SECTION AV
AUDIO, VISUAL & NAVIGATION SYSTEM

CONTENTS

BASE AUDIO

BOSE AUDIO WITH NAVIGATION

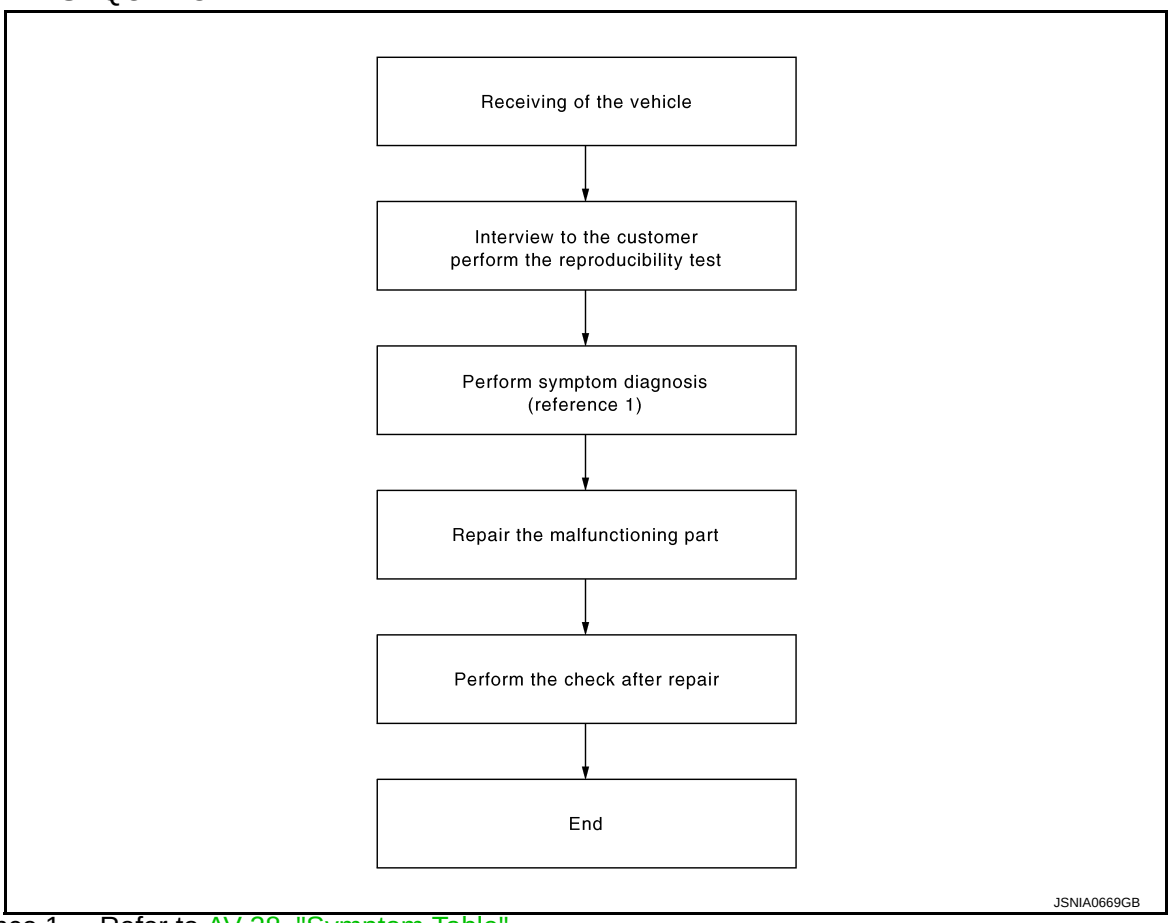
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000009359180

OVERALL SEQUENCE



Reference 1 ··· Refer to AV-28, "Symptom Table".

DETAILED FLOW

1.CHECK SYMPTOM

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

>> GO TO 2.

2.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-28, "Symptom Table"".

>> 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

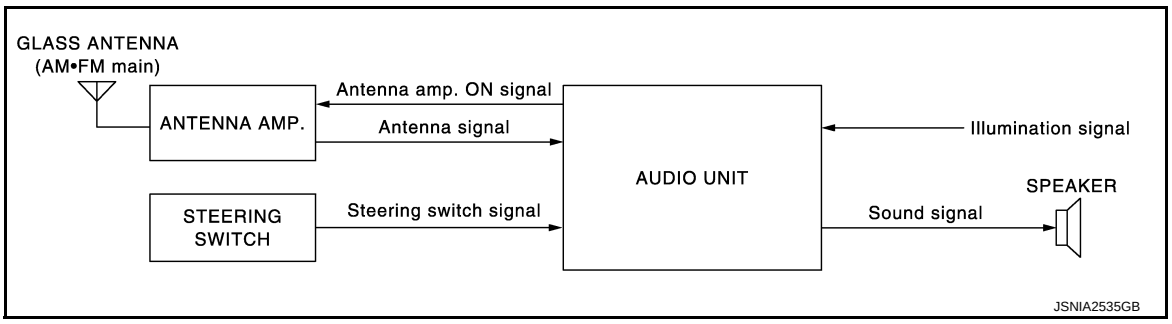
SYSTEM DESCRIPTION

AUDIO SYSTEM

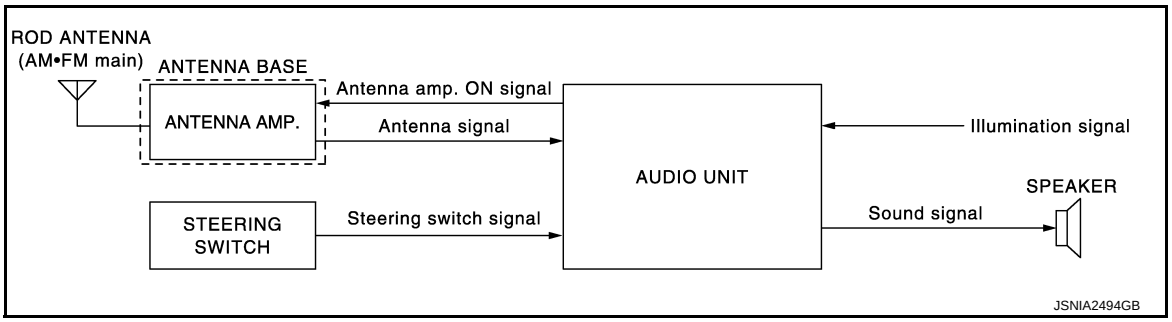
System Diagram

INFOID:0000000009359181

COUPE MODELS



ROADSTER MODELS



System Description

INFOID:0000000009359182

AUDIO SYSTEM

Audio functions

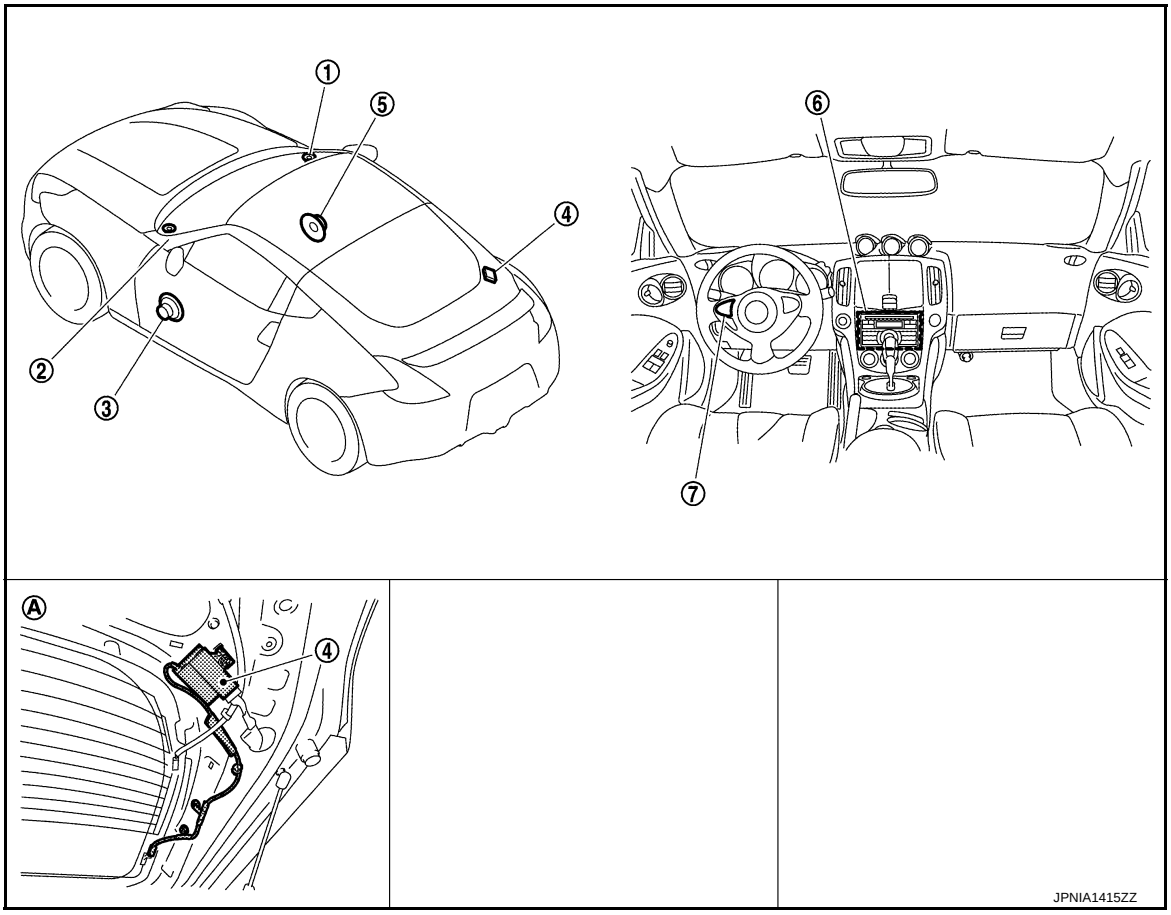
AM/FM radio
CD

- Radio signal are received by glass antenna, next it is amplified by antenna amp., and finally it is input to audio unit. (coupe models)
- Radio signal are received by rod antenna, next it is amplified by antenna amp., and finally it is input to audio unit. (roadster models)
- Audio unit outputs the audio signal to each speaker.

Component Parts Location

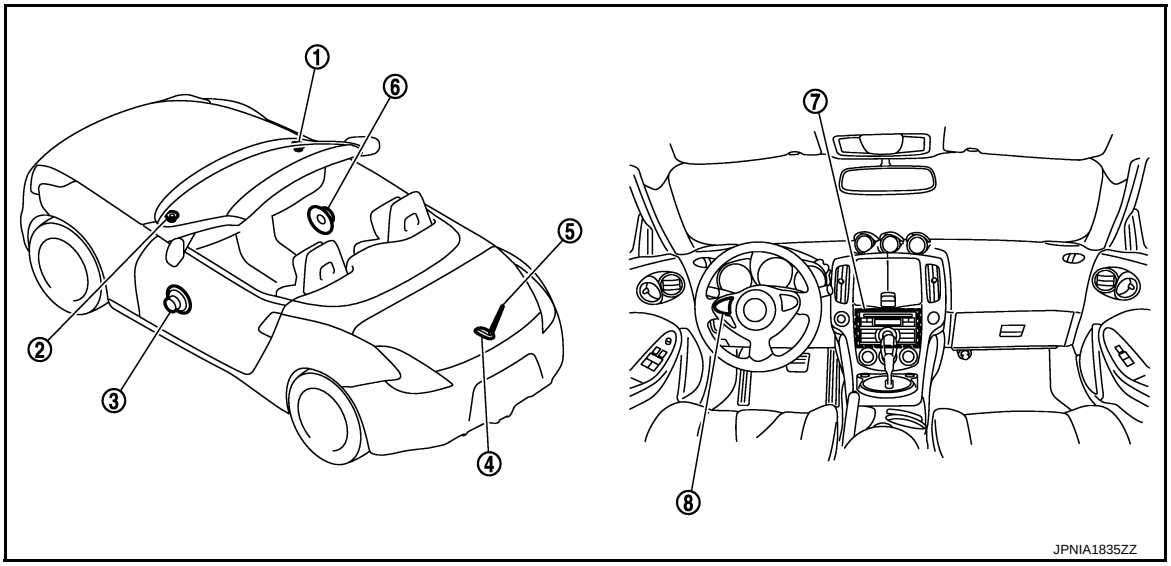
INFOID:0000000009359183

COUPE MODELS



1. Tweeter RH
2. Tweeter LH
3. Front door speaker LH
4. Antenna amp.
5. Front door speaker RH
6. Audio unit
7. Steering switch
A. Back door side RH

ROADSTER MODELS



1. Tweeter RH
2. Tweeter LH
3. Front door speaker LH

4. Antenna base
5. Rod antenna
6. Front door speaker RH
7. Audio unit
8. Steering switch

Component Description

INFOID:0000000009359184

Part name	Description
Audio unit	Controls audio system functions.
Front door 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 amp. (coupe models)	• Radio signal received by glass antenna is amplified and transmitted to audio unit. • Power (antenna amp. ON signal) is supplied from audio unit.
Antenna base (roadster models)	• An antenna base integrated with radio antenna amp. is adopted. • Radio signal received by rod antenna is amplified and transmitted to audio unit. • Power (antenna amp. ON signal) is supplied from audio unit.
Steering switch	• Each audio operation can be operated. • Steering switch signal (operation signal) is output to audio unit.

DIAGNOSIS SYSTEM (AUDIO UNIT)

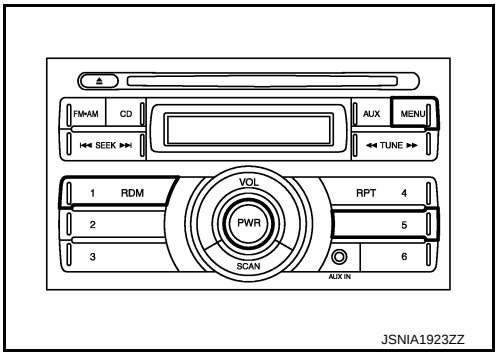
Diagnosis Description

INFOID:0000000009359185

Self-diagnosis mode can check the following items.
- Audio unit software versions

OPERATION PROCEDURE

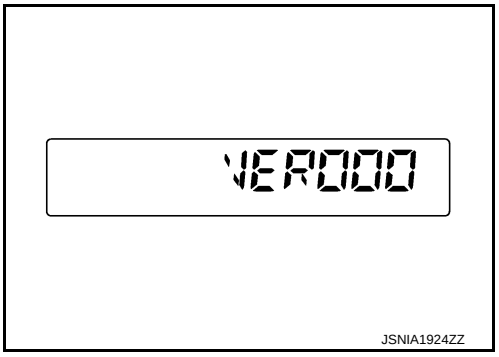
1. Turn ignition switch to the ON position.
2. Turn the audio unit off.
3. While pressing the “MENU”, “1”, “5”, “PWR” button, the self-diagnosis mode is started. When the self-diagnosis mode is started, a short beep will be head.



JSNIA1923ZZ

Software Version Check

1. Press the “PWR” switch to enter version diagnostics. “Audio software version is displayed.
2. Press the “PWR” switch again to display the CD changer version is displayed. When not connect it, “FF”



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DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:0000000009359186

1.CHECK FUSE

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

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

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	M80	19	OFF	Battery voltage
ACC power supply		7	ACC	

Is inspection result OK?

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

STEERING SWITCH SIGNAL A CIRCUIT

Description

INFOID:0000000009359187

Transmits the steering switch signal to audio unit.

Diagnosis Procedure

INFOID:0000000009359188

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT

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

Audio unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M80	6	M36	24	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M80	6		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-16, "Removal and Installation".

3.CHECK AUDIO UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
Audio unit		Audio unit		
Connector	Terminal	Connector	Terminal	
M80	6	M80	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace audio unit. Refer to AV-34, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-16, "Component Inspection".

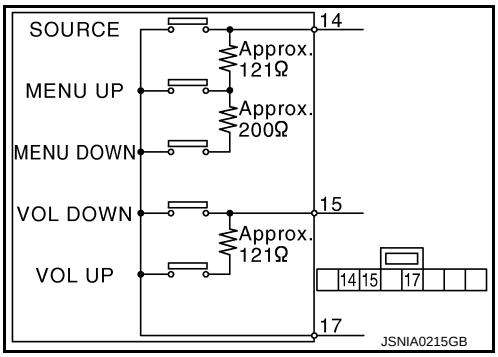
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-37, "Removal and Installation".

Component Inspection

INFOID:0000000009359189

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL UP switch ON	119 – 123
		VOL DOWN switch ON	0

STEERING SWITCH SIGNAL B CIRCUIT

Description

INFOID:0000000009359190

Transmits the steering switch signal to audio unit.

Diagnosis Procedure

INFOID:0000000009359191

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

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

Audio unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M80	16	M36	31	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M80	16		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-16, "Removal and Installation".

3.CHECK AUDIO UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
Audio unit		Audio unit		
Connector	Terminal	Connector	Terminal	
M80	16	M80	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace audio unit. Refer to AV-34, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-18, "Component Inspection".

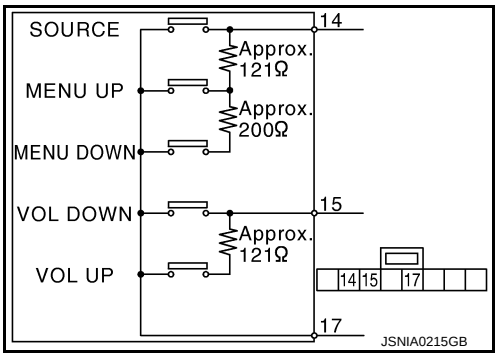
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch.Refer to AV-37, "Removal and Installation".

Component Inspection

INFOID:0000000009359192

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL UP switch ON	119 – 123
		VOL DOWN switch ON	0

STEERING SWITCH SIGNAL GND CIRCUIT

Description

INFOID:0000000009359193

Transmits the steering switch signal to audio unit.

Diagnosis Procedure

INFOID:0000000009359194

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT

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

Audio unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M80	15	M36	33	Existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-16, "Removal and Installation".

3.CHECK GROUND CIRCUIT

1. Connect audio unit connector and spiral cable connector.
2. Turn ignition switch ON.
3. Check continuity between audio unit harness connector.

Audio unit		Ground	Continuity
Connector	Terminal		
M80	15		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace audio unit. Refer to AV-34, "Removal and Installation".

4.CHECK STEERING SWITCH

Check steering switch. Refer to AV-20, "Component Inspection".

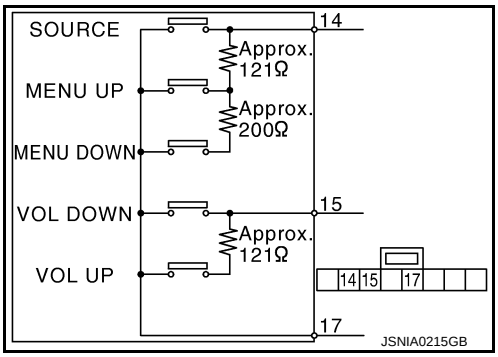
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-37, "Removal and Installation".

Component Inspection

INFOID:0000000009359195

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL UP switch ON	119 – 123
		VOL DOWN switch ON	0

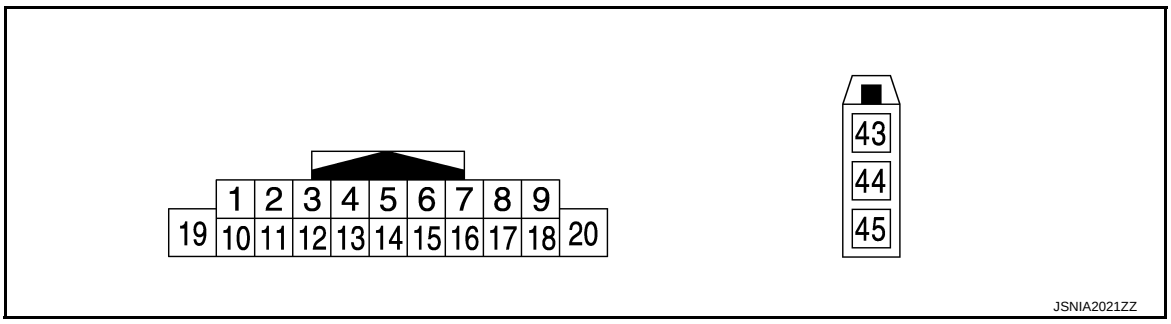
ECU DIAGNOSIS INFORMATION

AUDIO UNIT

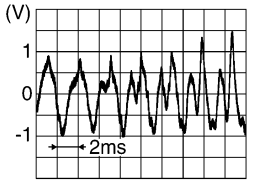
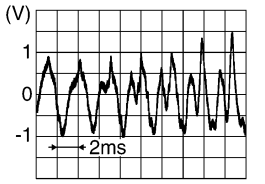
Reference Value

INFOID:0000000009359196

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
2 (L)	3 (V)	Sound signal front speaker LH	Output	Ignition switch ON	Audio signal output	 SKIB3609E
6 (P)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch	0 V
					Keep pressing MENU UP switch	1.0 V
					Keep pressing MENU DOWN switch	2.0 V
					Except for above	5.0 V
7 (L)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
9 (R)	8 (W)	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0 V
					Lighting switch is 1ST or 2ND.	12.0 V
11 (V)	12 (LG)	Sound signal front speaker RH	Output	Ignition switch ON	Audio signal output	 SKIB3609E

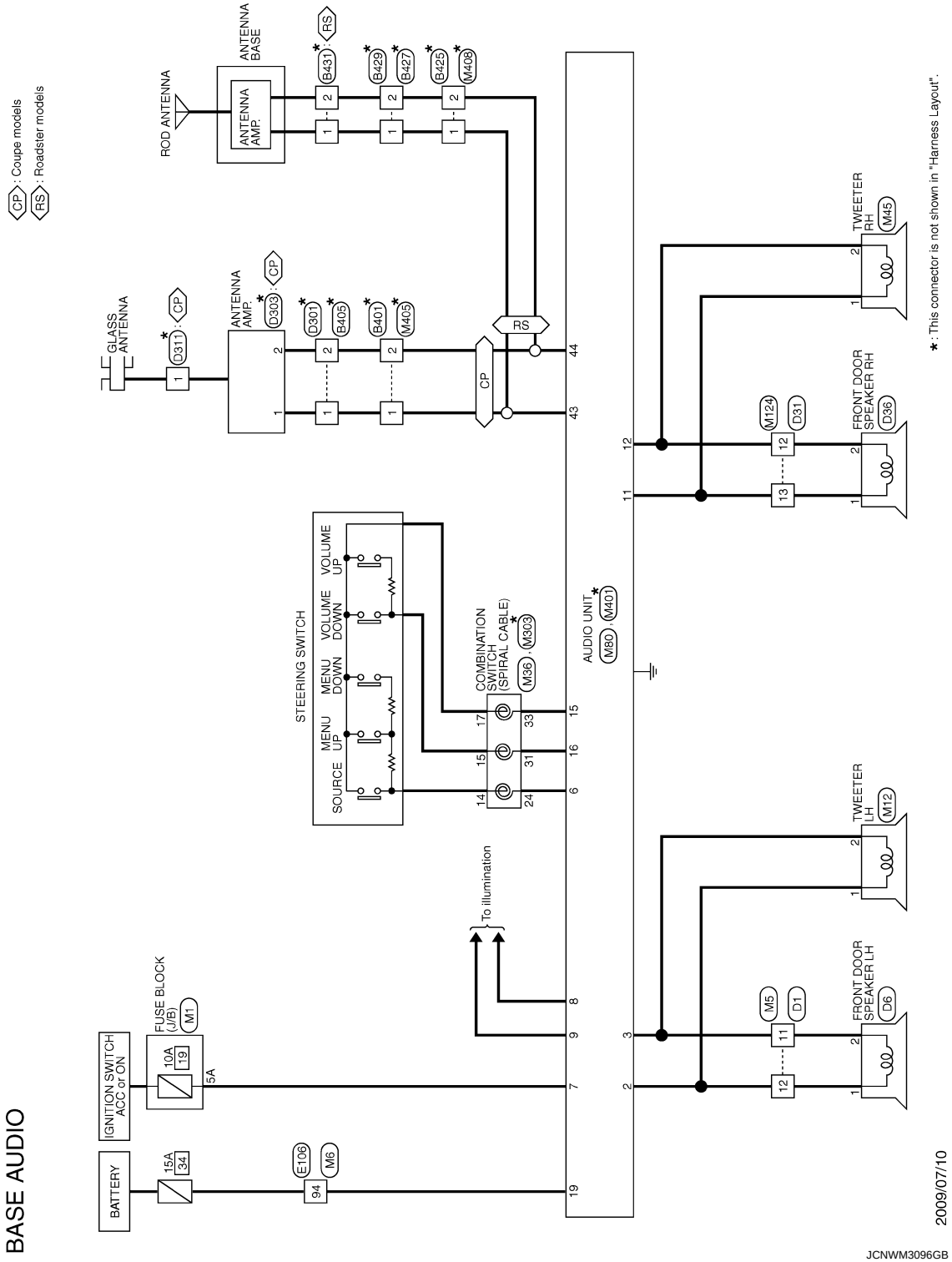
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
16 (L)	15 (B)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch	0 V
					Keep pressing VOL UP switch	1.0 V
					Except for above	5.0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
43	Ground	Antenna amp. ON signal	Output	Ignition switch ON	—	12.0 V
44	—	Antenna signal	Input	—	—	—

WIRING DIAGRAM

BASE AUDIO

Wiring Diagram

INFOID:0000000009359197



BASE AUDIO

BASE AUDIO

Connector No.	B401
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.	B405
Connector Name	WIRE TO WIRE
Connector Type	GT13SSN-1/1PP-HU(21)

H.S.

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

Connector No.	B425
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.	B427
Connector Name	WIRE TO WIRE
Connector Type	GT13SSN-1/1PP-HU(21)

H.S.

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

Connector No.	B429
Connector Name	WIRE TO WIRE
Connector Type	GT13SS-1/1S-HU(21)

H.S.

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

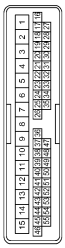
Connector No.	B431
Connector Name	ANTENNA BASE
Connector Type	GT13SSN-1/1PP-HU

H.S.

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

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

H.S.



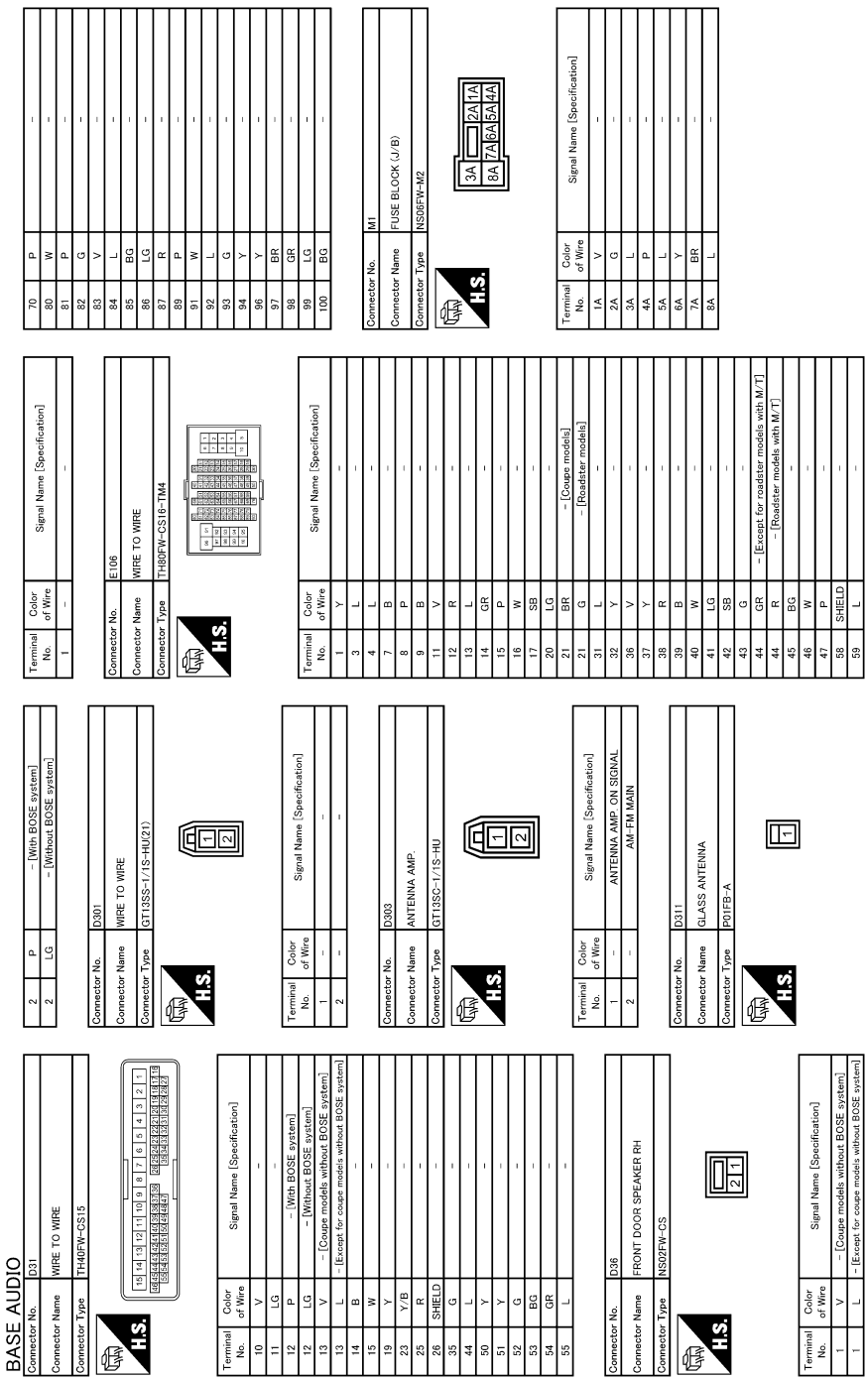
Terminal No.	Color of Wire	Signal Name [Specification]
7	Y	–
8	Y	–
9	G	–
10	BG	–
11	P	– [With BOSE system]
11	V	– [Without BOSE system]
12	L	–
13	B	–
14	SB	– [Coupe models]
14	Y	– [Roadster models]
15	W	–
19	Y	–
23	Y/B	–
25	R	–
26	SHIELD	–
35	G	–
44	L	–
47	B	–
48	SB	–
49	W	–
50	LG	–
51	R	–
52	V	–
53	BG	–
54	GR	–
55	G	–

Connector No.	D6
Connector Name	FRONT DOOR SPEAKER LH
Connector Type	NS02FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	P	– [With BOSE system]
2	V	– [Without BOSE system]

JRNWC4490GB



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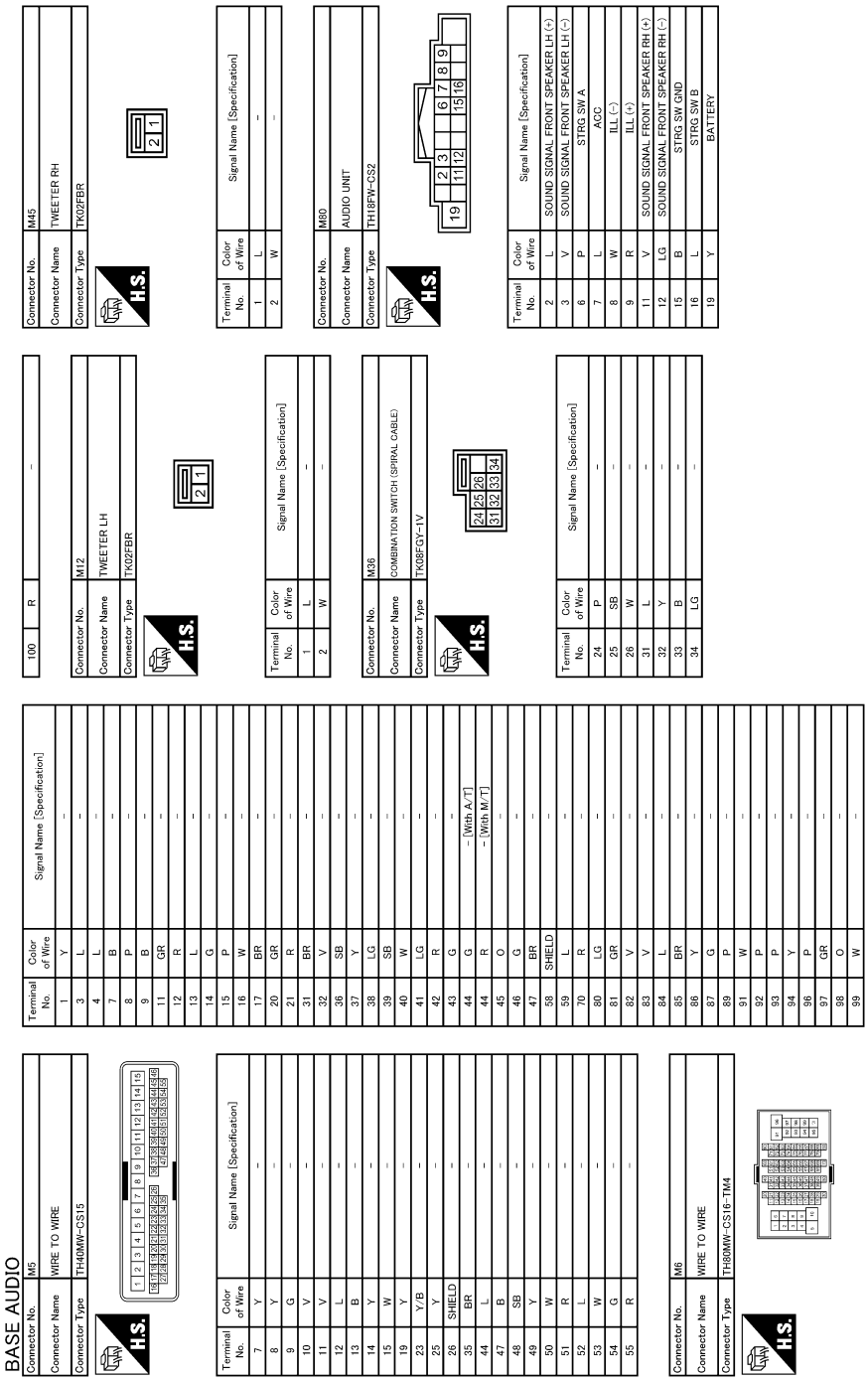

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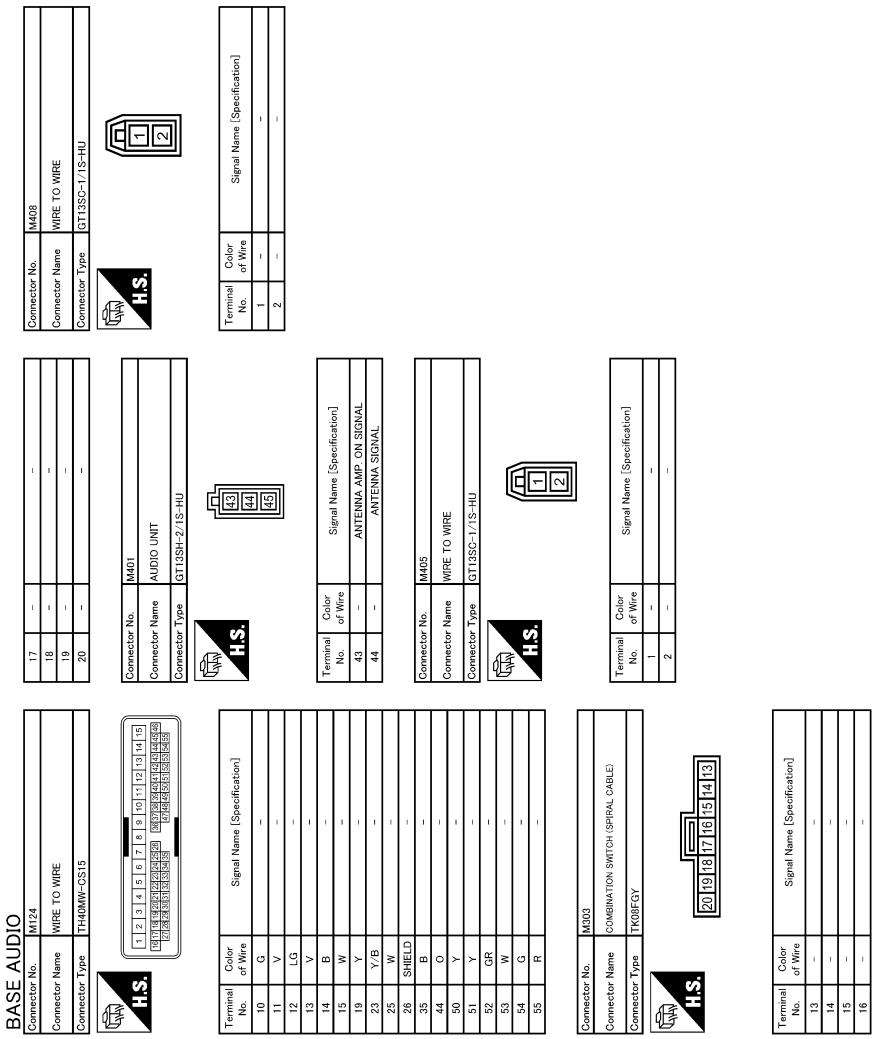


JRNWC4493GB

SYMPTOM DIAGNOSIS

AUDIO SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000009359198

AUDIO SYSTEM

Coupe Models

Symptoms	Check items	Possible malfunction location / Action to take
Audio unit does not start.	—	Audio unit power supply and ground circuit. Refer to AV-14, "AUDIO UNIT : Diagnosis Procedure".
No sound comes out.	No sound from all speakers.	Audio unit power supply and ground circuit. Refer to AV-14, "AUDIO UNIT : Diagnosis Procedure".
	Only a certain speaker (front right, front left, rear right, or rear left) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. • Malfunction in speaker. • Malfunction in audio unit.
Noise is mixed with audio.	Noise comes out from all speaker.	Malfunction in audio unit.
	Noise comes out only from a certain speaker (front right, front left, rear right, or rear left).	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. • Malfunction in speaker. • Poor installation of speaker (e.g. backlash and looseness) • Malfunction in audio unit.
	Noise is mixed with radio only (when the car hits a bump or while driving over bad roads).	Poor connector connection of antenna or antenna feeder.
Radio is not received or poor reception.	• Other audio sounds are normal. • Any radio cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	• Antenna amp. ON signal circuit malfunction. • Poor connector connection of antenna or antenna feeder.

Roadster Models

Symptoms	Check items	Possible malfunction location / Action to take
Audio unit does not start.	—	Audio unit power supply and ground circuit. Refer to AV-14, "AUDIO UNIT : Diagnosis Procedure".
No sound comes out.	No sound from all speakers.	Audio unit power supply and ground circuit. Refer to AV-14, "AUDIO UNIT : Diagnosis Procedure".
	Only a certain speaker (front right, front left, rear right, or rear left) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. • Malfunction in speaker. • Malfunction in audio unit.

Symptoms	Check items	Possible malfunction location / Action to take
Noise is mixed with audio.	Noise comes out from all speaker.	Malfunction in audio unit.
	Noise comes out only from a certain speaker (front right, front left, rear right, or rear left).	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. • Malfunction in speaker. • Poor installation of speaker (e.g. backlash and looseness) • Malfunction in audio unit.
	Noise is mixed with radio only (when the car hits a bump or while driving over bad roads).	• Poor connector connection of antenna or antenna feeder. • Loose antenna base mounting nut. Refer to AV-39, "Exploded View".
Radio is not received or poor reception.	• Other audio sounds are normal. • Any radio cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	• Antenna amp. ON signal circuit malfunction. • Poor connector connection of antenna or antenna feeder. • Loose antenna base mounting nut. Refer to AV-39, "Exploded View".

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-19, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch.
“MENU UP”, “MENU DOWN” and “SOURCE” switches are not operated.	Steering switch signal A circuit. Refer to AV-15, "Diagnosis Procedure".
“VOL UP” and “VOL DOWN” switches are not operated.	Steering switch signal B circuit. Refer to AV-17, "Diagnosis Procedure".

NORMAL OPERATING CONDITION

Description

INFOID:0000000009359199

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:

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 CD was inserted correctly.
	Check that the CD is scratched or dirty.
	Check that there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	The player will play correctly after it returns to the normal temperature if there is a temperature increase error.
	Check that the finalization process, such as session close and disc close, is done for the disc.
	Check that the CD is protected by copyright.
Poor sound quality	Check that the CD is scratched or dirty.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.
Poor reception only from a certain radio broadcast station.	Check incoming radio wave signal strength of applicable broadcast station.
Buzz/rattle sound from speaker	The majority of rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the rattle.

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

NOTE:

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

PRECAUTION

PRECAUTIONS

EXCEPT FOR MEXICO

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

INFOID:0000000009359200

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

EXCEPT FOR MEXICO : Precaution for Battery Service

INFOID:0000000009359201

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

FOR MEXICO

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

INFOID:0000000009359202

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:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**

- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:

Always observe the following items for preventing accidental activation.

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

FOR MEXICO : Precaution for Battery Service

INFOID:0000000009359203

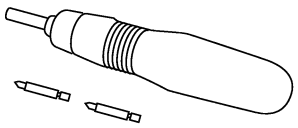
Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference.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

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000009359204

Tool name	Description
Power tool  PBIC0191E	Loosening screws

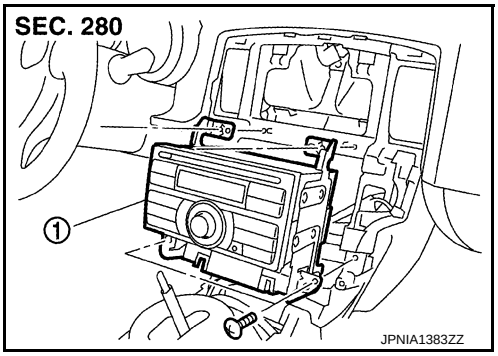
REMOVAL AND INSTALLATION

AUDIO UNIT

Exploded View

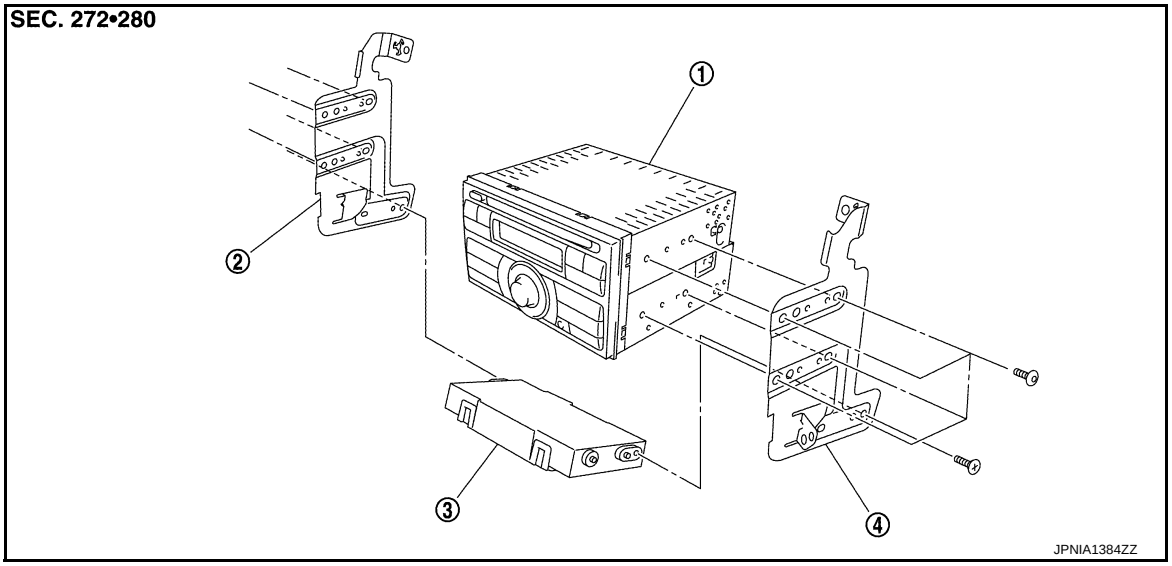
INFOID:0000000009359205

REMOVAL



1. Audio unit

DISASSEMBLY



1. Audio unit
2. Bracket LH
3. A/C auto amp.
4. Bracket RH

Removal and Installation

INFOID:0000000009359206

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove audio unit with A/C auto amp. as a single unit from the body.
3. Remove bracket screws to remove audio unit.

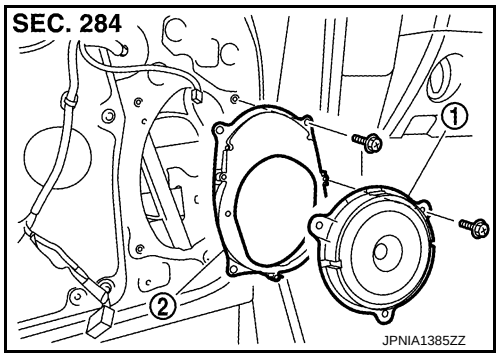
INSTALLATION

Install in the reverse order of removal.

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000009359207



1. Front door speaker
2. Bracket

Removal and Installation

INFOID:0000000009359208

REMOVAL

1. Remove door finisher. Refer to INT-15, "Removal and Installation" (coupe models) or INT-48, "Removal and Installation" (roadster models).
2. Remove front door speaker from bracket.

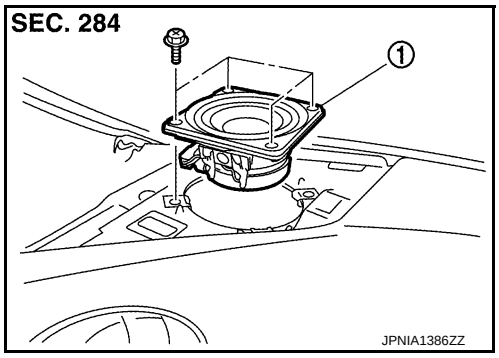
INSTALLATION

Install in the reverse order of removal.

TWEETER

Exploded View

INFOID:0000000009359209



1. Tweeter

Removal and Installation

INFOID:0000000009359210

REMOVAL

1. Remove speaker grille. Refer to IP-13, "Exploded View".
2. Remove tweeter screws, then lift up tweeter, disconnect connector and remove tweeter.

INSTALLATION

Install in the reverse order of removal.

STEERING SWITCH

Exploded View

INFOID:0000000009359211

Refer to SR-13, "Exploded View".

Removal and Installation

INFOID:0000000009359212

REMOVAL

Refer to SR-13, "Removal and Installation".

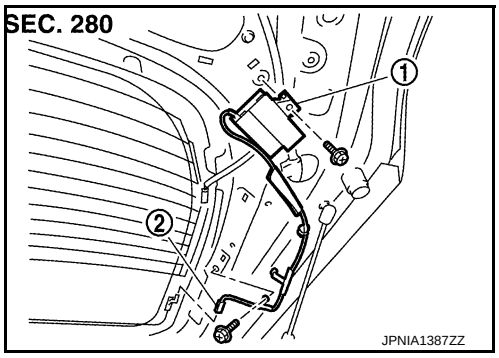
INSTALLATION

Installation is the reverse order of removal.

ANTENNA AMP.

Exploded View

INFOID:0000000009359213



1. Antenna amp.
2. Connector

Removal and Installation

INFOID:0000000009359214

REMOVAL

1. Remove back door finisher side. Refer to INT-33, "Exploded View".
2. Disconnect connector and remove screw, then remove antenna amp.

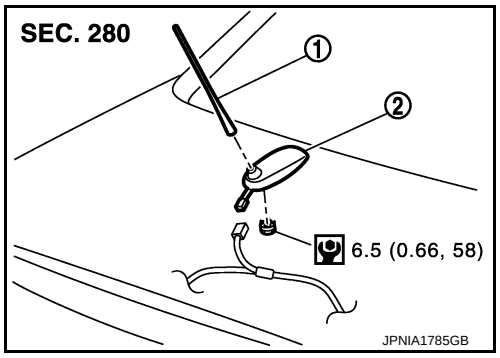
INSTALLATION

Install in the reverse order of removal.

ANTENNA BASE

Exploded View

INFOID:0000000009359215



1. Antenna rod
2. Antenna base

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

Removal and Installation

INFOID:0000000009359216

REMOVAL

1. Remove trunk lid finisher inner. Refer to INT-79, "Exploded View".
2. Remove antenna base mounting nut, disconnect the antenna base connector.
3. Remove antenna base.

