Procedure". • BOSE amp. ON signal circuit. Refer to AV-270, "Diagnosis Procedure".
	Sound is not heard from woofer.		• Sound signal woofer circuit • Woofer amp. ON signal circuit. Refer to AV-271, "Diagnosis Procedure".
	Sound is heard only from specific places.		Sound signal circuit of suspect system.
AM/FM radio is not received.	• Other audio sounds are normal. • Check “Radio Antenna” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“OK” is displayed for “Radio Antenna”.	NAVI control unit
		“OK” is not displayed for “Radio Antenna”.	• Antenna amp. ON signal circuit. • Antenna base • Antenna feeder
Speed sensitive volume system does not work.	Check “Speed Signal” in “SERVICE SYSTEM STATUS”, “SERVICE MENU”.	A value of “Speed Signal” changes according to vehicle speeds.	NAVI control unit
		A value of “Speed Signal” does not change according to vehicle speeds.	Vehicle speed signal circuit
Traffic information (XM Traffic) is not received.	Check “XM Antenna” in “SERVICE SYSTEM SELF TEST”, “SERVICE MENU”.	“Detected” is displayed for “XM Antenna”.	NAVI control unit
		“Detected” is not displayed for “XM Antenna”.	• Antenna base • Antenna feeder

RELATED TO USB

NOTE:

Check that there is no malfunction of USB equipment main body before performing a diagnosis.

Symptoms	Check items		Probable malfunction location / Action to take
iPod® or USB memory can not be recognized.	With iPod or USB memory Connected, check “USB Device” in “SERVICE STATUS”, “SERVICE MENU”.	iPod or USB memory name is displayed for “USB Device”.	• USB and AUX harness • USB connector and AUX jack • NAVI control unit
		“Removed” is displayed for “USB Device”.	• USB and AUX harness • USB connector and AUX jack

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

RELATED TO AUXILIARY INPUT

NOTE:

Check that there is no malfunction of AUX equipment main body before performing a diagnosis.

Symptoms	Check items	Probable malfunction location
No voice sound is heard when AUX mode is selected.	Voice sound is heard when other modes are selected.	• USB and AUX harness • USB connector and AUX jack

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. Refer to AV-276, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch
“SEEK UP”, “SEEK DOWN” and “” switches are not operated.	Steering switch signal A circuit. Refer to AV-272, "Diagnosis Procedure".
“ ”, “VOL UP”, “VOL DOWN” and “SOURCE” switches are not operated.	Steering switch signal B circuit. Refer to AV-274, "Diagnosis Procedure".
The steering switch operates improperly. (The above phenomena excluded.)	• EQ1 circuit • EQ3 circuit

RELATED TO CAMERA

Symptoms	Check items		Probable malfunction location / Action to take
Camera image is not shown.	The guide line display is normal.		• Rear view camera image signal circuit • Rear view camera power supply and ground circuits Refer to AV-268, "Diagnosis Procedure".
The screen is not switched to camera image.	Check “Direction Signal” in “SERVICE SYSTEM STATUS”, “SERVICE MENU”.	“Reverse” is displayed for “Direction Signal” when the shift lever is in R.	NAVI control unit
		“Reverse” is not displayed for “Direction Signal” when the shift lever is in R.	Reverse signal circuit
The guide line display is malfunctioning.	—		• EQ1 circuit • EQ3 circuit

HANDS-FREE PHONE SYMPTOMS

Symptom Table

INFOID:0000000006276252

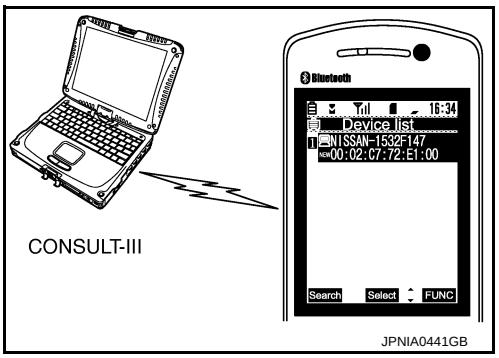
RELATED TO HANDS-FREE PHONE

- Check that the cellular phone is corresponding type (Bluetooth™ enabled) when the hands-free related malfunction vehicle is in service before performing a diagnosis.
- There is a case that malfunction occurs due to the version change of the phone type, etc. even though it is a corresponding type. Therefore, confirm it by changing the cellular phone to another corresponding type phone, and check that it operates normally. It is necessary to distinguish whether the cause is the vehicle or cellular phone. Check to ensure the customer's phone is supported by checking the phone compatibility for the hands-free system.