INSTALLATION

Installation is the reverse order of removal.

CAUTION:

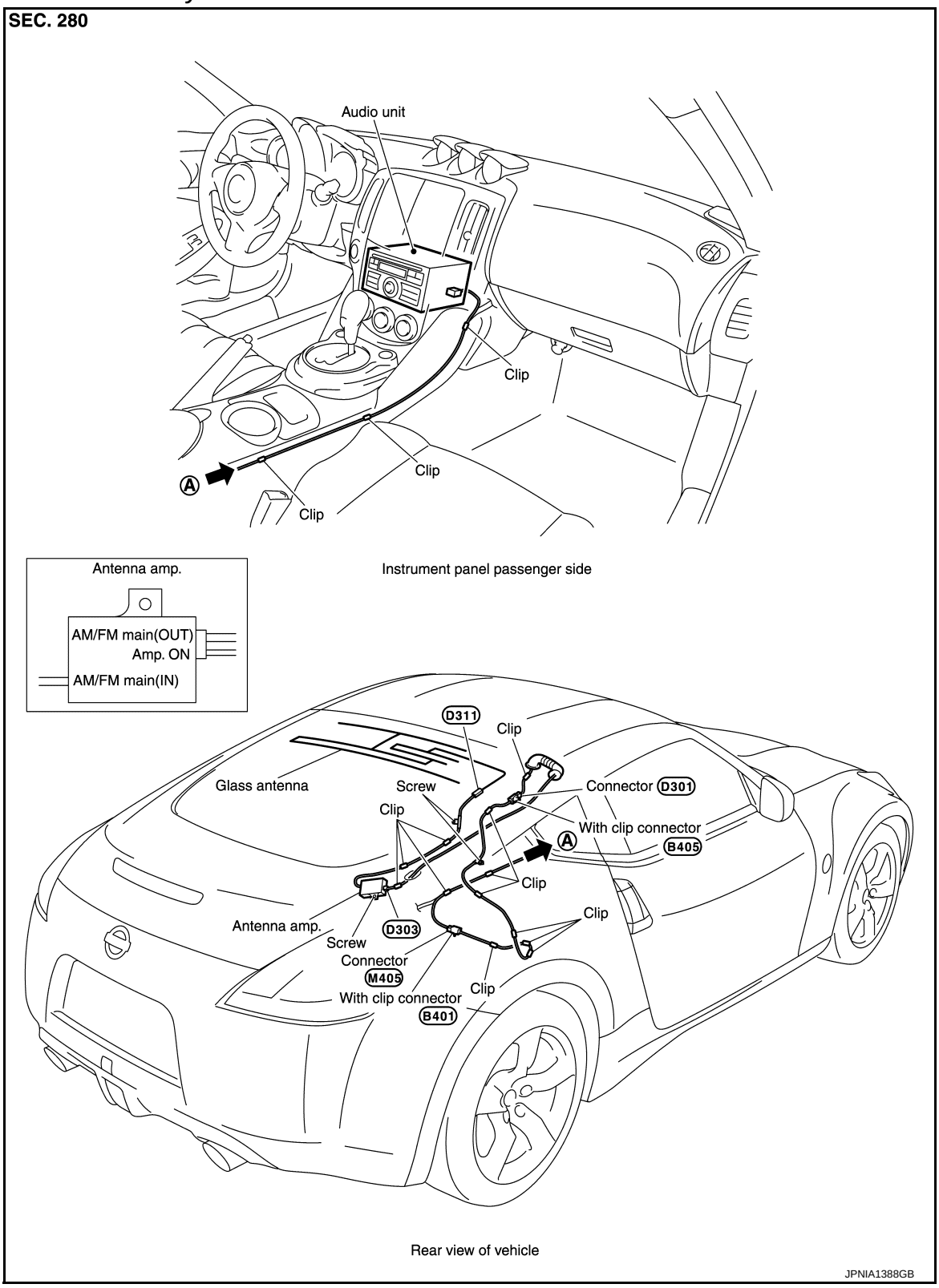
Be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, trunk lid panel may be deformed, when antenna base mounting nut tightening torque is loose.

ANTENNA FEEDER

COUPE

COUPE : Feeder Layout

INFOID:0000000009359217

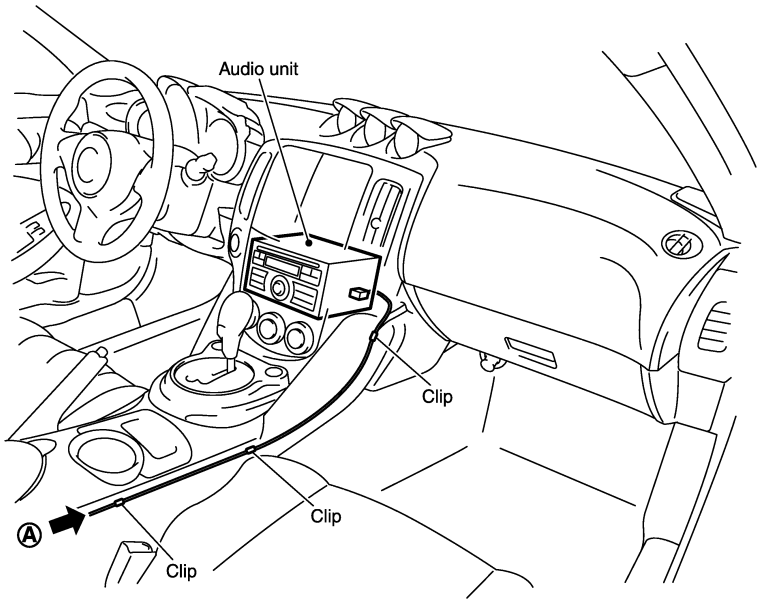


ROADSTER

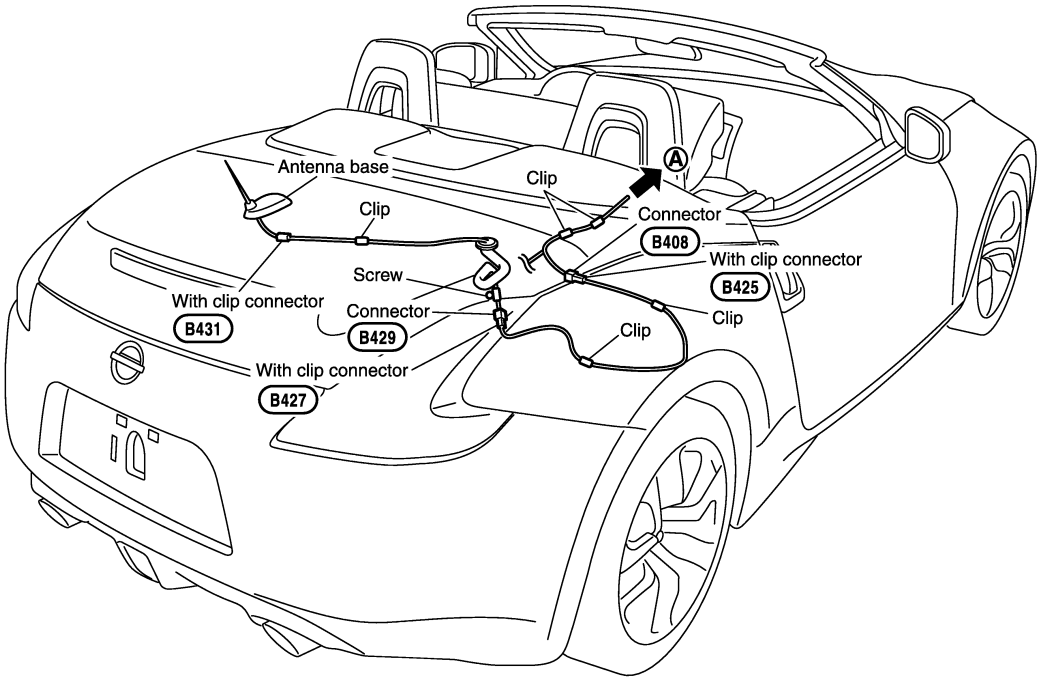
ROADSTER : Feeder Layout

INFOID:0000000009359218

SEC. 280



Instrument panel passenger side



Rear view of vehicle

JPNIA1837GB

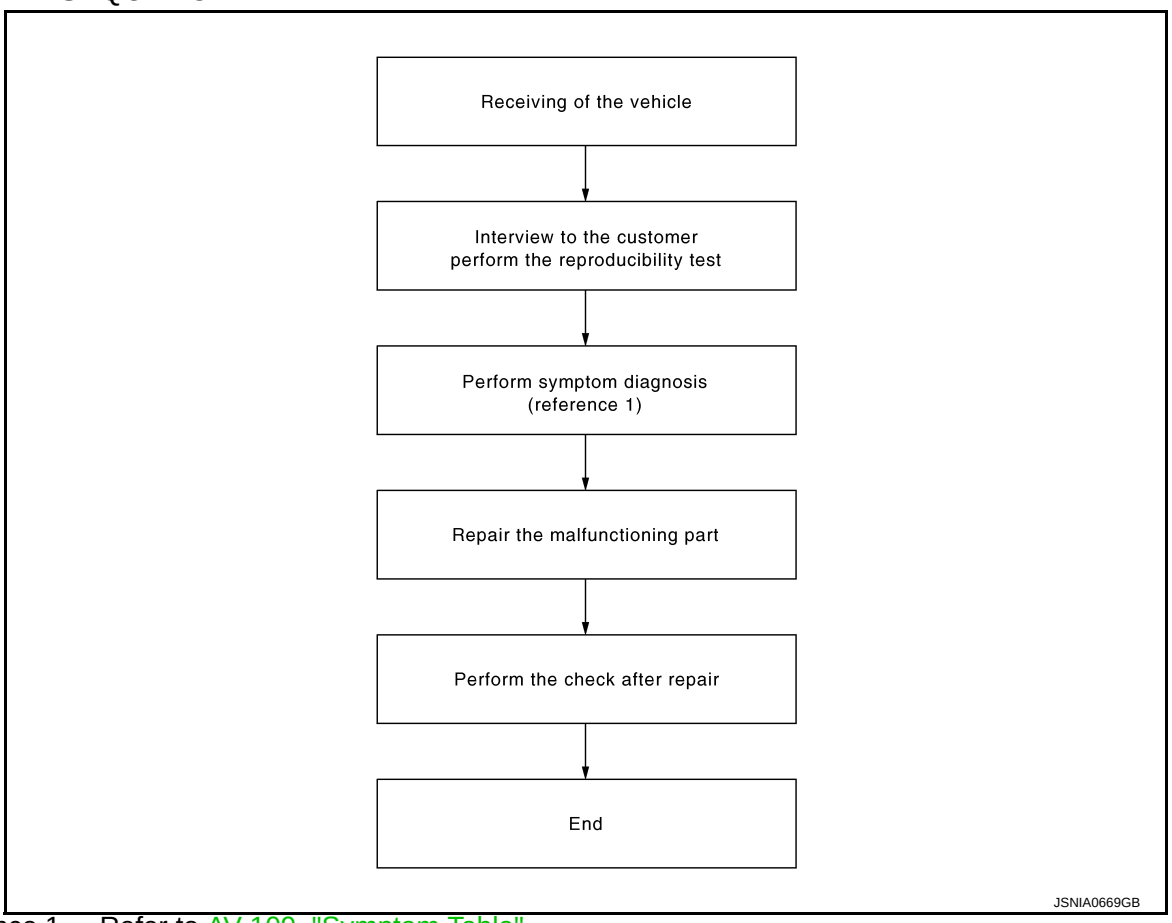
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000009359219

OVERALL SEQUENCE



Reference 1 ··· Refer to AV-109, "Symptom Table".

DETAILED FLOW

1.CHECK SYMPTOM

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

>> GO TO 2.

2.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-109, "Symptom Table"".

>> 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

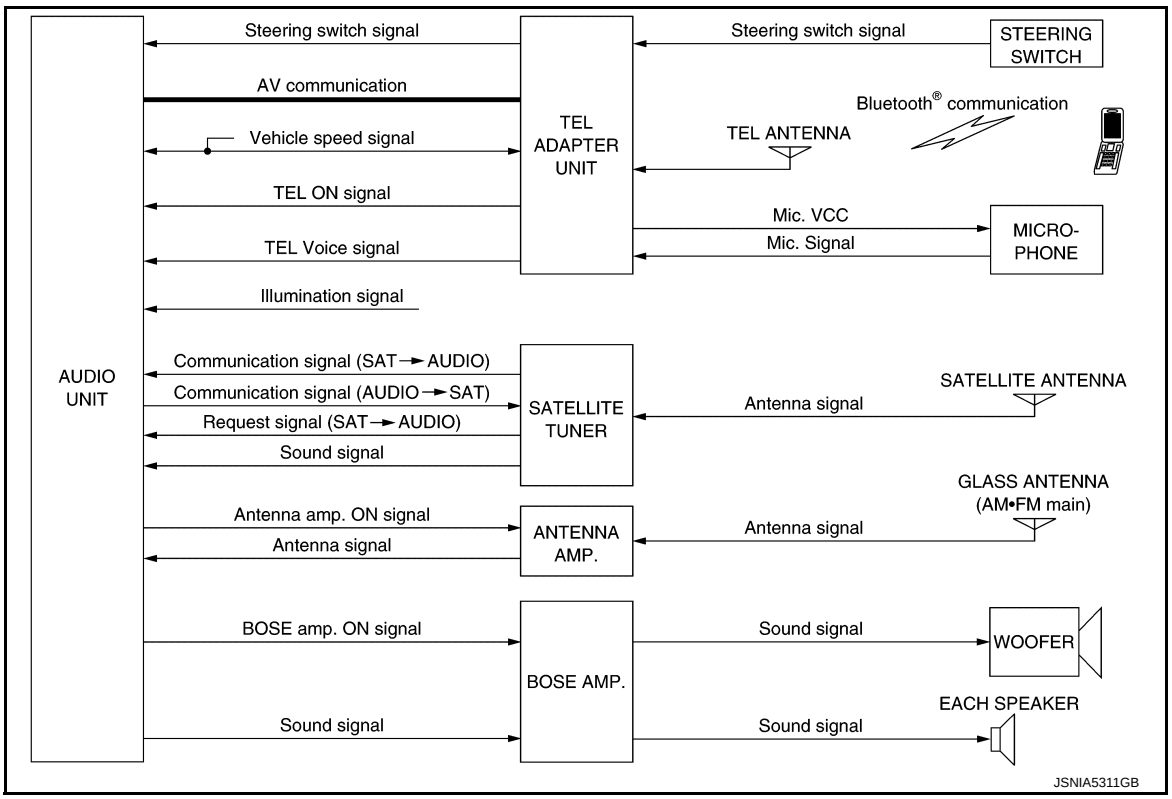
SYSTEM DESCRIPTION

AUDIO SYSTEM

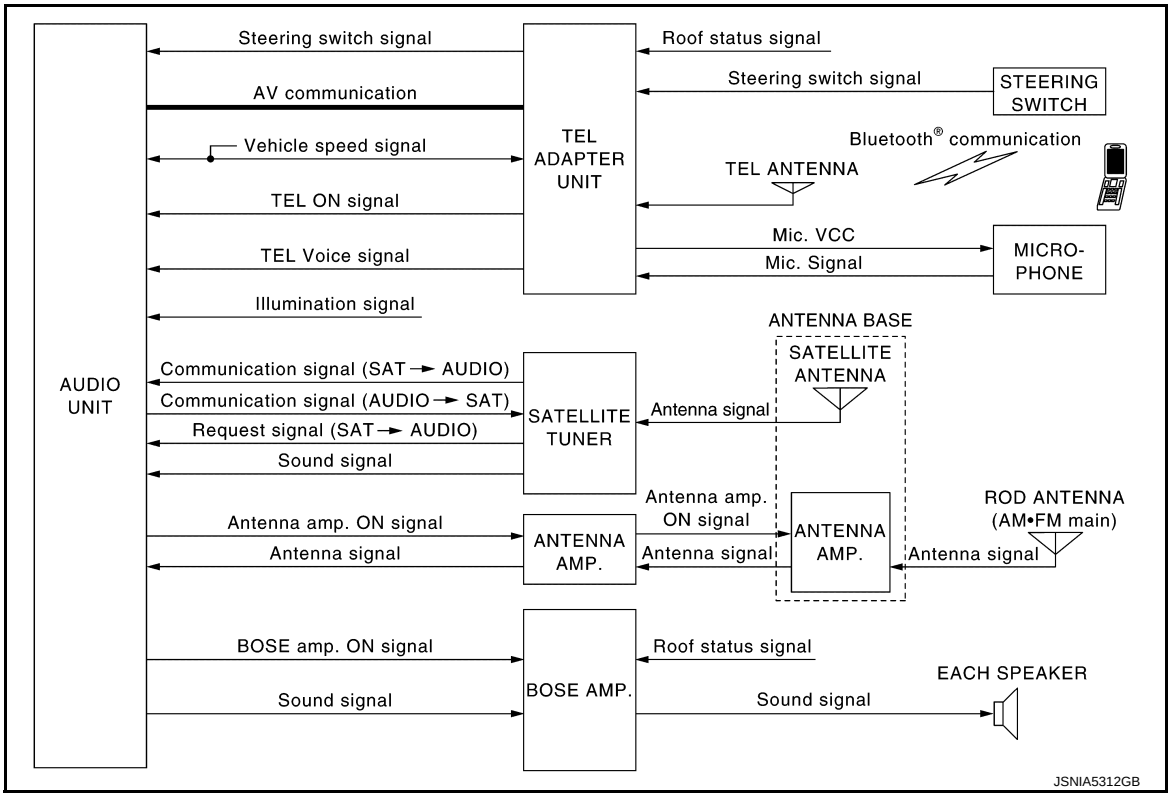
System Diagram

INFOID:0000000009359220

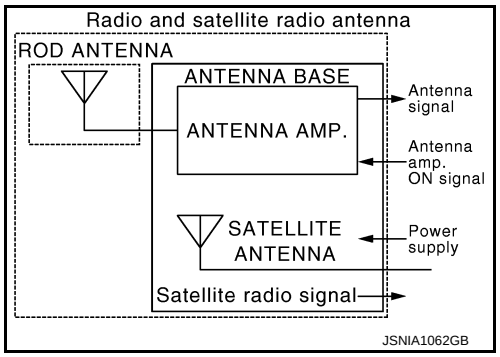
COUPE MODELS



ROADSTER MODELS



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



System Description

INFOID:0000000009359221

AUDIO SYSTEM

Audio functions

AM/FM radio
Satellite radio (except for Mexico models)
6CD
Speed sensitive volume
Sound equalizer automatic switching (roadster models)

- Radio signals are received by glass antenna, next it is amplified by antenna amp., and finally it is input to audio unit. (coupe models)
- Radio signals are received by rod antenna, next it is amplified by antenna amp., and finally it is input to audio unit. (roadster models)
- Audio unit outputs sound signal to BOSE amp. and BOSE amp. outputs to woofer and each speaker. (coupe models)
- Audio unit outputs sound signal to BOSE amp. and BOSE amp. outputs to each speaker. (roadster models)

Satellite Radio System
- Radio signals are supplied to satellite radio tuner from the satellite radio antenna.
- The satellite radio tuner sends sound signal to the audio unit.
- Audio unit outputs sound signal to BOSE amp. and BOSE amp. outputs to woofer and each speaker. (coupe models)
- Audio unit outputs sound signal to BOSE amp. and BOSE amp. outputs to each speaker. (roadster models)

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.

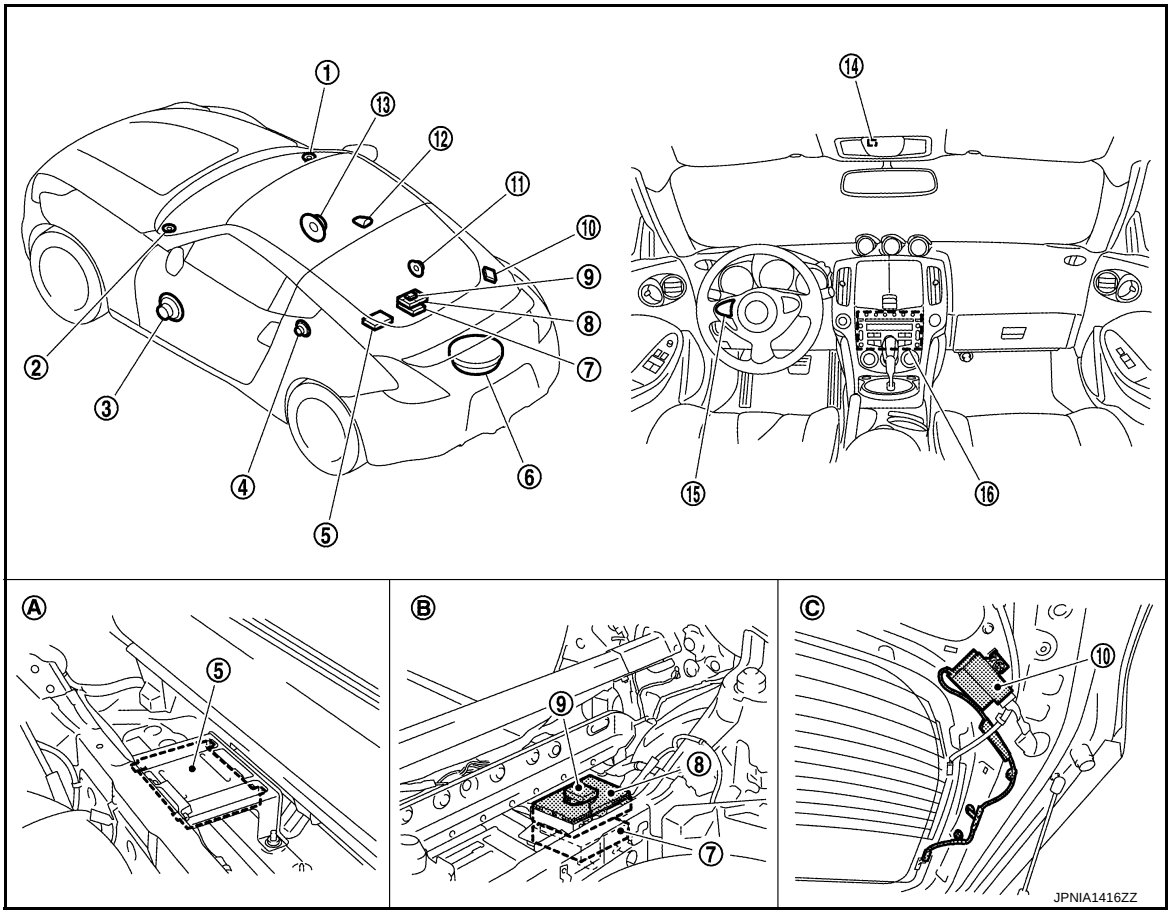
Sound Equalizer Automatic Switching Function

Sound quality in a fully-open retractable soft top condition is improved by the correction for bringing the frequency characteristics in a fully-open retractable soft top condition closer to the characteristics in a fully-closed retractable soft top condition. When the retractable soft top is in a fully-open condition, sound pressure is reduced due to the absence of sound echo generated by sound reflection from the retractable soft top. BOSE amp. detects an open-close condition of the retractable soft top by receiving a roof status signal from the retractable soft top control unit and switches the equalizer to correct the frequency characteristics in a fully-open retractable soft top condition. During the switching of the equalizer, audio stops temporarily due to the temporary mute.

Component Parts Location

INFOID:0000000009359222

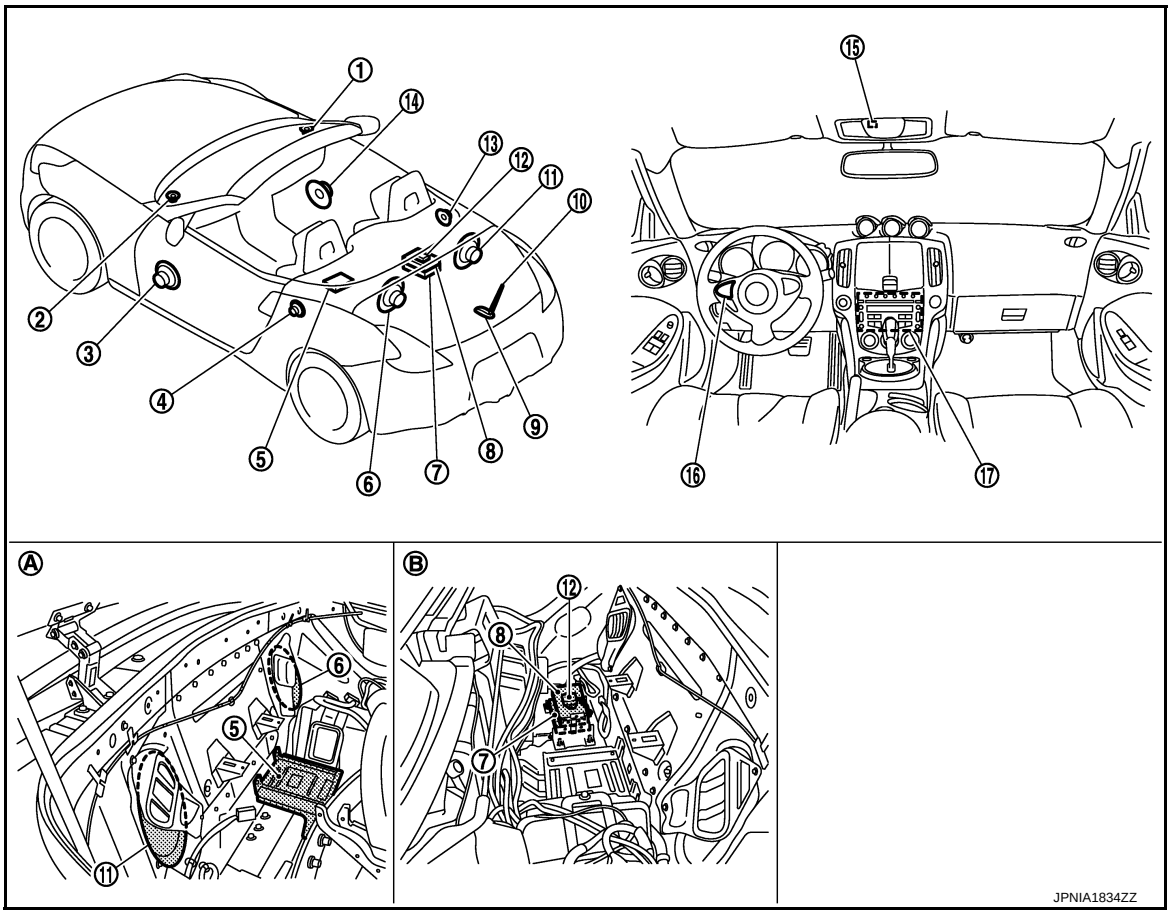
COUPE MODELS



1. Tweeter RH	2. Tweeter LH	3. Front door speaker LH
4. Rear speaker LH	5. BOSE amp.	6. Woofer
7. Satellite radio tuner*	8. TEL adapter unit	9. TEL antenna
10. Antenna amp.	11. Rear speaker RH	12. Satellite radio antenna*
13. Front door speaker RH	14. Microphone	15. Steering switch
16. Audio unit		
A. Luggage side LH	B. Luggage side RH	C. Back door side RH

*: Except for Mexico models

ROADSTER MODELS



1. Tweeter RH
2. Tweeter LH
3. Front door speaker LH
4. Rear speaker LH
5. BOSE amp.
6. Rear woofer LH
7. Satellite radio tuner
8. TEL adapter unit
9. Antenna base
10. Rod antenna
11. Rear woofer RH
12. TEL antenna
13. Rear speaker RH
14. Front door speaker RH
15. Microphone
16. Steering switch
17. Audio unit
A. Luggage side LH
B. Luggage side RH

Component Description

INFOID:0000000009359223

Part name	Description
Audio unit	Controls audio system and satellite radio system functions.
BOSE amp.	Coupe models • Receives power (BOSE amp. ON) and sound signals from audio unit, and outputs sound signals to woofer and each speaker. Roadster models • Receives power (BOSE amp. ON) and sound signals from audio unit, and outputs sound signals to woofer and each speaker. • Input roof status signal from retractable soft top control unit.
Steering switch	• Each audio operation can be operated. • Steering switch signal (operation signal) is output to audio unit through TEL adapter unit.
Front door speaker	• Outputs sound signal from BOSE amp. • Outputs mid and low range sounds.
Tweeter	• Outputs sound signal from BOSE amp. • Outputs high range sounds.

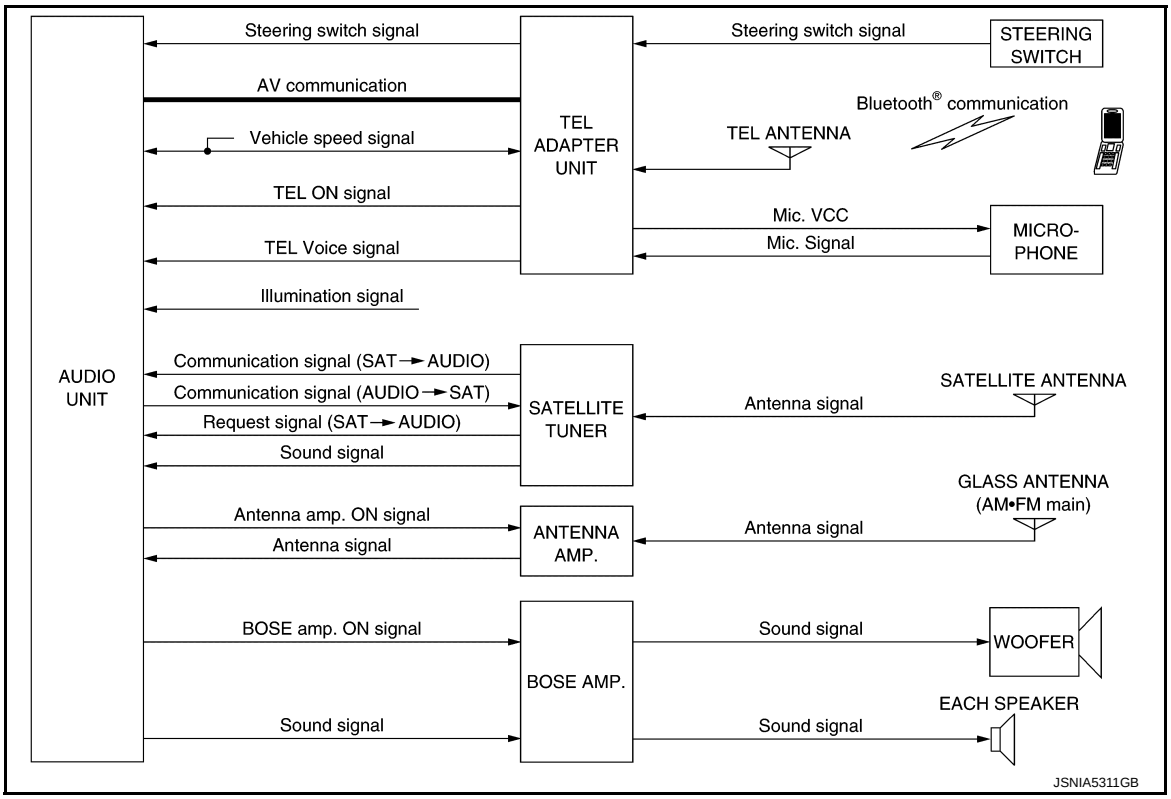
Part name	Description
Rear speaker	• Outputs sound signal from BOSE amp. • Outputs high, mid and low range sounds.
Woofer (coupe models)	• Outputs sound signal from BOSE amp. • Outputs low range sounds.
Rear woofer (roadster models)	• Outputs sound signal from BOSE amp. • Outputs low range sounds.
Antenna amp. (coupe models)	• Radio signal received by glass antenna is amplified and transmitted to audio unit. • Power (antenna amp. ON signal) is supplied from audio unit.
Antenna base (roadster models)	An antenna base integrated with radio antenna amp. and satellite radio antenna are adopted. Radio antenna • 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 the satellite radio wave and outputs it to the satellite radio tuner.
Satellite radio antenna	Sound signal (satellite radio) is received and output to satellite radio tuner.
Satellite radio tuner	• Receives radio signals from satellite radio antenna. • Sends sound signals to audio unit.

HANDS-FREE PHONE SYSTEM

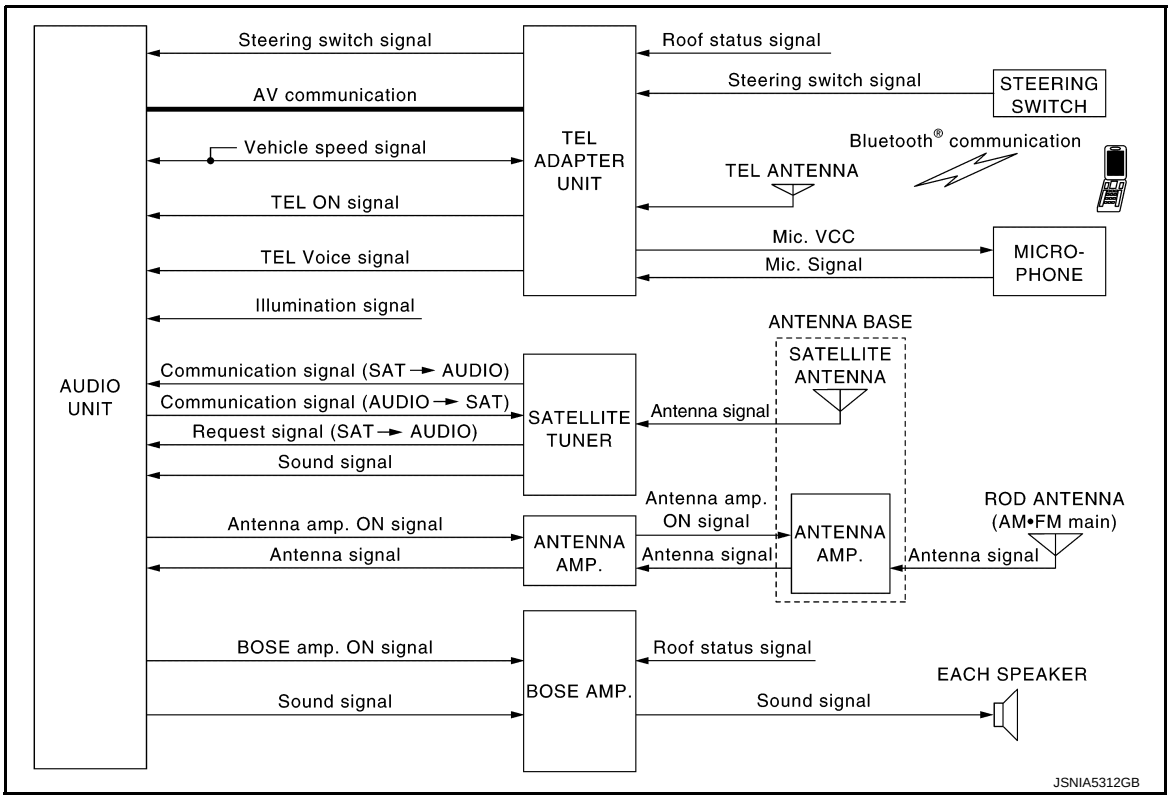
System Diagram

INFOID:0000000009359224

COUPE MODELS

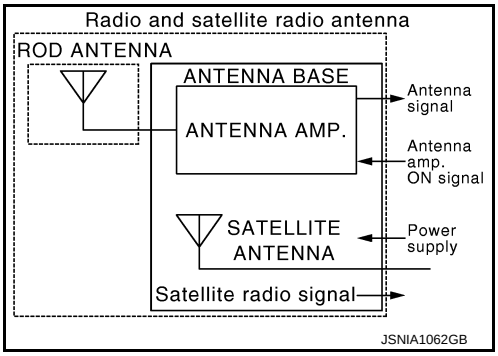


ROADSTER MODELS



NOTE:

An antenna base integrated with antenna amp. and satellite antenna are adopted.



System Description

INFOID:0000000009359225

- The connection between portable telephone 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 via BOSE amp. to the front speaker when operating the telephone.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-56, "Diagnosis Description".
- Start of hads-free phone system can be performed by steering switch.

WHEN RECEIVING A CALL

Telephone voice signal received with the portable telephone is input from TEL antenna via TEL adapter unit to audio unit with Bluetooth® communication and output via BOSE amp. to the front speaker. The operation is performed with the steering switch or voice recognition function.

WHEN A CALL IS ORIGINATED

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

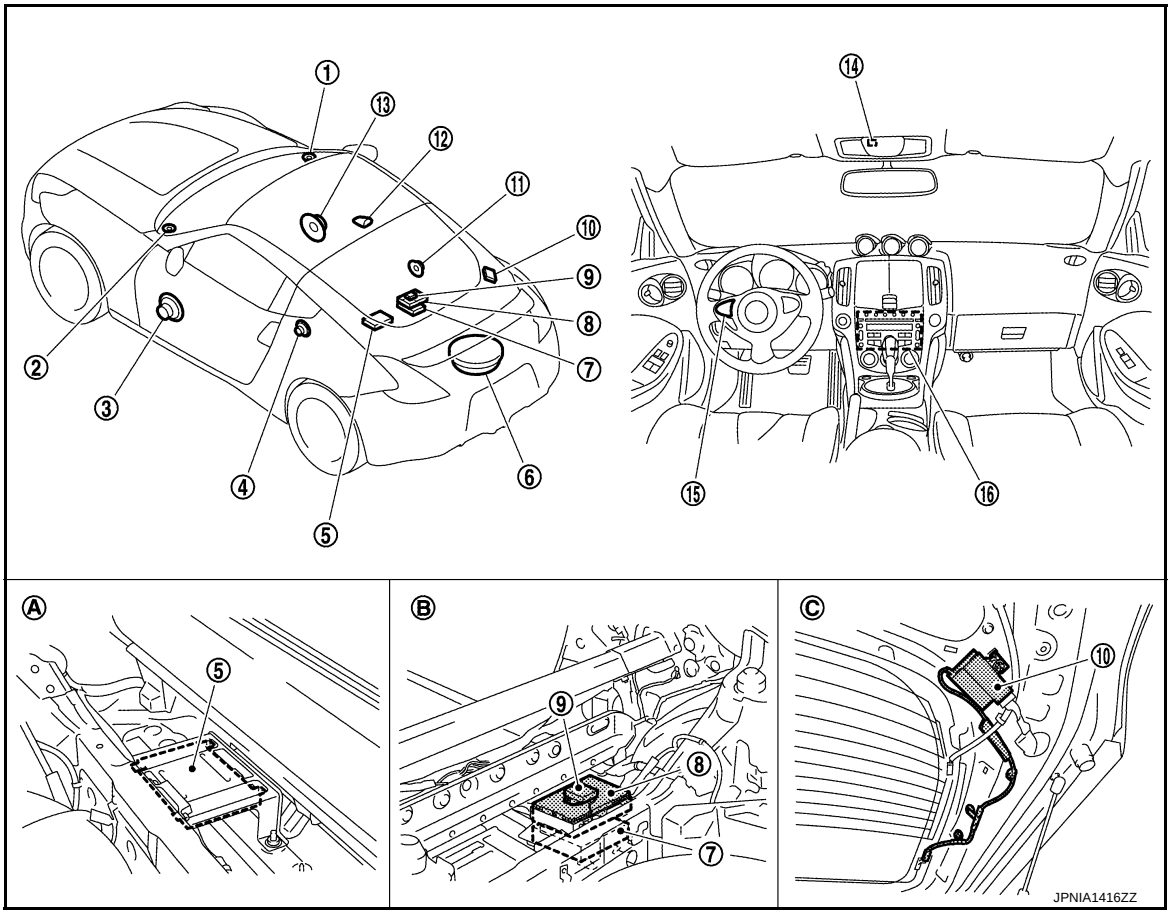
VOICE RECOGNITION FUNCTION

- Each operation of multi AV system can be performed by inputting sound to microphone.
- Start of voice recognition system can be performed by steering switch.
- System operation is available only when the retractable soft top is closed. (roadster models)

Component Parts Location

INFOID:0000000009359226

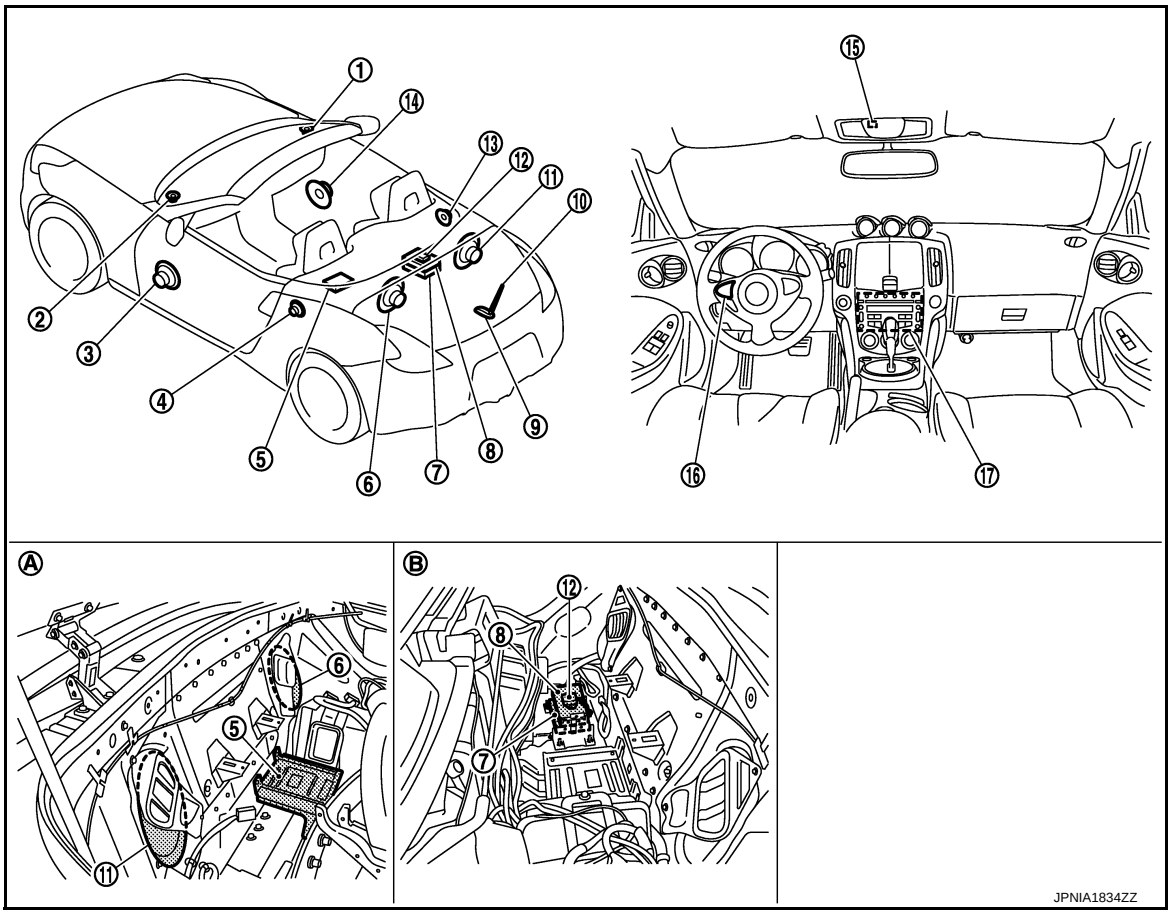
COUPE MODELS



1. Tweeter RH	2. Tweeter LH	3. Front door speaker LH
4. Rear speaker LH	5. BOSE amp.	6. Woofer
7. Satellite radio tuner*	8. TEL adapter unit	9. TEL antenna
10. Antenna amp.	11. Rear speaker RH	12. Satellite radio antenna*
13. Front door speaker RH	14. Microphone	15. Steering switch
16. Audio unit		
A. Luggage side LH	B. Luggage side RH	C. Back door side RH

*: Except for Mexico models

ROADSTER MODELS



1. Tweeter RH
2. Tweeter LH
3. Front door speaker LH
4. Rear speaker LH
5. BOSE amp.
6. Rear woofer LH
7. Satellite radio tuner
8. TEL adapter unit
9. Antenna base
10. Rod antenna
11. Rear woofer RH
12. TEL antenna
13. Rear speaker RH
14. Front door speaker RH
15. Microphone
16. Steering switch
17. Audio unit
A. Luggage side LH
B. Luggage side RH

Component Description

INFOID:0000000009359227

Part name	Description
Audio unit	• Receives telephone voice signal from TEL adapter unit. • Sends telephone voice and voice guidance signals to BOSE amp. • Audio unit and TEL adapter unit exchange data by AV communication, and control audio unit display. • Receives the steering switch signal (operation signal) from the steering switch through TEL adapter unit.
BOSE amp.	Inputs power (BOSE amp. ON) and sound signal from audio unit, and outputs sound signal to each speaker.
Front door speaker	Receives telephone voice and voice guidance signals from BOSE amp.
Tweeter	
Steering switch	• The hands-free phone system can be operated. • Steering switch signal (operation signal) is output to audio unit through TEL adapter unit.

Part name	Description
Microphone	• Uses when operating the hands-free phone. • Outputs microphone signal (telephone voice signal) to the TEL adapter unit. • The power (microphone power supply) is supplied from the TEL adapter unit.
TEL adapter unit	• Inputs the telephone voice signal from TEL antenna during reception and outputs into the audio unit. • Inputs the telephone voice signal from microphone during speech recognition and outputs it to the TEL antenna. • Input roof status signal from retractable soft top control unit. (roadster models)
TEL antenna	Connects with the portable telephone via Bluetooth® communication and communicates the telephone voice signal.

DIAGNOSIS SYSTEM (AUDIO UNIT)

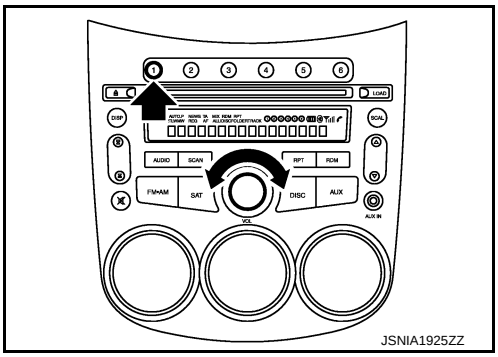
Diagnosis Description

INFOID:0000000009359228

Self-diagnosis mode can check the following items.
- Audio unit hardware/software versions
- Continuity of each speaker channel
- Continuity of each audio unit switch

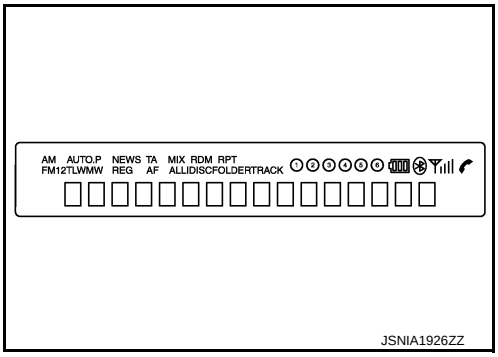
OPERATION PROCEDURE

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.



JSNIA1925ZZ

4. Initially, all display segments will be illuminated.



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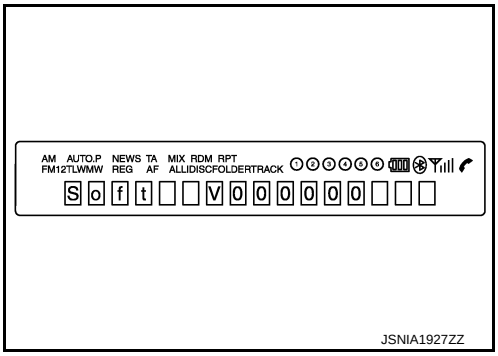
Version Check

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



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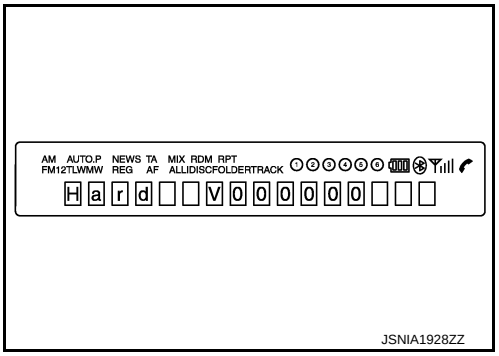
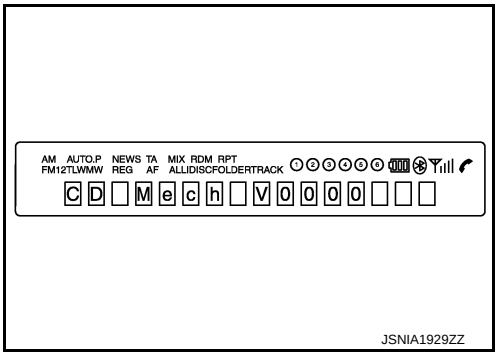
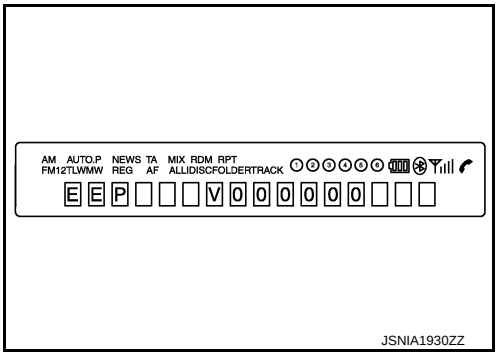
2. Press the “DISP” switch again to display the “Hard” (audio hardware version).



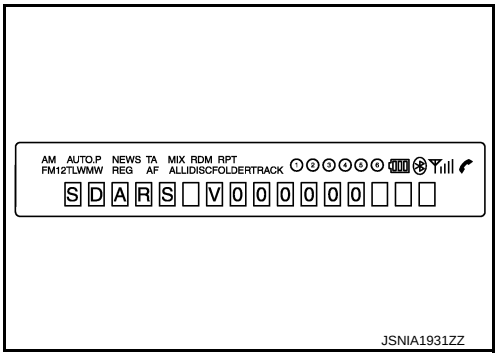
3. Press the “DISP” switch again to display the “CD Mech” (CD mechanism version).



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



5. Press the “DISP” switch again to display the “SDARS” (satellite radio version).
NOTE:
Except for Mexico models



DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

Diagnosis Description

INFOID:0000000009359229

HANDS FREE PHONE SYSTEM ON BOARD DIAGNOSIS

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.

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
STEP 1	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 audio screen.
STEP 2	Hands free phone system initialization	Hands free phone system initialization mode can perform the initialization of hands free phone system.
	Speaker adaptation data deleting	The speaker adaptation data deleting mode can delete the speaker adaptation data.

SELF-DIAGNOSIS RESULTS

Self-diagnosis mode reads out the self-diagnosis results and indicates DTC on the audio screen.

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. The DTC displays are combined and displayed. For example, DTC 01100 is displayed when DTC 01000 and DTC 00100 are indicated at the same time.

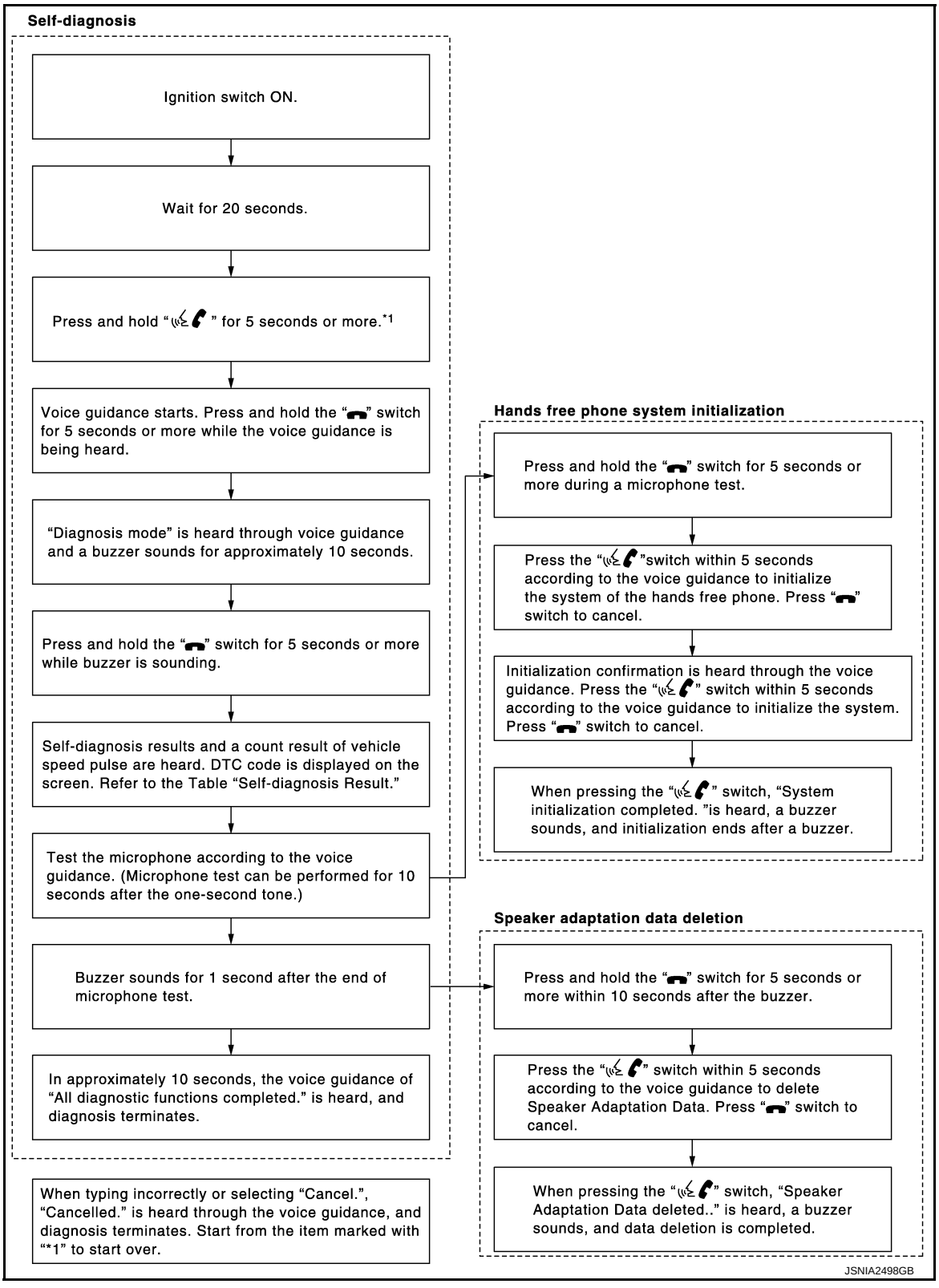
Self-diagnosis results

DTC (Audio screen)	Failure massage	Possible causes
DTC 10000	Internal failure	TEL adapter unit
DTC 01000	Bluetooth antenna open	TEL antenna
DTC 00100	Bluetooth antenna shorted	
DTC 00010	Button ladder A is stuck	Steering switch
DTC 00001	Button ladder B is stuck	
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



DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

AUDIO UNIT

AUDIO UNIT : Diagnosis Procedure

INFOID:0000000009359230

1. CHECK FUSE

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

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

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	M81	19	OFF	Battery voltage
ACC power supply		7	ACC	

Is inspection result OK?

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

BOSE AMP.

BOSE AMP. : Diagnosis Procedure

INFOID:0000000009359231

1. CHECK FUSE

Check that the following fuses of the BOSE amp. are not blown.

Power source	Fuse No.
Battery	8

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	B42	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	B42	12	OFF	Existed

Is inspection result OK?

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

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER : Diagnosis Procedure

INFOID:0000000009359232

1.CHECK FUSES

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

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

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	B236	12	OFF	Battery voltage
ACC power supply		16	ACC	

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:0000000009359233

1.CHECK FUSES

Check that the following fuses of the TEL adapter unit are not blown.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

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 TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	B237	1	OFF	Battery voltage
ACC power supply		2	ACC	

Is inspection result OK?

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	B237	4	OFF	Existed

Is inspection result OK?

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

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

Description

INFOID:0000000009359234

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

Diagnosis Procedure

INFOID:0000000009359235

1.CHECK STEERING SWITCH SIGNAL A 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	
B237	12	M36	24	Existed

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

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B237	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. Refer to SR-16, "Removal and Installation".

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		TEL adapter unit		
Connector	Terminal	Connector	Terminal	
B237	12	B237	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-132, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-62, "Component Inspection".

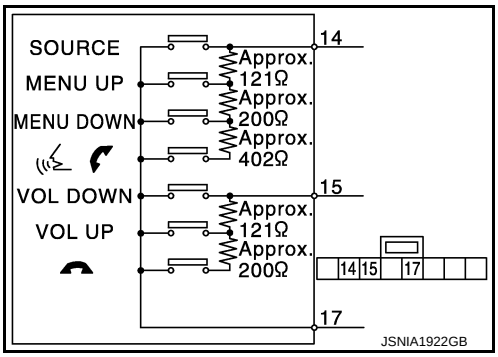
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-131, "Removal and Installation".

Component Inspection

INFOID:0000000009359236

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	switch ON	709 – 737
		MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL DOWN switch ON	0
		VOL UP switch ON	119 – 123
		switch ON	315 – 327

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

Description

INFOID:0000000009359237

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

Diagnosis Procedure

INFOID:0000000009359238

1.CHECK STEERING SWITCH SIGNAL B 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	
B237	13	M36	31	Existed

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

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B237	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. Refer to SR-16, "Removal and Installation".

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		TEL adapter unit		
Connector	Terminal	Connector	Terminal	
B237	13	B237	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-132, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-64, "Component Inspection".

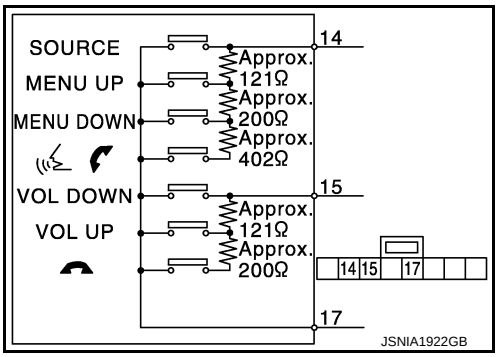
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch.Refer to AV-131, "Removal and Installation".

Component Inspection

INFOID:0000000009359239

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	switch ON	709 – 737
		MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL DOWN switch ON	0
		VOL UP switch ON	119 – 123
		switch ON	315 – 327

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

Description

INFOID:0000000009359240

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

Diagnosis Procedure

INFOID:0000000009359241

1.CHECK STEERING SWITCH SIGNAL GND 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	
B237	14	M36	33	Existed

4. Connect TEL adapter unit connector.

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-16, "Removal and Installation".

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		
B237	14		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace TEL adapter unit. Refer to AV-132, "Removal and Installation".

4.CHECK STEERING SWITCH

Check steering switch. Refer to AV-66, "Component Inspection".

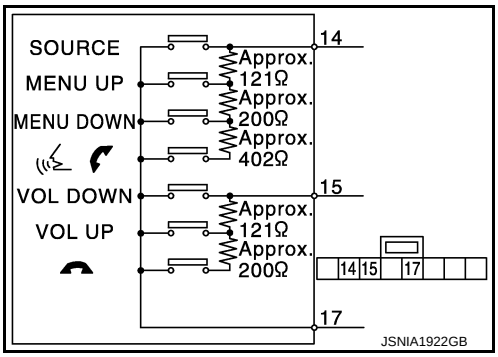
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-131, "Removal and Installation".

Component Inspection

INFOID:0000000009359242

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	switch ON	709 – 737
		MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL DOWN switch ON	0
		VOL UP switch ON	119 – 123
		switch ON	315 – 327

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

Description

INFOID:0000000009359243

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

Diagnosis Procedure

INFOID:0000000009359244

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT

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	
M81	6	B237	17	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M81	6		Not existed

Is the inspection result normal?

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

2.CHECK TEL ADAPTER UNIT POWER SUPPLY

Check TEL adapter unit power supply. Refer to AV-59, "TEL ADAPTER UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace TEL adapter unit. Refer to AV-132, "Removal and Installation".

3.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.

(+)		(–)		Voltage (Approx.)
Audio unit		Audio unit		
Connector	Terminal	Connector	Terminal	
M81	6	M81	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace audio unit. Refer to AV-120, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-68, "Component Inspection".

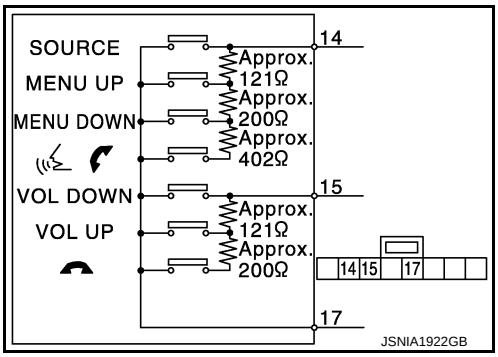
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-131, "Removal and Installation".

Component Inspection

INFOID:0000000009359245

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	switch ON	709 – 737
		MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL DOWN switch ON	0
		VOL UP switch ON	119 – 123
		switch ON	315 – 327

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

Description

INFOID:0000000009359246

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

Diagnosis Procedure

INFOID:0000000009359247

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

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	
M81	16	B237	18	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M81	16		Not existed

Is the inspection result normal?

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

2.CHECK TEL ADAPTER UNIT POWER SUPPLY

Check TEL adapter unit power supply.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace TEL adapter unit. Refer to AV-132, "Removal and Installation".

3.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.

(+)		(–)		Voltage (Approx.)
Audio unit		Audio unit		
Connector	Terminal	Connector	Terminal	
M81	16	M81	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace audio unit. Refer to AV-120, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-70, "Component Inspection".

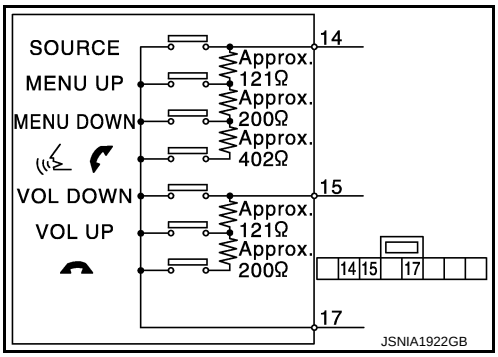
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-131, "Removal and Installation".

Component Inspection

INFOID:0000000009359248

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	switch ON	709 – 737
		MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL DOWN switch ON	0
		VOL UP switch ON	119 – 123
		switch ON	315 – 327

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

Description

INFOID:0000000009359249

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

Diagnosis Procedure

INFOID:0000000009359250

1.CHECK STEERING SWITCH SIGNAL GND CIRCUIT

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	
M81	15	B237	19	Existed

Is the 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		
M81	15		Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace audio unit. Refer to AV-120, "Removal and Installation".

3.CHECK STEERING SWITCH

Check steering switch. Refer to AV-71, "Component Inspection".

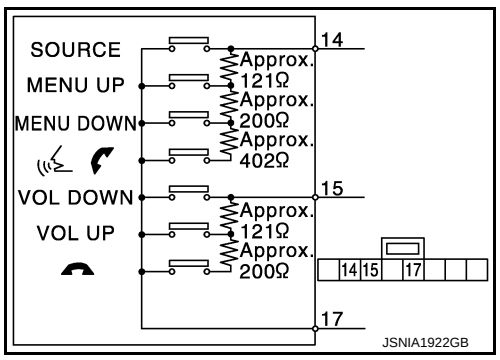
Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-131, "Removal and Installation".

Component Inspection

INFOID:0000000009359251

Measure the resistance between the steering switch connector.



Standard

Steering switch		Condition	Resistance Ω
Terminal	Terminal		
14	17	switch ON	709 – 737
		MENU DOWN switch ON	315 – 327
		MENU UP switch ON	119 – 123
		SOURCE switch ON	0
15		VOL DOWN switch ON	0
		VOL UP switch ON	119 – 123
		switch ON	315 – 327

COMMUNICATION SIGNAL CIRCUIT

Description

INFOID:0000000009359252

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:0000000009359253

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	
B236	9	M83	39	Existed
	10		40	Existed

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

Satellite radio tuner		Ground	Continuity
Connector	Terminal		
B236	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		
M83	39		4.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace audio unit. Refer to AV-120, "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.

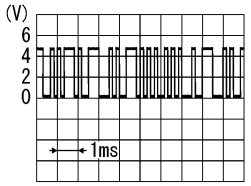
Satellite radio tuner		Ground	Voltage (Approx)
Connector	Terminal		
B236	10		7.5 V

Is inspection result OK?

YES >> GO TO 4.
NO >> Replace satellite radio tuner. Refer to AV-129, "Removal and Installation".

4. CHECK COMMUNICATION SIGNAL (SAT–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			Condition	Reference value
Connector	Terminal			
B236	9	Ground	When satellite radio mode is selected.	

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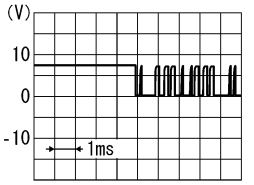
Is inspection result OK?

YES >> GO TO 5.
NO >> Replace satellite radio tuner. Refer to AV-129, "Removal and Installation".

5. CHECK COMMUNICATION SIGNAL (AUDIO–SAT)

Check signal between audio unit harness connector and ground.

Audio unit			Condition	Reference value
Connector	Terminal			
B83	40	Ground	When satellite radio mode is selected.	

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Is inspection result OK?

YES >> INSPECTION END
NO >> Replace audio unit. Refer to AV-120, "Removal and Installation".

REQUEST SIGNAL CIRCUIT (SAT TO AUDIO)

Description

INFOID:0000000009359254

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

Diagnosis Procedure

INFOID:0000000009359255

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 unit harness connector and audio unit harness connector.

Satellite radio tuner		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B236	8	M83	38	Existed

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

Satellite radio tuner		Ground	Continuity
Connector	Terminal		
B236	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.

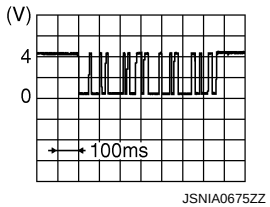
Audio unit		Ground	Voltage (Approx.)
Connector	Terminal		
M83	38		4.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace audio unit. Refer to AV-120, "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			
B236	8		When satellite radio mode is selected.	

JSNIA0675ZZ

Is inspection result OK?

YES >> INSPECTION END
NO >> Replace satellite radio tuner. Refer to AV-129, "Removal and Installation".

BOSE AMP. ON SIGNAL CIRCUIT

Description

INFOID:0000000009359256

When the audio system is turned on, a voltage signal is supplied from the audio unit to the BOSE amp. When this signal is received, the BOSE amp. will turn on.

Diagnosis Procedure

INFOID:0000000009359257

1.CHECK CONTINUITY AMP. ON SIGNAL CIRCUIT

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

Audio unit		BOSE amp.		Continuity
Connector	Terminal	Connector	Terminal	
M81	1	B41	31	Existed

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

Audio unit		Ground	Continuity
Connector	Terminal		
M81	1		Not existed

Is inspection result OK?

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

2.CHECK VOLTAGE AMP. ON SIGNAL

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		
M81	1		12.0 V

Is inspection result OK?

YES >> Replace BOSE amp. Refer to AV-126, "COUPE : Removal and Installation" (coupe models), AV-126, "ROADSTER : Removal and Installation" (roadster models).
NO >> Replace audio unit. Refer to AV-120, "Removal and Installation".

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000009359258

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

Diagnosis Procedure

INFOID:0000000009359259

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	
B237	7	R5	1	Existed
	8		2	
	29		4	

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

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B237	7		Not existed
	29		

Is inspection result OK?

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

2.CHECK MICROPHONE POWER SUPPLY

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

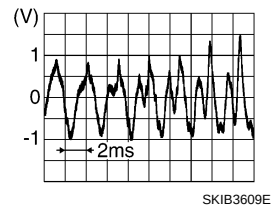
TEL adapter unit		Ground	Voltage (Approx.)
Connector	Terminal		
B237	29		5.0 V

Is inspection result OK?

YES >> GO TO 3.
NO >> Replace TEL adapter unit. Refer to AV-132, "Removal and Installation".

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		TEL adapter unit		Condition	Reference value
Connector	Terminal	Connector	Terminal		
B237	7	B237	8	Give a voice.	

SKIB3609E

Is inspection result OK?

YES >> INSPECTION END
NO >> Replace microphone. Refer to AV-133, "Removal and Installation".

TELEPHONE ON SIGNAL CIRCUIT

Description

INFOID:0000000009359260

When telephone is being used. TEL adapter unit transmits telephone ON signal to audio unit.

Diagnosis Procedure

INFOID:0000000009359261

1.CHECK CONTINUITY TELEPHONE ON SIGNAL CIRCUIT

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

TEL adapter unit		Audio unit		Continuity
Connector	Terminal	Connector	Terminal	
B237	11	M82	28	Existed

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

TEL adapter unit		Ground	Continuity
Connector	Terminal		
B237	11		Not existed

Is inspection result OK?

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

2.CHECK TELEPHONE ON SIGNAL

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

Audio unit		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M82	28		While using hands-free phone system	0 V
			While not using hands-free phone system	5.0 V

Is inspection result OK?

YES >> INSPECTION END
NO >> Replace audio unit. Refer to AV-120, "Removal and Installation".

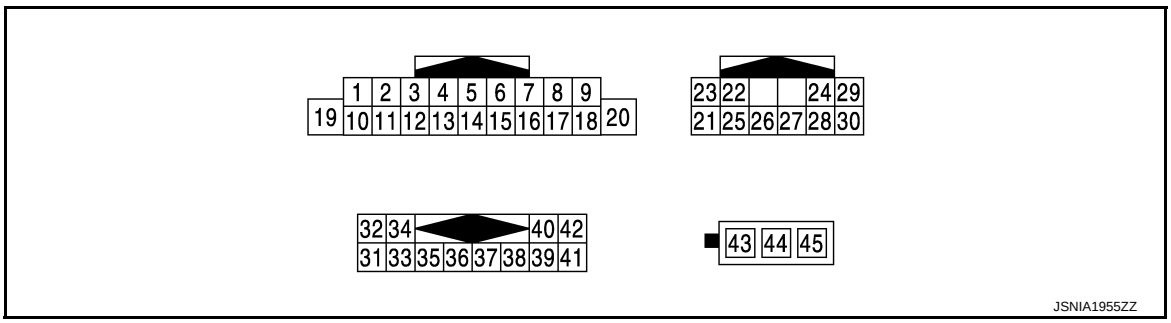
ECU DIAGNOSIS INFORMATION

AUDIO UNIT

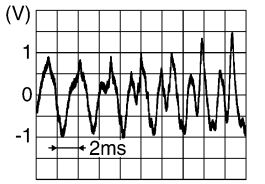
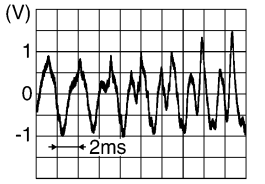
Reference Value

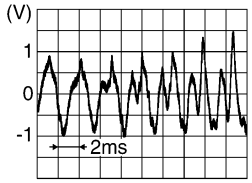
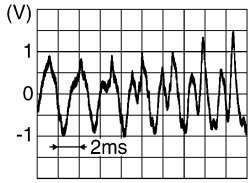
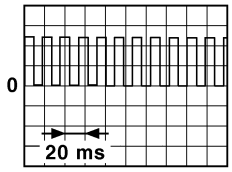
INFOID:0000000009359262

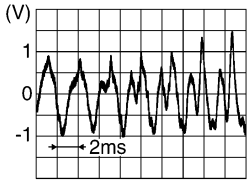
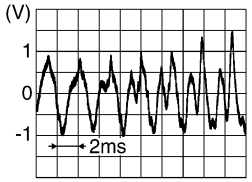
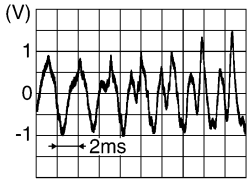
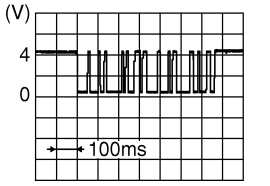
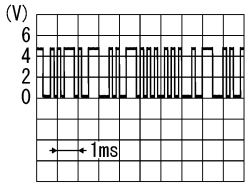
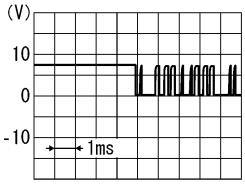
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (V)	Ground	BOSE amp. ON signal	Output	Ignition switch ON	—	12.0 V
2 (LG)	3 (V)	Sound signal front speaker LH	Output	Ignition switch ON	Sound signal output	 SKIB3609E
4 (L)	5 (R)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound signal output	 SKIB3609E
6 (W)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch	0 V
					Keep pressing MENU UP switch	1.25 V
					Keep pressing MENU DOWN switch	2.5 V
					Keep pressing switch	3.7 V
					Except for above	5.0 V
7 (L)	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 (W)	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0 V
					Lighting switch is 1ST or 2ND.	12.0 V
10	—	Shield	—	—	—	—
11 (L)	12 (P)	Sound signal front speaker RH	Output	Ignition switch ON	Sound signal output	 SKIB3609E
13 (R)	14 (G)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound signal output	 SKIB3609E
16 (GR)	15 (B)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch	0 V
					Keep pressing VOL UP switch	1.25 V
					Keep pressing switch	2.5 V
					Except for above.	5.0 V
18 (Y)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25MPH)	**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	—	Shield	—	—	—	—
21 (R)	—	AV communication signal (H)	—	Input/ Output	—	—
22 (G)	—	AV communication signal (L)	—	Input/ Output	—	—
25	—	Shield	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
26 (LG)	27 (V)	Sound signal (Telephone voice, telephone guidance)	Input	Ignition switch ON	Give a voice	 SKIB3609E
28 (O)	Ground	Telephone ON signal	Input	Ignition switch ON	While using hands-free phone system	0 V
					While not using hands-free phone system	5.0 V
32 (B)	31 (W)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
34 (G)	33 (R)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
35	—	Shield	—	—	—	—
36	—	Shield	—	—	—	—
38 (P)*1 (Y)*2	Ground	Request signal (SAT TO AUDIO)	Input	Ignition switch ON	When satellite radio mode is selected	 JSNIA0675ZZ
39 (G)	Ground	Communication signal (SAT-AUDIO)	Input	Ignition switch ON	When satellite radio mode is selected	 PKIB5039J
40 (L)	Ground	Communication signal (AUDIO-SAT)	Output	Ignition switch ON	When satellite radio mode is selected	 SKIA9301J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
43	Ground	Antenna amp. ON signal	Output	Ignition switch ON	—	12.0 V
44	—	Antenna signal	Input	—	—	—

*1: Coupe models
*2: Roadster models

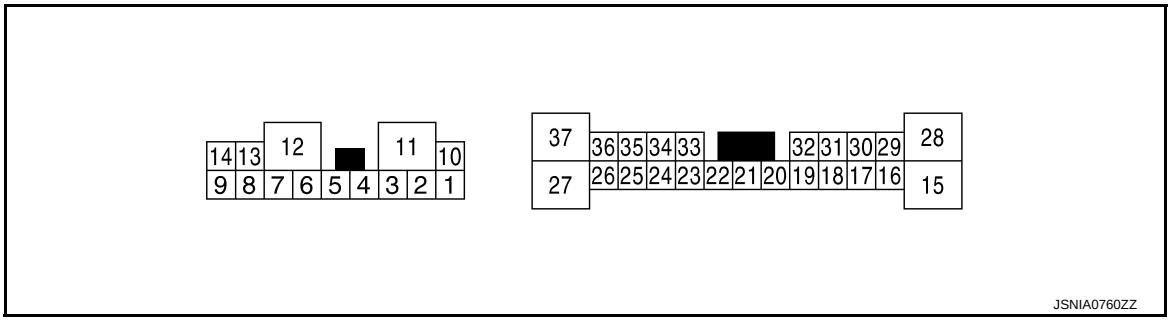
BOSE AMP.

COUPE

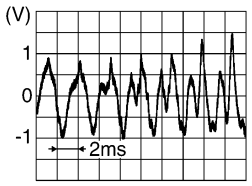
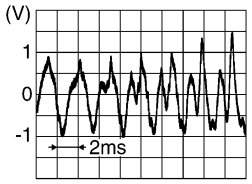
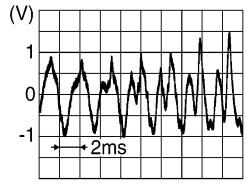
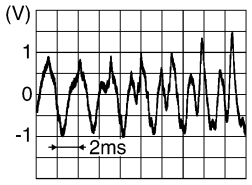
COUPE : Reference Value

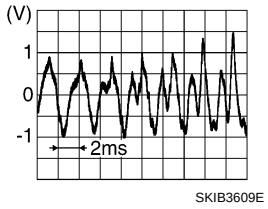
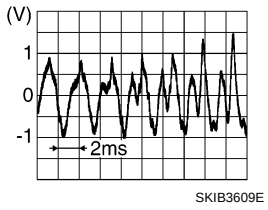
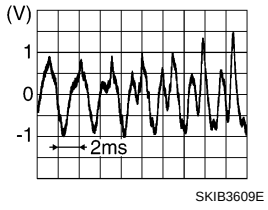
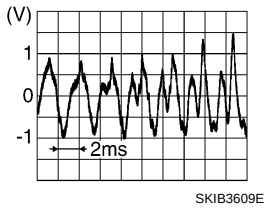
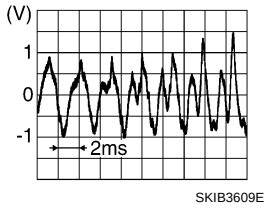
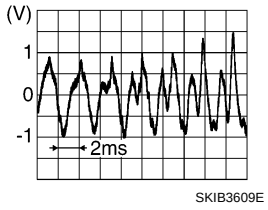
INFOID:0000000009359263

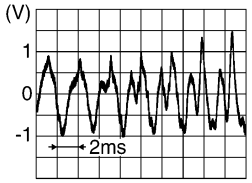
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (L)	10 (V)	Sound signal front door speaker LH	Output	Ignition switch ON	Voice output	 SKIB3609E
2 (BG)	3 (G)	Sound signal front door speaker RH	Output	Ignition switch ON	Voice output	 SKIB3609E
4 (SB)	5 (V)	Sound signal woofer	Output	Ignition switch ON	Voice output	 SKIB3609E
6 (LG)	7 (GR)	Sound signal tweeter LH	Output	Ignition switch ON	Voice output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (R)	14 (BR)	Sound signal rear speaker RH	Output	Ignition switch ON	Voice output	 SKIB3609E
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
15 (L)	28 (P)	Sound signal rear speaker LH	Output	Ignition switch ON	Voice output	 SKIB3609E
18 (P)	32 (L)	Sound signal front LH	Input	Ignition switch ON	Voice output	 SKIB3609E
19 (R)	20 (G)	Sound signal front RH	Input	Ignition switch ON	Voice output	 SKIB3609E
21 (V)	22 (SB)	Sound signal rear LH	Input	Ignition switch ON	Voice output	 SKIB3609E
23 (BR)	33 (Y)	Sound signal rear RH	Input	Ignition switch ON	Voice output	 SKIB3609E

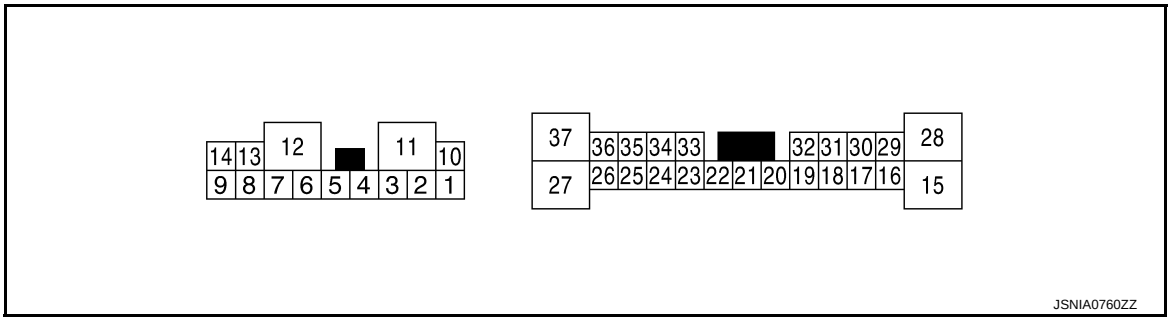
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
31 (W)	Ground	BOSE amp. ON signal	Input	Ignition switch ACC	—	12.0 V
37 (B)	27 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Voice output	 SKIB3609E

ROADSTER

ROADSTER : Reference Value

INFOID:0000000009359264

TERMINAL LAYOUT



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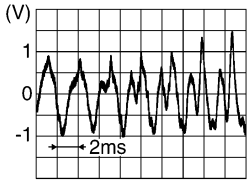
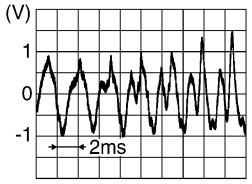
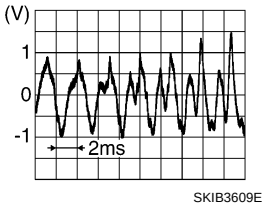
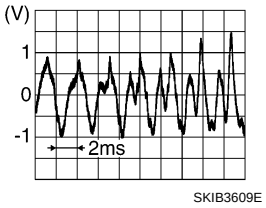
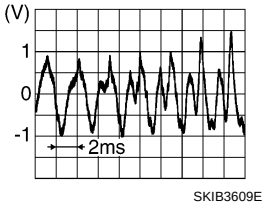
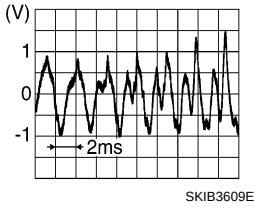
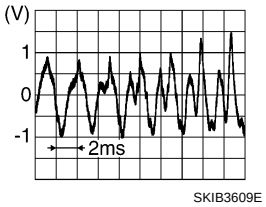
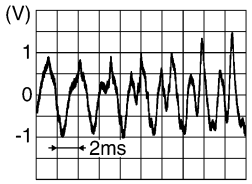
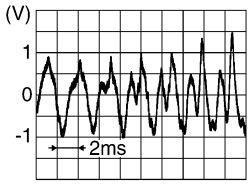
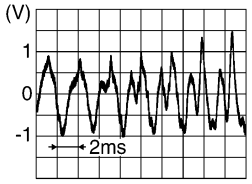
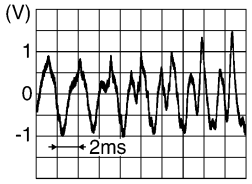
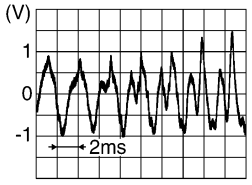
PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (L)	10 (V)	Sound signal rear woofer LH	Output	Ignition switch ON	Voice output	 SKIB3609E
2 (LG)	3 (Y)	Sound signal rear woofer RH	Output	Ignition switch ON	Voice output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
4 (L)	5 (V)	Sound signal front door speaker LH	Output	Ignition switch ON	Voice output	 SKIB3609E
6 (LG)	7 (GR)	Sound signal tweeter LH	Output	Ignition switch ON	Voice output	 SKIB3609E
8 (BG)	13 (G)	Sound signal front door speaker RH	Output	Ignition switch ON	Voice output	 SKIB3609E
9 (LG)	14 (Y)	Sound signal rear speaker RH	Output	Ignition switch ON	Voice output	 SKIB3609E
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
15 (L)	28 (P)	Sound signal rear speaker LH	Output	Ignition switch ON	Voice output	 SKIB3609E
17 (R)	Ground	Roof status signal (AUDIO)	Input	Ignition switch ON	Retractable soft top fully open	Battery voltage
					Retractable soft top other than above	0 V

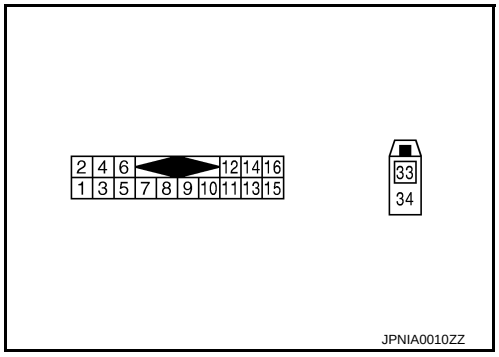
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (P)	32 (L)	Sound signal front LH	Input	Ignition switch ON	Voice output	 SKIB3609E
19 (R)	20 (G)	Sound signal front RH	Input	Ignition switch ON	Voice output	 SKIB3609E
21 (V)	22 (SB)	Sound signal rear LH	Input	Ignition switch ON	Voice output	 SKIB3609E
23 (BR)	33 (Y)	Sound signal rear RH	Input	Ignition switch ON	Voice output	 SKIB3609E
31 (W)	Ground	BOSE amp. ON signal	Input	Ignition switch ACC	—	12.0 V
37 (B)	27 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Voice output	 SKIB3609E

SATELLITE RADIO TUNER

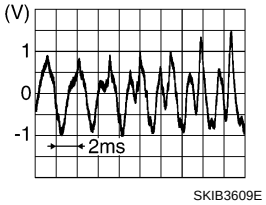
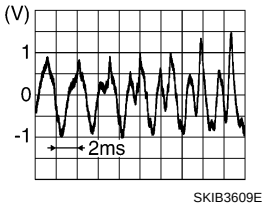
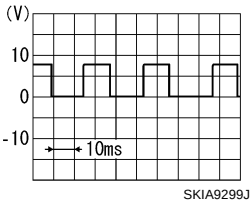
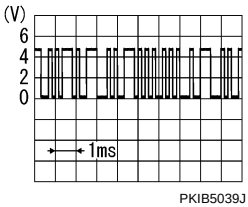
Reference Value

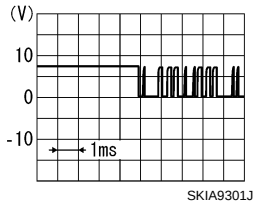
INFOID:0000000009359265

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
2 (R)	1 (G)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
4 (B)	3 (W)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected	 SKIB3609E
5	—	Shield	—	—	—	—
6	—	Shield	—	—	—	—
8 (Y)	Ground	Request signal (SAT TO AUDIO)	Output	Ignition switch ON	When satellite radio mode is selected	 SKIA9299J
9 (O)	Ground	Communication signal (SAT→AUDIO)	Output	Ignition switch ON	When satellite radio mode is selected	 PKIB5039J

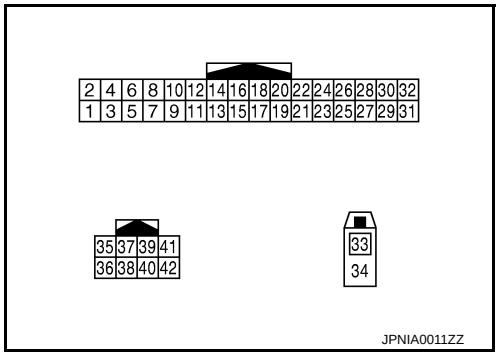
Terminal		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
10 (BR)	Ground	Communication signal (AUDIO→SAT)	Input	Ignition switch ON	When satellite radio mode is selected	 SKIA9301J
12 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
16 (V)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

TEL ADAPTER UNIT

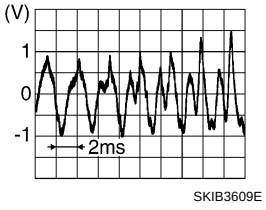
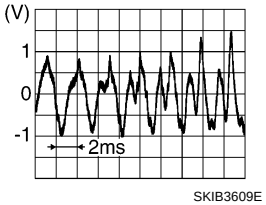
Reference Value

INFOID:0000000009359266

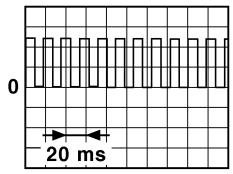
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (V)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
3 (SB)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
4 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
7 (L)	8	Microphone signal	Input	Ignition switch ON	Give a voice	 SKIB3609E
8	—	Shield (microphone signal ground)	—	—	—	—
9 (BR)	10 (Y)	Sound signal (Telephone voice, telephone guidance)	Output	Ignition switch ON	During voice guide output with the switch pressed	 SKIB3609E
11 (BG)	Ground	Telephone 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 (P)	14 (B)	Steering switch signal A (input)	Input	Ignition switch ON	Keep pressing SOURCE switch	0 V
					Keep pressing MENU UP switch	1.25 V
					Keep pressing MENU DOWN switch	2.5 V
					Keep pressing switch	3.7 V
					Except for above	5.0 V
13 (L)	14 (B)	Steering switch signal B (input)	Input	Ignition switch ON	Keep pressing VOL DOWN switch	0 V
					Keep pressing VOL UP switch	1.25 V
					Keep pressing switch	2.5 V
					Except for above.	5.0 V
14 (B)	Ground	Steering switch signal ground	—	Ignition switch ON	—	0 V
16 (R)	Ground	Roof status signal (AUDIO)	Input	Ignition switch ON	Retractable soft top fully open	Battery voltage
					Retractable soft top other than above	0 V
17 (W)	19 (B)	Steering switch signal A (output)	Output	Ignition switch ON	Keep pressing SOURCE switch	0 V
					Keep pressing MENU UP switch	1.25 V
					Keep pressing MENU DOWN switch	2.5 V
					Keep pressing switch	3.7 V
					Except for above	5.0 V
18 (GR)	19 (B)	Steering switch signal B (output)	Output	Ignition switch ON	Keep pressing VOL DOWN switch	0 V
					Keep pressing VOL UP switch	1.25 V
					Keep pressing switch	2.5 V
					Except for above.	5.0 V
20 (L)*1 (B)*2	Ground	Control signal	—	Ignition switch ON	—	0 V
22 (P)*1 (B)*2	Ground	Control signal	—	Ignition switch ON	—	0 V
23 (B)	Ground	Control signal	—	Ignition switch ON	—	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
24 (W)	Ground	Control signal	—	Ignition switch ON	—	0 V
28 (V)	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
29 (P)	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 (R)	—	AV communication signal (H)	Input/ Output	—	—	—
36 (G)	—	AV communication signal (L)	Input/ Output	—	—	—
39 (L)	—	AV communication signal (H)	Input/ Output	—	—	—
40 (L)	—	AV communication signal (H)	Input/ Output	—	—	—
41 (Y)	—	AV communication signal (L)	Input/ Output	—	—	—
42 (Y)	—	AV communication signal (L)	Input/ Output	—	—	—

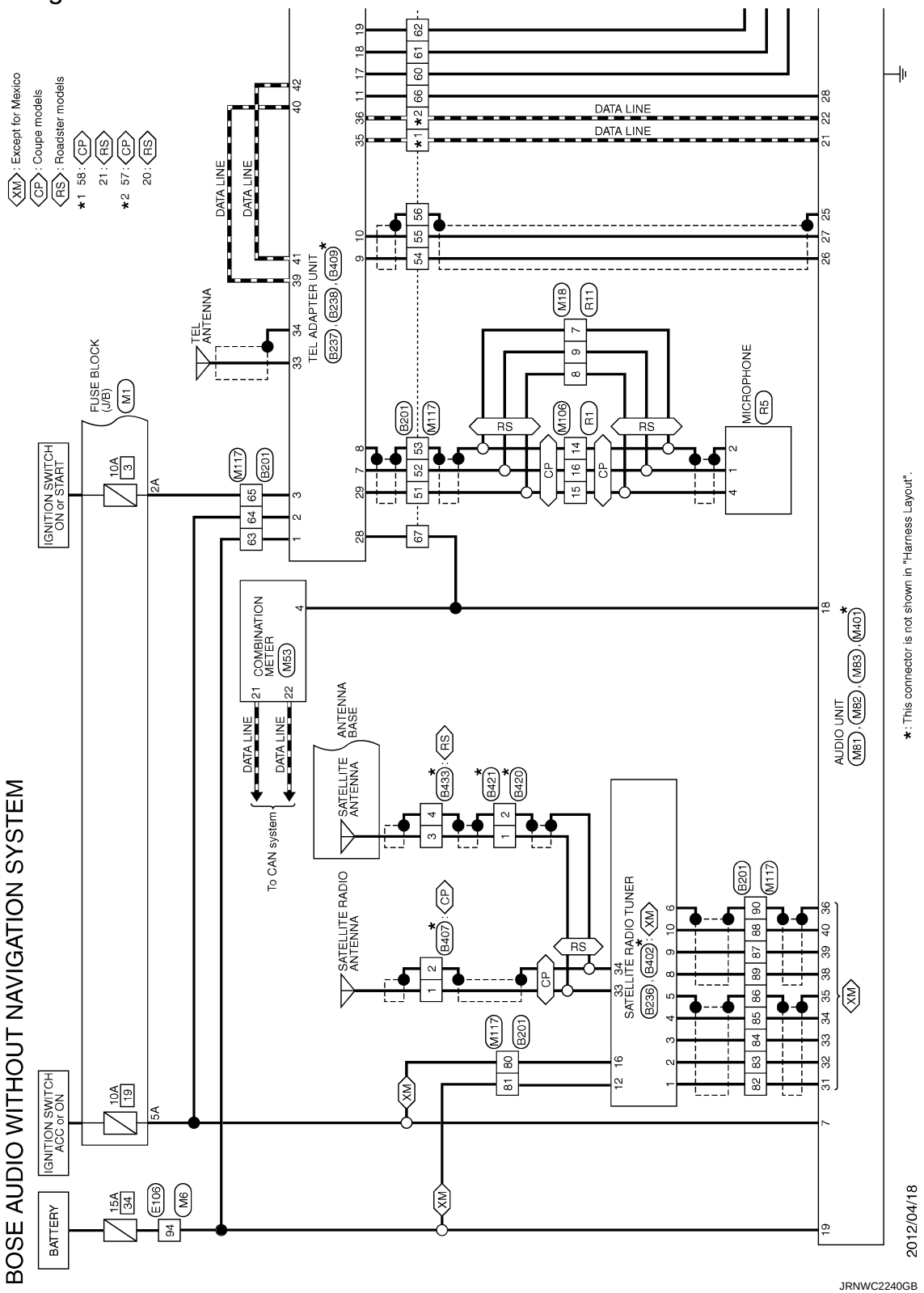
*1: Coupe models
*2: Roadster models

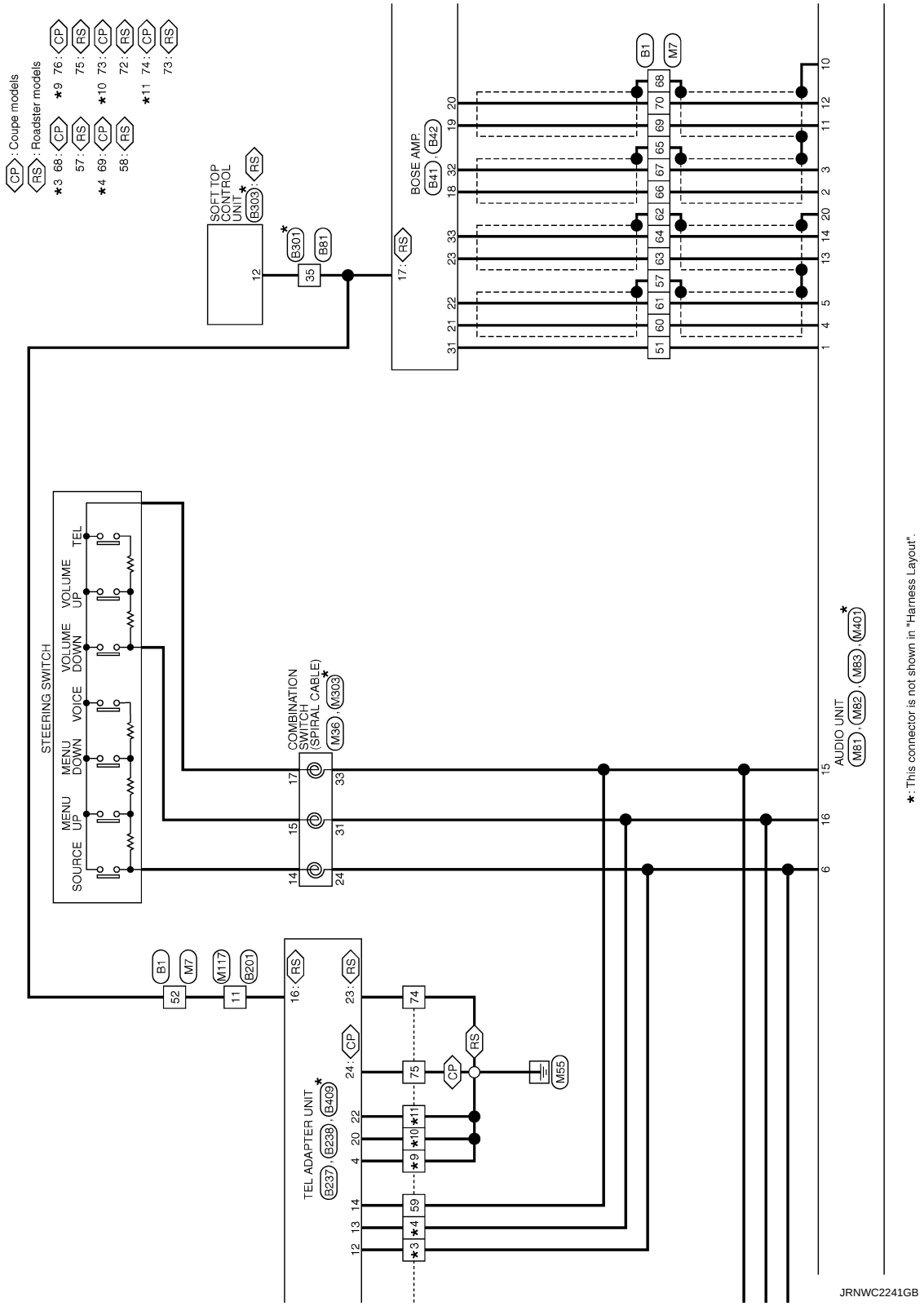
WIRING DIAGRAM

BOSE AUDIO WITHOUT NAVIGATION

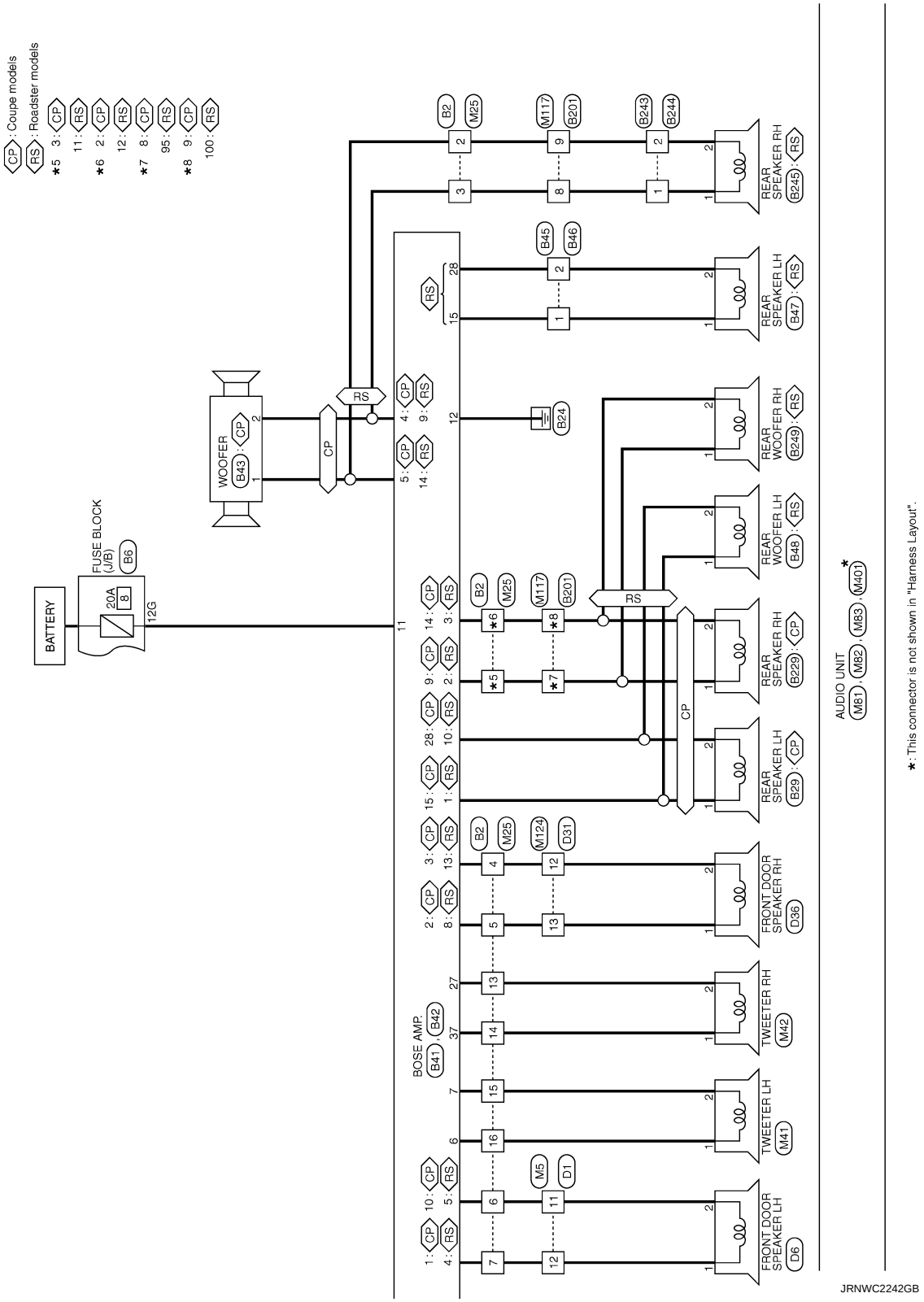
Wiring Diagram - BOSE AUDIO WITHOUT NAVIGATION SYSTEM -