Simple Check for Bluetooth™ Communication

If cellular phone and TEL adapter unit cannot be connected with Bluetooth™ communication, following procedure allows the technician to judge which device has malfunction.

1. Turn on a cellular phone, not connecting Bluetooth™ communication.
2. Start CONSULT-III, then start Windows®.
3. Set CONSULT-III near a cellular phone.
4. When operated Bluetooth™ registration by cellular phone, check if CONSULT-III* would be displayed on the device name.
   (If other Bluetooth™device is located near cellular phone, a name of the device would be displayed also.)
   NOTE:
   *:Displayed device name is “NISSAN-********”.



- If no device name is displayed, cellular phone is malfunction. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Possible malfunction location/Action to take
Does not recognize cellular phone connection.	Repeat the registration of cellular phone.	TEL adapter unit
Hands-free phone cannot be established.	—	• TEL adapter unit power supply and ground circuit. Refer to AV-264, "TEL ADAPTER UNIT : Diagnosis Procedure". • Control signal circuit Refer to AV-267, "Diagnosis Procedure". • AV communication circuit between NAVI control unit and TEL adapter unit.
The other party's voice cannot be heard by hands-free phone.	Audio system sound is normal.	Sound signal (TEL voice, TEL guidance) circuit
	Audio system sound does not sound.	Refer to AV-278, "Symptom Table".
Originating sound is not heard by the other party with hands-free phone communication.	Voice recognition function is normal.	TEL adapter unit
	Voice recognition function does not work.	Microphone signal circuit. Refer to AV-265, "Diagnosis Procedure".

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. Refer to AV-276, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch. Refer to AV-300, "Exploded View".

Symptoms	Possible malfunction location / Action to take
“SEEK UP”, “SEEK DOWN” and “ ” switches are not operated.	Steering switch signal A circuit. Refer to AV-272, "Diagnosis Procedure".
“ ”, “VOL UP”, “VOL DOWN” and “SOURCE” switches are not operated.	Steering switch signal B circuit. Refer to AV-274, "Diagnosis Procedure".
The steering switch operates improperly. (The above phenomena excluded.)	• EQ1 circuit • EQ3 circuit

NORMAL OPERATING CONDITION

Description

INFOID:0000000006275810

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 display is turned off.	Press "☀/☽" to turn on 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 voice guidance volume level.
No map is displayed on the screen.	The map SD-card is not inserted.	Insert the map SD-card correctly.
	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 AUDIO

- The majority of the audio malfunctions are the result of outside causes (bad CD/cassette, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

NOTE:
- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the "red book" Compact Disc Standard and may not play.

Symptom	Cause and Counter measure
Cannot play	Check if the CD was inserted correctly.
	Check if the CD is scratched or dirty.
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than ".MP3", ".WMA", ".mp3", or ".wma" 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 writing applications or other text editing applications.
	Check if the finalization process, such as session close and disc close, is done for the CD.
	Check if the CD is protected by copyright.

Symptom	Cause and Counter measure
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 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 file has been given an extension of ".MP3", ".WMA", ".mp3" or ".wma", or when play is prohibited by copyright protection, the player will skip to the next song.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.

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

NOTE:

- Fading noise: This noise occurs because of variations in the field strength in a narrow range due to mountains or buildings blocking the signal.
- Multi-path noise: This noise results from a time difference between the broadcast waves directly from the station arriving at the antenna and the waves reflected by mountains or buildings.

MAP SD-CARD

Symptom	Possible cause	Possible solution
The message "Error" appears.	The SD-card is not recognized by the system.	Check the map SD-card data. Files can be lost.
		If you see any damage, replace the map SD-card.

RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
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 cancelled.	Turn on the route guidance.
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.
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 a global route calculation based on multiple route calculations.
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 point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets.	Reset the destination to a main or ordinary road, and recalculate the route.

Symptom	Possible cause	Possible solution
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect data on the map SD-card.	Updated information will be included in the next version of the map SD-card.
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 VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads and locations differ between 2D and 3D view.	This is because the quantity of the displayed information is reduced so that the screen does not become difficult to read. There is also a chance that the names of roads or locations may be displayed several times, and that the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is travelling on a new road, the vehicle icon is located on another nearby road.	The system automatically places the vehicle icon on the nearest available road, because the new road is not stored in the map data.	Updated road information will be included in the next version of the map SD-card.
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.
	The map data has an error 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 SD-card.

RELATED TO VOICE GUIDANCE

Symptom	Possible cause	Possible solution
Voice guidance is not available	In some cases, 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 voice guidance ON.
	Route guidance is set to off.	Route guidance is set to ON.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

RELATED TO TRAFFIC INFORMATION

Symptom	Possible cause	Possible solution
The traffic information is not displayed	The traffic information is not set to on.	Set the traffic information to on.
	You are in an area where traffic information is not available	Scroll to an area where traffic information is available
	You have not subscribed to XM NavTraffic or, your subscription to XM NavTraffic has expired.	Check your subscription status of XM NavTraffic.
	The map scale is set at a level where the display of icons is impossible.	Check that the map scale is set at a level in which the display of icons is possible.
With the automatic detour route search ON, no detour route is set to avoid congested areas.	There is no faster route compared to the current route, based on the road network and traffic information.	The automatic detour search is not intended for avoiding traffic jams. It searches for the fasted rote taking into consideration such things as traffic jams.
The route does not avoid road section with traffic information stating it is closed due to road construction.	The navigation system is designed not to avoid this event because the actual period of closure may differ from the declared roadwork period.	Observe the actual road condition and follow the instructions on road for detour when necessary. If the road closure is for certain, use detour function and set the detour distance to avoid the closed road section.
Traffic information displayed differs from information from other media (e.g. radio).	Other media may use different information sources.	Observe the actual road conditions and regulations. Always observe safe driving practices and follow all traffic regulations.

RELATED TO TELEPHONE

Symptoms	Cause and Counter measure
System fails to interpret the command correctly.	1. Ensure that the command format is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at a 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. Refer to AV-235, "Diagnosis Description".
The system consistently selects the wrong entry from the phone book.	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.

REMOVAL AND INSTALLATION

NAVI CONTROL UNIT

Removal and Installation

INFOID:0000000006275811

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove NAVI control unit mounting screws.
3. Pull out NAVI control unit, remove harness clip, and then disconnect antenna feeder and harness connectors.
4. Remove NAVI control unit and bracket as a unit.
5. Remove brackets from NAVI control unit.

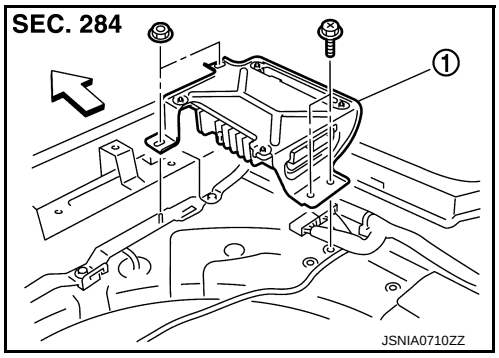
INSTALLATION

Install in the reverse order of removal.

BOSE AMP.

Exploded View

INFOID:0000000006369980



⇦: Vehicle front
1. BOSE amp.