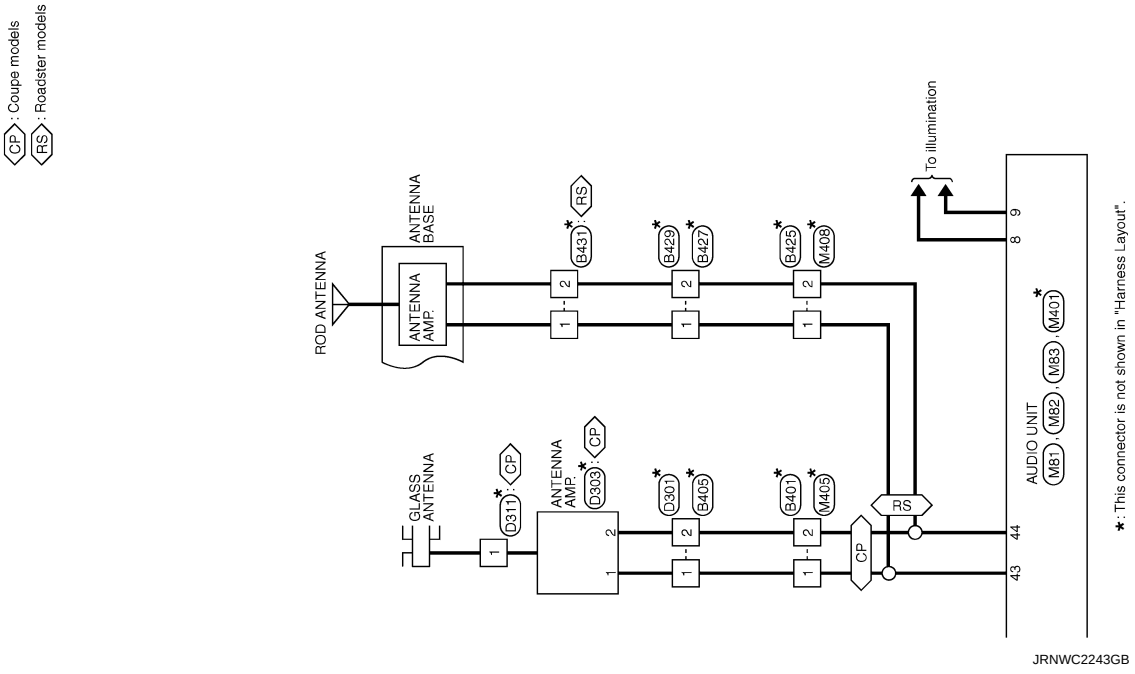
INFOID:0000000009359267



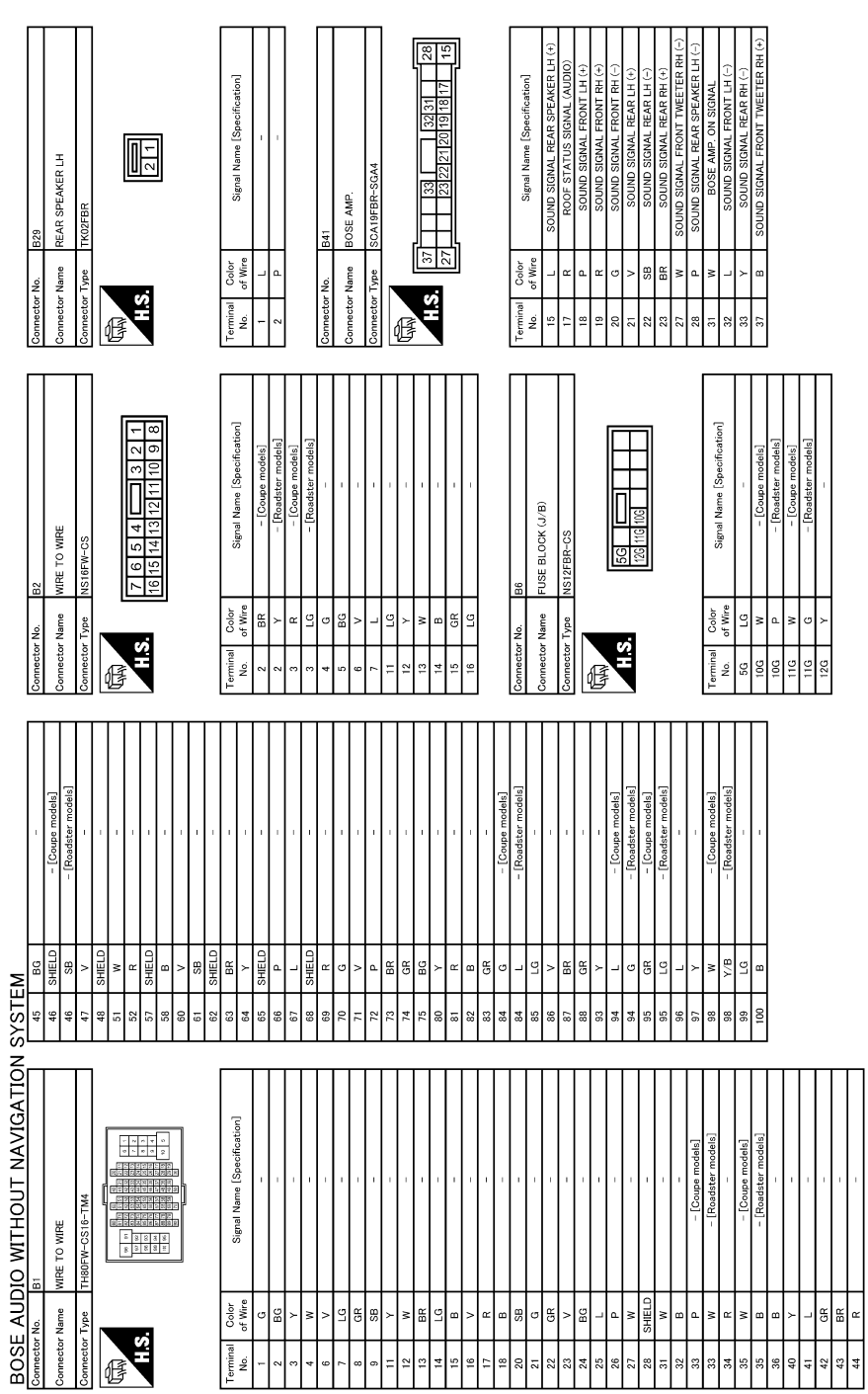


*: This connector is not shown in "Harness Layout".


CP : Coupe models
RS : Roadster models
BATTERY
FUSE BLOCK (J/B) B6
20A 8
12G
WOOFER B43
BOSE AMP B41, B42
FRONT DOOR SPEAKER LH D6
FRONT DOOR SPEAKER RH D36
TWEETER LH M41
TWEETER RH M42
REAR SPEAKER LH B29
REAR SPEAKER RH B229
REAR WOOFER LH B48
REAR WOOFER RH B249
REAR SPEAKER LH B47
REAR SPEAKER RH B245
AUDIO UNIT M81, M82, M83, M401
*: This connector is not shown in "Harness Layout".
JRNWC2242GB


CP : Coupe models
RS : Roadster models
ROD ANTENNA
ANTENNA BASE
ANTENNA AMP
RS
B431
B429
B427
B425
M408
To illumination
9
8
AUDIO UNIT
M81
M82
M83
M401
GLASS ANTENNA
CP
D311
ANTENNA AMP
D303
D301
B405
B401
M405
CP
RS
44
43
*: This connector is not shown in "Harness Layout".
JRNWC2243GB

BOSE AUDIO WITHOUT NAVIGATION SYSTEM



JRNWC4494GB

BOSE AUDIO WITHOUT NAVIGATION SYSTEM

Connector No.	B42
Connector Name	BOSE AMP.
Connector Type	SGA12FBR-SJA2

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	SOUND SIGNAL FRONT DOOR SPEAKER LH (+)
2	BG	SOUND SIGNAL FRONT DOOR SPEAKER RH (+) [Coupe models]
2	LG	SOUND SIGNAL REAR WOOFER RH (+) [Roadster models]
3	G	SOUND SIGNAL FRONT DOOR SPEAKER RH (-) [Coupe models]
3	Y	SOUND SIGNAL REAR WOOFER RH (-) [Roadster models]
4	L	SOUND SIGNAL FRONT DOOR SPEAKER LH (-) [Roadster models]
4	SB	SOUND SIGNAL WOOFER (+) [Coupe models]
5	V	SOUND SIGNAL WOOFER (-)
6	LG	SOUND SIGNAL TWEETER LH (+)
7	GR	SOUND SIGNAL TWEETER LH (-)
8	BG	SOUND SIGNAL FRONT DOOR SPEAKER RH (+)
9	R	SOUND SIGNAL REAR SPEAKER RH (+) [Coupe models]
9	LG	SOUND SIGNAL REAR SPEAKER RH (+) [Roadster models]
10	V	SOUND SIGNAL FRONT DOOR SPEAKER LH (-)
11	Y	BATTERY
12	B	GROUND
13	G	SOUND SIGNAL FRONT DOOR SPEAKER RH (-)
14	BR	SOUND SIGNAL REAR SPEAKER RH (-) [Coupe models]
14	Y	SOUND SIGNAL REAR SPEAKER RH (-) [Roadster models]

Connector No.	B43
Connector Name	WOOFER
Connector Type	RS02FGY

H.S.

1 2

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	SOUND SIGNAL WOOFER (-)
2	SB	SOUND SIGNAL WOOFER (+)

Connector No.	B45
Connector Name	WIRE TO WIRE
Connector Type	TK02MBR-P

H.S.

1 2

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

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Type	TK02FBR

H.S.

2 1

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

Connector No.	B47
Connector Name	REAR SPEAKER LH
Connector Type	TK02FBR

H.S.

2 1

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

Connector No.	B48
Connector Name	REAR WOOFER LH
Connector Type	NS02FW-CS

H.S.

2 1

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

Connector No.	B81
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	BR	–
6	B	–
8	Y	–
9	BG	–
14	GR	–
15	SB	–
16	V	–
17	G	–
24	LG	–
25	V	–
31	L	–
32	P	–
34	BG	–
35	R	–

JRNWC4495GB

BOSE AUDIO WITHOUT NAVIGATION SYSTEM

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	BR	– [Coupe models]
2	R	– [Roadster models]
3	Y	– [Coupe models]
3	B	– [Roadster models]
4	G	–
7	R	– [Coupe models]
7	Y	– [Roadster models]
8	LG	–
9	Y	–
11	R	–
20	G	–
21	R	–
30	B	–
40	W	–
41	V	–
42	G	–
43	L	–
44	SB	–
51	P	–
52	L	–
53	SHIELD	–
54	BR	–
55	Y	–
56	SHIELD	–
57	G	– [Coupe models]
57	P	– [Roadster models]
58	R	– [Coupe models]
58	L	– [Roadster models]
59	B	–
60	W	–
61	GR	–
62	B	–
63	Y	–
64	V	–
65	SB	–
66	BG	–
67	V	–
68	P	–
69	L	–
70	G	–
72	B	–
73	L	– [Coupe models]
73	B	– [Roadster models]
74	P	– [Coupe models]
74	B	– [Roadster models]
75	W	– [Coupe models]
75	B	– [Roadster models]
76	B	–
80	V	–
81	SB	–
82	G	–
83	R	–
84	W	–
85	B	–
86	SHIELD	–
87	O	–
88	BR	–
89	Y	–
90	SHIELD	–
92	SB	– [Coupe models]
92	LG	– [Roadster models]
93	V	– [Coupe models]
93	W	– [Roadster models]
94	SHIELD	– [Coupe models]
94	G	– [Roadster models]
95	GR	– [Coupe models]
95	LG	– [Roadster models]
97	LG	– [Coupe models]
97	Y	– [Roadster models]
98	W	– [Coupe models]
98	Y/B	– [Roadster models]
99	G	–
100	BR	– [Coupe models]
100	Y	– [Roadster models]

Connector No.	B229
Connector Name	REAR SPEAKER RH
Connector Type	TK02FBR

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	G	–
3	B	–
4	L	–
5	B	–
6	P	–
7	B	–
8	W	–

1	LG	–
2	Y	–

Connector No.	B236
Connector Name	SATELLITE RADIO TUNER
Connector Type	A16FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	SATELLITE RADIO SOUND SIGNAL LH (–)
2	R	SATELLITE RADIO SOUND SIGNAL LH (+)
3	W	SATELLITE RADIO SOUND SIGNAL RH (–)
4	B	SATELLITE RADIO SOUND SIGNAL RH (+)
5	SHIELD	SHIELD
6	SHIELD	SHIELD
8	Y	REQUEST (SAT->AUDIO)
9	O	COMM (SAT->AUDIO)
10	BR	COMM (AUDIO->SAT)
12	SB	BATTERY
16	V	ACC

Connector No.	B237
Connector Name	TEL ADAPTER UNIT
Connector Type	TH32FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	BATTERY
2	V	ACC
3	SB	IGNITION SIGNAL
4	B	GROUND
7	L	MICROPHONE SIGNAL
8	SHIELD	MICROPHONE GND
9	BR	TEL VOICE SIGNAL (+)
10	Y	TEL VOICE SIGNAL (–)
11	BG	TELEPHONE ON SIGNAL
12	P	STRG SW A (INPUT)
13	L	STRG SW B (INPUT)
14	B	STRG SW GND (INPUT)
16	R	ROOF STATUS SIGNAL (AUDIO)
17	W	STRG SW A (OUTPUT)
18	GR	STRG SW B (OUTPUT)
19	B	STRG SW GND (OUTPUT)
20	L	CONTROL SIGNAL [Coupe models]
20	B	CONTROL SIGNAL [Roadster models]
22	P	CONTROL SIGNAL [Coupe models]
22	B	CONTROL SIGNAL [Roadster models]
23	B	CONTROL SIGNAL
24	W	CONTROL SIGNAL
28	V	VEHICLE SPEED SIGNAL (8-PULSE)
29	P	MICROPHONE VCC

Connector No.	B238
Connector Name	TEL ADAPTER UNIT
Connector Type	TH08FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
35	R	AV COMM (H)
36	G	AV COMM (L)
39	L	AV COMM (H)
40	L	AV COMM (H)
41	Y	AV COMM (L)
42	Y	AV COMM (L)

JRNWC4496GB

BOSE AUDIO WITHOUT NAVIGATION SYSTEM

Connector No.	B243
Connector Name	WIRE TO WIRE
Connector Type	TK02MBR-P

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

Connector No.	B244
Connector Name	WIRE TO WIRE
Connector Type	TK02FBR

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

Connector No.	B245
Connector Name	REAR SPEAKER RH
Connector Type	TK02FBR

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

Connector No.	B249
Connector Name	REAR WOOFER RH
Connector Type	NS02FW-CS

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

Connector No.	B301
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
4	LG	–
5	L	–
6	P	–
8	O	–
9	Y	–
14	BR	–
15	BR	–
16	W	–
17	DG	–
24	V	–
25	LG	–
31	BG	–
32	P	–
34	O	–
35	SB	–

Connector No.	B303
Connector Name	SOFT TOP CONTROL UNIT
Connector Type	TH40FB-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	SENSOR POWER SUPPLY (ROOF STRIKER SENSOR LH)
3	DG	ROOF STRIKER SENSOR RH
4	W	ROOF STRIKER SENSOR LH
8	Y	REVERSE SIGNAL
9	SB	POWER CONDITION (POWER WINDOW)
10	O	TRUNK LID OPEN SIGNAL
11	O	ROOF STATUS SIGNAL (INDICATOR)
12	SB	ROOF STATUS SIGNAL (AUDIO)
14	L	ROOF OPEN / CLOSE SWITCH (CLOSE)
15	LG	ROOF OPEN / CLOSE SWITCH (OPEN)
16	V	TRUNK ROOM LAMP SWITCH
17	BG	CAN-H
18	P	CAN-L
19	LG	LOCAL COMMUNICATION (POWER WINDOW)
20	V	LOCAL COMMUNICATION (BCM)
21	BR	SENSOR POWER SUPPLY (ROOF STRIKERSENSOR RH)
29	DG	GROUND
35	P	ROOF OPEN / CLOSE SWITCH (GND)

Connector No.	B401
Connector Name	WIRE TO WIRE
Connector Type	GT13SCN-1/1PP-HU

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

Connector No.	B402
Connector Name	SATELLITE RADIO TUNER
Connector Type	FAKRA CONNECTOR

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

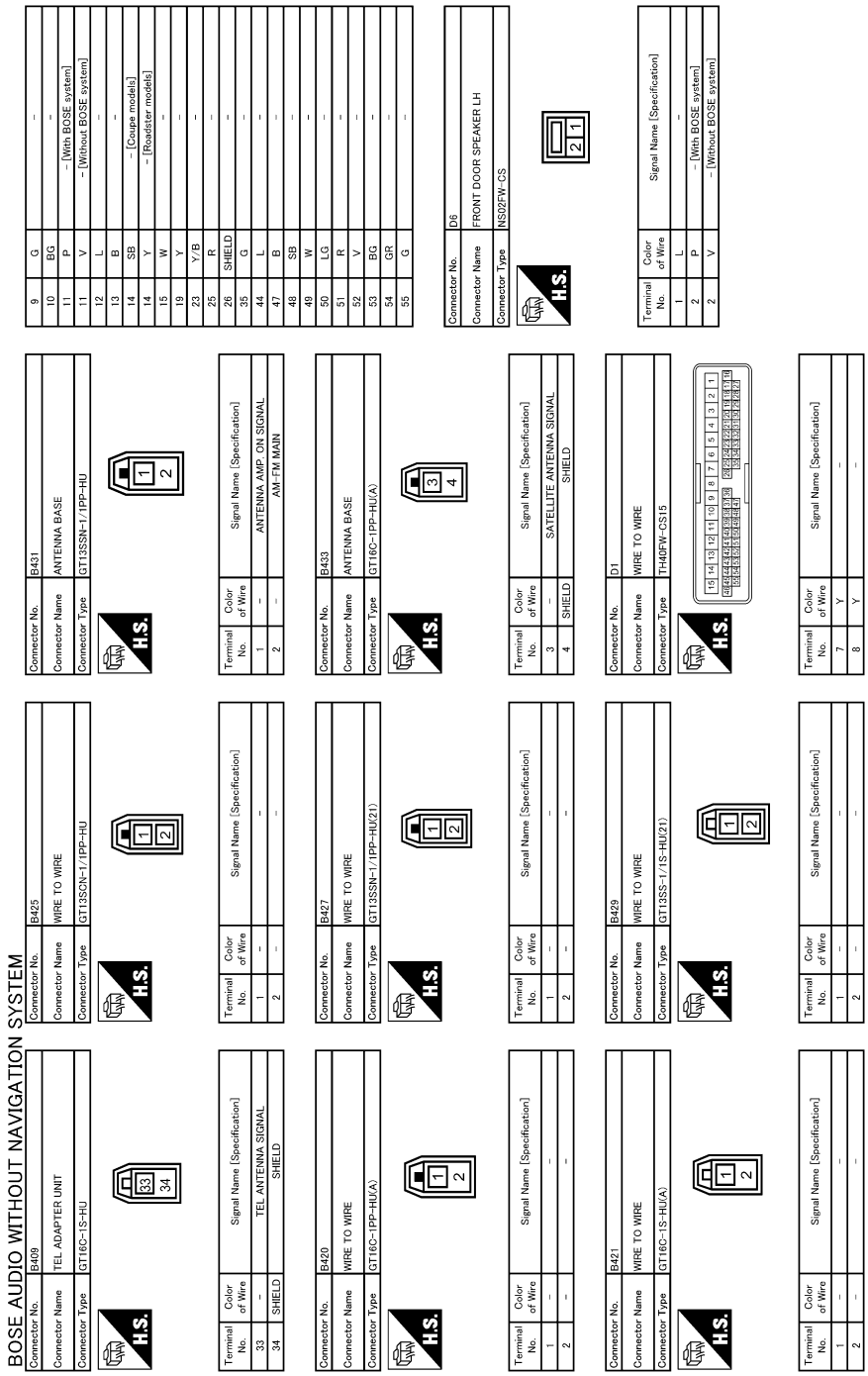
Connector No.	B405
Connector Name	WIRE TO WIRE
Connector Type	GT13SSN-1/1PP-HU(21)

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

Connector No.	B407
Connector Name	SATELLITE RADIO ANTENNA
Connector Type	GT16C-1PP-HU(A)

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

JRNWC4497GB



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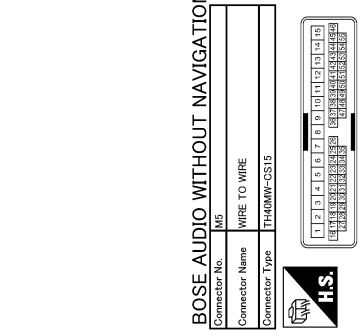
BOSE AUDIO WITHOUT NAVIGATION SYSTEM

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



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–
3	L	–
4	L	–
7	B	–
8	P	–
9	B	–
11	GR	–
12	R	–
13	L	–
14	G	–
15	P	–
16	W	–
17	BR	–
20	GR	–
21	R	–
31	BR	–
32	V	–
36	SB	–
37	Y	–
38	LG	–
39	SB	–
40	W	–
41	LG	–
42	R	–
43	G	–
44	G	– [With A/T]
44	R	– [With M/T]
45	O	–
46	G	–
47	BR	–
58	SHIELD	–
59	L	–
70	R	–
80	LG	–
81	GR	–
82	V	–
83	V	–
84	L	–
85	BR	–
86	Y	–
87	G	–
89	P	–
91	W	–
92	P	–
93	P	–
94	Y	–
96	P	–
97	GR	–
98	O	–
99	W	–

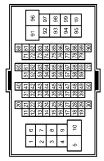
Terminal No.	Color of Wire	Signal Name [Specification]
7	Y	–
8	Y	–
9	G	–
10	V	–
11	V	–
12	L	–
13	B	–
14	Y	–
15	W	–
19	Y	–
23	Y/B	–
25	Y	–
26	SHIELD	–
35	BR	–
44	L	–
47	B	–
48	SB	–
49	Y	–
50	W	–
51	R	–
52	L	–
53	W	–
54	G	–
55	R	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
85	BR	–
86	Y	–
87	G	–
89	P	–
91	W	–
92	P	–
93	P	–
94	Y	–
96	P	–
97	GR	–
98	O	–
99	W	–

100	R	–

Connector No.	M7
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	O	–
6	V	–
7	LG	–
8	SB	–
9	GR	–
11	Y	–
12	V	–
13	BR	–
14	V	–
15	B	–
16	V	–
17	R	–
18	L	–
20	SB	–
21	G	–
22	GR	–
23	V	–
24	R	–
25	L	–
26	P	–
27	B	–
28	SHIELD	–
31	W	–
32	B	–
33	W	–
34	R	–
35	B	–
36	L	–
40	L	–
41	R	–
42	GR	–
43	R	–

44	R	–
45	O	–
46	SHIELD	– [Coupe models]
46	G	– [Roadster models]
47	R	–
48	SHIELD	–
51	V	–
52	R	–
57	SHIELD	–
58	B	–
60	L	–
61	R	–
62	SHIELD	–
63	R	–
64	G	–
65	SHIELD	–
66	LG	–
67	V	–
68	SHIELD	–
69	L	–
70	P	–
71	V	–
72	P	–
73	BR	–
74	GR	–
75	O	–
80	Y	–
81	W	–
82	BR	–
83	GR	–
84	L	–
85	LG	–
86	V	–
87	BR	–
88	SB	–
93	Y	–
94	SB	– [Coupe models]
94	L	– [Roadster models]
95	GR	– [Coupe models]
95	W	– [Roadster models]
96	L	–
97	LG	– [Coupe models]
97	Y	– [Roadster models]
98	BG	– [Coupe models]
98	Y/B	– [Roadster models]
99	W	–
100	B	–

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BOSE AUDIO WITHOUT NAVIGATION SYSTEM

Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH

H.S.

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

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

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

H.S.

24	25	26	
31	32	33	34

Terminal No.	Color of Wire	Signal Name [Specification]
24	P	–
25	SB	–
26	W	–
31	L	–
32	Y	–
33	B	–
34	LG	–

Connector No.	M41
Connector Name	TWEETER LH
Connector Type	TK02FBR

H.S.

2	1

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

Connector No.	M42
Connector Name	TWEETER RH
Connector Type	TK02FBR

H.S.

2	1

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

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH24FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BATTERY POWER SUPPLY
2	O	IGNITION SIGNAL
3	L	VEHICLE SPEED SIGNAL (2-PULSE)
4	Y	VEHICLE SPEED SIGNAL (8-PULSE) [Except for Mexico]
4	V	VEHICLE SPEED SIGNAL (8-PULSE) [For Mexico]
5	B	ILLUMINATION CONTROL SIGNAL
6	R	ROOF STATUS SIGNAL
8	Y	POP UP
9	BR	COMMUNICATION SIGNAL (METER-->TRIPLE METER)
10	L	COMMUNICATION SIGNAL (TRIPLE METER-->METER)
11	Y	AT SNOW
12	G	S-MODE SWITCH SIGNAL
15	L	ACC POWER SUPPLY
16	R	AIR BAG SIGNAL
17	B	GROUND
18	V	AMBIENT SENSOR SIGNAL
19	G	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
20	GR	AMBIENT SENSOR GROUND
21	L	CAN-H
22	P	CAN-L
23	B	GROUND
24	Y	FUEL LEVEL SENSOR GROUND

Connector No.	M81
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	18	20

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

Connector No.	M25
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]
2	Y	–
3	LG	–
4	LG	–
5	V	–
6	V	–
7	L	–
11	LG	–
12	Y	–
13	W	–
14	L	–

JRNWC4501GB

BOSE AUDIO WITHOUT NAVIGATION SYSTEM

Connector No.	M82
Connector Name	AUDIO UNIT
Connector Type	TH12FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
21	R	AV COMM (H)
22	G	AV COMM (L)
25	SHIELD	SHIELD
26	LG	TEL VOICE SIGNAL (+)
27	V	TEL VOICE SIGNAL (–)
28	O	TELEPHONE ON SIGNAL

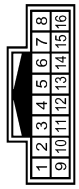
Connector No.	M83
Connector Name	AUDIO UNIT
Connector Type	A12FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
31	W	SATELLITE RADIO SOUND SIGNAL LH (–)
32	B	SATELLITE RADIO SOUND SIGNAL LH (+)
33	R	SATELLITE RADIO SOUND SIGNAL RH (–)
34	G	SATELLITE RADIO SOUND SIGNAL RH (+)
35	SHIELD	SHIELD
36	SHIELD	SHIELD
38	P	REQUEST (SAT->AUDIO) [Coupe models]
38	Y	REQUEST (SAT->AUDIO) [Roadster models]
39	G	COMM (SAT->AUDIO)
40	L	COMM (AUDIO->SAT)

Connector No.	M106
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	R	–
6	B	–
7	P	–
8	R	–
11	B	–
12	G	–
13	Y	–
14	SHIELD	–
15	R	–
16	G	–

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

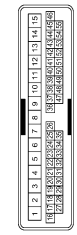
Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	– [Coupe models]
2	LG	– [Roadster models]
3	O	– [Coupe models]
3	B	– [Roadster models]
4	W	–
7	LG	– [Coupe models]
7	Y	– [Roadster models]
8	LG	–
9	Y	–
11	R	–
20	G	–

21	R	–
30	B	–
40	O	–
41	Y	–
42	G	–
43	L	–
44	SB	–
51	R	–
52	G	–
53	SHIELD	–
54	LG	–
55	V	–
56	SHIELD	–
57	G	– [Coupe models]
57	P	– [Roadster models]
58	R	– [Coupe models]
58	L	– [Roadster models]
59	B	–
60	W	–
61	GR	–
62	B	–
63	Y	–
64	L	–
65	G	–
66	O	–
67	V	–
68	P	–
69	L	–
70	L	–
72	B	–
73	B	–
74	B	–
75	B	–
76	B	–
80	L	–
81	Y	–
82	W	–
83	B	–
84	R	–
85	G	–
86	SHIELD	–
87	G	–
88	L	–
89	P	– [Coupe models]
89	Y	– [Roadster models]
90	SHIELD	–
92	G	– [Coupe models]
92	LG	– [Roadster models]
93	R	– [Coupe models]
93	V	– [Roadster models]
94	SHIELD	– [Coupe models]
94	G	– [Roadster models]

95	SB	– [Coupe models]
95	LG	– [Roadster models]
97	LG	– [Coupe models]
97	Y	– [Roadster models]
98	V	– [Coupe models]
98	Y/B	– [Roadster models]
99	G	–
100	BR	– [Coupe models]
100	Y	– [Roadster models]

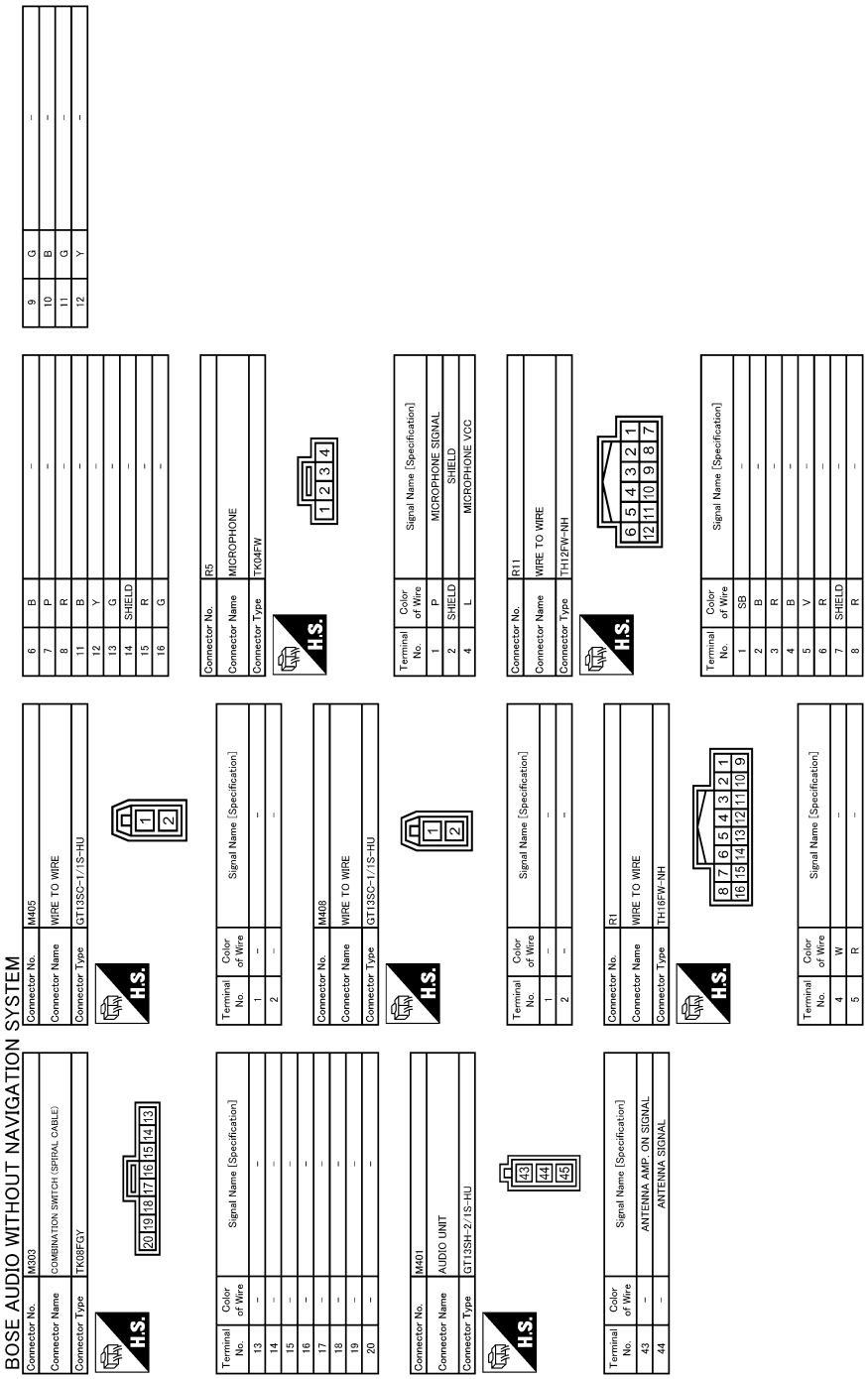
Connector No.	M124
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
10	G	–
11	V	–
12	LG	–
13	V	–
14	B	–
15	W	–
19	Y	–
23	Y/B	–
25	W	–
26	SHIELD	–
35	B	–
44	O	–
50	Y	–
51	Y	–
52	GR	–
53	W	–
54	G	–
55	R	–

JRNWC4502GB



JRNWC4503GB

SYMPTOM DIAGNOSIS

AUDIO SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000009359268

AUDIO SYSTEM

Coupe Models

Symptoms	Check items	Possible malfunction location / Action to take
Audio unit does not start.	—	Audio unit power supply and ground circuit. Refer to AV-58, "AUDIO UNIT : Diagnosis Procedure".
No sound comes out.	No sound from all speakers.	• BOSE amp. power supply and ground circuit. Refer to AV-58, "BOSE AMP. : Diagnosis Procedure". • BOSE amp. ON signal circuit. Refer to AV-77, "Diagnosis Procedure".
	Sound is not heard from woofer.	Sound signal (woofer) circuit malfunction.
	Only a certain speaker (front right, front left, rear right, or rear left) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and BOSE amp. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Malfunction in audio unit. • Malfunction in BOSE amp.
Noise is mixed with audio.	Noise comes out from all speaker.	• Malfunction in audio unit. • Malfunction in BOSE amp.
	Noise comes out only from a certain speaker (front right, front left, rear right, or rear left).	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Poor installation of speaker (e.g. backlash and looseness) • Malfunction in audio unit. • Malfunction in BOSE amp.
	Noise is mixed with radio only (when the car hits a bump or while driving over bad roads).	Poor connector connection of antenna or antenna feeder.
Radio is not received or poor reception.	• Other audio sounds are normal. • Any radio cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	• Antenna amp. ON signal circuit malfunction. • Poor connector connection of antenna or antenna feeder.
Satellite radio is not received.	It change to satellite radio mode.	• Sound signal circuit malfunction between satellite radio tuner and audio unit. • Poor connector connection of satellite radio tuner. • Loose satellite radio antenna mounting nut. Refer to AV-130, "Exploded View".
	It does not change to satellite radio mode.	• Satellite radio tuner power supply and ground circuit. Refer to AV-59, "SATELLITE RADIO TUNER : Diagnosis Procedure". • Request signal or communication signal circuit malfunction. Refer to AV-90, "Reference Value".

Roadster Models

Symptoms	Check items	Possible malfunction location / Action to take
Audio unit does not start.	—	Audio unit power supply and ground circuit. Refer to AV-58, "AUDIO UNIT : Diagnosis Procedure".
No sound comes out.	No sound from all speakers.	• BOSE amp. power supply and ground circuit. Refer to AV-58, "BOSE AMP. : Diagnosis Procedure". • BOSE amp. ON signal circuit. Refer to AV-77, "Diagnosis Procedure".
	Sound is not heard from rear woofer.	Sound signal (woofer) circuit malfunction.
	Only a certain speaker (front right, front left, rear right, or rear left) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and BOSE amp. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Malfunction in audio unit. • Malfunction in BOSE amp.
Noise is mixed with audio.	Noise comes out from all speaker.	• Malfunction in audio unit. • Malfunction in BOSE amp.
	Noise comes out only from a certain speaker (front right, front left, rear right, or rear left).	• Poor connector connection of speaker. • Sound signal circuit malfunction between audio unit and speaker. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Poor installation of speaker (e.g. backlash and looseness) • Malfunction in audio unit. • Malfunction in BOSE amp.
	Noise is mixed with radio only (when the car hits a bump or while driving over bad roads).	• Poor connector connection of antenna or antenna feeder. • Loose antenna base mounting nut. Refer to AV-128, "Exploded View".
Radio is not received or poor reception.	• Other audio sounds are normal. • Any radio cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	• Antenna amp. ON signal circuit malfunction. • Poor connector connection of antenna or antenna feeder. • Loose antenna base mounting nut. Refer to AV-128, "Exploded View".
Satellite radio is not received.	It change to satellite radio mode.	• Sound signal circuit malfunction between satellite radio tuner and audio unit. • Poor connector connection of satellite radio tuner. • Loose antenna base mounting nut. Refer to AV-128, "Exploded View".
	It does not change to satellite radio mode.	• Satellite radio tuner power supply and ground circuit. Refer to AV-59, "SATELLITE RADIO TUNER : Diagnosis Procedure". • Request signal or communication signal circuit malfunction. Refer to AV-90, "Reference Value".

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-65, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch

Symptoms	Possible malfunction location / Action to take
“ ”, “MENU UP”, “MENU DOWN” and “SOURCE” switches are not operated.	Steering switch signal A circuit (steering switch to TEL adapter unit). Refer to AV-61, "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-63, "Diagnosis Procedure".

HANDS-FREE PHONE SYMPTOMS

Symptom Table

INFOID:0000000009359269

RELATED TO HANDS-FREE PHONE (EXCEPT FOR MEXICO)

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

Check Compatibility

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

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

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

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

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

Symptoms	Check items	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-59, "TEL ADAPTER UNIT : Diagnosis Procedure".
	• Both the reception and the speech cannot be performed. • Audio can be operated by steering switch.	Telephone ON signal circuit. Refer to AV-80, "Diagnosis Procedure".
The other party's voice cannot be heard by hands-free phone.	Audio system sound is normal.	Sound signal (telephone voice, telephone guidance) circuit
	Audio system sound does not sound.	Refer to AV-109, "Symptom Table".
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	TEL adapter unit
	Sound operation function does not work.	Microphone signal circuit. Refer to AV-78, "Diagnosis Procedure".
When hands-free phone is in use, the information (connection time etc.) is not displayed on the audio screen.	—	AV communication signal (H, L)

RELATED TO HANDS-FREE PHONE (FOR MEXICO)

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-59, "TEL ADAPTER UNIT : Diagnosis Procedure".
	• Both the reception and the speech cannot be performed. • Audio can be operated by steering switch.	Telephone ON signal circuit. Refer to AV-80, "Diagnosis Procedure".
The other party's voice cannot be heard by hands-free phone.	Audio system sound is normal.	Sound signal (telephone voice, telephone guidance) circuit
	Audio system sound does not sound.	Refer to AV-109, "Symptom Table".
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	TEL adapter unit
	Sound operation function does not work.	Microphone signal circuit. Refer to AV-78, "Diagnosis Procedure".
When hands-free phone is in use, the information (connection time etc.) is not displayed on the audio screen.	—	AV communication signal (H, L)

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-65, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch
"", "MENU UP", "MENU DOWN" and "SOURCE" switches are not operated.	• Steering switch signal A circuit (steering switch to TEL adapter unit). Refer to AV-61, "Diagnosis Procedure". • Steering switch signal A circuit (TEL adapter unit to audio unit). Refer to AV-67, "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-63, "Diagnosis Procedure". • Steering switch signal B circuit (TEL adapter unit to audio unit). Refer to AV-69, "Diagnosis Procedure".

NORMAL OPERATING CONDITION

Description

INFOID:0000000009359270

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 CD was inserted correctly.
	Check that the CD is scratched or dirty.
	Check that there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	The player will play correctly after it returns to the normal temperature if there is a temperature increase error.
	Only the music CD files (CD-DA data) will be played if there is a mixture of music CD files (CD-DA data) and MP3/WMA files on a CD.
	Files with extensions other than “.MP3”, “.WMA”, “.mp3”, or “.wma” cannot be played.
	Check that the finalization process, such as session close and disc close, is done for the disc.
	Check that the CD is protected by copyright.
Poor sound quality	Check that 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 multi session disc, some time may be required before the music starts playing.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.
Poor reception only from a certain radio broadcast station.	Check incoming radio wave signal strength of applicable broadcast station.
Buzz/rattle sound from speaker	The majority of rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the rattle.

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

NOTE:

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

RELATED TO TELEPHONE

Symptom	Possible cause	Possible solution
The voice on the other side is difficult to be heard. The voice is difficult to reach the other side of the connection.	The interior of the vehicle is too noisy.	Close the windows or have other occupants be quiet.
	The volume of the voice is too low.	Speak louder.
	Pronunciation is unclear.	Speak clearly.

RELATED TO HANDS-FREE PHONE (EXCEPT FOR MEXICO)

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

RELATED TO HANDS-FREE PHONE (FOR MEXICO)

Symptom	Cause and Counter measure
Cannot use hands-free phone	Customer will not be able to use a hands-free phone under the following conditions. • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. **NOTE:** While a cellular phone is connected through the Bluetooth® wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth® Hands-Free Phone System cannot charge cellular phones.
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality	Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.

PRECAUTION

PRECAUTIONS

EXCEPT FOR MEXICO

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

INFOID:0000000009359271

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

EXCEPT FOR MEXICO : Precaution for Battery Service

INFOID:0000000009359272

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

EXCEPT FOR MEXICO : Precaution for Trouble Diagnosis

INFOID:0000000009359273

AV COMMUNICATION SYSTEM

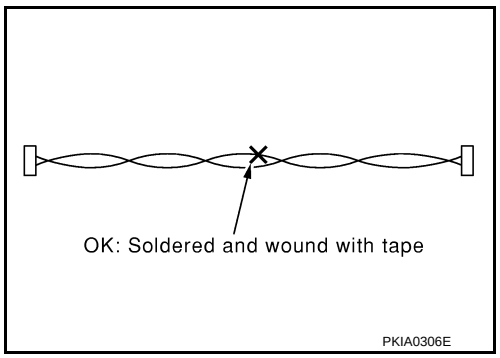
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

EXCEPT FOR MEXICO : Precaution for Harness Repair

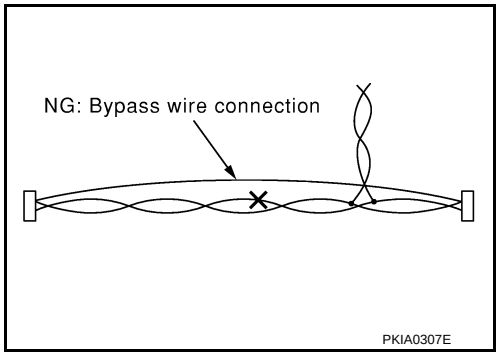
INFOID:0000000009359274

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.)



FOR MEXICO

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

INFOID:0000000009359275

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:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

FOR MEXICO : Precaution for Battery Service

INFOID:0000000009359276

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

FOR MEXICO : Precaution for Trouble Diagnosis

INFOID:0000000009359277

AV COMMUNICATION SYSTEM

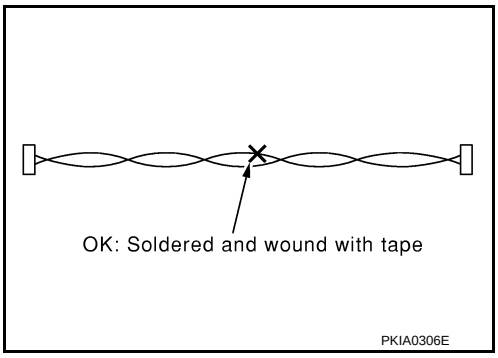
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

FOR MEXICO : Precaution for Harness Repair

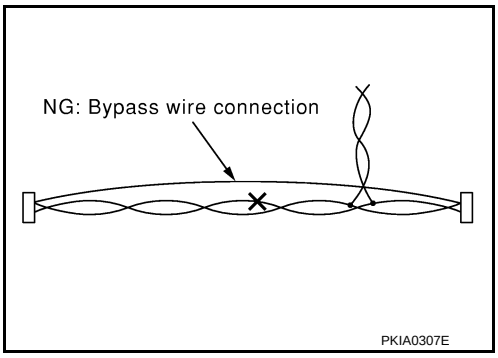
INFOID:0000000009359278

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.)