Removal and Installation

INFOID:0000000006369981

REMOVAL

1. Remove luggage floor spacer assembly (FR, RH). Refer to INT-32, "Exploded View".
2. Remove BOSE amp.

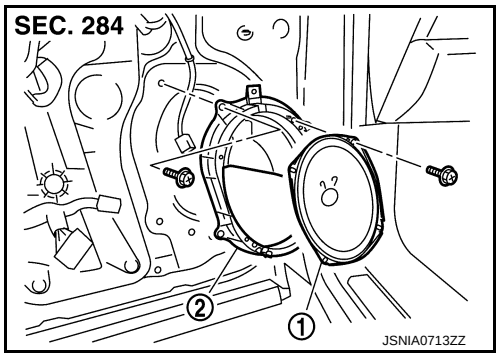
INSTALLATION

Install in the reverse order of removal.

FRONT SPEAKER

Exploded View

INFOID:0000000006369986



1. Front speaker
2. Bracket

Removal and Installation

INFOID:0000000006369987

REMOVAL

1. Remove front door finisher. Refer to INT-13, "FRONT DOOR FINISHER : Exploded View".
2. Remove front door speaker from bracket.

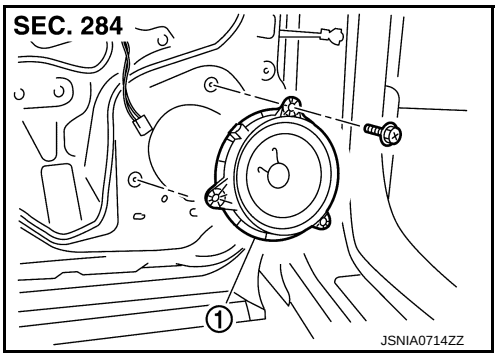
INSTALLATION

Install in the reverse order of removal.

REAR SPEAKER

Exploded View

INFOID:0000000006369988



1. Rear speaker

Removal and Installation

INFOID:0000000006369989

REMOVAL

1. Remove rear door finisher. Refer to INT-16, "REAR DOOR FINISHER : Exploded View".
2. Remove rear speaker.

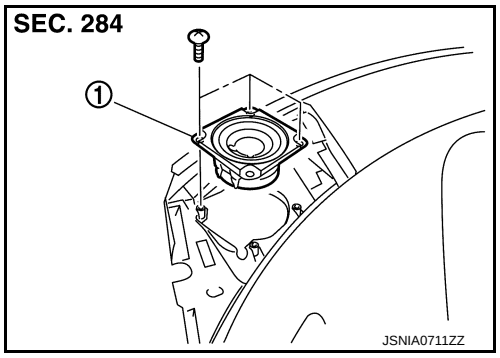
INSTALLATION

Install in the reverse order of removal.

TWEETER

Exploded View

INFOID:0000000006369982



1. Tweeter

Removal and Installation

INFOID:0000000006369983

REMOVAL

1. Remove instrument panel. Refer to IP-13, "Exploded View".
2. Remove tweeter from instrument panel.

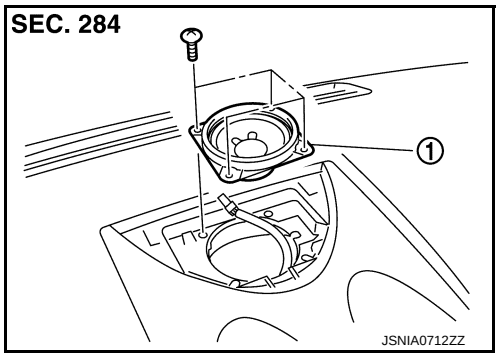
INSTALLATION

Install in the reverse order of removal.

CENTER SPEAKER

Exploded View

INFOID:0000000006369984



1. Center speaker

Removal and Installation

INFOID:0000000006369985

REMOVAL

1. Remove center speaker grille. Refer to IP-13, "Exploded View".
2. Remove center speaker.

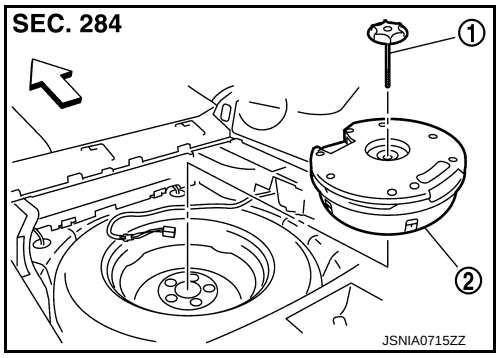
INSTALLATION

Install in the reverse order of removal.