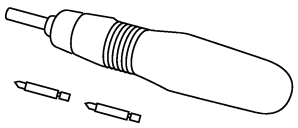


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000009359279

Tool name	Description
Power tool  PBIC0191E	Loosening screws

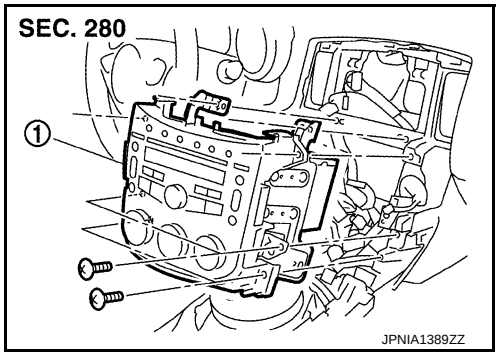
REMOVAL AND INSTALLATION

AUDIO UNIT

Exploded View

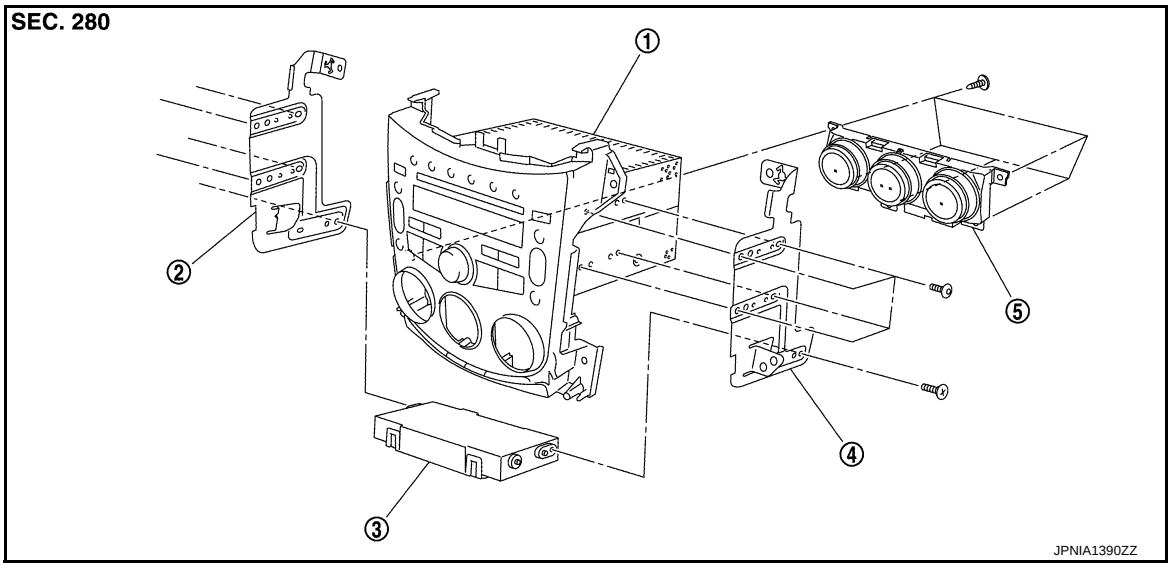
INFOID:0000000009359280

REMOVAL



1. Audio unit

DISASSEMBLY



1. Audio unit
2. Bracket LH
3. A/C auto amp.
4. Bracket RH
5. A/C control

Removal and Installation

INFOID:0000000009359281

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove audio unit with A/C auto amp. and A/C control as a single unit from the body.
3. Remove screws to remove A/C control.
4. Remove bracket screws to remove audio unit.

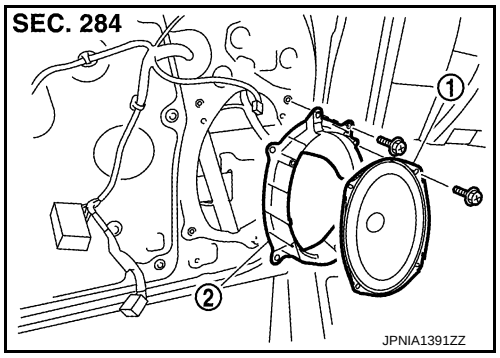
INSTALLATION

Install in the reverse order of removal.

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000009359282



1. Front door speaker
2. Speaker bracket

Removal and Installation

INFOID:0000000009359283

REMOVAL

1. Remove door finisher. Refer to INT-15, "Exploded View" (coupe models) or INT-47, "Exploded View" (roadster models).
2. Remove front door speaker screws, then disconnect front door speaker connector and remove front door speaker.

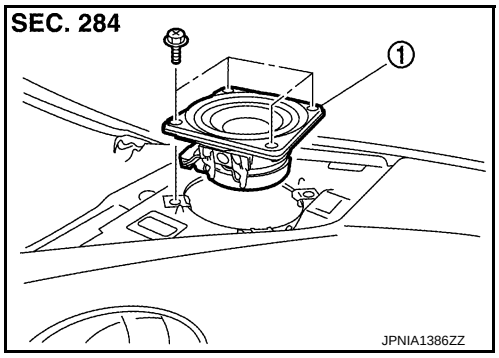
INSTALLATION

Install in the reverse order of removal.

TWEETER

Exploded View

INFOID:0000000009359284



1. Tweeter

Removal and Installation

INFOID:0000000009359285

REMOVAL

1. Remove speaker grille. Refer to IP-13, "Exploded View".
2. Remove tweeter screws, then lift up tweeter, disconnect connector and remove tweeter.

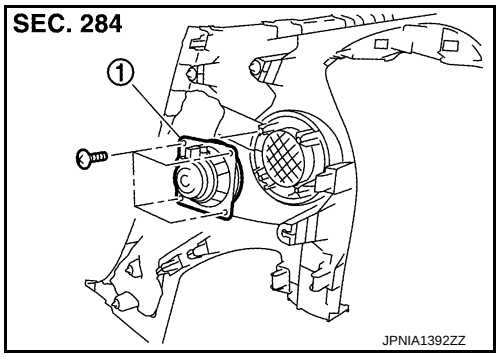
INSTALLATION

Install in the reverse order of removal.

REAR SPEAKER

Exploded View

INFOID:0000000009359286



1. Rear speaker

Removal and Installation

INFOID:0000000009359287

REMOVAL

1. Remove rear side finisher. Refer to INT-18, "Exploded View" (coupe models) or INT-51, "Exploded View" (roadster models).
2. Remove rear speaker screws, then remove rear speaker.

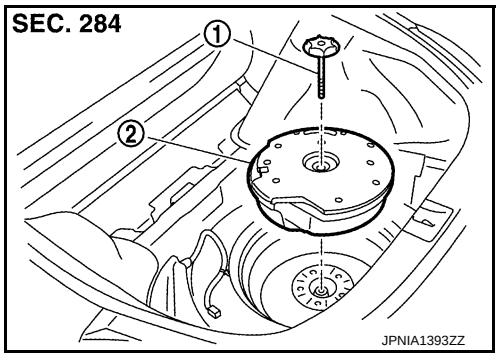
INSTALLATION

Install in the reverse order of removal.

WOOFER

Exploded View

INFOID:0000000009359288



1. Clamp
2. Woofer

Removal and Installation

INFOID:0000000009359289

REMOVAL

1. Remove luggage spacer. Refer to INT-31, "Exploded View".
2. Remove clamp, then disconnect woofer connector and remove the woofer.

INSTALLATION

Install in the reverse order of removal.

REAR WOOFER

Removal and Installation

INFOID:0000000009359290

REMOVAL

1. Remove the mounting clip on the front side of the storage room finisher and the soft top bumper rubber. Refer to RF-233, "STORAGE ROOM FINISHER : Removal and Installation".
2. Turn up the storage room finisher to obtain work space.
3. Remove rear woofer bracket.
4. Remove the screw and disconnect the connecter to remove the rear woofer.

INSTALLATION

Install in the reverse order of removal.

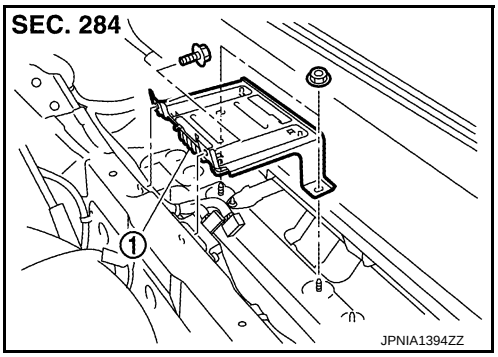
BOSE AMP.

COUPE

COUPE : Exploded View

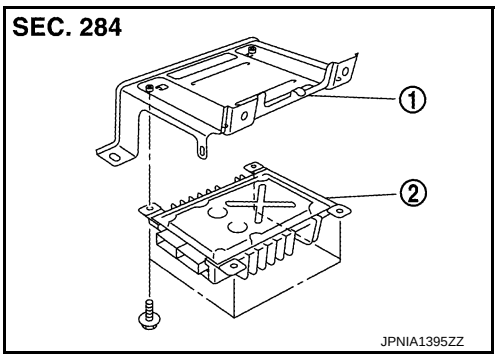
INFOID:0000000009359291

REMOVAL



1. BOSE amp.

DISASSEMBLY



1. Bracket
2. BOSE amp.

COUPE : Removal and Installation

INFOID:0000000009359292

REMOVAL

1. Remove luggage floor spacer front. Refer to INT-31, "Exploded View".
2. Disconnect BOSE amp. connector, remove BOSE amp. with bracket as a single unit from body.
3. Remove BOSE amp. bracket screws to remove BOSE amp.

INSTALLATION

Install in the reverse order of removal.

ROADSTER

ROADSTER : Removal and Installation

INFOID:0000000009359293

REMOVAL

1. Remove luggage floor spacer front. Refer to INT-31, "Exploded View".
2. Disconnect BOSE amp. connector, remove BOSE amp. with bracket as a single unit from body.
3. Remove BOSE amp. bracket screws to remove BOSE amp.

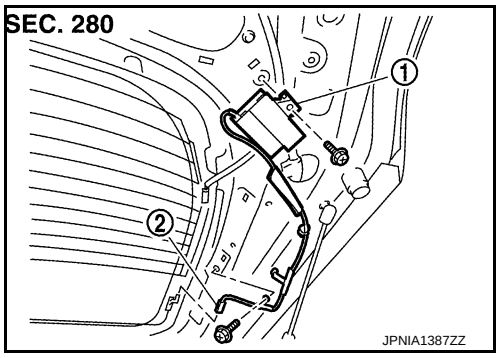
INSTALLATION

Install in the reverse order of removal.

ANTENNA AMP.

Exploded View

INFOID:0000000009359294



1. Antenna amp.
2. Connector

Removal and Installation

INFOID:0000000009359295

REMOVAL

1. Remove back door finisher side. Refer to INT-33, "Exploded View".
2. Disconnect connector and remove screw, then remove antenna amp.

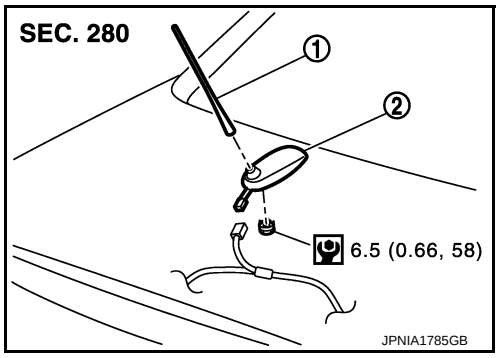
INSTALLATION

Install in the reverse order of removal.

ANTENNA BASE

Exploded View

INFOID:0000000009359296



1. Antenna rod
2. Antenna base

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

Removal and Installation

INFOID:0000000009359297

REMOVAL

1. Remove trunk lid finisher inner. Refer to INT-79, "Exploded View".
2. Remove antenna base mounting nut, disconnect the antenna base connector.
3. Remove antenna base.

INSTALLATION

Installation is the reverse order of removal.

CAUTION:

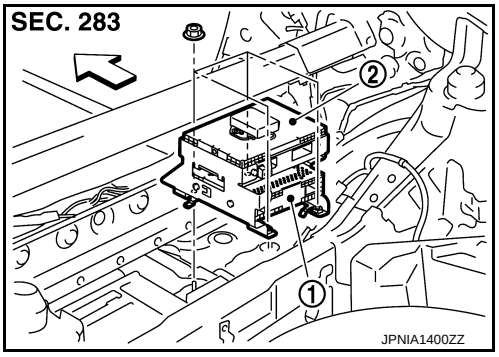
Be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, trunk lid panel may be deformed, when antenna base mounting nut tightening torque is loose.

SATELLITE RADIO TUNER

Exploded View

INFOID:0000000009359298

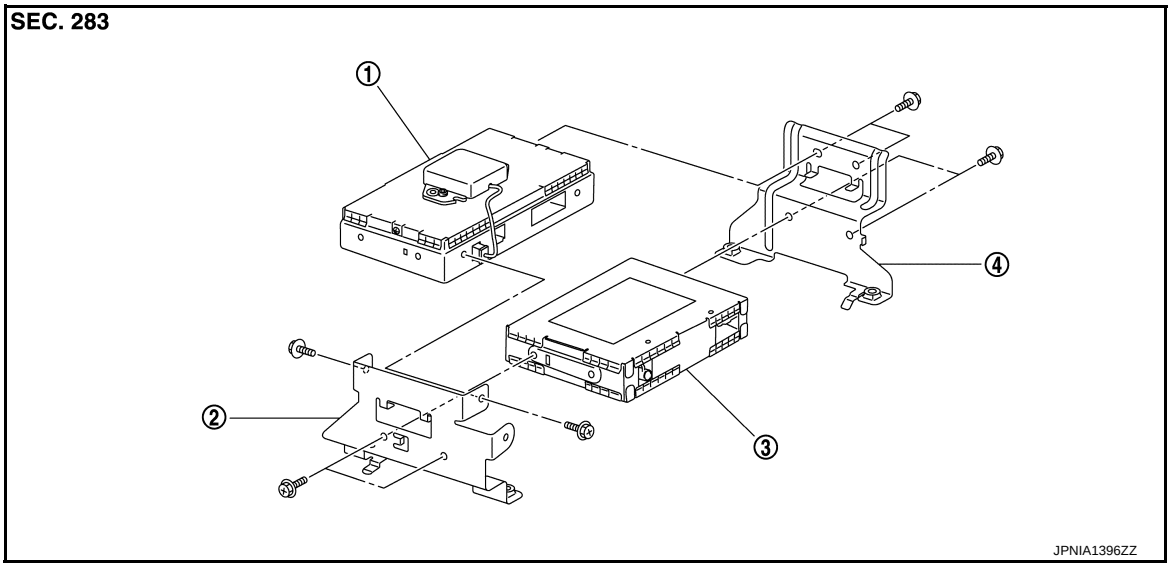
REMOVAL



1. Satellite radio tuner
2. TEL adapter unit

⇦ : Vehicle front

DISASSEMBLY



1. TEL adapter unit
2. Bracket LH
3. Satellite radio tuner
4. Bracket RH

Removal and Installation

INFOID:0000000009359299

REMOVAL

1. Remove Luggage spacer center front. Refer to INT-31, "Exploded View".
2. Disconnect TEL adapter unit connector and satellite radio tuner connector.
3. Remove satellite radio tuner with TEL adapter unit as a single unit from the body.
4. Remove bracket screws, and then remove satellite radio tuner.

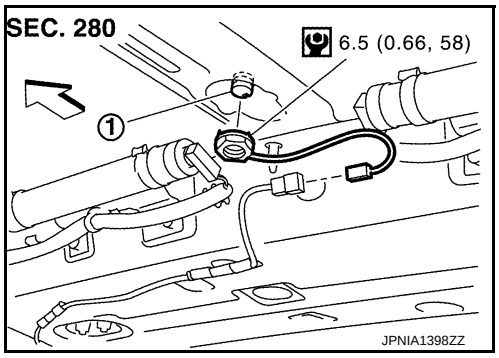
INSTALLATION

Install in the reverse order of removal.

SATELLITE RADIO ANTENNA

Exploded View

INFOID:0000000009359300



1. Satellite radio antenna

⇦ : Vehicle front

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

Removal and Installation

INFOID:0000000009359301

REMOVAL

1. Remove rear pillar finisher (LH/RH). Refer to INT-18, "Exploded View".
2. Pull down headlining (rear side) and obtain space for work between vehicle and headlining. Refer to INT-28, "Exploded View".
3. Disconnect satellite radio antenna connector.
4. Remove satellite radio antenna mounting nut, then remove satellite radio antenna from roof panel.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- **Never bend headlining when pull down headlining (rear side).**
- **When satellite radio antenna mounting nut tightening torque is loose, be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, roof panel may become deformed.**

STEERING SWITCH

Exploded View

INFOID:0000000009359302

Refer to SR-13, "Exploded View" .

Removal and Installation

INFOID:0000000009359303

REMOVAL

Refer to SR-13, "Exploded View".

INSTALLATION

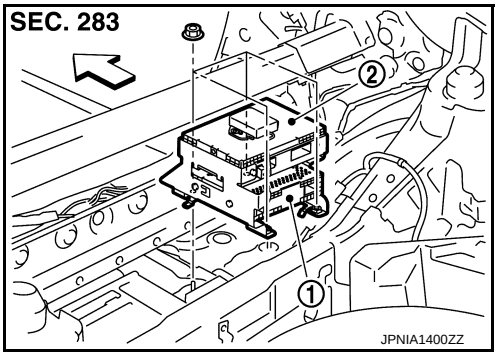
Install in the reverse order of removal.

TEL ADAPTER UNIT

Exploded View

INFOID:0000000009359304

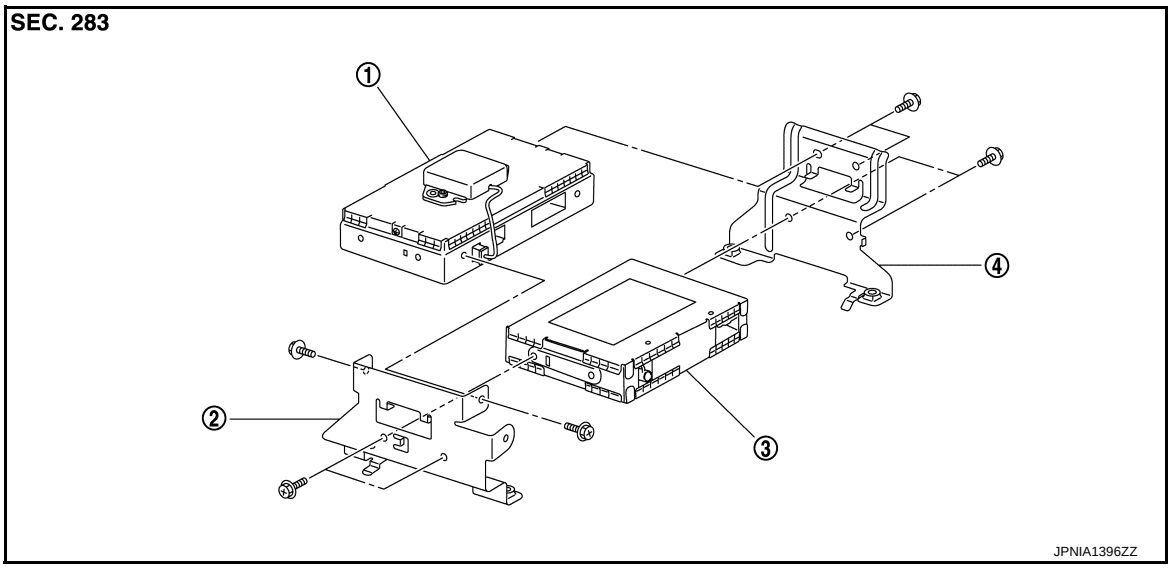
REMOVAL



1. Satellite radio tuner
2. TEL adapter unit

⇦ : Vehicle front

DISASSEMBLY



1. TEL adapter unit
2. Bracket LH
3. Satellite radio tuner
4. Bracket RH

Removal and Installation

INFOID:0000000009359305

REMOVAL

1. Remove luggage spacer center front. Refer to INT-31, "Exploded View".
2. Disconnect TEL adapter unit connector and satellite radio tuner connector.
3. Remove TEL adapter unit with satellite radio tuner as a single unit from the body.
4. Remove bracket screws, and then remove TEL adapter unit.

INSTALLATION

Install in the reverse order of removal.

MICROPHONE

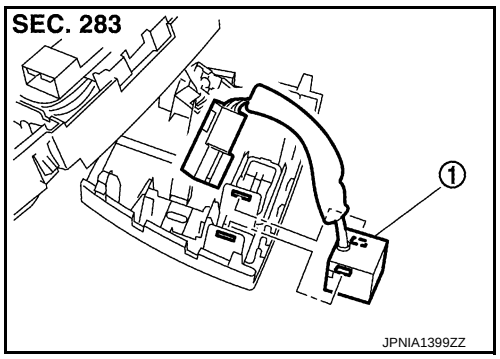
Exploded View

INFOID:0000000009359306

REMOVAL

Refer to INL-55, "Exploded View" (Coupe models) or INL-118, "Exploded View" (Roadster models).

DISASSEMBLY



1. Microphone

Removal and Installation

INFOID:0000000009359307

REMOVAL

1. Remove map lamp. Refer to INL-55, "Exploded View" (coupe models), or INL-118, "Exploded View" (roadster models).
2. Press the pawl to remove microphone from map lamp.

INSTALLATION

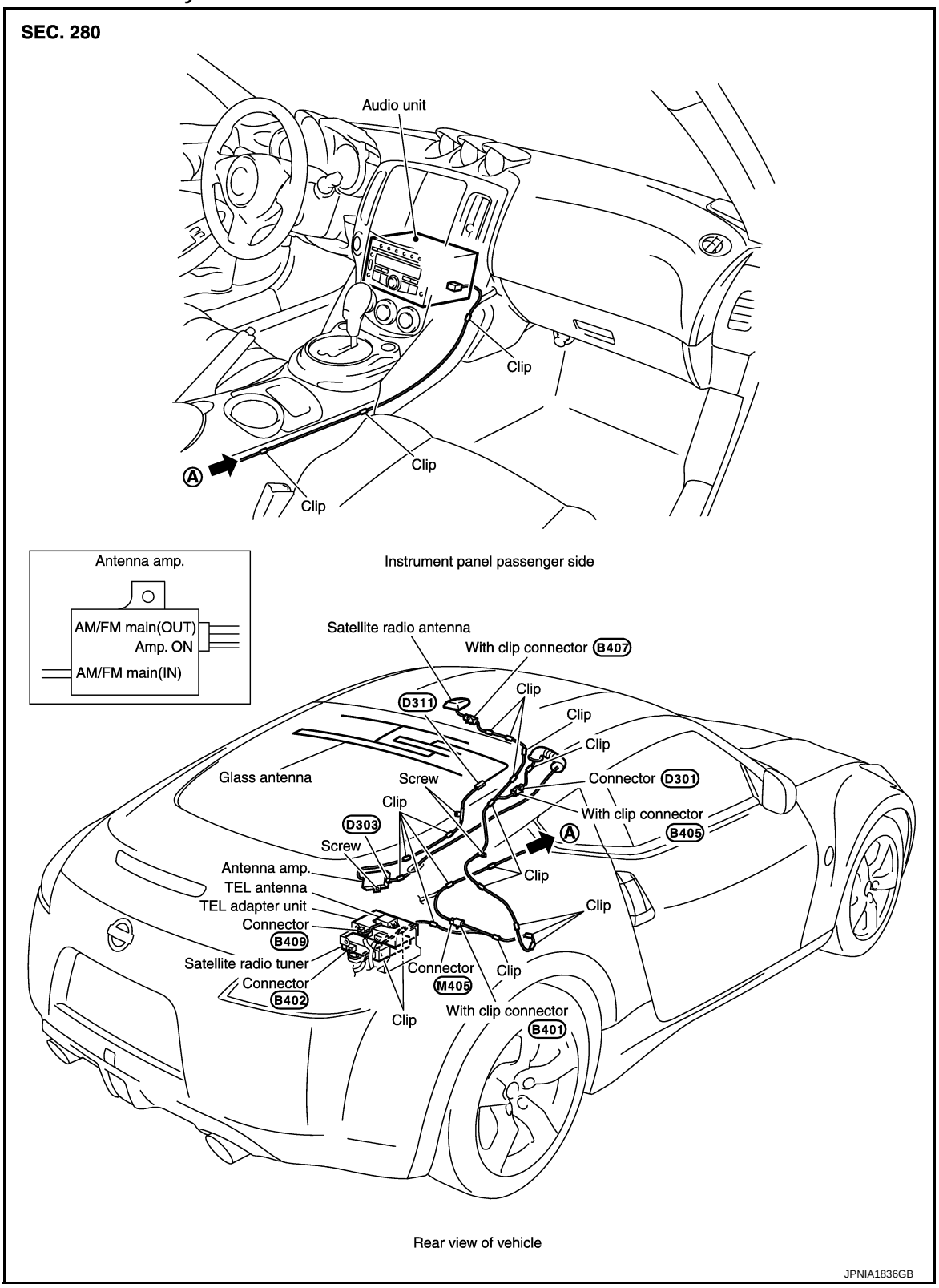
Install in the reverse order of removal.

ANTENNA FEEDER

COUPE

COUPE : Feeder Layout

INFOID:0000000009359308

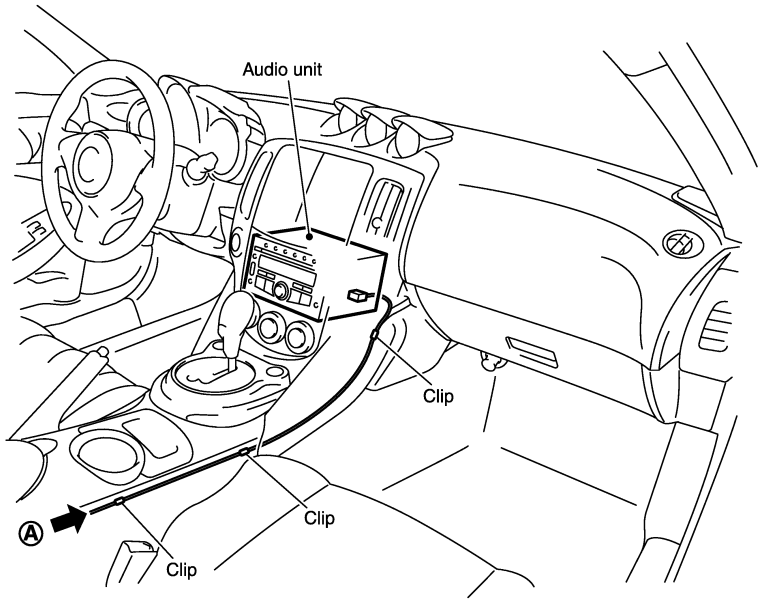


ROADSTER

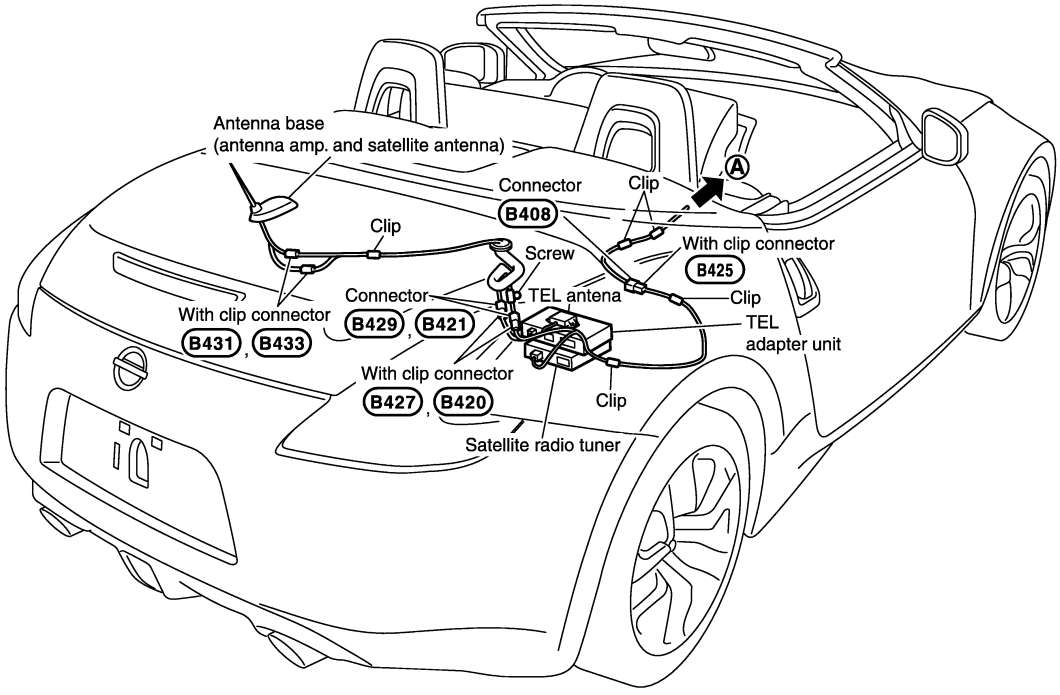
ROADSTER : Feeder Layout

INFOID:0000000009359309

SEC. 280



Instrument panel passenger side



Rear view of vehicle

JPNIA1838GB

PRECAUTION

PRECAUTIONS

EXCEPT FOR MEXICO

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

INFOID:0000000009359310

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

EXCEPT FOR MEXICO : Cautions in Removing Battery Terminal and AV Control Unit (Models with AV Control Unit)

INFOID:0000000009359311

CAUTION:

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

NOTE:

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

EXCEPT FOR MEXICO : Precaution for Battery Service

INFOID:0000000009359312

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

EXCEPT FOR MEXICO : Precaution for Trouble Diagnosis

INFOID:0000000009359313

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.

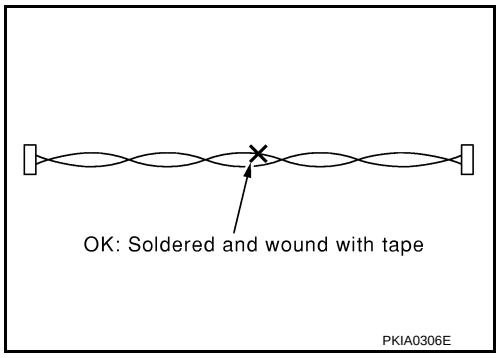
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

EXCEPT FOR MEXICO : Precaution for Harness Repair

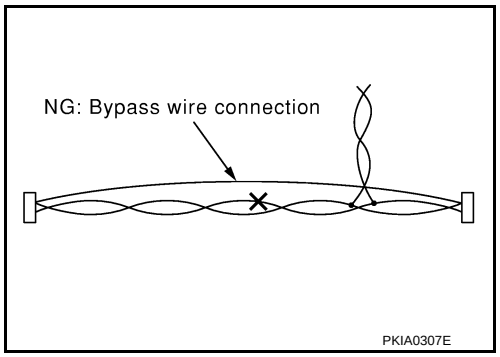
INFOID:0000000009359314

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.)



FOR MEXICO

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

INFOID:0000000009359315

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:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

INFOID:0000000009359316

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

FOR MEXICO : Precaution for Battery Service

INFOID:0000000009359317

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

FOR MEXICO : Precaution for Trouble Diagnosis

INFOID:0000000009359318

AV COMMUNICATION SYSTEM

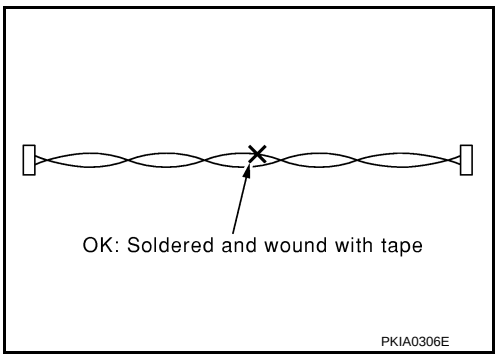
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

FOR MEXICO : Precaution for Harness Repair

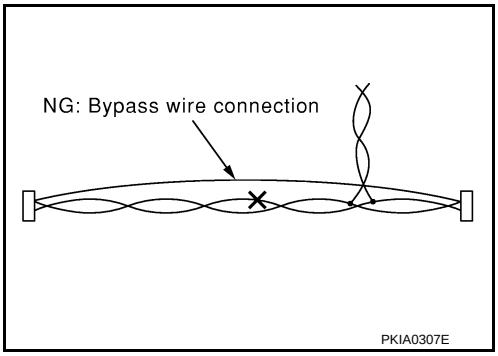
INFOID:0000000009359319

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.)

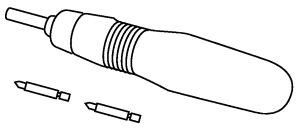


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000009359320

Tool name	Description
Power tool  PBIC0191E	Loosening screws

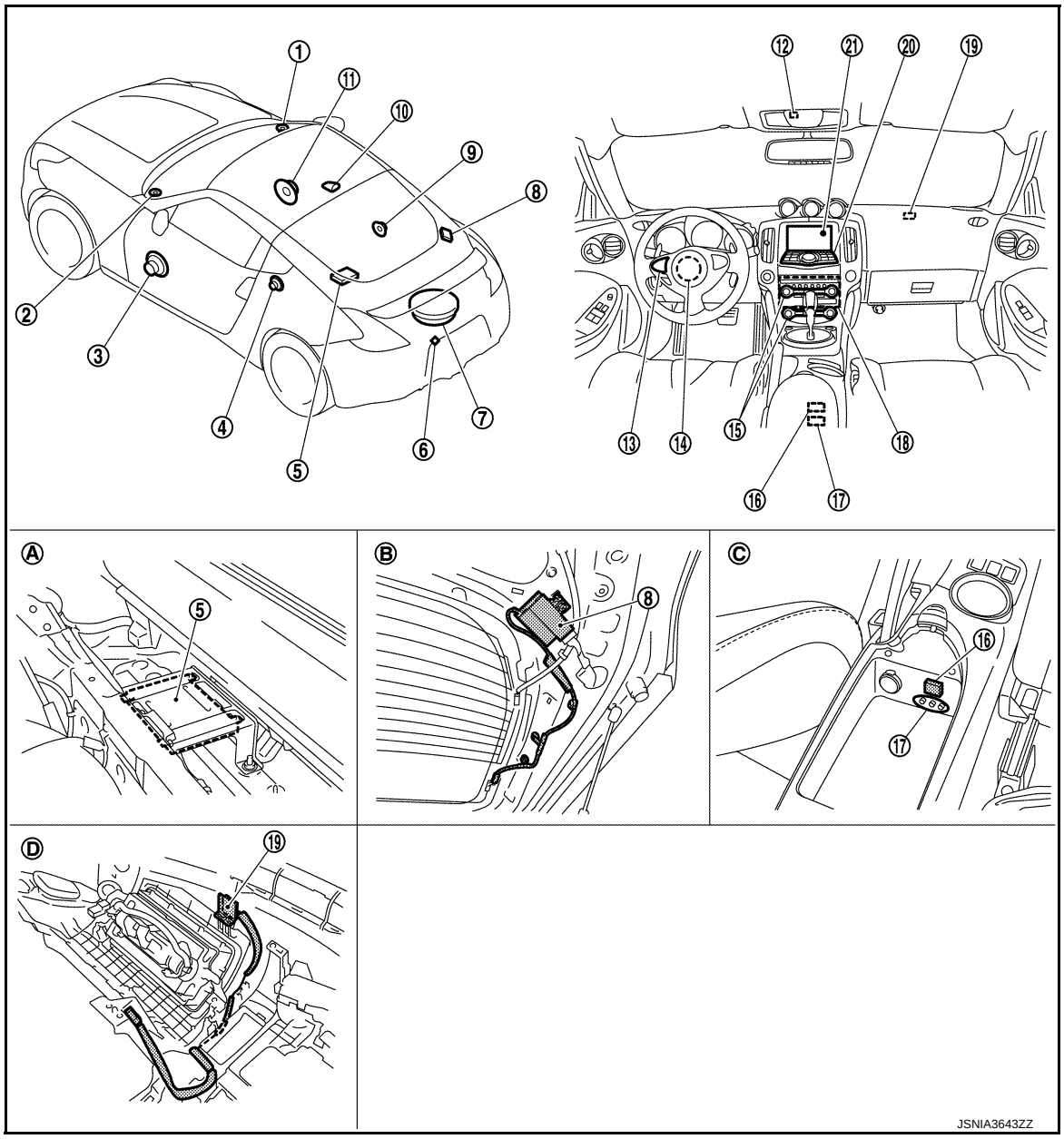
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

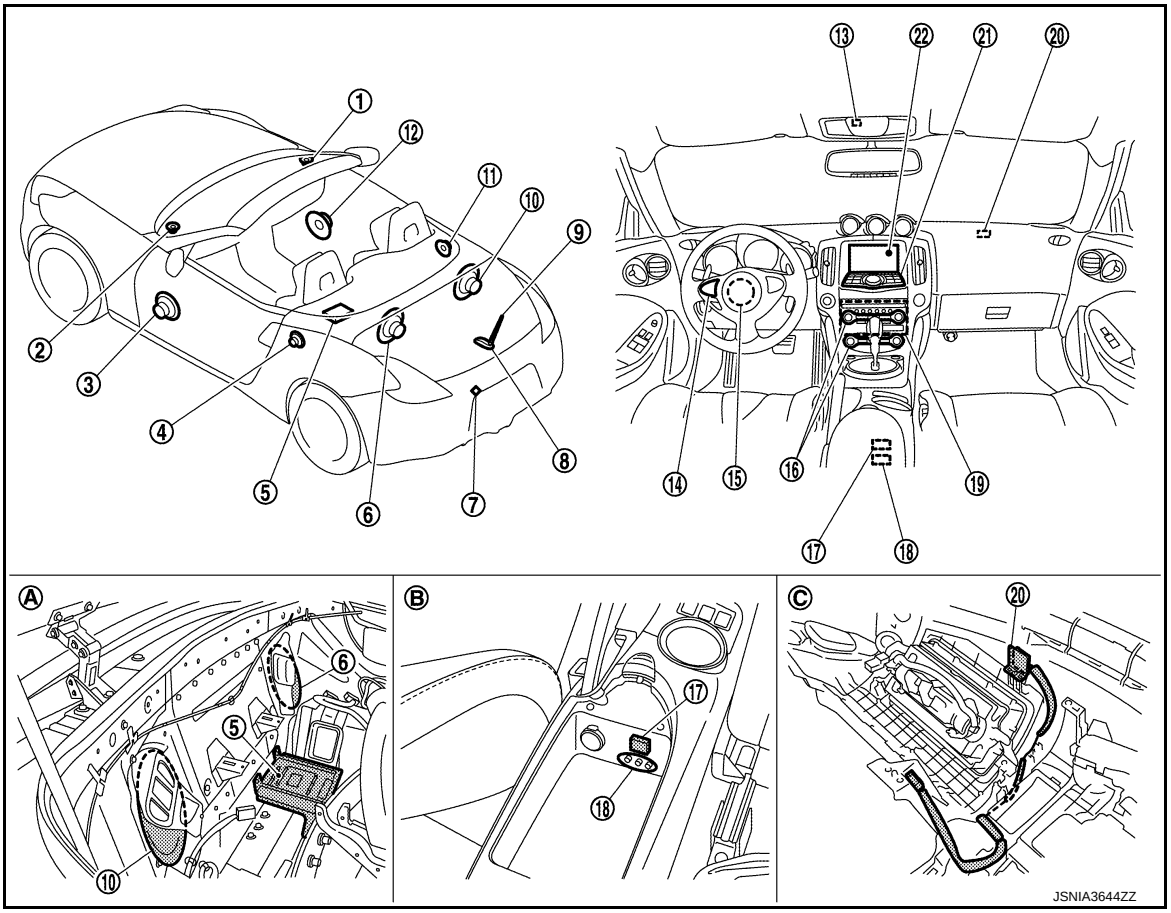
INFOID:0000000009359321

COUPE MODELS



1. Tweeter RH
2. Tweeter LH
3. Front door speaker LH
4. Rear speaker LH
5. BOSE amp.
6. Rear view camera
7. Woofer
8. Antenna amp.
9. Rear speaker RH
10. Satellite radio antenna
11. Front door speaker RH
12. Microphone
13. Steering switch
14. Steering angle sensor
15. Preset switch
16. USB connector
17. Auxiliary input jacks
18. AV control unit
19. GPS antenna
20. Multifunction switch
21. Front display unit

A. Luggage side LH
B. Back door side RH
C. Consol box inner
D. Instrument panel remove condition



1. Tweeter RH
2. Tweeter LH
3. Front door speaker LH
4. Rear speaker LH
5. BOSE amp.
6. Rear woofer LH
7. Rear view camera
8. Antenna base
9. Antenna rod
10. Rear woofer RH
11. Rear speaker RH
12. Front door speaker RH
13. Microphone
14. Steering switch
15. Steering angle sensor
16. Preset switch
17. USB connector
18. Auxiliary input jacks
19. AV control unit
20. GPS antenna
21. Multifunction switch
22. Front display unit

A. Luggage side LH
B. Consol box inner
C. Instrument panel remove condition

Component Description

INFOID:0000000009359322

Part name	Description
AV control unit	• Integrates hard disk drive (HDD) allowing map data and music data to be stored. • It is the master unit of the MULTI AV system, and it is connected to each control unit by AV communication. It operates each system according to AV communication signals from the AV control unit. • The AV control unit includes the audio, hands-free phone, voice control, navigation, USB connection, DVD play function and vehicle information functions. • It is connected to ECM and combination meter via CAN communication to obtain necessary information for the vehicle information function. • It inputs the illumination signals that are required for the display dimming control. • It inputs the signals for driving status recognition (vehicle speed, reverse and parking brake). • Update of map data is performed with the DVD-ROM. • It includes the Bluetooth® module function.
Front display unit	• Front display image is controlled by the serial communication from AV control unit. • RGB digital image signal is input from AV control unit. • Composite image signal is input from AV control unit. • Camera image signal is input from rear view camera. • Touch panel function can be operated for each system by touching a display directly.
BOSE amp.	Coupe models • Inputs power (BOSE amp. ON) and sound signal from AV control unit, and outputs sound signal to woofer and each speaker. Roadster models • Inputs power (BOSE amp. ON) and sound signal from AV control unit, and outputs sound signal to each speaker. • Inputs roof status signal from retractable soft top control unit.
Front door speaker	• Outputs sound signal from BOSE amp. • Outputs mid and low range sound.
Tweeter	• Outputs sound signal from BOSE amp. • Outputs high range sound.
Rear speaker	• Outputs sound signal from BOSE amp. • Outputs high, mid and low range sound.
Woofer (coupe models)	• Outputs sound signal from BOSE amp. • Outputs low range sound.
Rear woofer (roadster models)	• Outputs sound signal from BOSE amp. • Outputs low range sound.
Multifunction switch	• Operation panel is equipped with the centralized switch where audio, auxiliary input and navigation, etc. operations are integrated. • Connected with preset switch via cable, and operation signal is transmitted to AV control unit via AV communication.
Preset switch	• Operation panel is equipped with the centralized switch where audio and air conditioner, etc. operations are integrated. • Connected with multifunction switch via cable, and operation signal is transmitted to AV control unit via AV communication. • The disk ejection operating signal is performed by wiring harness.
Steering switch	• Operations for audio, hands-free phone, vice control and navigation, etc. are possible. • Steering switch signal (operation signal) is output to AV control unit.
Microphone	• Used for hands-free phone operation and voice recognition. • Microphone signal is transmitted to AV control unit. • Power (Microphone VCC) is supplied from AV control unit.
Auxiliary input jacks	Image signal and sound signal of auxiliary input is transmitted to AV control unit.

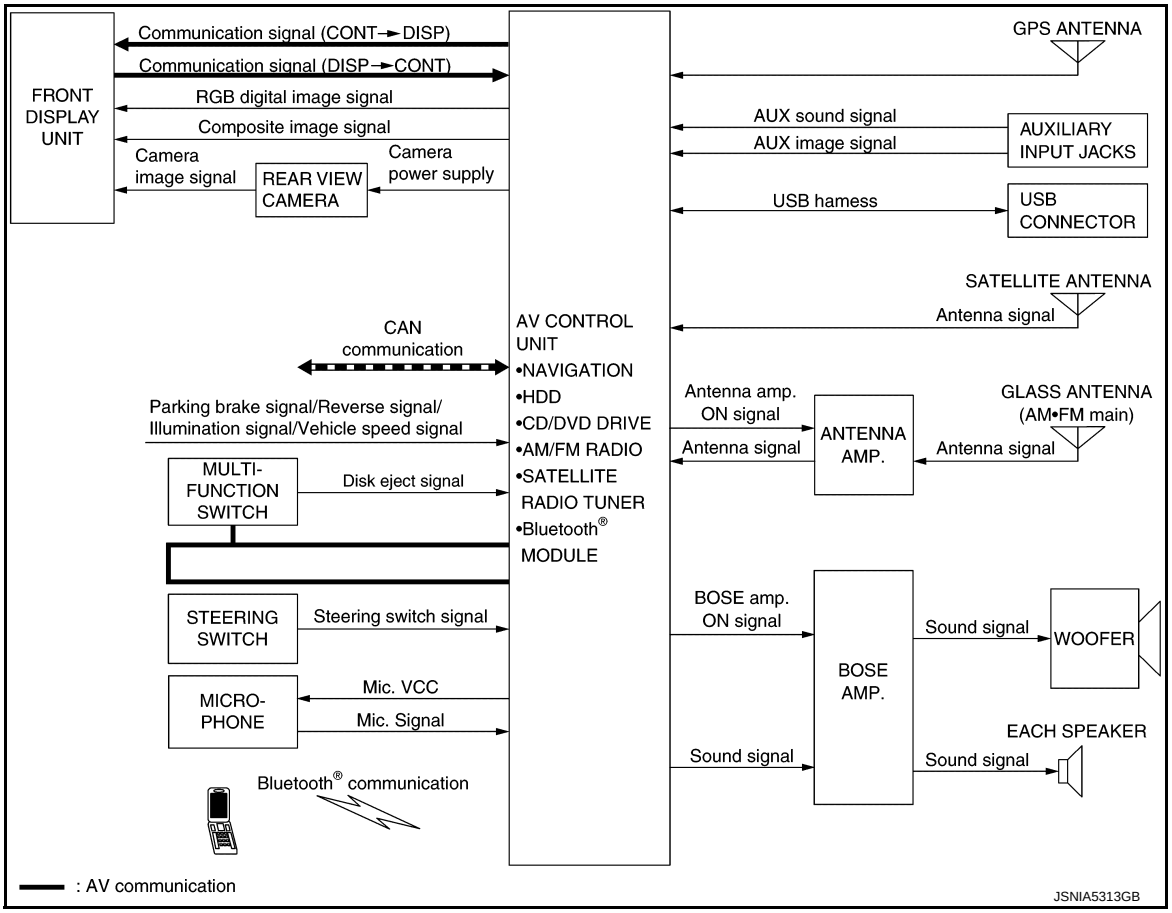
Part name	Description
Rear view camera	• Camera power supply is input from AV control unit. • The image of vehicle rear view is transmits to front display unit.
GPS antenna	GPS signal is received and transmitted to AV control unit.
Antenna amp. (coupe models)	• Radio signal received by glass antenna is amplified and transmitted to AV control unit. • Power (antenna amp. ON signal) is supplied from AV control unit.
Antenna base (roadster models)	An antenna base integrated with radio antenna amp. and satellite radio antenna are adopted. Radio antenna • Radio signal received by rod antenna is amplified and transmitted to AV control unit. • Power (antenna amp. ON signal) is supplied from AV control unit. Satellite radio antenna • Receives the satellite radio wave and outputs it to the AV control unit.
USB connector	Image signal* and sound signal of USB input are transmitted to AV control unit.
Satellite radio antenna	Receives the satellite radio wave and outputs it to the AV control unit.

*: Image signals cannot be received from iPod®.

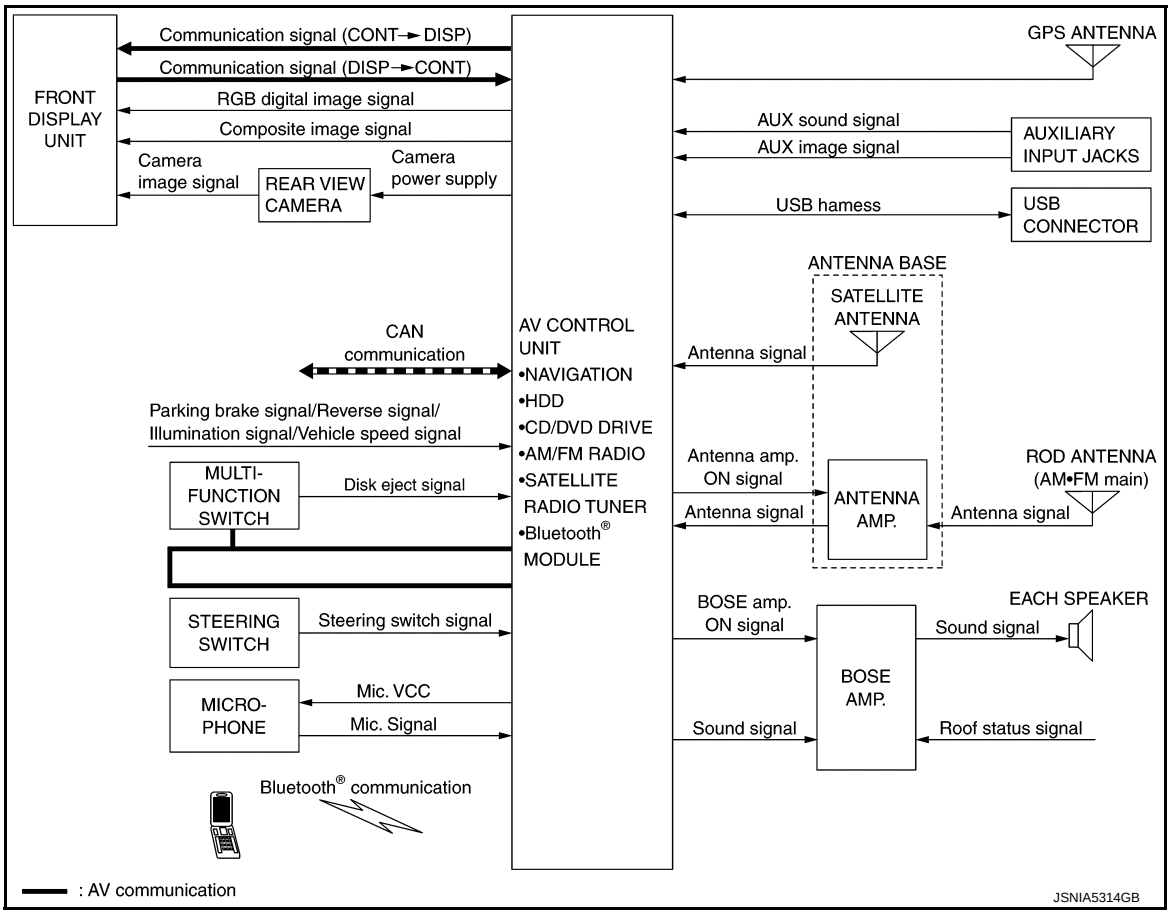
SYSTEM
MULTI AV SYSTEM
MULTI AV SYSTEM : System Diagram

INFOID:0000000009359323

COUPE MODELS

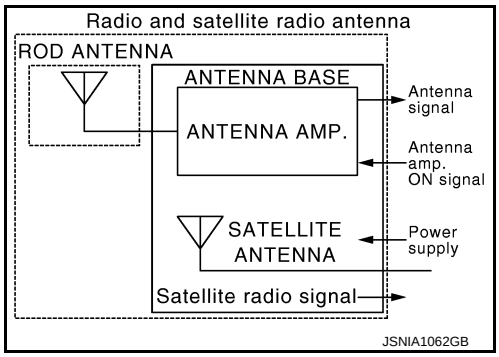


NOTE:
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.



NOTE:

- The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.
- An antenna base integrated with antenna amp. and satellite antenna are adopted.



MULTI AV SYSTEM : System Description

INFOID:0000000009359324

Multi AV system means that the following systems are integrated.

FUNCTION NAME
Navigation system function
Audio function
Hands-free phone function
Auxiliary input function
Voice recognition function
Touch panel function
Vehicle information function

FUNCTION NAME
USB connection function
DVD play function
Rear view monitor function

COMMUNICATION SIGNAL

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

NAVIGATION SYSTEM FUNCTION

Description

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

Position Detection Principle

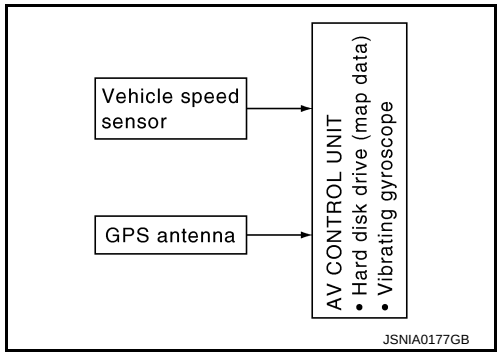
The navigation system periodically calculates the current vehicle position according to the following three types of signals.

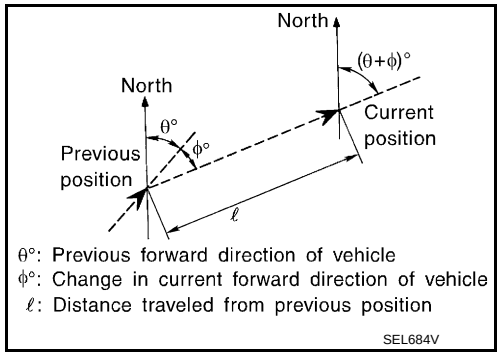
- Travel distance of the vehicle as determined by the vehicle speed sensor
- Vehicle turning angle determined by the gyroscope (angular speed sensor)
- The travel direction of the vehicle determined by the GPS antenna (GPS information)

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

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

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



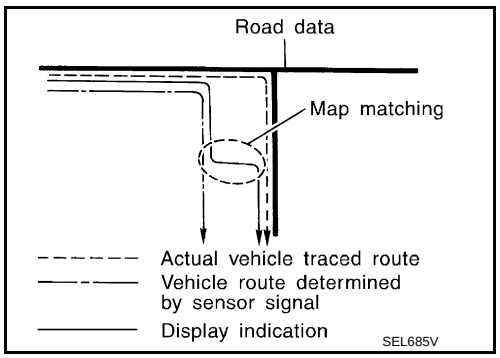


Type	Advantage	Disadvantage
Gyroscope (angular velocity sensor)	The turning angle is precisely detected.	Errors are accumulated when driving a long distance without stopping.
GPS antenna (GPS information)	The travel direction (North/South/East/West) is detected.	The travel direction is not precisely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

Input signals are prioritized in each situation. However, this order of priority may change in accordance with more detailed travel conditions so that the travel direction is detected more accurately.

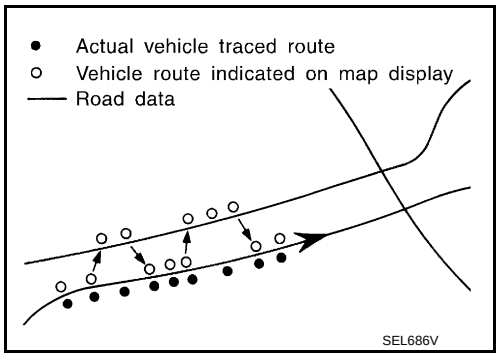
Map-matching

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

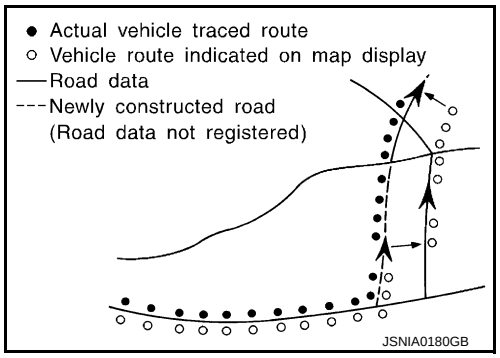


There is a possibility that the vehicle position may not be corrected in the following case, and when vehicle is driven over a certain distance or time in which GPS information is hard to receive. Correct manually the current location mark on the screen.

- In map-matching, several alternative routes are prepared and prioritized in addition to the road judged as currently driving on.
  Therefore, due to errors in the distance and/or direction, an incorrect road may be prioritized, and the current location mark may be repositioned to the incorrect road.
  If two roads are running in parallel, they are of the same priority. Therefore, the current location mark may appear on either of them alternately, depending on maneuvering of the steering wheel and configuration of the road, etc.

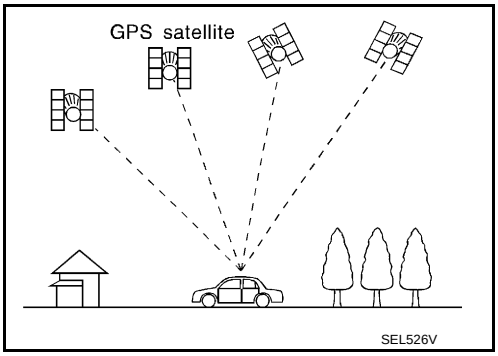


- Map-matching does not function correctly when road on which the vehicle is driving is new, etc. and not recorded in the map data. Also, map-matching does not function correctly when road pattern stored in the map data and the actual road pattern are different due to repair, etc.
  Therefore, the map-matching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



GPS (Global Positioning System)

GPS (Global Positioning System) is developed for and is controlled by the US Department of Defense. The system utilizes GPS satellites (NAVSTAR), transmitting out radio waves while flying on an orbit around the earth at an altitude of approximately 21,000 km (13,049 mile).
The receiver calculates the travel position in three dimensions (latitude/longitude/altitude) according to the time lag of the radio waves that four or more GPS satellites transmit (three-dimensional positioning). The GPS receiver calculates the travel position in two dimensions (latitude/longitude) with the previous altitude data if the GPS receiver receives only three radio waves (two-dimensional positioning). GPS position correction is not performed while stopping the vehicle.



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

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

AUDIO FUNCTION

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

FUNCTION
AM/FM radio
Satellite radio
CD
Bluetooth® audio
Music Box (Hard Disk Drive)*
Sound equalizer automatic switching (Roadster models)

* :For Mexico

Operating Signal

Audio system operation can be performed with multifunction switch, preset switch, steering switch, touch panel function or voice recognition function.
- Operating signal is transmitted to AV control unit with AV communication when it is operated by multifunction switch or preset switch. The disk ejection operating signal is performed by wiring harness.
- Operating signal is transmitted to AV control unit with steering switch signal when it is operated by steering switch.
- Refer to the following system description (“VOICE RECOGNITION FUNCTION” and “TOUCH PANEL SYSTEM”)for explanation of voice recognition function and touch panel function.

Screen Display

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

AM/FM Radio Mode

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

- Audio signal is received by rod antenna, next it is amplified by antenna amp., and finally it is input to AV control unit. Audio signal is input to BOSE amp., and BOSE amp. outputs to each speaker. (roadster models)

Satellite Radio Mode

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

CD Mode

- CD function is built into AV control unit.
- AV control unit outputs audio signal to BOSE amp., and BOSE amp. outputs to woofer and each speaker. (coupe models)
- AV control unit outputs audio signal to BOSE amp., and BOSE amp. outputs to each speaker. (roadster models)

Bluetooth® Audio

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

Music Box Mode (For Mexico)

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

Sound Equalizer Automatic Switching Function

Sound quality in a fully-open retractable soft top condition is improved by the correction for bringing the frequency characteristics in a fully-open retractable soft top condition closer to the characteristics in a fully-closed retractable soft top condition. When the retractable soft top is in a fully-open condition, sound pressure is reduced due to the absence of sound echo generated by sound reflection from the retractable soft top. BOSE amp. detects an open-close condition of the retractable soft top by receiving a roof status signal from the retractable soft top control unit and switches the equalizer to correct the frequency characteristics in a fully-open retractable soft top condition. During the switching of the equalizer, audio stops temporarily due to the temporary mute.

HANDS-FREE PHONE FUNCTION

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

When A Call Is Originated

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

When Receiving A Call

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

AUXILIARY INPUT FUNCTION

- Image and sound can be output from an external device by connecting a device with auxiliary input jacks.
- AUX image signals are transmitted to the display unit through AV control unit.
- AUX sound signals are transmitted to woofer and each speaker through AV control unit and BOSE amp. (coupe models)

- AUX sound signals are transmitted to each speaker through AV control unit and BOSE amp. (roadster models)

VOICE RECOGNITION FUNCTION

- Each operation of multi AV system can be performed by inputting sound to microphone.
- Start of voice recognition system can be performed by steering switch.
- AV control unit is connected by CAN communication, and it receives roof status signal from the soft top control unit, then system operation is available only when the retractable soft top is closed. (roadster models)

TOUCH PANEL SYSTEM

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

VEHICLE INFORMATION FUNCTION

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

USB CONNECTION FUNCTION

- Connecting iPod® or USB memory allows the driver to play iPod® music files or USB memory-stored music files, video data, and image viewer data.
- Sound signals of music files stored in iPod® or USB memory are transmitted from the USB connector to the AV control unit. The AV control unit transmits the sound signals to the woofer and each speaker via BOSE amp. (coupe models)
- Sound signals of music files stored in iPod® or USB memory are transmitted from the USB connector to the AV control unit. The AV control unit transmits the sound signals to each speaker via BOSE amp. (roadster models)
- Video signals and image viewer file signals are transmitted from the USB connector to the AV control unit. The data and files are displayed on the front display unit screen.
- iPod® is recharged when connected to USB connector.
- Only files that meet the following conditions will be played.

	Music file	Video file	Image viewer file
File format	“MP3”, “WMA”, “AAC”, “M4A”	“DivX”, “MPEG4 (ASF)”	“JPEG”
File extension	“.mp3”, “.wma”, “.aac”, “.m4a”	“.divx”, “.afs”, “.avi”	“.jpg”, “.jpeg”
Maximum file size	2 GB	2 GB	• 2 MB • Screen size*1: (H: 1536 x V: 2048 pixels) • The number of directories*2: Up to 500

*1: Images cannot be displayed if the screen size exceeds the upper limit.

*2: The value of an image file storable in the same directory is up to 1024.

NOTE:

- iPod® is a trademark of Apple inc., registered in the U.S. and other countries.
- Image signals cannot be received from iPod®.
- Use the enclosed USB harness when connecting iPod® to USB connector.

DVD PLAY FUNCTION

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

REAR VIEW MONITOR FUNCTION

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

MULTI AV SYSTEM : Fail-Safe

INFOID:0000000009359325

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

FAIL-SAFE CONDITIONS

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

Display

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

Fail-safe mode	Display (display of the fail-safe condition)
When HDD temperature is low	HDD system is experiencing problems due to extreme low temperature. Normal operation will resume when temperature rises.
When HDD temperature is high	HDD system is experiencing problems due to extreme high temperature. Normal operation will resume when temperature drops.

DESCRIPTION OF CONTROLS

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

Ability Operation Mode

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

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

RELEASE CONDITIONS OF FAIL-SAFE

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

When The Temperature of HDD Is Low or High

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

DIAGNOSIS SYSTEM (AV CONTROL UNIT)

Description

INFOID:0000000009359326

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

On Board Diagnosis Function

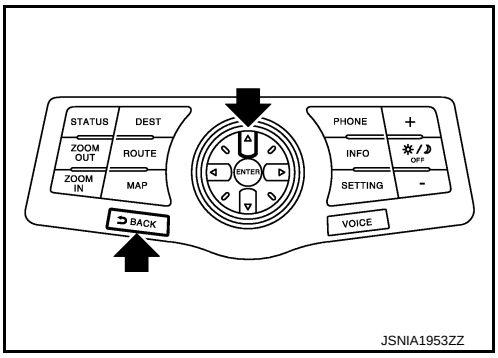
INFOID:0000000009359327

MULTIFUNCTION SWITCH AND PRESET SWITCH SELF-DIAGNOSIS FUNCTION

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

Self-diagnosis Mode

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



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Finishing Self-diagnosis Mode

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

ON BOARD DIAGNOSIS

Description

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

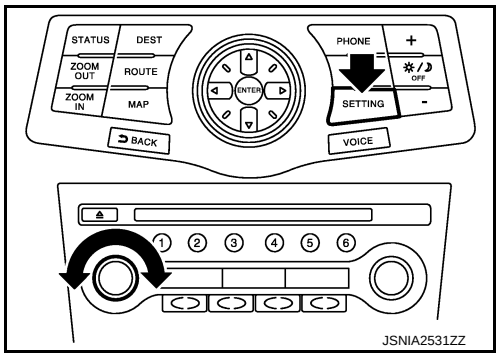
On Board Diagnosis Item

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

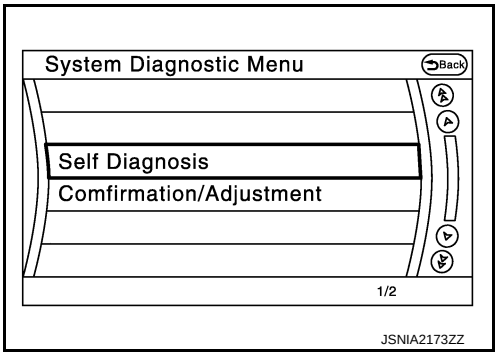
Mode			Description
Confirmation/ Adjustment	Display Diagnosis		The following check functions are available: color tone check by color bar display, light and shade check by gray scale display, touch panel calibration and response check, and color tone check by white display.
	Vehicle Signals		Diagnosis of signals can be performed for vehicle speed, parking brake, lights, ignition, reverse, side view switch and room lamp.
	Speaker Test		The connection of a speaker can be confirmed by test tone.
	Navigation	Steering Angle Adjustment	When there is a difference between the actual turning angle and the vehicle mark turning angle, it can be adjusted.
		Speed Calibration	When there is a difference between the current location mark and the actual location, it can be adjusted.
		XM SAT Subscription Status	The XM NavTraffic subscription status can be checked.
	Error History		The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.
	Synchronizer FES Clock		–
	Vehicle CAN Diagnosis		The transmitting/receiving of CAN communication can be monitored.
	AV COMM Diagnosis		The communication condition of each unit of Multi AV system can be monitored.
	Hands-free Phone		The received volume adjustment of hands-free phone, microphone speaker check, and erase memory can be performed.
	Camera Cont.		The four functions of “Correct Draw Line of Rear view Camera”, “Alter/ Confirm Configuration”, “Reset Configuration” and “Camera Syst Type” are available.
	XM	XM Navi Trffic	Change Channel • Any necessary channels required to receive traffic information from the satellite radio system can be set. Change Application ID • Any application ID'-s required to receive traffic information from the satellite radio system can be set.
		XM NavWeather	
		XM CGS	
		Diag	Not used.
	Delete Unit Connection Log		Erase the connection history of unit and error history.
	Initialize Settings		Initializes the AV control unit memory.
	Version Information		Version information of the AV control unit is displayed.

STARTING PROCEDURE

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



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



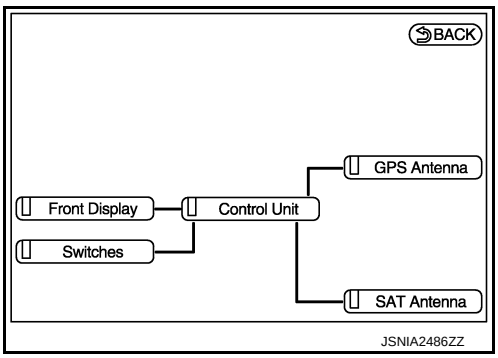
SELF-DIAGNOSIS MODE

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

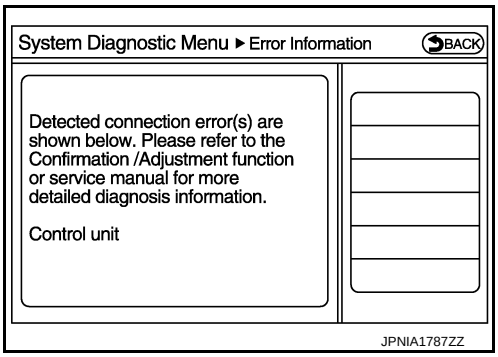


NOTE:

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

- Replace AV control unit if “Self-Diagnosis did not run because of a control unit malfunction” is indicated. The symptom is AV control unit internal error. Refer to AV-270, "Exploded View".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.

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



Detection Range of Self-diagnosis Mode

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

SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

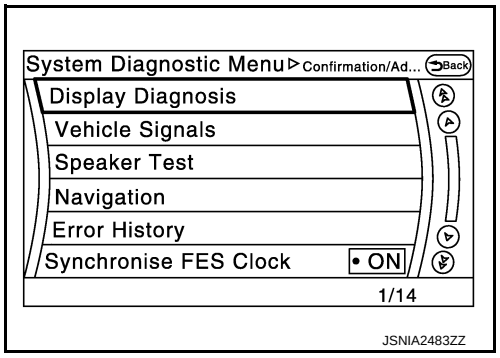
Screen switch	Description	Possible malfunction location / Action to take
Control unit	Malfunction is detected in AV control unit power supply and ground circuits.	Check AV control unit power supply and ground circuits. When detecting no malfunction in those components, replace AV control unit.

A Connecting Cable Between Units Is Displayed In Yellow.

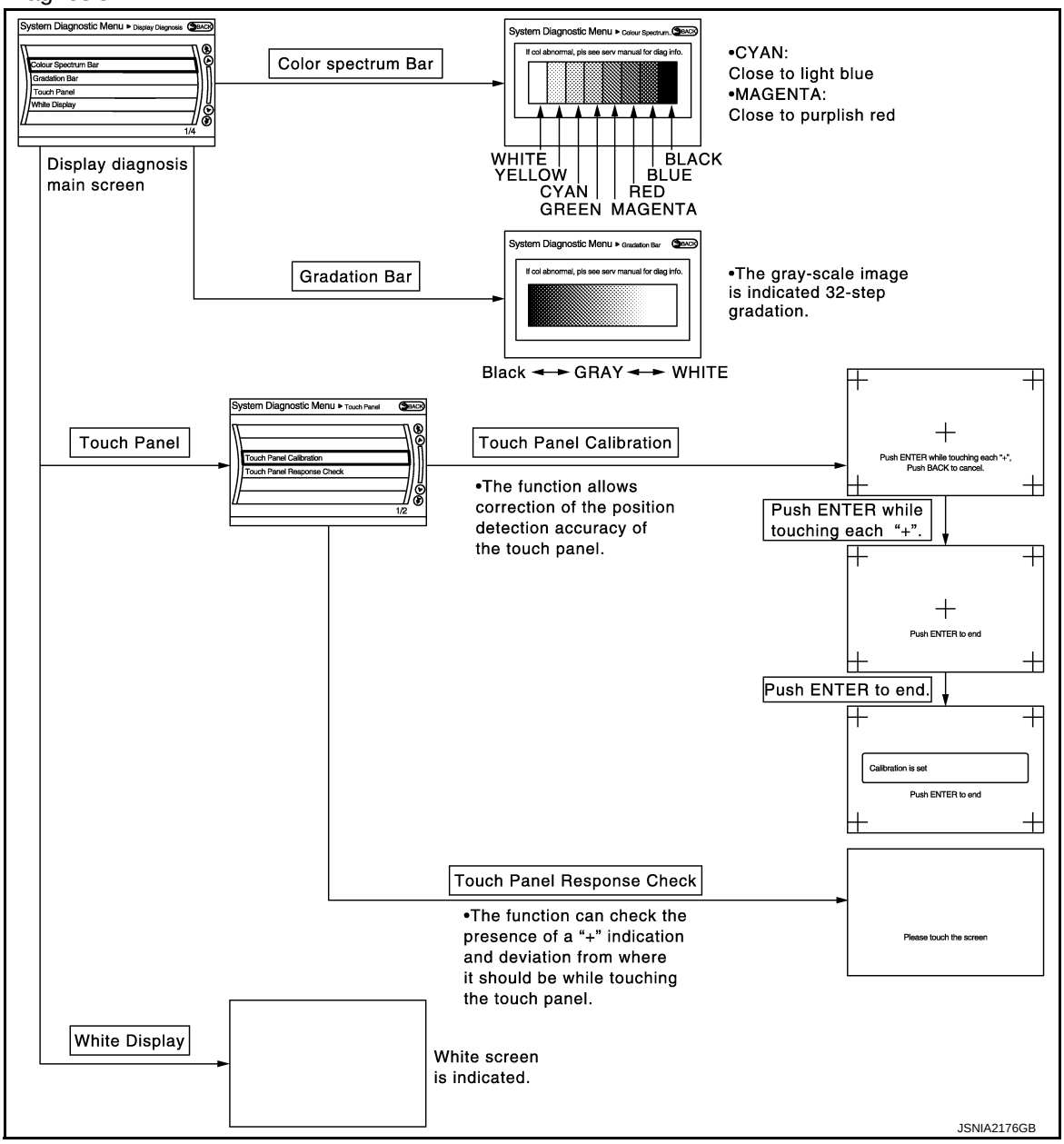
Area with yellow connection lines	Description	Possible malfunction location / Action to take
Control unit ⇔ Front Display	Malfunction is detected in serial communication circuits between AV control unit and front display unit.	Serial communication circuits between AV control unit and front display unit.
Control unit ⇔ GPS Antenna	GPS antenna connection malfunctions detected.	GPS antenna
Control unit ⇔ SAT Antenna	Satellite radio antenna connection malfunctions detected.	Satellite radio antenna

CONFIRMATION/ADJUSTMENT MODE

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

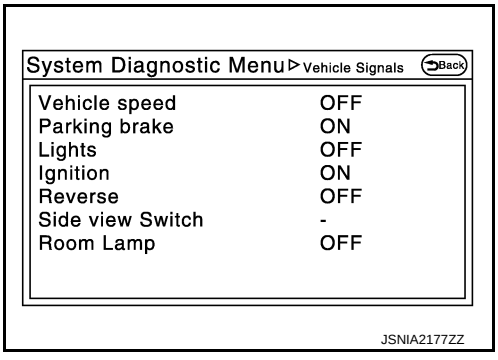


Display Diagnosis



Vehicle Signals

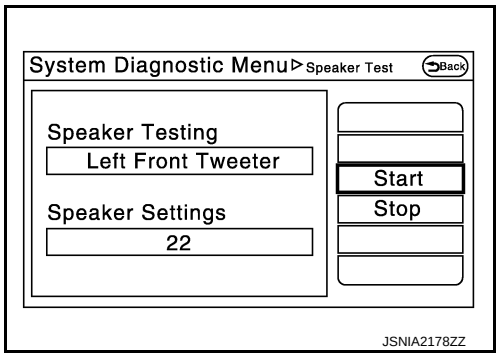
A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



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

Speaker Test

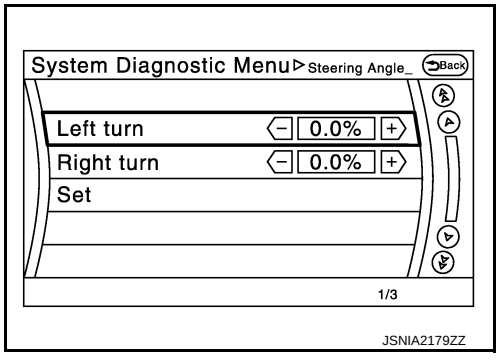
Select “SPEAKER DIAGNOSIS” to display the Speaker Diagnosis screen. Press “Start” to generate a test tone in a speaker. Press “Start” to generate a test tone in the next speaker. Press “Stop” to stop the test tones.



Navigation

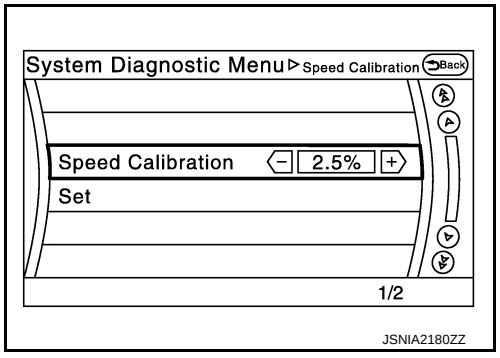
STEERING ANGLE ADJUSTMENT

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



SPEED CALIBRATION

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



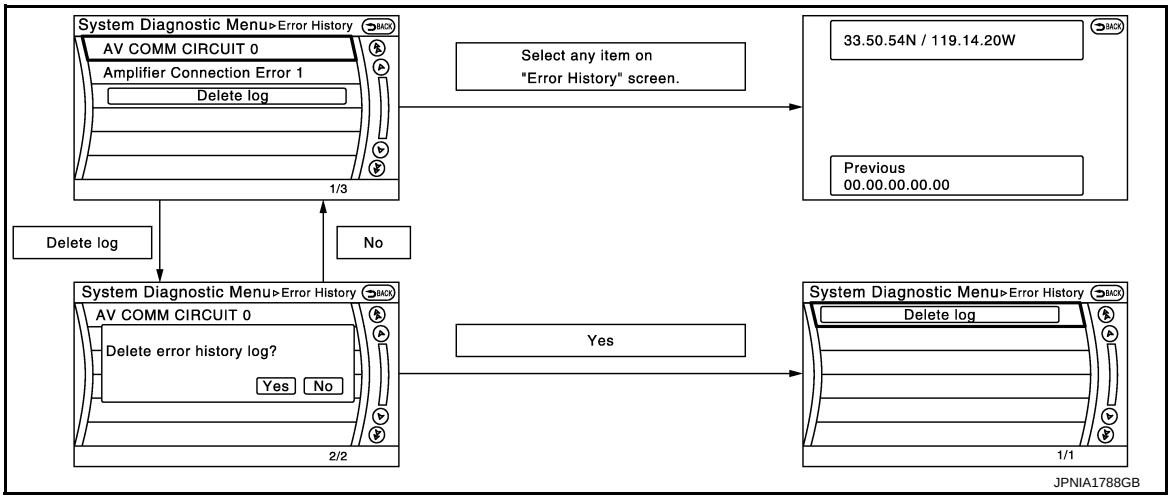
XM SAT SUBSCRIPTION STATUS
The XM NavTraffic subscription status can be checked.

Error History
The self-diagnosis results are judged depending on whether any error occurs from when “Self-diagnosis” is selected until the self-diagnosis results are displayed.
However, the diagnosis results are judged normal if an error has occurred before the ignition switch is turned ON and then no error has occurred until the self-diagnosis start. Check the “Error Record” to detect any error that may have occurred before the self-diagnosis start because of this situation.
The error record displays the time and place of the most recent occurrence of that error. However, take note of the following points.
- If there is a malfunction with the GPS antenna circuit board in the AV control unit, the correct date and time of occurrence may not be able to be displayed.
- Place of the error occurrence is represented by the position of the current location mark at the time an error occurred. If current location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.
- The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

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

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

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



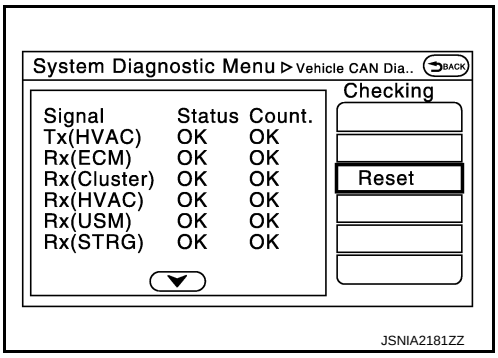
Error item
Some error items may be displayed simultaneously according to the cause. If some error items are displayed simultaneously, the detection of the cause can be performed by the combination of display items

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-163, "CONSULT Function (MULTI AV)".
CONTROL UNIT (CAN)	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	
FLASH-ROM Error Of Control Unit	AV control unit malfunction is detected.	
Connection Of Gyro		
Connection of G Sensor		
CAN Controller Memory Error		
Bluetooth Module Connection Error		
Sub CPU Connection Error		
iPod authentification chip error		
Audio connection error		
DSP Connection Error	AV control unit malfunction is detected.	• If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
DSP Communication Error		
HDD Connection Error	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
HDD Read Error		
HDD Write Error		
HDD Communication Error		
HDD Access Error		
GPS Communication Error	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.
GPS ROM Error		
GPS RAM Error		
GPS RTC Error		
Unfinished configuration	The writing of configuration data is incomplete.	Write configuration data with CONSULT.
USB Controller Communication Error	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DVD Mechanism Communication Error	AV control unit malfunction is detected.	• If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
Steer. Angle Sensor Calibration	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.
Front Display Connection Error	When either one of the following items is detected: • front display unit power supply and ground circuits malfunction is detected. • malfunction is detected in communication circuits between AV control unit and display unit.	• Front display unit power supply and ground circuits. • Communication circuits between AV control unit and front display unit.

Error item	Description	Possible malfunction factor/Action to take
GPS Antenna Error	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
XM Antenna Connection Error	Satellite radio antenna connection malfunction is detected.	• Satellite radio antenna feeder. • Satellite radio antenna.
USB electric current Error	Detection of over current in USB connector.	Check USB harness between the AV control unit and USB connector.
AM/FM antenna amplifier short to ground	Radio antenna amp. ON signal circuit malfunction is detected.	Radio antenna amp. ON signal circuit between AV control unit and radio antenna amp.
AM/FM antenna amplifier open		
Ext_Amp_ON output terminal short to ground	BOSE amp. ON signal circuit malfunction is detected.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.
Ext_Amp_ON output terminal :open		
• AV COMM CIRCUIT • Switches Connection Error	When either one of the following items are detected: • multifunction switch power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and multifunction switch are malfunctioning.	• Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.

Vehicle CAN Diagnosis

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

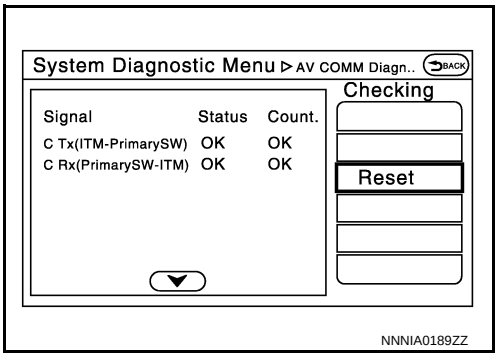


Items	Display (Current)	Malfunction counter (Past)
Tx(HVAC)	OK / ???	OK / 0 – 39
Rx(ECM)	OK / ???	OK / 0 – 39
Rx(Cluster)	OK / ???	OK / 0 – 39
Rx(HVAC)	OK / ???	OK / 0 – 39
Rx(USM)	OK / ???	OK / 0 – 39
Rx(STRG)	OK / ???	OK / 0 – 39
Rx(RCU)	OK / ???	OK / 0 – 39

NOTE:
“???” indicates UNKWN

AV COMM Diagnosis

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



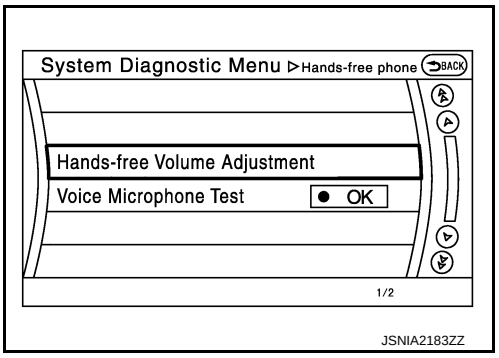
Items	Status (Current)	Counter (Past)
C Tx(ITM–PrimarySW)	OK / ???	OK / 0 – 39
C Rx(PrimarySW–ITM)	OK / ???	OK / 0 – 39

NOTE:

"???" indicates UNKWN

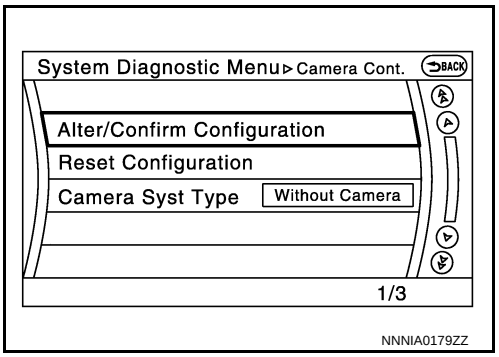
Hands-Free Phone

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



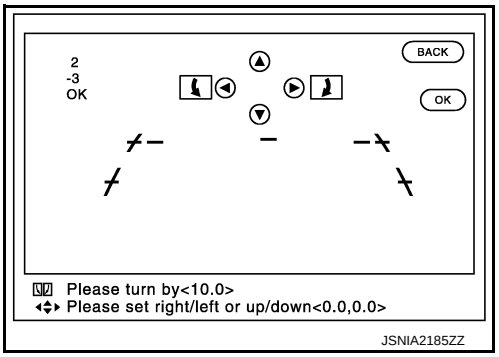
Camera Cont.

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



Correct Draw Line of Rear view Camera

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



Alter/Confirm Configuration

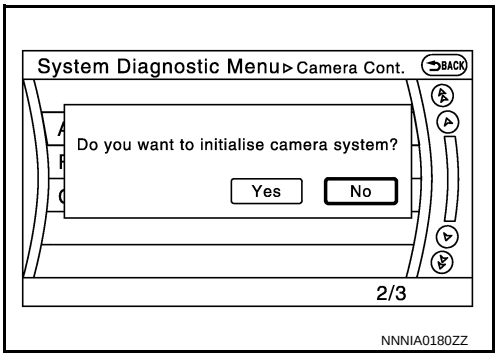
- Configuration stored in the AV control unit can be checked and modified.

Configuration list

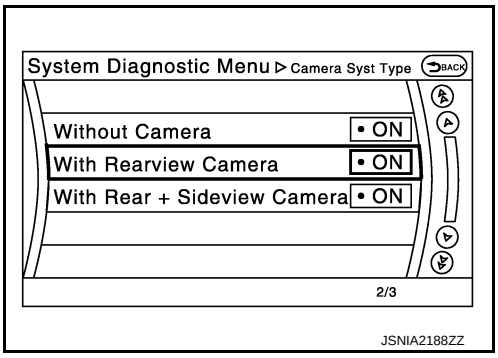
Setting item	Setting	Setting item	Setting
Predi. Course Lines	With	Wheelbase	2.5500000
Rear Coeff. K	–38009.06	Total Length	0.0000000
Rear Coeff. F	0.0014620	Steering Gear Ratio	15.192000
Rear Coeff. P1	0.0000062	Side Coeff. K	0.0000000
Rear Coeff. P2	0.0000056	Side Coeff. F	0.0000000
Rear Coeff. C1	823.00000	Side Coeff. P1	0.0000000
Rear Coeff. C2	480.00000	Side Coeff. P2	0.0000000
Rear Coeff. D1	800.00000	Side Coeff. C1	0.0000000
Rear Coeff. D2	494.00000	Side Coeff. C2	0.0000000
Car Width	1.8450000	Side Coeff. D1	0.0000000

Setting item	Setting	Setting item	Setting
Rear Offset	0.1900000	Side Coeff. D2	0.0000000
Rear Height	0.6886500	Side Offset	0.0000000
Rear L/R Angle	0.0000000	Overall Height	0.0000000
Rear Up/Dn Angle	47.900001	Side L/R Angle	0.0000000
Rear Roll Angle	0.0000000	Side Up/Dn Angle	0.0000000
Bumper Rear Dist.	0.0530000	Side Roll Angle	0.0000000
Bumper Rear Ax Dist	0.8630000	Side Front End Dist	0.0000000
Steer. Max Angle	492.75253	Total Width	0.0000000
Min. Turning Red.	5.0999999	—	—

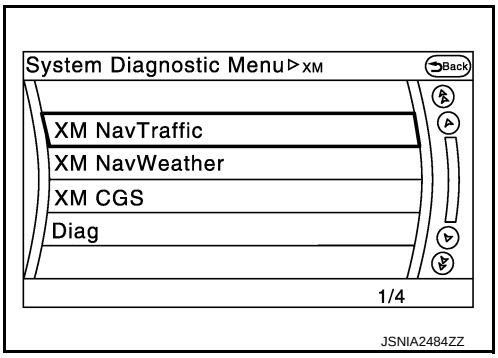
Reset Configuration
- Configuration stored in the AV control unit can be initialized.



Camera Syst Type
- Type of camera system is selectable.

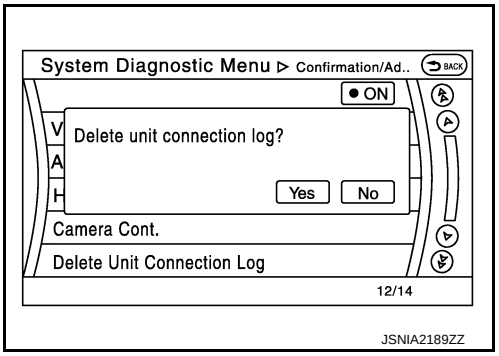


XM
- Change Channel
- Any necessary channels required to receive traffic information from the satellite radio system can be set.
- Change Application ID
- Any application ID'-s required to receive traffic information from the satellite radio system can be set.



Delete Unit Connection Log

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



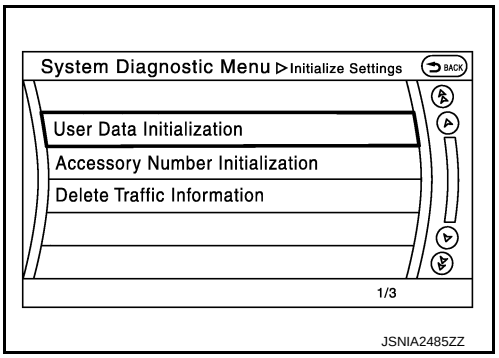
JSNIA2189ZZ

Initialize Settings

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

CAUTION:

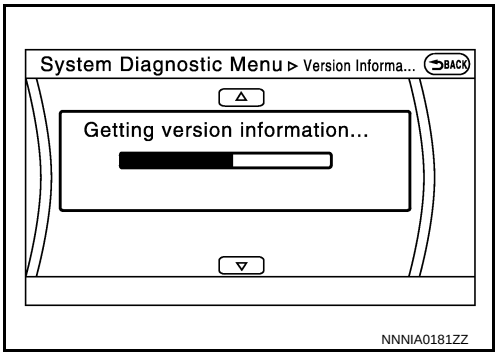
- **Never perform Accessory Number Initialization except when configuration is unsuccessful.**
- **Accessory Number Initialization requires configuration. For details, refer to AV-203, "Description".**



JSNIA2485ZZ

Version Information

Version information of the AV control unit is displayed.



NNNIA0181ZZ

CONSULT Function (MULTI AV)

INFOID:0000000009359328

APPLICATION ITEMS

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

Diagnosis mode	Description
Ecu Identification	The part number of AV control unit can be checked.
Self Diagnostic Result	Performs a diagnosis on the AV control unit and a connection diagnosis for the communication circuit of the Multi AV system, and displays the current and past malfunctions collectively.
Data Monitor	The diagnosis of vehicle signal that is input to the AV control unit can be performed.
Work Support	Steering angle sensor can be adjusted.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing AV control unit.

AV Communication

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

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

ECU IDENTIFICATION

The part number of AV control unit is displayed.

SELF DIAGNOSIS RESULT

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

Self-diagnosis Results Display Item

Error item	Description	Possible malfunction factor/Action to take
CAN COMM CIRCUIT [U1000]	CAN communication malfunction is detected.	Perform diagnosis with CONSULT, and then repair the malfunctioning parts according to the diagnosis results. Refer to AV-205, "Diagnosis Procedure"
CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.
CONTROL UNIT (AV) [U1310]	AV communication circuit initial diagnosis malfunction is detected.	
Cont Unit [U1200]	AV control unit malfunction is detected.	
GYRO NO CONN [U1201]		
G-SENSOR NO CONN [U1202]		
CAN CONT [U1216]		
BLUETOOTH MODULE [U1217]		
SUB CPU CONN [U1228]		
iPod CERTIFICATION [U1229]		
Built-in AUDIO CONN [U122E]		
HDD CONN [U1218]	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
HDD READ [U1219]		
HDD WRITE [U121A]		
HDD COMM [U121B]		
HDD ACCESS [U121C]		
GPS COMM [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.
GPS ROM [U1205]		
GPS RAM [U1206]		
GPS RTC [U1207]		
USB CONTROLLER [U1225]	USB connection malfunction is detected.	Check that the connection to the USB connector is normal.
DSP CONN [U121D]	AV control unit malfunction is detected.	• If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
DSP COMM [U121E]		
DVD COMM [U1227]	AV control unit malfunction is detected.	• If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.
CONFIG UNFINISH [U122A]	The writing of configuration data is incomplete.	Write configuration data with CONSULT.
ST ANGLE SEN CALIB [U1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.

Error item	Description	Possible malfunction factor/Action to take
FRONT DISP CONN [U1243]	When either one of the following items are detected: • front display unit power supply and ground circuits malfunction is detected. • communication circuits between AV control unit and front display unit.	• Front display unit power supply and ground circuits. • Communication circuits between AV control unit and AV front display unit.
GPS ANTENNA CONN [U1244]	GPS antenna connection malfunction is detected.	Check the connection of the GPS antenna connector.
XM ANTENNA CONN [U1258]	Satellite radio antenna connection malfunction is detected.	• Satellite radio antenna feeder. • Satellite radio antenna.
USB OVERCURRENT [U1263]	Detection of over current in USB connecter.	Check USB harness between the AV control unit and USB connector.
ANTENNA AMP TERMINAL [U1264]	Radio antenna amp. ON signal circuit malfunction is detected.	Radio antenna amp. ON signal circuit between AV control unit and radio antenna amp.
AMP ON TERMINAL [U1265]	BOSE amp. ON signal circuit malfunction is detected.	BOSE amp. ON signal circuit between AV control unit and BOSE amp.
• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	When either one of the following items are detected: • multifunction switch power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and multifunction switch are malfunctioning.	• Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.

DATA MONITOR

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

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

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

SELECTION FROM MENU

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

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

WORK SUPPORT

Adjusts the neutral position of the steering angle sensor.

CAUTION:

For vehicles with VDC, adjust the steering angle sensor neutral position on the ABS actuator control unit side. Refer to BRC-8, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement".

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

CONFIGURATION

Configuration has three functions as follows.

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

ECU DIAGNOSIS INFORMATION

AV CONTROL UNIT

Reference Value

INFOID:0000000009359329

VALUES ON THE DIAGNOSIS TOOL

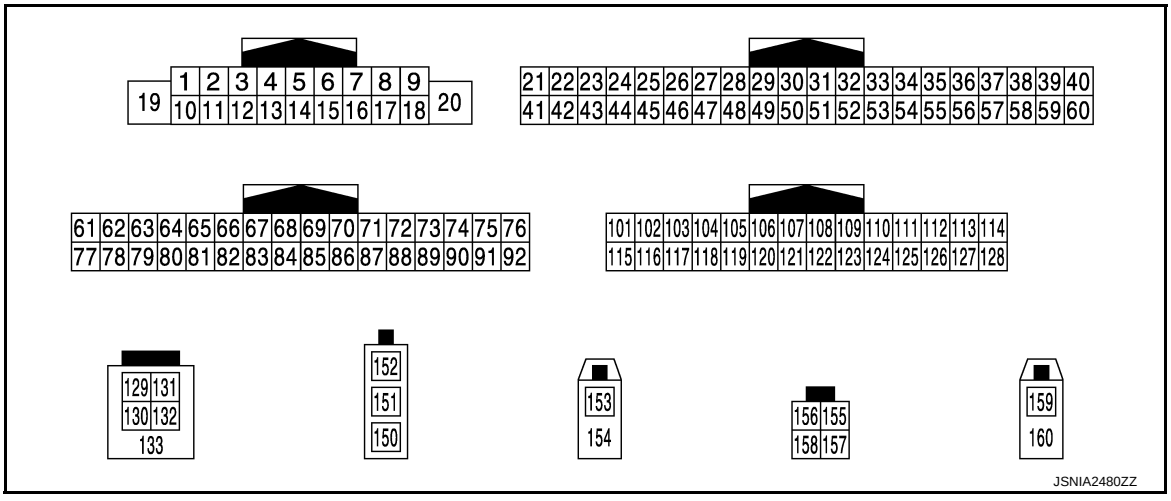
NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT MONITOR ITEM

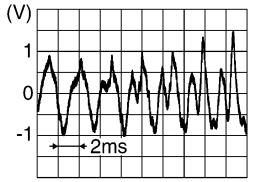
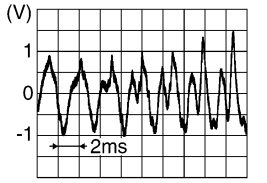
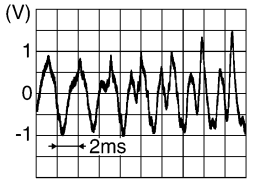
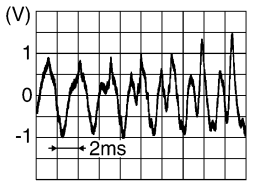
Monitor Item	Condition		Value/Status
VHCL SPD SIG	Ignition switch ON	Vehicle speed > 0 km/h (0 MPH)	On
		Vehicle speed = 0 km/h (0 MPH)	Off
PKB SIG	Ignition switch ON	Parking brake is applied.	On
		Parking brake is released.	Off
ILLUM SIG	Ignition switch ON	Light switch ON	On
		Light switch OFF	Off
IGN SIG	Ignition switch ON	—	On
	Ignition switch ACC	—	Off
REV SIG	Ignition switch ON	Selector lever in R position	On
		Selector lever in any position other than R	Off
SIDE VIEW SW*	Ignition switch ON	—	Off
ROOM LAMP*	Ignition switch ON	—	Off

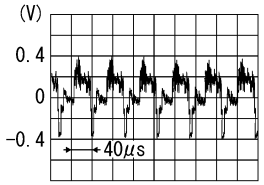
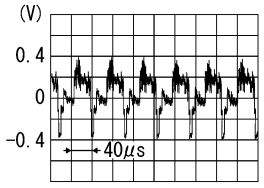
*: This item is displayed, but cannot be monitored.