WOOFER

Exploded View

INFOID:0000000006369990



⇦: Vehicle front
1. Clamp
2. Woofer

Removal and Installation

INFOID:0000000006369991

REMOVAL

1. Remove luggage floor center box. Refer to INT-32, "Exploded View".
2. Remove clamp, and then remove woofer.

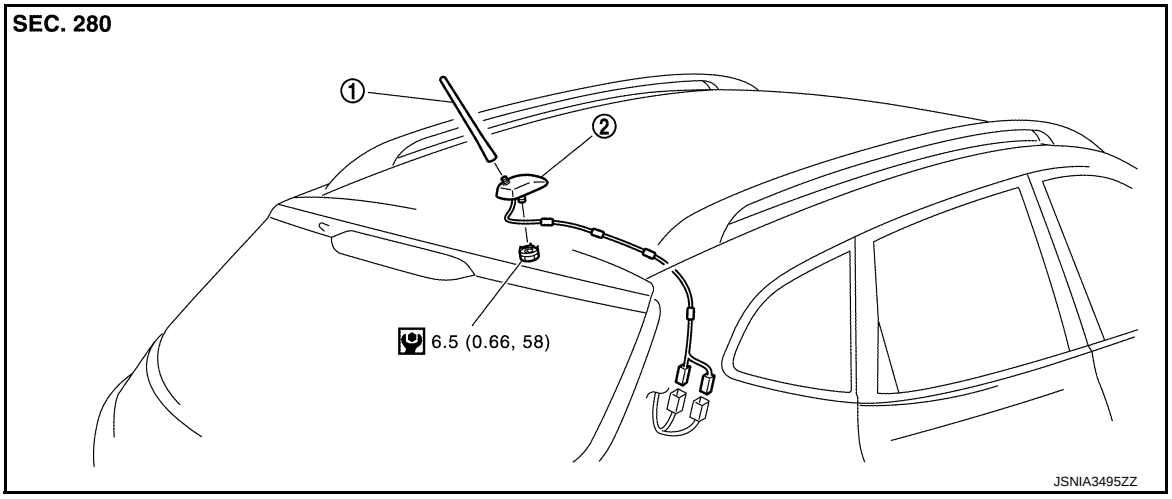
INSTALLATION

Install in the reverse order of removal.

RADIO & SATELLITE RADIO ANTENNA

Exploded View

INFOID:0000000006275815



1. Antenna rod
2. Antenna base

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000006275816

REMOVAL

1. Remove headlining assembly. Refer to INT-25, "NORMAL ROOF : Exploded View" (normal roof models) or INT-28, "SUNROOF : Exploded View" (sunroof models).
2. Remove nuts, and then remove antenna base.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

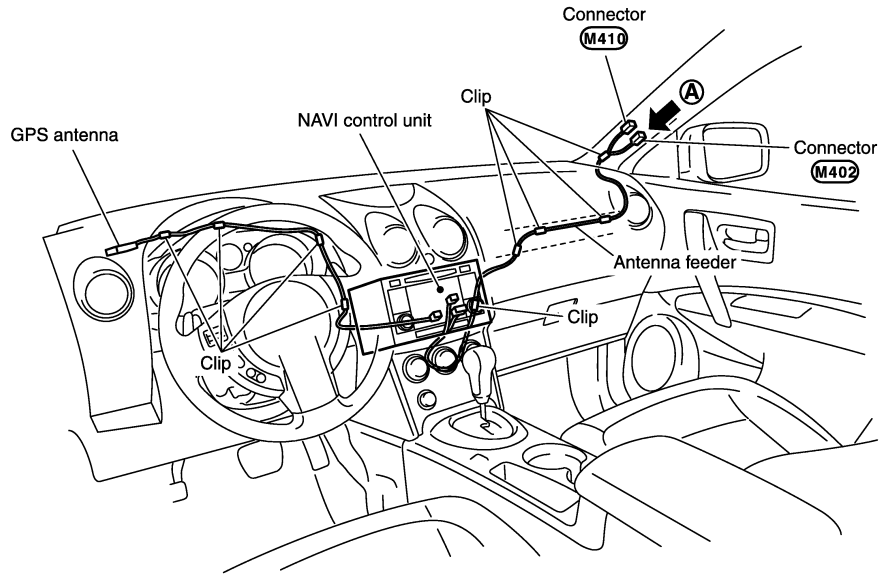
If the antenna base mounting nut is tightened looser than the specified torque, then this will lower the sensitivity of the antenna. On the other hand, if the nut is tightened tighter than the specified torque, then this will deform the roof panel.

GPS ANTENNA

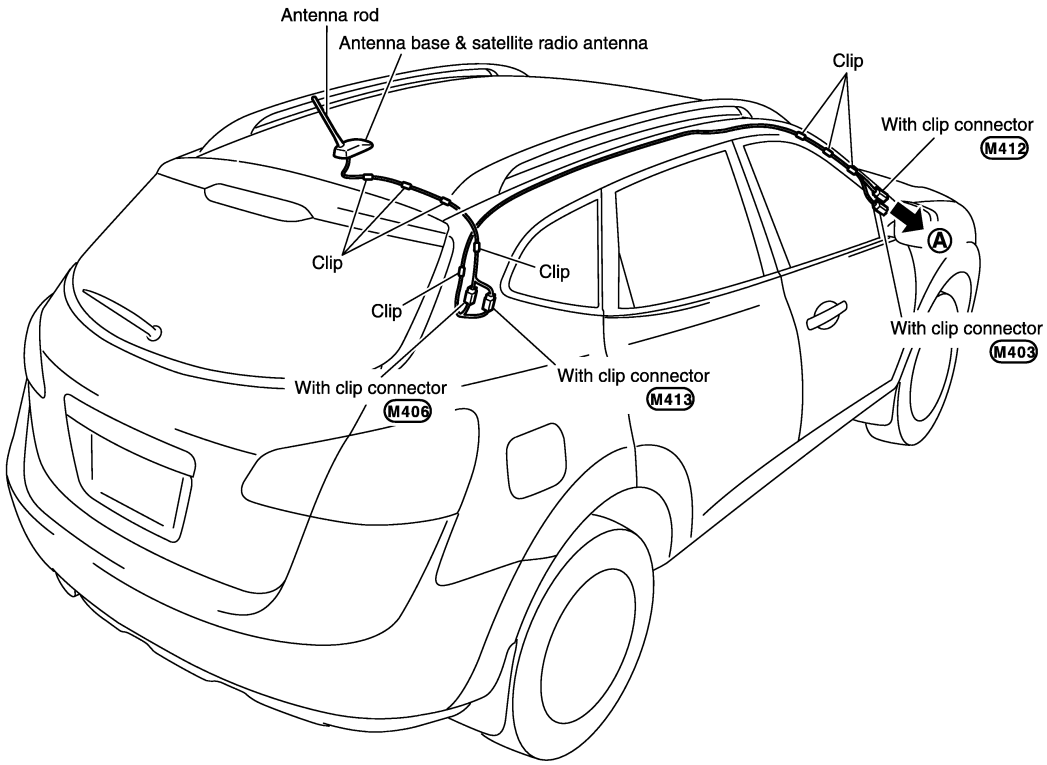
Feeder Layout

INFOID:0000000006275817

SEC. 280



Instrument panel driver side



Rear view of vehicle

JSNIA3299GB

Removal and Installation

INFOID:0000000006275818

REMOVAL

1. Remove instrument panel. Refer to IP-13, "Exploded View".

2. Remove GPS antenna screw to remove GPS antenna.

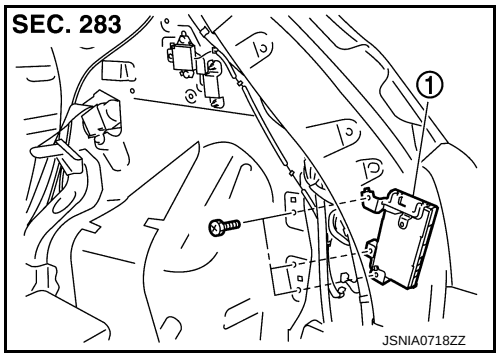
INSTALLATION

Install in the reverse order of removal.