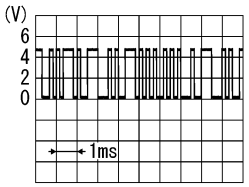
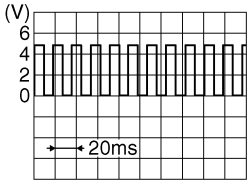
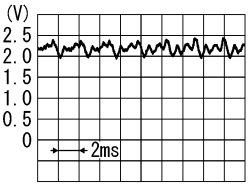
TERMINAL LAYOUT

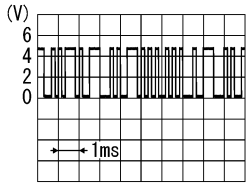
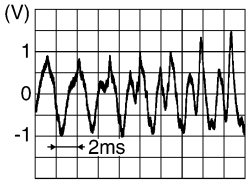
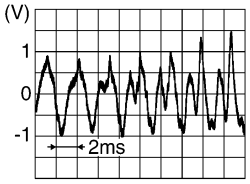


PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (V)	Ground	BOSE amp. ON signal	Output	Ignition switch ON	—	12.0 V
2 (LG)	3 (V)	Sound signal front LH	Output	Ignition switch ON	Sound output	 SKIB3609E
4 (L)	5 (R)	Sound signal rear LH	Output	Ignition switch ON	Sound output	 SKIB3609E
6 (P)	15 (B)	Steering switch signal A	Input	Ignition switch ON	Keep pressing SOURCE switch.	0 V
					Keep pressing MENU UP switch.	1.0 V
					Keep pressing MENU DOWN switch.	2.0 V
					Keep pressing switch	3.0 V
					Keep pressing ENTER switch.	4.0 V
					Except for above.	5.0 V
7 (L)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
10	—	Shield	—	—	—	—
11 (L)	12 (P)	Sound signal front RH	Output	Ignition switch ON	Sound output	 SKIB3609E
13 (R)	14 (Y)*1 (G)*2	Sound signal rear RH	Output	Ignition switch ON	Sound output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
16 (L)	15 (B)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch.	0 V
					Keep pressing VOL UP switch.	1.0 V
					Keep pressing switch.	2.0 V
					Keep pressing switch.	3.0 V
					Except for above.	5.0 V
19 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
20 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
22 (R)	Ground	Camera power supply	Output	Ignition switch ON	At rear view camera image is displayed.	6.0 V
					Except for above.	0 V
26 (LG)	Ground	AUX image signal	Input	Ignition switch ON	At AUX image is displayed.	 SKIB2251J
29 (SB)	Ground	Disk eject signal	Input	Ignition switch ON	Pressing the eject switch.	0 V
					Except for above.	5.0 V
42 (B)	Ground	Camera ground	—	Ignition switch ON	—	0 V
46 (V)	Ground	AUX image signal ground	—	Ignition switch ON	—	0 V
47	—	Shield	—	—	—	—
49 (BR)	Ground	Switch ground	—	Ignition switch ON	—	0 V
65 (O)	Ground	Parking brake signal	Input	Ignition switch ON	Parking brake is ON.	5.0 V
					Parking brake is OFF.	0 V
67 (L)	Ground	Composite image ground	—	Ignition switch ON	—	0 V
68 (G)	Ground	Composite image signal	Output	Ignition switch ON	At DVD image is displayed.	 SKIB2251J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
72 (R)	Ground	Microphone VCC	Output	Ignition switch ON	—	5.0 V
73 (G)	Ground	Communication signal (CONT→DISP)	Output	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
74 (P)	—	CAN–L	Input/ Output	—	—	—
75 (LG)*1 (Y)*2	—	AV communication signal (L)	Input/ Output	—	—	—
76 (LG)*1 (Y)*2	—	AV communication signal (L)	Input/ Output	—	—	—
79 (R)	Ground	Illumination signal	Input	Ignition switch OFF	Lighting switch is OFF.	0 V
					Lighting switch is ON.	12.0 V
80 (G)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
81 (O)	Ground	Reverse signal	Input	Ignition switch ON	R position	12.0 V
					Other than R position	0 V
82 (Y)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	**NOTE:** Maximum voltage may be 12.0 V due to specifications (connected units).  SKIA6649J
83	—	Shield	—	—	—	—
84 (Y)	—	—	—	—	—	—
87 (G)	71	Microphone signal	Input	Ignition switch ON	Give a voice	 PKIB5037J

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
89 (R)	Ground	Communication signal (DISP→CONT)	Input	Ignition switch ON	When adjusting display brightness.	 PKIB5039J
90 (L)	—	CAN–H	Input/ Output	—	—	—
91 (Y)*1 (LG)*2	—	AV communication signal (H)	Input/ Output	—	—	—
92 (Y)*1 (LG)*2	—	AV communication signal (H)	Input/ Output	—	—	—
104 (Y)	119 (L)	AUX sound signal LH	Input	Ignition switch ON	When AUX mode is selected.	 SKIB3609E
117	—	Shield	—	—	—	—
118 (G)	119 (L)	AUX sound signal RH	Input	Ignition switch ON	When AUX mode is selected.	 SKIB3609E
129 (O)	—	USB ground	—	—	—	—
130 (L)	—	USB D– signal	—	—	—	—
131 (BR)	—	V BUS signal	—	—	—	—
132 (R)	—	USB D+ signal	—	—	—	—
133	—	Shield	—	—	—	—
150	—	FM sub	Input	—	—	—
151	—	AM-FM main	Input	—	—	—
152	Ground	Antenna amp. ON signal	Input	Ignition switch ON	—	12.0 V
153	Ground	GPS antenna signal	Input	Ignition switch ON	Not connected GPS antenna connector.	5.0 V
154	—	Shield	—	—	—	—

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
157	Ground	RGB digital image signal (–)	Output	Ignition switch ON	Not connected connector.	1.3 V
158	Ground	RGB digital image signal (+)	Output	Ignition switch ON	Not connected connector.	1.3 V
159	Ground	Satellite radio antenna signal	Input	Ignition switch ON	Not connected to satellite radio antenna connector.	5.0 V
160	—	Shield	—	—	—	—

*1: Coupe models
*2: Roadster models

Fail-Safe

INFOID:0000000009359330

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

FAIL-SAFE CONDITIONS

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

Display

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

Fail-safe mode	Display (display of the fail-safe condition)
When HDD temperature is low	HDD system is experiencing problems due to extreme low temperature. Normal operation will resume when temperature rises.
When HDD temperature is high	HDD system is experiencing problems due to extreme high temperature. Normal operation will resume when temperature drops.

DESCRIPTION OF CONTROLS

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

Ability Operation Mode

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

RELEASE CONDITIONS OF FAIL-SAFE

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

When The Temperature of HDD Is Low or High

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

DTC Index

INFOID:0000000009359331

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

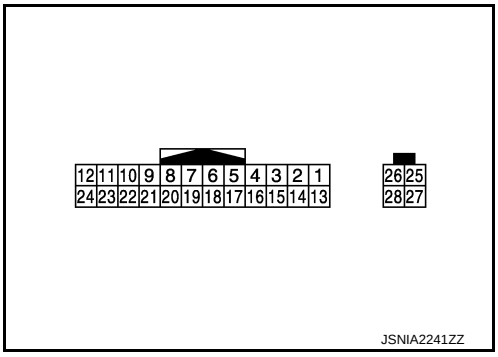
DTC	Display item	Refer to
U1000	CAN COMM CIRCUIT [U1000]	AV-205, "Diagnosis Procedure"
U1010	CONTROL UNIT (CAN) [1010]	AV-206, "DTC Logic"
U1200	Cont Unit [U1200]	AV-207, "DTC Logic"
U1201	GYRO NO CONN [U1201]	AV-208, "DTC Logic"
U1202	G-SENSOR NO CONN [U1202]	AV-209, "DTC Logic"
U1204	GPS COMM [U1204]	AV-210, "Diagnosis Procedure"
U1205	GPS ROM [U1205]	AV-211, "Diagnosis Procedure"
U1206	GPS RAM [U1206]	AV-212, "Diagnosis Procedure"
U1207	GPS RTC [U1207]	AV-213, "Diagnosis Procedure"
U1216	CAN CONT [U1216]	AV-214, "DTC Logic"
U1217	BLUETOOTH MODULE [U1217]	AV-215, "DTC Logic"
U1218	HDD CONN [U1218]	AV-216, "Diagnosis Procedure"
U1219	HDD READ [U1219]	AV-217, "Diagnosis Procedure"
U121A	HDD WRITE [U121A]	AV-218, "Diagnosis Procedure"
U121B	HDD COMM [U121B]	AV-219, "Diagnosis Procedure"
U121C	HDD ACCESS [U121C]	AV-220, "Diagnosis Procedure"
U121D	DSP CONN [U121D]	AV-221, "Diagnosis Procedure"
U121E	DSP COMM [U121E]	AV-222, "Diagnosis Procedure"
U1225	USB CONTROLLER [U1225]	AV-223, "DTC Logic"
U1227	DVD COMM [U1227]	AV-224, "Diagnosis Procedure"
U1228	SUB CPU CONN [U1228]	AV-225, "DTC Logic"
U1229	iPod CERTIFICATION [U1229]	AV-226, "DTC Logic"
U122A	CONFIG UNFINISH [U122A]	AV-227, "Diagnosis Procedure"
U122E	Built-in AUDIO CONN [U122E]	AV-228, "DTC Logic"
U1232	ST ANGLE SEN CALIB [1232]	AV-229, "Diagnosis Procedure"
U1243	FRONT DISP CONN [U1243]	AV-230, "Diagnosis Procedure"
U1244	GPS ANTENNA CONN [U1244]	AV-232, "Diagnosis Procedure"
U1258	XM ANTENNA CONN [U1258]	AV-233, "DTC Logic"
U1263	USB OVERCURRENT [U1263]	AV-234, "Diagnosis Procedure"
U1264	ANTENNA AMP TERMINAL [U1264]	•AV-235, "COUPE : Diagnosis Procedure" (coupe models) •AV-235, "ROADSTER : Diagnosis Procedure" (roadster models)
U1265	AMP ON TERMINAL [U1265]	AV-237, "Diagnosis Procedure"
U1310	CONTROL UNIT (AV) [U1310]	AV-239, "DTC Logic"
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	AV-238, "Description"

FRONT DISPLAY UNIT

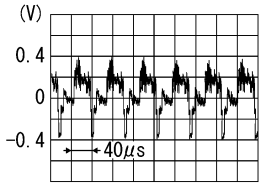
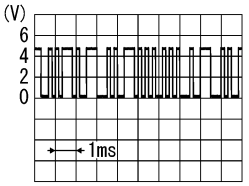
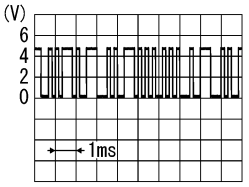
Reference Value

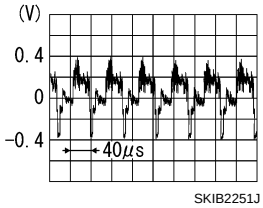
INFOID:0000000009359332

TERMINAL LAYOUT



PHYSICAL VALUES

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

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (G)	Ground	Composite image signal	Input	Ignition switch ON	At DVD image is displayed.	 SKIB2251J
19 (L)	Ground	Composite image signal ground	—	Ignition switch ON	—	0 V
20 (Y)	—	—	—	—	—	—
23 (L)	Ground	ACC power supply	Input	—	—	—
27	—	RGB digital image signal (–)	Input	—	—	—
28	—	RGB digital image signal (+)	Input	—	—	—

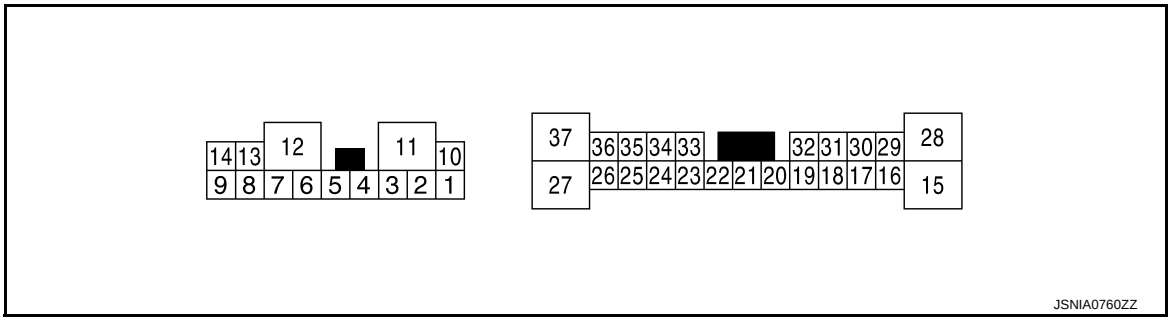
BOSE AMP.

COUPE

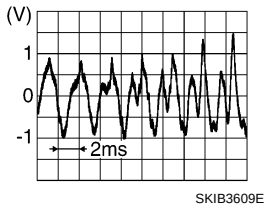
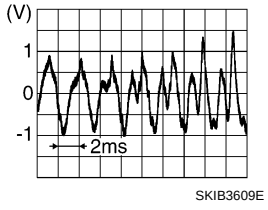
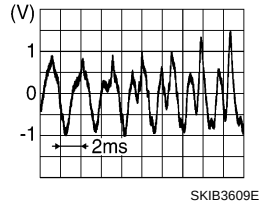
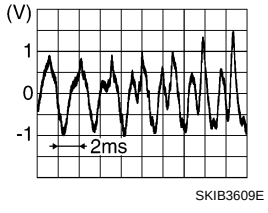
COUPE : Reference Value

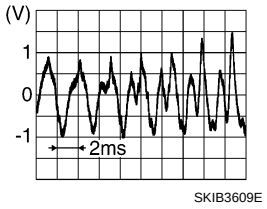
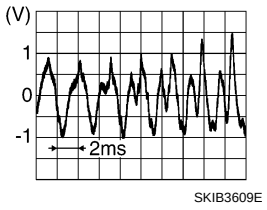
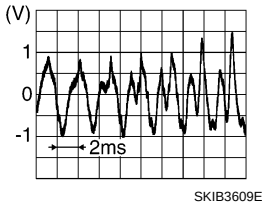
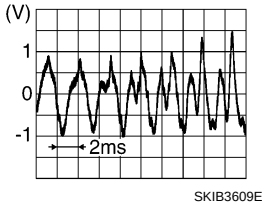
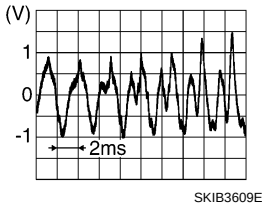
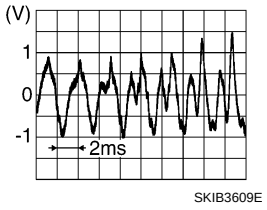
INFOID:0000000009359333

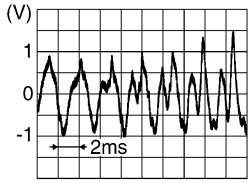
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (L)	10 (V)	Sound signal front door speaker LH	Output	Ignition switch ON	Voice output	 SKIB3609E
2 (BG)	3 (G)	Sound signal front door speaker RH	Output	Ignition switch ON	Voice output	 SKIB3609E
4 (SB)	5 (V)	Sound signal woofer	Output	Ignition switch ON	Voice output	 SKIB3609E
6 (LG)	7 (GR)	Sound signal tweeter LH	Output	Ignition switch ON	Voice output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
9 (R)	14 (BR)	Sound signal rear speaker RH	Output	Ignition switch ON	Voice output	 SKIB3609E
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
15 (L)	28 (P)	Sound signal rear speaker LH	Output	Ignition switch ON	Voice output	 SKIB3609E
18 (P)	32 (L)	Sound signal front LH	Input	Ignition switch ON	Voice output	 SKIB3609E
19 (R)	20 (G)	Sound signal front RH	Input	Ignition switch ON	Voice output	 SKIB3609E
21 (V)	22 (SB)	Sound signal rear LH	Input	Ignition switch ON	Voice output	 SKIB3609E
23 (BR)	33 (Y)	Sound signal rear RH	Input	Ignition switch ON	Voice output	 SKIB3609E

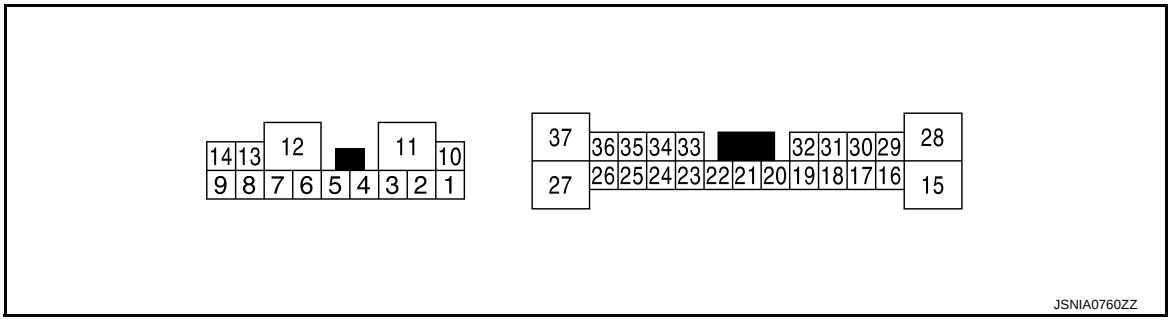
Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
31 (W)	Ground	BOSE amp. ON signal	Input	Ignition switch ACC	—	12.0 V
37 (B)	27 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Voice output	 SKIB3609E

ROADSTER

ROADSTER : Reference Value

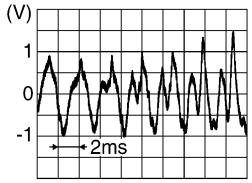
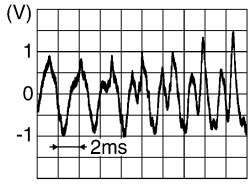
INFOID:0000000009359334

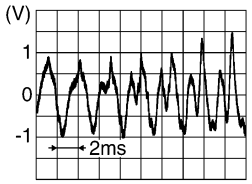
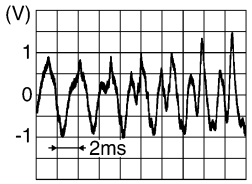
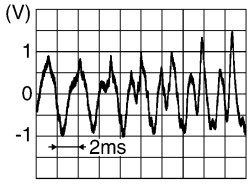
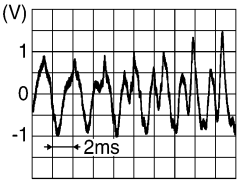
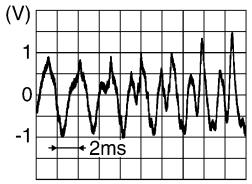
TERMINAL LAYOUT

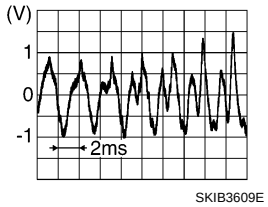
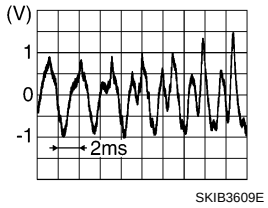
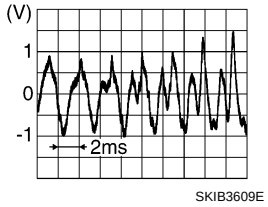
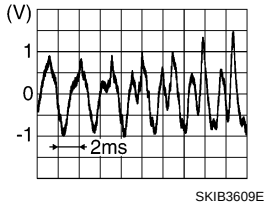
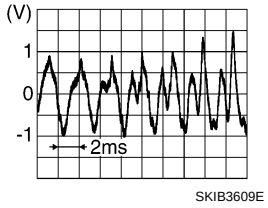


JSNIA0760ZZ

PHYSICAL VALUES

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
1 (L)	10 (V)	Sound signal rear woofer LH	Output	Ignition switch ON	Voice output	 SKIB3609E
2 (LG)	3 (Y)	Sound signal rear woofer RH	Output	Ignition switch ON	Voice output	 SKIB3609E

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
4 (L)	5 (V)	Sound signal front door speaker LH	Output	Ignition switch ON	Voice output	 SKIB3609E
6 (LG)	7 (GR)	Sound signal tweeter LH	Output	Ignition switch ON	Voice output	 SKIB3609E
8 (BG)	13 (G)	Sound signal front door speaker RH	Output	Ignition switch ON	Voice output	 SKIB3609E
9 (LG)	14 (Y)	Sound signal rear speaker RH	Output	Ignition switch ON	Voice output	 SKIB3609E
11 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
15 (L)	28 (P)	Sound signal rear speaker LH	Output	Ignition switch ON	Voice output	 SKIB3609E
17 (R)	Ground	Roof status signal (AUDIO)	Input	Ignition switch ON	Retractable soft top fully open	Battery voltage
					Retractable soft top other than above	0 V

Terminal (Wire color)		Description		Condition		Reference value (Approx.)
+	–	Signal name	Input/ Output			
18 (P)	32 (L)	Sound signal front LH	Input	Ignition switch ON	Voice output	 SKIB3609E
19 (R)	20 (G)	Sound signal front RH	Input	Ignition switch ON	Voice output	 SKIB3609E
21 (V)	22 (SB)	Sound signal rear LH	Input	Ignition switch ON	Voice output	 SKIB3609E
23 (BR)	33 (Y)	Sound signal rear RH	Input	Ignition switch ON	Voice output	 SKIB3609E
31 (W)	Ground	BOSE amp. ON signal	Input	Ignition switch ACC	—	12.0 V
37 (B)	27 (W)	Sound signal tweeter RH	Output	Ignition switch ON	Voice output	 SKIB3609E

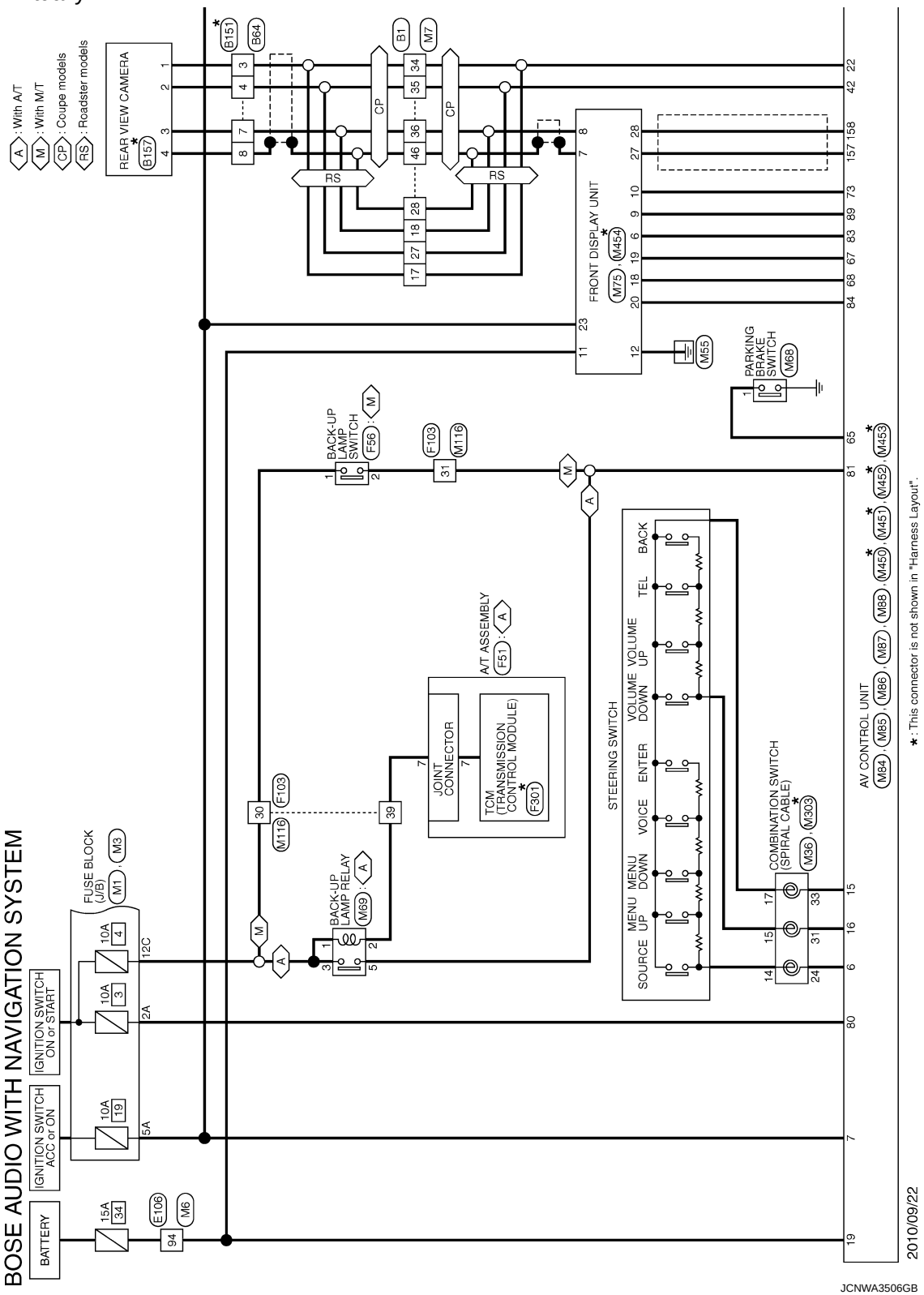
WIRING DIAGRAM

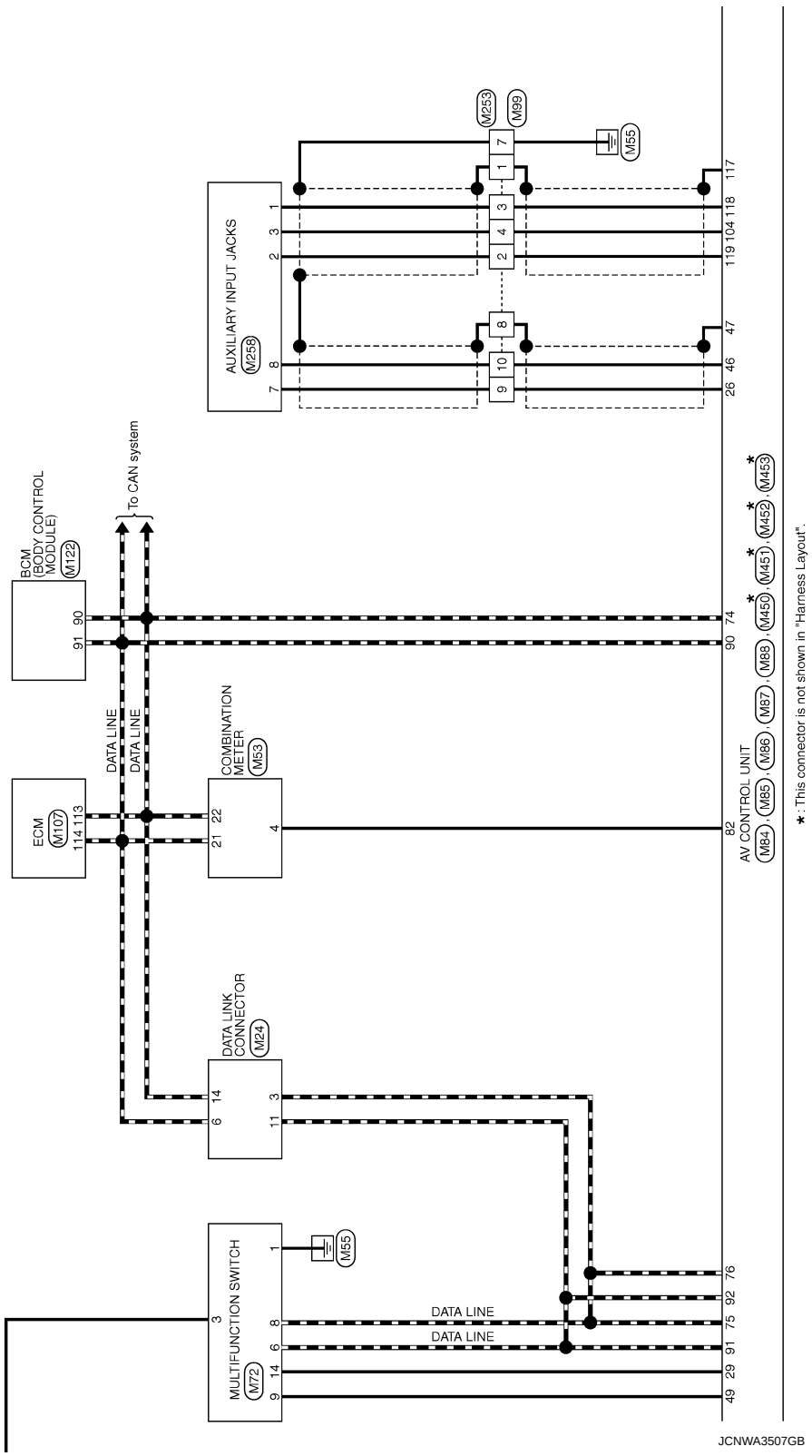
BOSE AUDIO WITH NAVIGATION SYSTEM

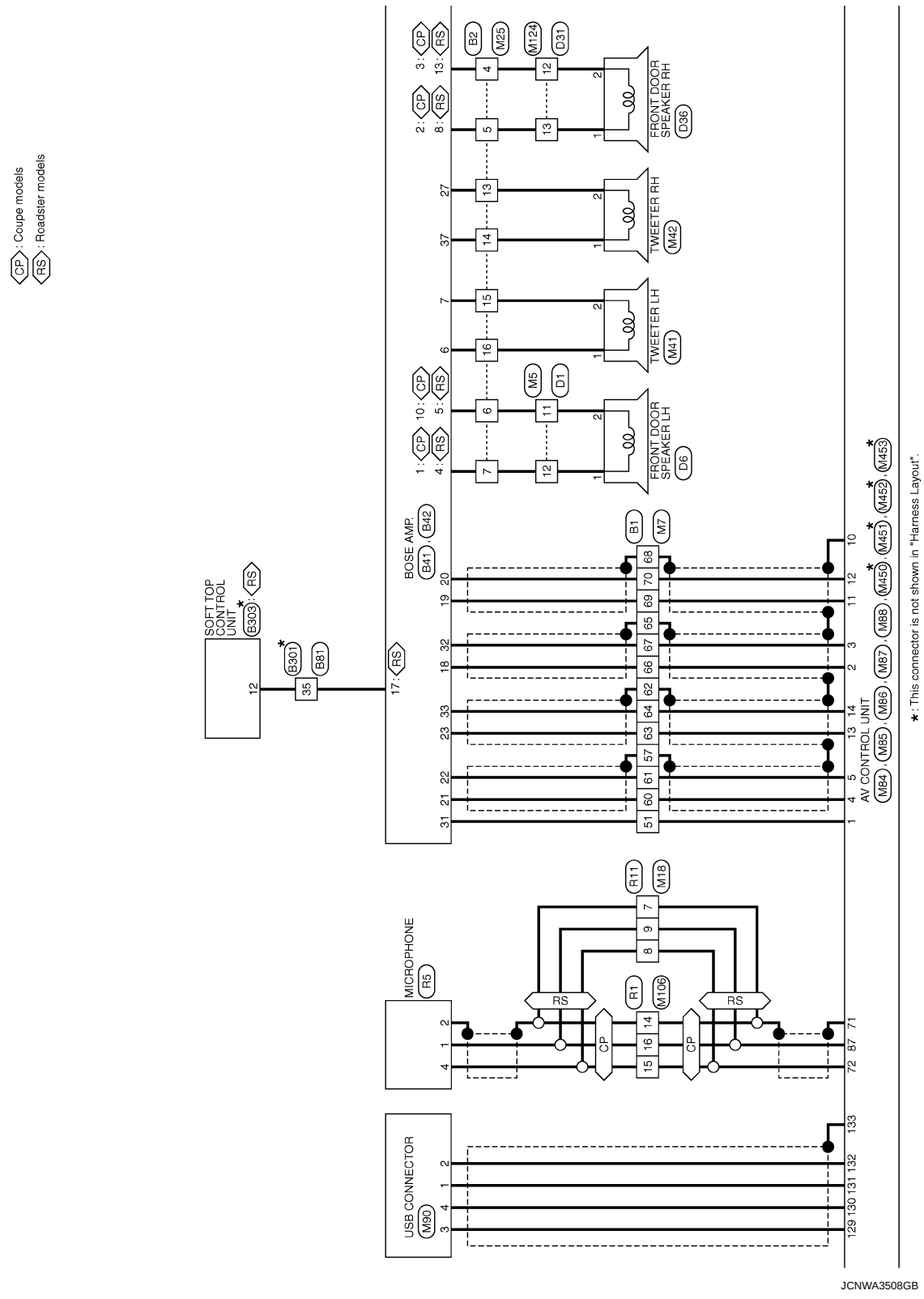
Wiring Diagram

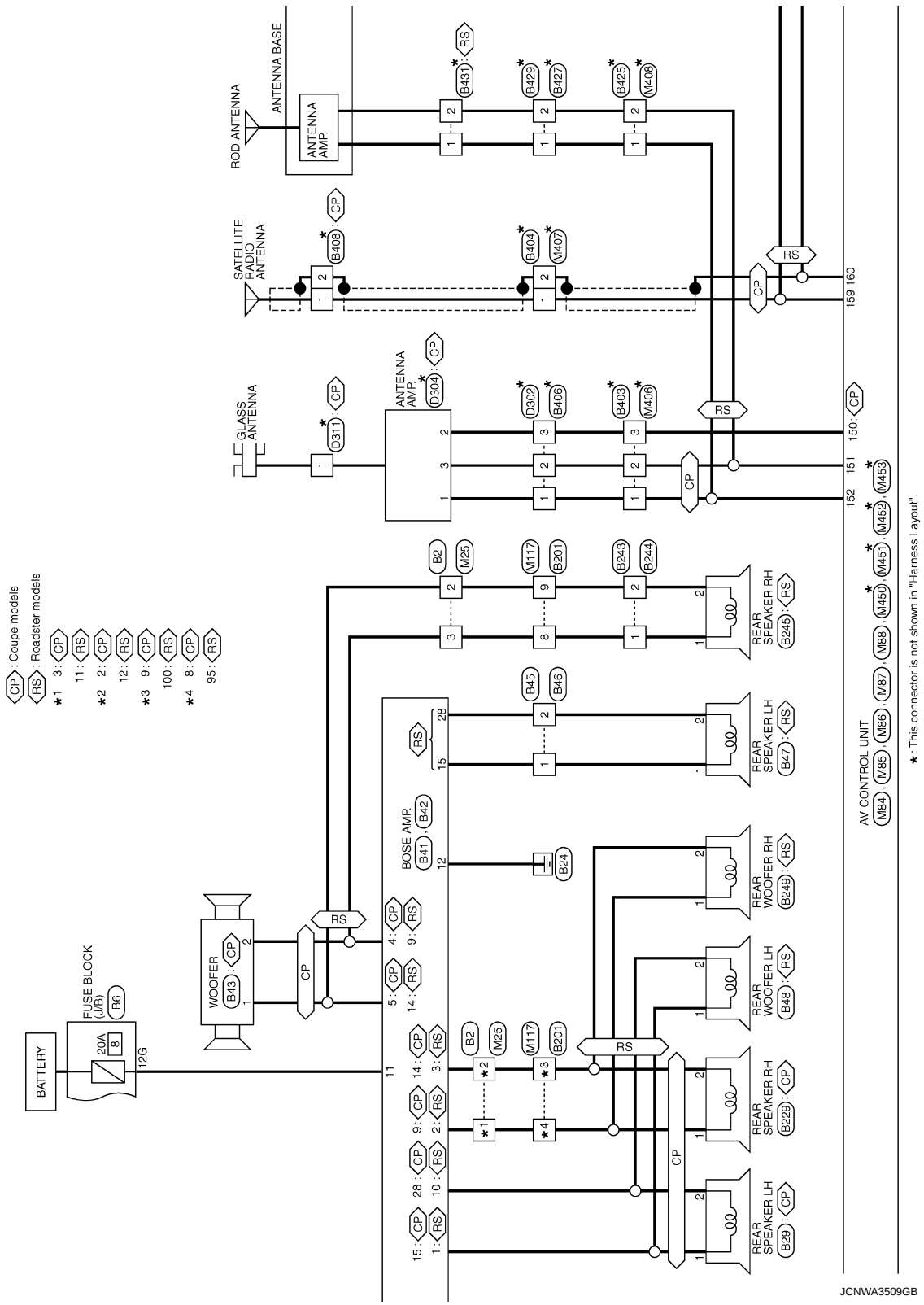
INFOID:0000000009359335

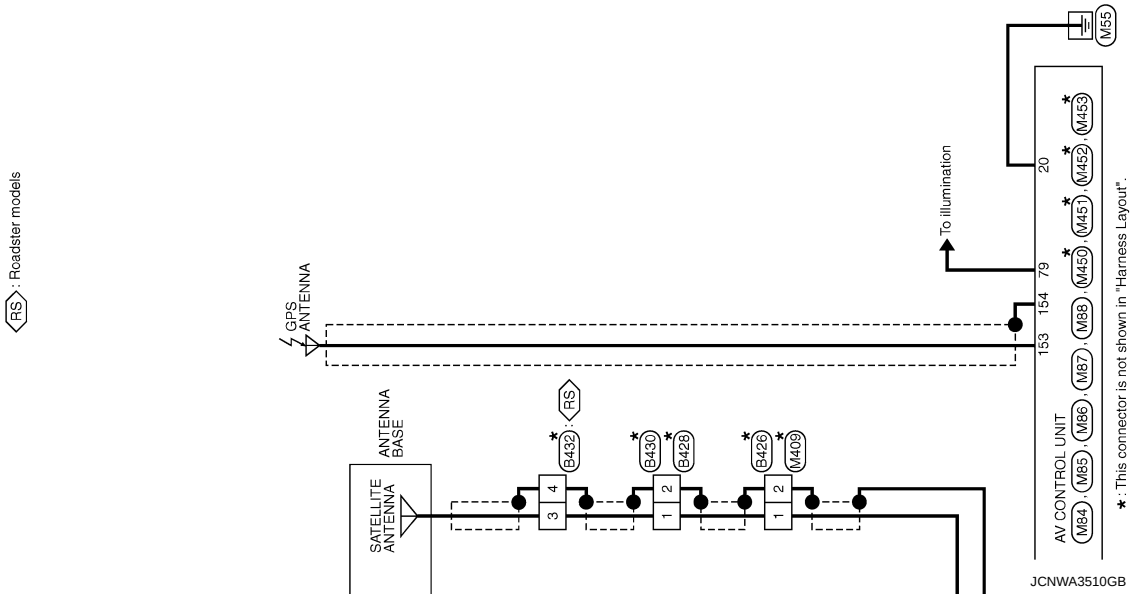
NOTE:
The name MULTIFUNCTION SWITCH indicates the integration of PRESET SWITCH and MULTIFUNCTION SWITCH virtually.




AUXILIARY INPUT JACKS
M258
M253
M99
M55
BCM (BODY CONTROL MODULE)
M122
To CAN system
ECM
M107
DATA LINE
DATA LINE
COMBINATION METER
M53
DATA LINK CONNECTOR
M24
MULTIFUNCTION SWITCH
M72
M55
DATA LINE
DATA LINE
AV CONTROL UNIT
M84, M85, M86, M87, M88, M450, M451, M452, M453
*: This connector is not shown in "Harness Layout".
JCNWA3507GB


CP : Coupe models
RS : Roadster models
FRONT DOOR SPEAKER RH
D36
TWEETER RH
M42
TWEETER LH
M41
FRONT DOOR SPEAKER LH
D6
BOSE AMP.
B41
B42
SOFT TOP CONTROL UNIT
B303
B301
B81
MICROPHONE
R5
USB CONNECTOR
M90
AV CONTROL UNIT
M84
M85
M86
M87
M88
M450
M451
M452
M453
* : This connector is not shown in "Harness Layout".
JCNWA3508GB


ROD ANTENNA
ANTENNA BASE
ANTENNA AMP.
SATELLITE RADIO ANTENNA
GLASS ANTENNA
ANTENNA AMP.
BATTERY
FUSE BLOCK (J/B)
WOOFER
BOSE AMP.
REAR SPEAKER RH
REAR SPEAKER LH
REAR WOOFER RH
REAR WOOFER LH
AV CONTROL UNIT
CP : Coupe models
RS : Roadster models
*: This connector is not shown in "Harness Layout".
JCNWA3509GB


RS : Roadster models
GPS ANTENNA
ANTENNA BASE
SATELLITE ANTENNA
RS
B432
B430
B428
B426
M403
4
3
2
1
2
1
To illumination
M55
20
153 154 79
M453
M452
M451
M450
M88
M87
M86
M85
M84
AV CONTROL UNIT
* : This connector is not shown in "Harness Layout".
JCNWA3510GB

BOSE AUDIO WITH NAVIGATION SYSTEM

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	BG	–
3	Y	–
4	W	–
6	V	–
7	LG	–
8	GR	–
9	SB	–
11	Y	–
12	W	–
13	BR	–
14	LG	–
15	B	–
16	V	–
17	R	–
18	B	–
20	SB	–
21	G	–
22	GR	–
23	V	–
24	BG	–
25	L	–
26	P	–
27	W	–
28	SHIELD	–
31	W	–
32	B	–
33	P	– [Coupe models]
33	W	– [Roadster models]
34	R	–
35	W	– [Coupe models]
35	B	– [Roadster models]
36	B	–
40	Y	–
41	L	–
42	GR	–
43	BR	–
44	R	–
45	BG	–
46	SHIELD	– [Coupe models]
46	SB	– [Roadster models]
47	V	–
48	SHIELD	–
51	W	–
52	R	–
57	SHIELD	–
58	B	–
60	V	–
61	SB	–
62	SHIELD	–
63	BR	–
64	Y	–
65	SHIELD	–
66	P	–
67	L	–
68	SHIELD	–
69	R	–
70	G	–
71	V	–
72	P	–
73	BR	–
74	GR	–
75	BG	–
80	Y	–
81	R	–
82	B	–
83	GR	–
84	G	– [Coupe models]
84	L	– [Roadster models]
85	LG	–
86	V	–
87	BR	–
88	GR	–
93	Y	–
94	L	– [Coupe models]
94	G	– [Roadster models]
95	GR	– [Coupe models]
95	LG	– [Roadster models]
96	L	–
97	Y	–
98	W	– [Coupe models]
98	Y/B	– [Roadster models]
99	LG	–
100	B	–

Connector No.	B2
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	BR	– [Coupe models]
2	Y	– [Roadster models]
3	R	– [Coupe models]
3	LG	– [Roadster models]
4	G	–
5	BG	–
6	V	–
7	L	–
11	LG	–
12	Y	–
13	W	–
14	B	–
15	GR	–
16	LG	–

Connector No.	B6
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FBR-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
5G	LG	–
10G	W	– [Coupe models]
10G	P	– [Roadster models]
11G	W	– [Coupe models]
11G	G	– [Roadster models]
12G	Y	–

Connector No.	B29
Connector Name	REAR SPEAKER LH
Connector Type	TK02FBR

H.S.