TEL ADAPTER UNIT

Exploded View

INFOID:0000000006369998



1. TEL adapter unit

Removal and Installation

INFOID:0000000006369999

REMOVAL

1. Remove luggage side lower finisher (RH). Refer to INT-32, "Exploded View".
2. Remove TEL adapter unit.

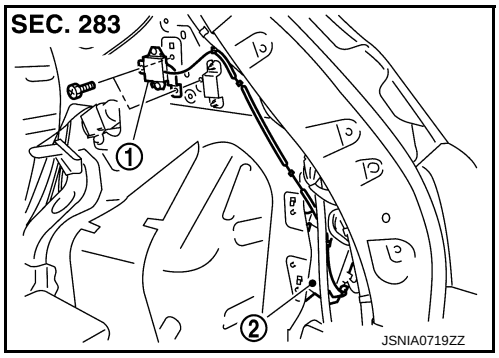
INSTALLATION

Install in the reverse order of removal.

TEL ANTENNA

Exploded View

INFOID:0000000006370000



1. TEL antenna
2. TEL adapter unit

Removal and Installation

INFOID:0000000006370001

REMOVAL

1. Remove luggage side upper finisher (RH). Refer to INT-32, "Exploded View".
2. Remove TEL antenna.

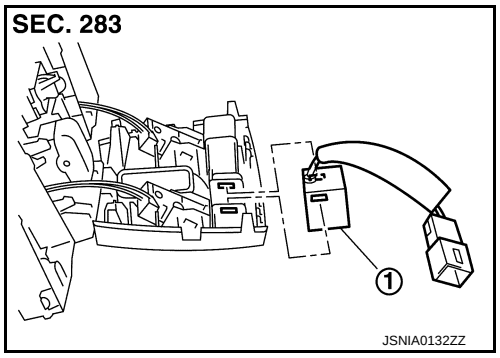
INSTALLATION

Install in the reverse order of removal.

MICROPHONE

Exploded View

INFOID:0000000006369996



1. Microphone

Removal and Installation

INFOID:0000000006369997

REMOVAL

1. Remove map lamp assembly. Refer to INT-25, "NORMAL ROOF : Exploded View" (normal roof models) or INT-28, "SUNROOF : Exploded View" (sunroof models).
2. Remove microphone from map lamp assembly.

INSTALLATION

Install in the reverse order of removal.

STEERING SWITCH

Exploded View

INFOID:0000000006369994

Refer to SR-11, "Exploded View".

Removal and Installation

INFOID:0000000006369995

REMOVAL

Refer to SR-11, "Removal and Installation".

INSTALLATION

Install in the reverse order of removal.

REAR VIEW CAMERA

Removal and Installation

INFOID:0000000006275821

REMOVAL

1. Remove back door finisher. Refer to INT-35, "Exploded View".
2. Remove rear view camera screws to remove rear view camera.

INSTALLATION

Install in the reverse order of removal.

USB CONNECTOR AND AUX JACK

Removal and Installation

INFOID:0000000006275822

REMOVAL

1. Remove center console assembly. Refer to IP-22, "Exploded View".
2. Push the pawl from the back of center console assembly to remove USB connector and AUX jack.

INSTALLATION

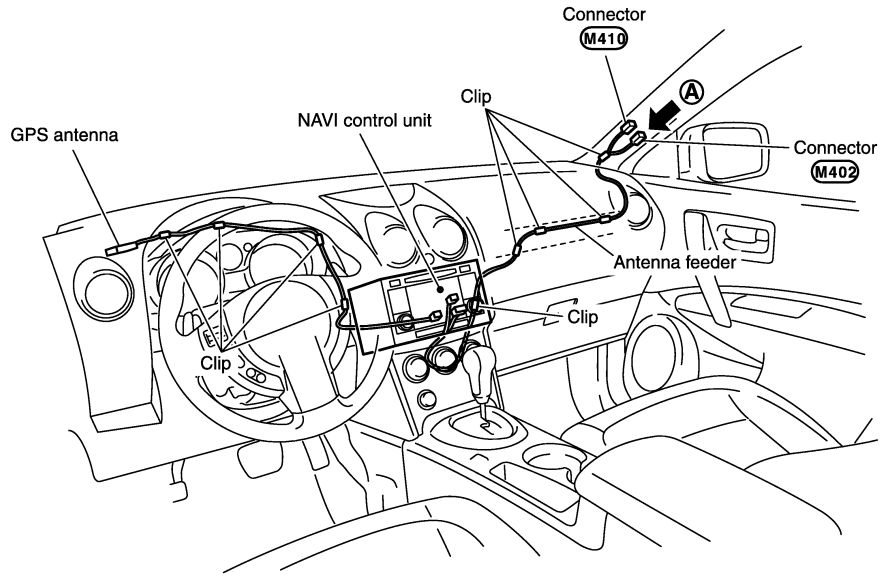
Install in the reverse order of removal.

ANTENNA FEEDER

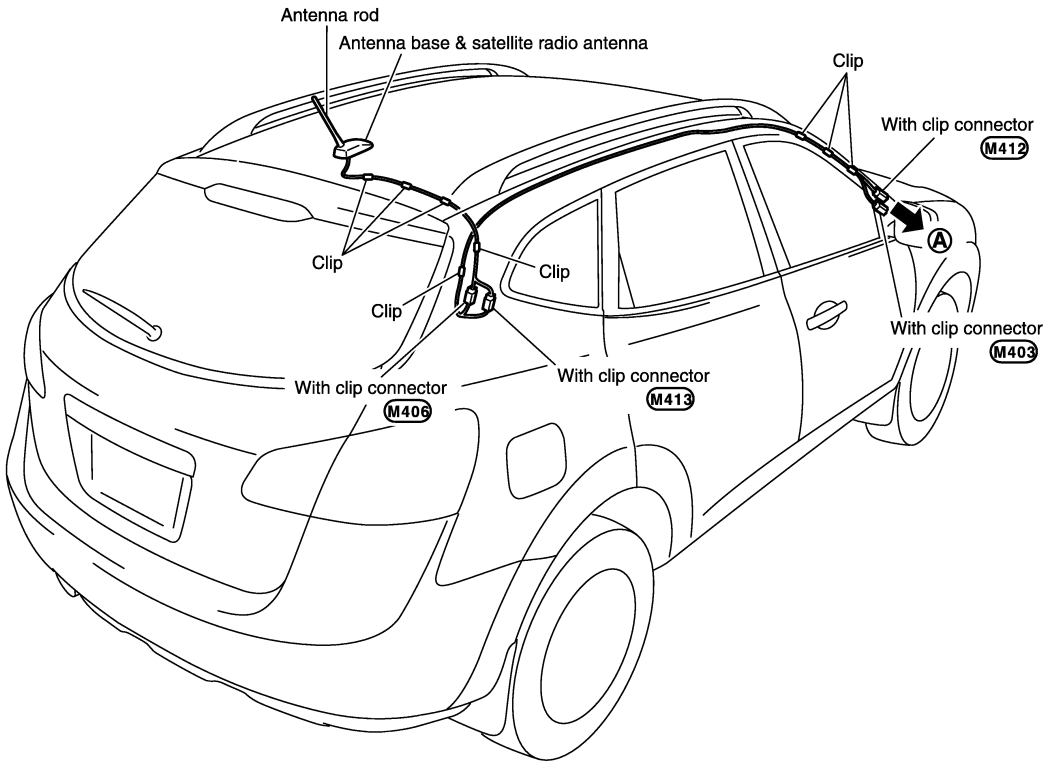
Feeder Layout

INFOID:0000000006275823

SEC. 280



Instrument panel driver side



Rear view of vehicle

JSNIA3299GB