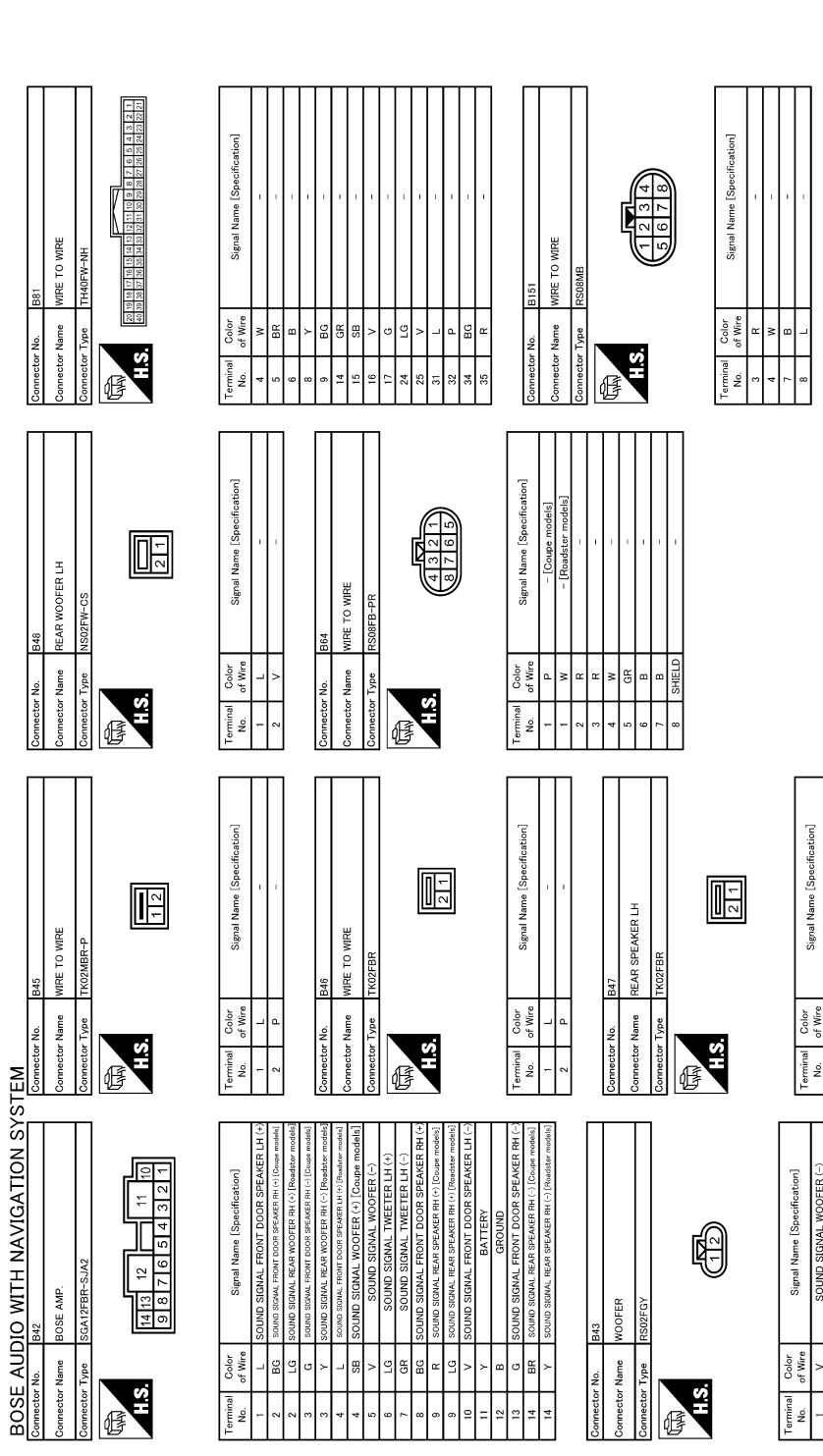
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	P	–

Connector No.	B41
Connector Name	BOSE AMP.
Connector Type	SCA19FBR-SGA4

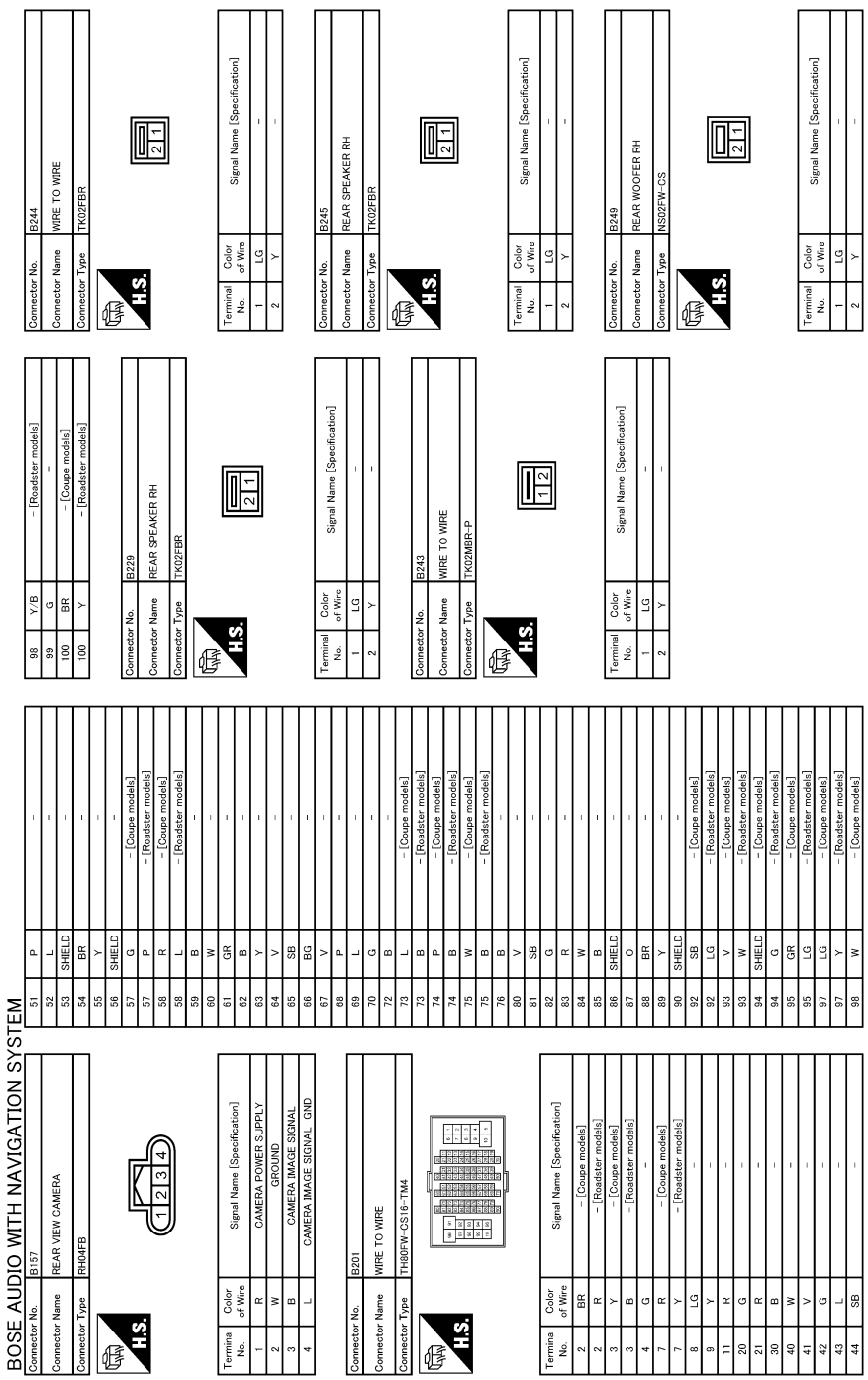
H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
15	L	SOUND SIGNAL REAR SPEAKER LH (+)
17	R	ROOF STATUS SIGNAL (AUDIO)
18	P	SOUND SIGNAL FRONT LH (+)
19	R	SOUND SIGNAL FRONT RH (+)
20	G	SOUND SIGNAL FRONT RH (–)
21	V	SOUND SIGNAL REAR LH (+)
22	SB	SOUND SIGNAL REAR LH (–)
23	BR	SOUND SIGNAL REAR RH (+)
27	W	SOUND SIGNAL FRONT TWEETER RH (–)
28	P	SOUND SIGNAL REAR SPEAKER LH (–)
31	W	BOSE AMP. ON SIGNAL
32	L	SOUND SIGNAL FRONT LH (–)
33	Y	SOUND SIGNAL REAR RH (–)
37	B	SOUND SIGNAL FRONT TWEETER RH (+)

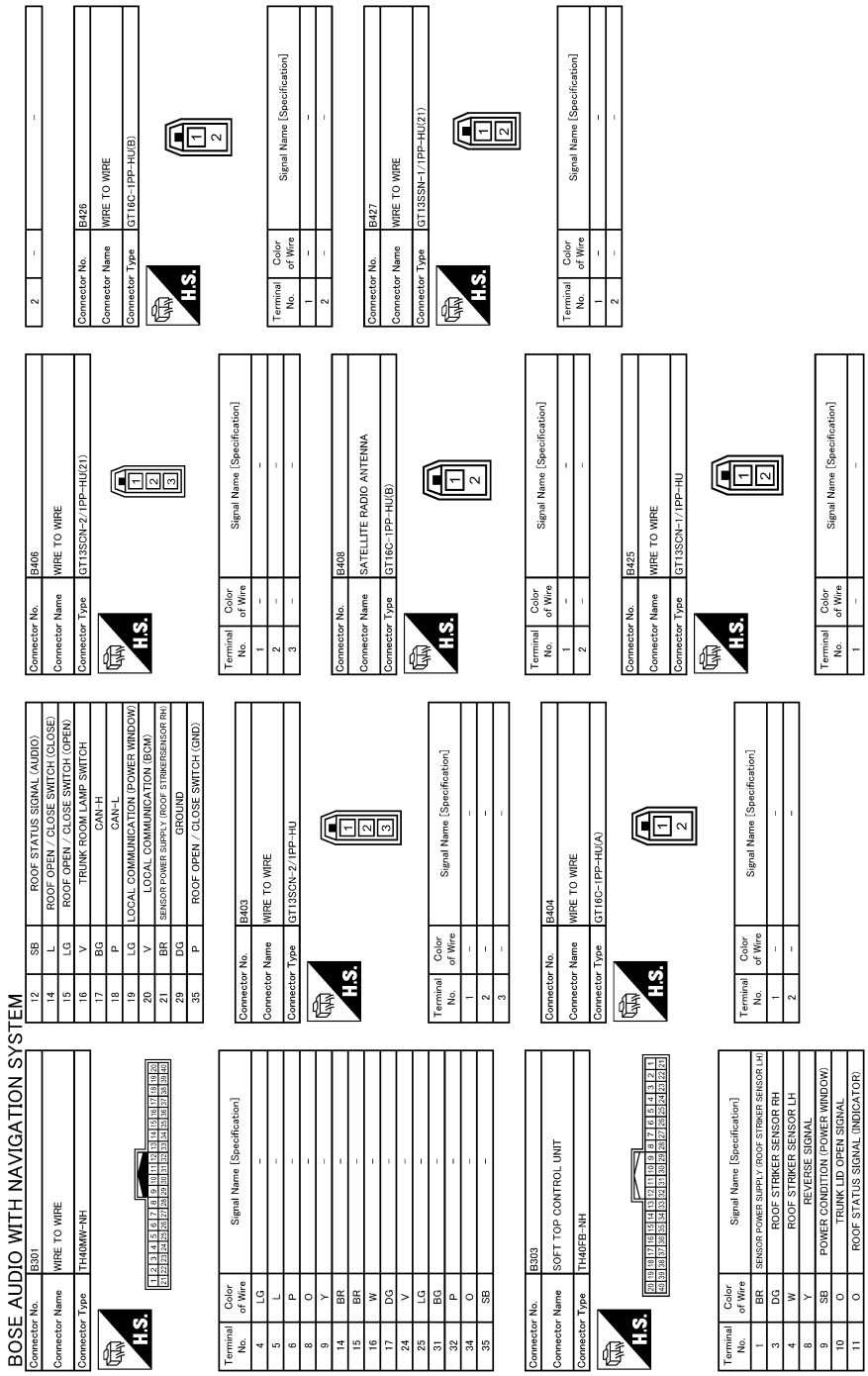
JRNWC4504GB



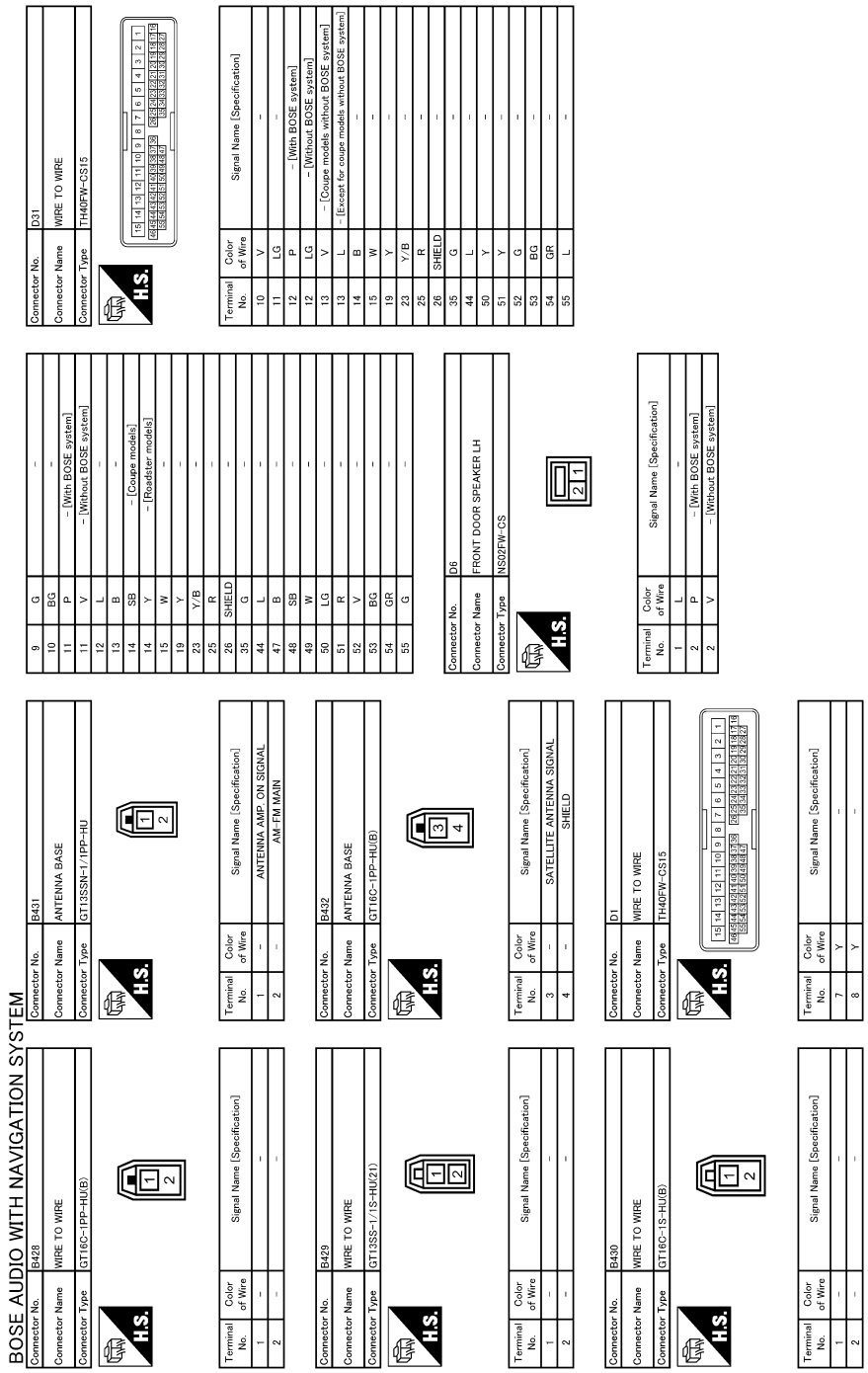
JRNWC4505GB



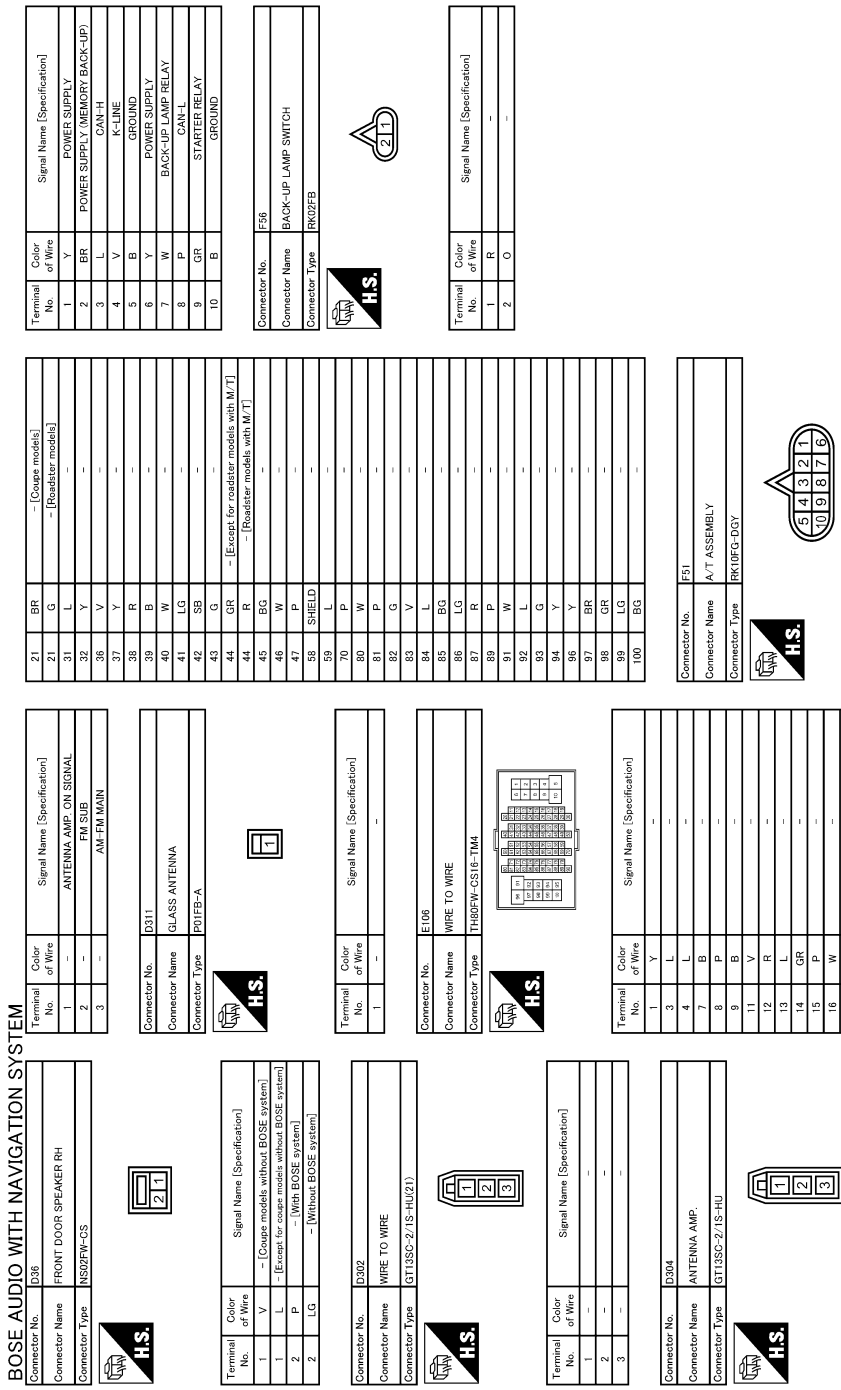
JRNWC4506GB



JRNWC4507GB



JRNWC4508GB

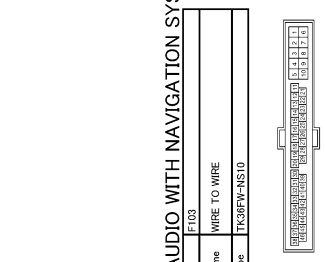


JRNWC4509GB

BOSE AUDIO WITH NAVIGATION SYSTEM

Connector No.	F103
Connector Name	WIRE TO WIRE
Connector Type	TK36FW-NS10

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
2	G	–
3	W	–
4	R	–
5	B	–
8	L	–
9	Y	–
10	GR	–
19	O	–
20	Y	–
28	B	–
29	LG	–
30	R	–
31	O	–
39	W	–
42	G	–
43	P	–
44	L	–
45	Y	–
46	V	–

Connector No.	F501
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FG

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	B	POWER SUPPLY
3	R	POWER SUPPLY (MEMORY BACK-UP)
4	O	K-LINE
5	G	GROUND
6	GR	POWER SUPPLY
7	L	BACK-UP LAMP RELAY
8	BR	CAN-L
9	Y	STARTER RELAY
10	W/B	GROUND

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

H.S.

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

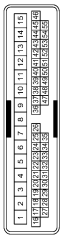
Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
6C	R	–
7C	B	–
9C	O	–
10C	L	–
11C	LG	–
12C	O	–

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

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
7	Y	–
8	Y	–
9	G	–
10	V	–
11	V	–
12	L	–
13	B	–
14	Y	–
15	W	–
19	Y	–
23	Y/B	–
25	Y	–
26	SHIELD	–
35	BR	–
44	L	–
47	B	–
48	SB	–
49	Y	–
50	W	–
51	R	–
52	L	–
53	W	–
54	G	–
55	R	–

JRNWC4510GB

BOSE AUDIO WITH NAVIGATION SYSTEM

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–
3	L	–
4	L	–
7	B	–
8	P	–
9	B	–
11	GR	–
12	R	–
13	L	–
14	G	–
15	P	–
16	W	–
17	BR	–
20	GR	–
21	R	–
31	BR	–
32	V	–
36	SB	–
37	Y	–
38	LG	–
39	SB	–
40	W	–
41	LG	–
42	R	–
43	G	–
44	G	– [With A/T]
44	R	– [With M/T]
45	O	–
46	G	–
47	BR	–
58	SHIELD	–
59	L	–
70	R	–
80	LG	–
81	GR	–
82	V	–
83	V	–
84	L	–
85	BR	–
86	Y	–
87	G	–
89	P	–
91	W	–
92	P	–
93	P	–
94	Y	–
96	P	–
97	GR	–
98	O	–
99	W	–
100	R	–

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

H.S.

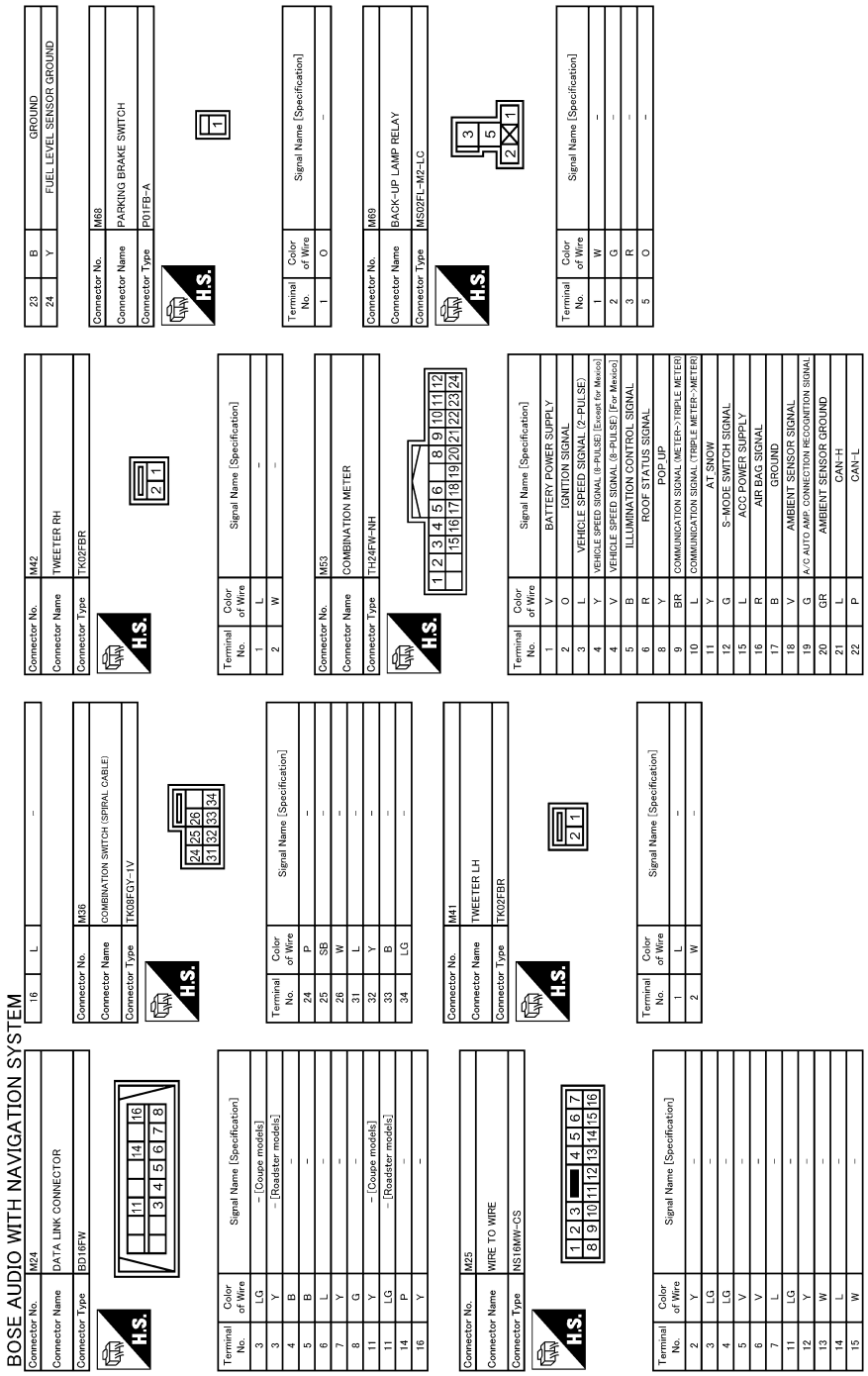
Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	–
2	O	–
3	LG	–
4	O	–
6	V	–
7	LG	–
8	SB	–
9	GR	–
11	Y	–
12	V	–
13	BR	–
14	V	–
15	B	–
16	V	–
17	R	–
18	L	–
20	SB	–
21	G	–
22	GR	–
23	V	–
24	R	–
25	L	–
26	P	–
27	B	–
28	SHIELD	–
31	W	–
32	B	–
33	W	–
34	R	–
35	B	–
36	L	–
40	L	–
41	R	–
42	GR	–
43	R	–
44	R	–
45	O	–
46	SHIELD	– [Coupe models]
46	G	– [Roadster models]
47	R	–
48	SHIELD	–
51	V	–
52	R	–
57	SHIELD	–
58	B	–
60	L	–
61	R	–
62	SHIELD	–
63	R	–
64	G	–
65	SHIELD	–
66	LG	–
67	V	–
68	SHIELD	–
69	L	–
70	P	–
71	V	–
72	P	–
73	BR	–
74	GR	–
75	O	–
80	Y	–
81	W	–
82	BR	–
83	GR	–
84	L	–
85	LG	–
86	V	–
87	BR	–
88	SB	–
93	Y	–
94	SB	– [Coupe models]
94	L	– [Roadster models]
95	GR	– [Coupe models]
95	W	– [Roadster models]
96	L	–
97	LG	– [Coupe models]
97	Y	– [Roadster models]
98	B/G	– [Coupe models]
98	Y/B	– [Roadster models]
99	W	–
100	B	–

Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH

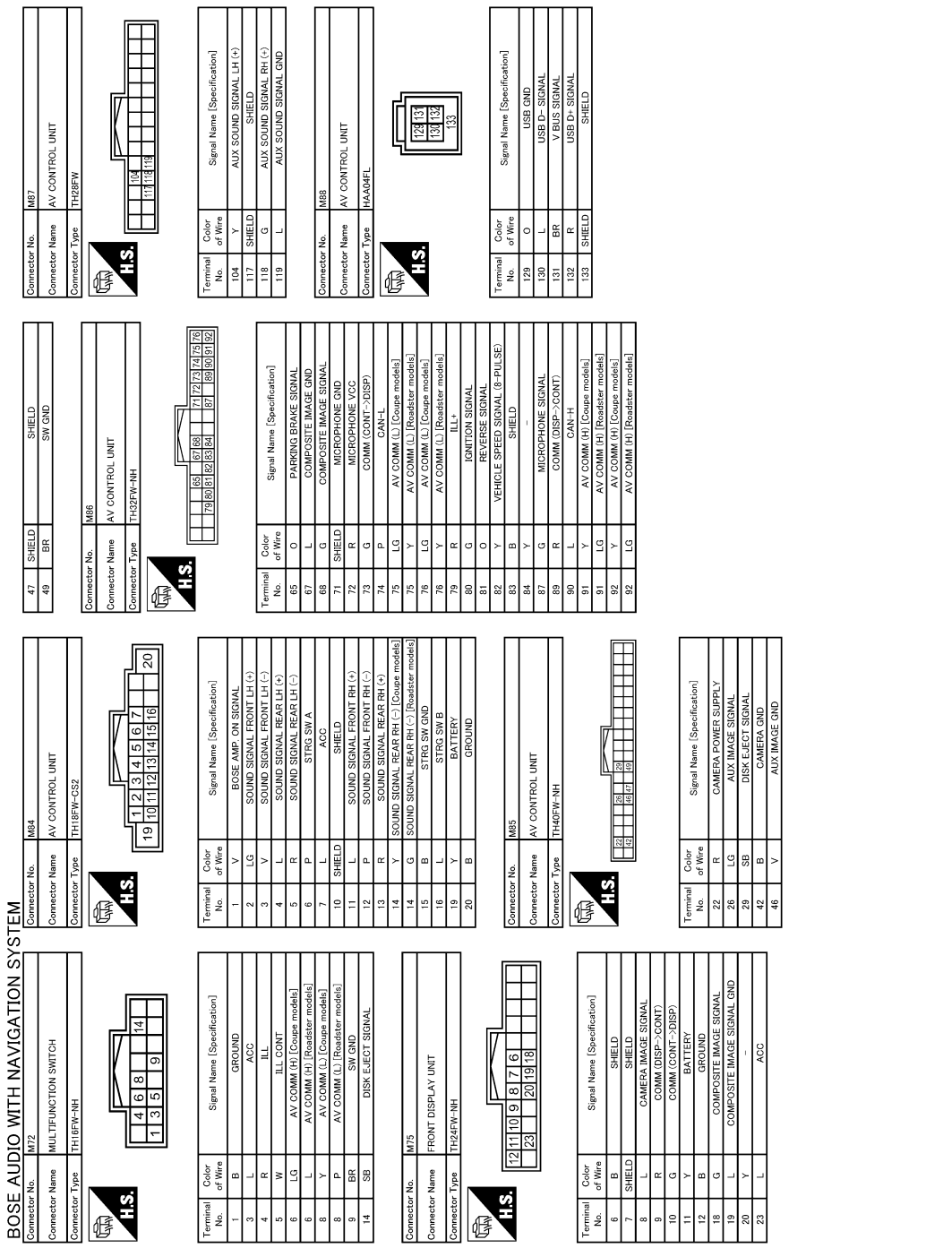
H.S.

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

JRNWC4511GB



JRNWC4512GB



JRNWC4513GB

BOSE AUDIO WITH NAVIGATION SYSTEM

Connector No.	M90
Connector Name	USB CONNECTOR
Connector Type	HAA04FG

H.S.

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

Connector No.	M99
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	SHIELD	–
2	L	–
3	G	–
4	Y	–
5	P	–
6	L	–
7	B	–
8	SHIELD	–
9	LG	–
10	V	–

Connector No.	M106
Connector Name	WIRE TO WIRE
Connector Type	TH16MW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	R	–
6	B	–
7	P	–
8	R	–
11	B	–
12	G	–
13	Y	–
14	SHIELD	–
15	R	–
16	G	–

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-R28-R-LH-Z

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
97	R	ACCELERATOR PEDAL POSITION SENSOR 1
98	P	ACCELERATOR PEDAL POSITION SENSOR 2
99	L	SENSOR POWER SUPPLY
100	W	SENSOR GROUND
101	SB	ASCD STEERING SWITCH
102	GR	EVAP CONTROL SYSTEM PRESSURE SENSOR
103	G	SENSOR POWER SUPPLY
104	GR	SENSOR GROUND
105	L	REFRIGERANT PRESSURE SENSOR
106	W	FUEL TANK TEMPERATURE SENSOR
107	BR	SENSOR POWER SUPPLY
108	Y	SENSOR GROUND
109	G	PNP SIGNAL
110	R	ENGINE SPEED OUTPUT SIGNAL
112	SB	SENSOR GROUND
113	P	CAN COMMUNICATION LINE
114	L	CAN COMMUNICATION LINE
117	Y	DATA LINK CONNECTOR
121	LG	EVAP CANISTER VENT CONTROL VALVE
122	P	STOP LAMP SWITCH
123	B	ECM GROUND
124	B	ECM GROUND
125	R	POWER SUPPLY FOR ECM
126	BR	ASCD BRAKE SWITCH
127	B	ECM GROUND
128	B	ECM GROUND

Connector No.	M116
Connector Name	WIRE TO WIRE
Connector Type	TK38MW-NS10

H.S.

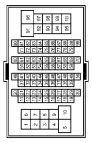
Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–
3	BG	– [Coupe models]
3	O	– [Roadster models]
4	W	–
5	B	–
8	L	–
9	Y	–
10	R	–
19	O	–
20	G	–
28	B	–
29	LG	–
30	LG	–
31	O	–
39	G	–
42	G	–
43	P	–
44	L	–
45	BR	–
46	V	–

JRNWC4514GB

BOSE AUDIO WITH NAVIGATION SYSTEM

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

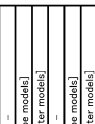
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	– [Coupe models]
2	LG	– [Roadster models]
3	O	– [Coupe models]
3	B	– [Roadster models]
4	W	–
7	LG	– [Coupe models]
7	Y	– [Roadster models]
8	LG	–
9	Y	–
11	R	–
20	G	–
21	R	–
30	B	–
40	O	–
41	Y	–
42	G	–
43	L	–
44	SB	–
51	R	–
52	G	–
53	SHIELD	–
54	LG	–
55	V	–
56	SHIELD	–
57	G	– [Coupe models]
57	P	– [Roadster models]
58	R	– [Coupe models]
58	L	– [Roadster models]
59	B	–
60	W	–
61	GR	–
62	B	–
63	Y	–
64	L	–
65	G	–
66	O	–
67	V	–
68	P	–
69	L	–
70	L	–
72	B	–
73	B	–
74	B	–
75	B	–
76	B	–
80	L	–
81	Y	–
82	W	–
83	B	–
84	R	–
85	G	–
86	SHIELD	–
87	G	–
88	L	–
89	P	– [Coupe models]
89	Y	– [Roadster models]
90	SHIELD	–
92	G	– [Coupe models]
92	LG	– [Roadster models]
93	R	– [Coupe models]
93	V	– [Roadster models]
94	SHIELD	– [Coupe models]
94	G	– [Roadster models]
95	SB	– [Coupe models]
95	LG	– [Roadster models]
97	LG	– [Coupe models]
97	Y	– [Roadster models]
98	V	– [Coupe models]
98	Y/B	– [Roadster models]
99	G	–
100	BR	– [Coupe models]
100	Y	– [Roadster models]

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

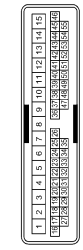
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
72	L	ROOM ANT 2–
73	P	ROOM ANT 2+
74	SB	PASSENGER DOOR ANT–
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT–
77	LG	DRIVER DOOR ANT+
78	L	ROOM ANT 1–
79	R	ROOM ANT 1+
80	GR	NATS ANT AMP
81	W	NATS ANT AMP
82	R	IGN RELAY (F/B) CONT
83	GR	KYLS ENT RECEIVER (FRONT) COMM
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CAN–L
91	L	CAN–H
92	LG	KEY SLOT ILL
93	V	ON IND
95	O	ACC RELAY CONT
96	Y	A/T SHIFT SELECTOR POWER SUPPLY
99	R	SHIFT P/CLUTCH PEDAL POS SW
100	GR	PASSENGER DOOR REQUEST SW
101	Y	DRIVER DOOR REQUEST SW
102	O	BLOWER FAN MOTOR RELAY CONT
103	LG	KYLS ENT RECEIVER (FRONT) PWR SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	P	HAZARD SW

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

H.S.



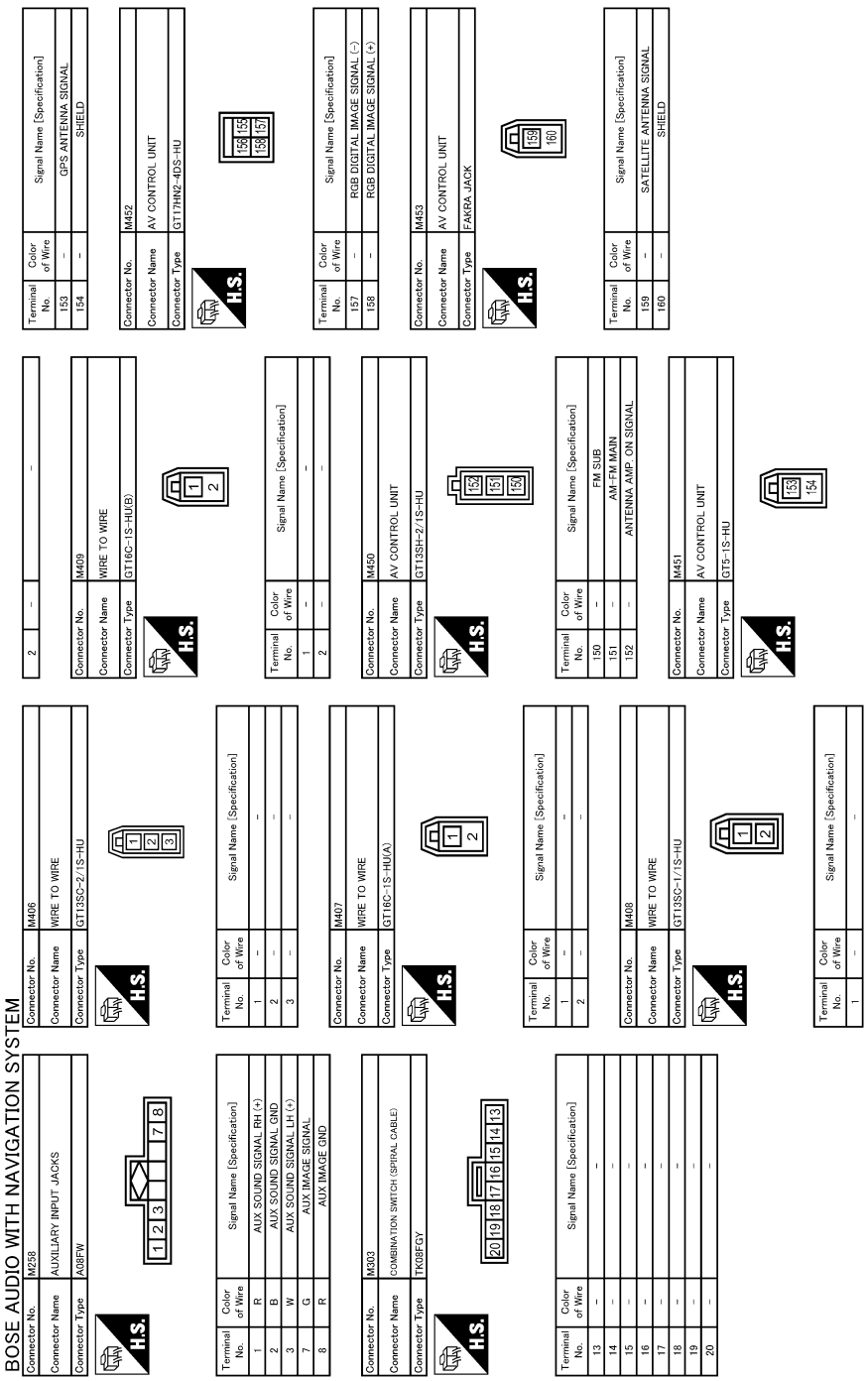
Terminal No.	Color of Wire	Signal Name [Specification]
10	G	–
11	V	–
12	LG	–
13	V	–
14	B	–
15	W	–
19	Y	–
23	Y/B	–
25	W	–
26	SHIELD	–
35	B	–
44	O	–
50	Y	–
51	GR	–
52	W	–
53	G	–
54	R	–
55	R	–

Connector No.	M253
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH

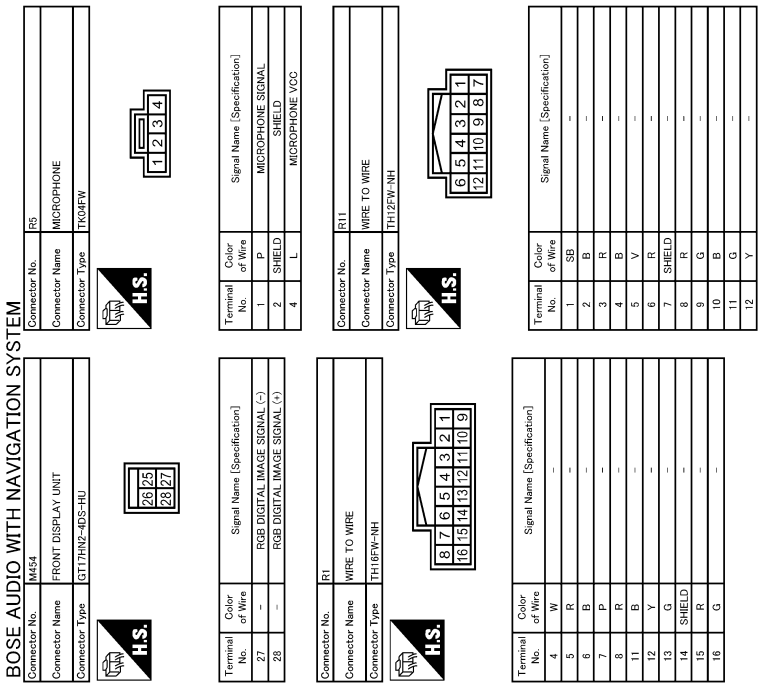
H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	SHIELD	–
2	B	–
3	R	–
4	W	–
5	P	– [Coupe models]
5	G	– [Roadster models]
6	L	– [Coupe models]
6	R	– [Roadster models]
7	SHIELD	–
8	SHIELD	–
9	G	–
10	R	–

JRNWC4515GB



JRNWC4516GB



JRNWC4517GB

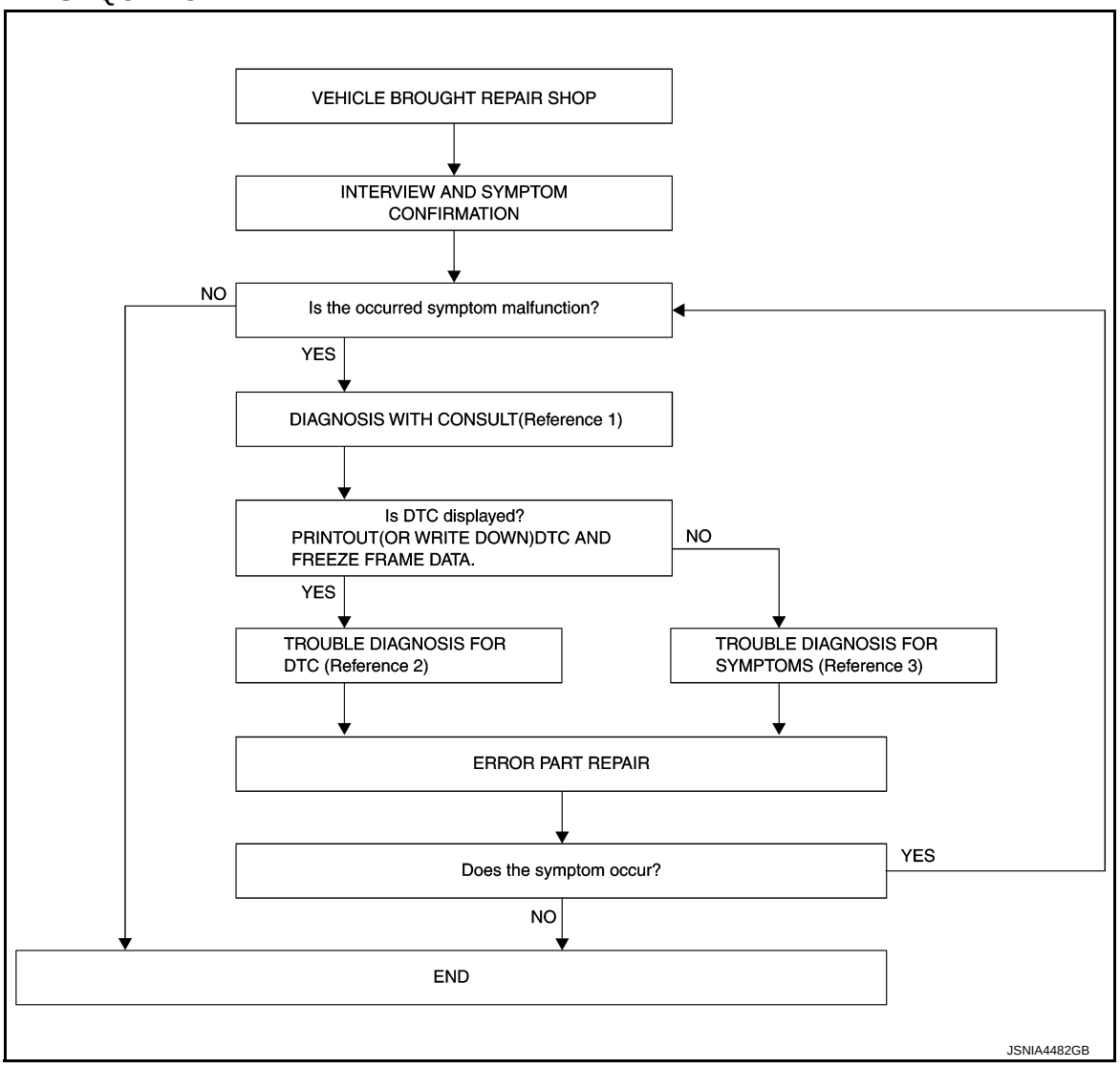
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009359336

OVERALL SEQUENCE



- Reference 1··· Refer to AV-163, "CONSULT Function (MULTI AV)".
- Reference 2··· Refer to AV-173, "DTC Index".
- Reference 3··· Refer to AV-256, "Symptom Table".

DETAILED FLOW

1. INTERVIEW AND SYMPTOM CONFIRMATION

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

Is the occurred symptom malfunction?

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

2. DIAGNOSIS WITH CONSULT

1. Connect CONSULT and perform a self-diagnosis for “MULTI AV”. Refer to AV-163, "CONSULT Function (MULTI AV)".
   NOTE:
   Skip to step 4 of the diagnosis procedure if “MULTI AV” is not displayed.
2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Is DTC displayed?

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

3. TROUBLE DIAGNOSIS FOR DTC

1. Check the DTC indicated in the self-diagnosis results.
2. Perform the relevant diagnosis referring to the DTC Index. Refer to AV-173, "DTC Index".

>> GO TO 5.

4. TROUBLE DIAGNOSIS FOR SYMPTOMS

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-256, "Symptom Table".

>> GO TO 5.

5. ERROR PART REPAIR

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

Does the symptom occur?

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

Description

INFOID:0000000009359337

BEFORE REPLACEMENT

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

AFTER REPLACEMENT

CAUTION:

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

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

Work Procedure

INFOID:0000000009359338

1.SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “Before Replace ECU” to save or print current vehicle specification. Refer to AV-203, "Description".

NOTE:

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

>> GO TO 2.

2.REPLACE AV CONTROL UNIT

Replace AV control unit. Refer to AV-270, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “After Replace ECU” or “Manual Configuration” to write vehicle specification. Refer to AV-203, "Work Procedure".

>> GO TO 4.

4.OPERATION CHECK

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

>> WORK END

CONFIGURATION (AV CONTROL UNIT)

Description

INFOID:0000000009359339

- Since vehicle specifications are not included in the AV control unit after replacement, it is required to write vehicle specifications with CONSULT.
- The AV control unit configuration includes functions as follows.

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

Work Procedure

INFOID:0000000009359340

1.WRITE VEHICLE SPECIFICATION

CONSULT Configuration
Write vehicle specification into AV control unit.

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

2.WRITE STORED DATA

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

>> GO TO 4.

3.MANUALLY WRITE VEHICLE SPECIFICATION

CONSULT Configuration
Perform “Manual Configuration.” Refer to the Configuration List to write vehicle specification into the AV control unit. Refer to AV-203, "Configuration List".
NOTE:
If selection items are not displayed on the CONSULT screen, touch “NEXT.”

>> GO TO 4.

4.OPERATION CHECK

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

>> WORK END

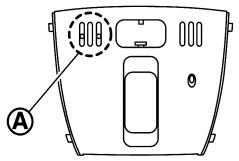
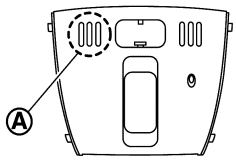
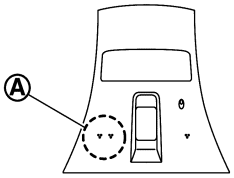
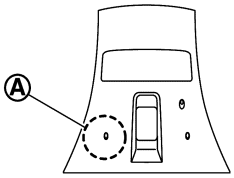
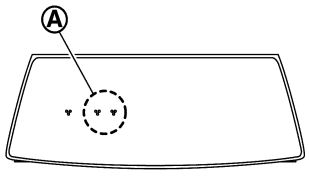
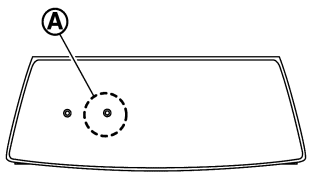
Configuration List

INFOID:0000000009359341

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

MANUAL SETTING ITEM		Detail
Items	Setting value	
STEERING	LHD	LHD models
	RHD	RHD models
SOUND SYSTEM	BASE	Without BOSE system
	BOSE	With BOSE system
CAMERA SYSTEM	NONE/AVM	Without camera system or with around view monitor system
	REAR	With rear view monitor system
	REAR+SIDE	With rear view monitor system and front-side view monitor function
MICROPHONE	DIRECTIONAL MIC	With directional microphone*
	NON-DIRECTIONAL MIC	With non-directional microphone*

NOTE:
- AVM: Around view monitor
- Some manual setting items may not be displayed, depending on the vehicle specifications.
- *: In the following table, find an illustration that the Ⓐ part matches the vehicle and select microphone type.

Directional microphone	Non-directional microphone
 JSNIA5541ZZ Ⓐ: Microphone installation position	 JSNIA5542ZZ Ⓐ: Microphone installation position
 JSNIA5543ZZ Ⓐ: Microphone installation position	 JSNIA5544ZZ Ⓐ: Microphone installation position
 JSNIA5545ZZ Ⓐ: Microphone installation position	 JSNIA5546ZZ Ⓐ: Microphone installation position

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000009359342

CAN (Controller Area Network) is a serial communication line for real-time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independently). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart. Refer to LAN-25, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000009359343

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Probable malfunction location
U1000	CAN COMM CIRCUIT [U1000]	AV control unit is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system.

Diagnosis Procedure

INFOID:0000000009359344

1.PERFORM SELF-DIAGNOSTIC

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

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to “LAN system”. Refer to LAN-15, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI section. Refer to GI-45, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000009359345

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Probable malfunction factor
U1010	CONTROL UNIT (CAN) [U1010]	CAN initial diagnosis malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1200 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359346

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1200	Cont Unit [U1200]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1201 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359347

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1201	GYRO NO CONN [U1201]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1202 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359348

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1202	G-SENSOR NO CONN [U1202]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1204 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359349

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1204	GPS CONN [U1204]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359350

1.PERFORM THE SELF-DIAGNOSIS

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

Is any DTC detected?

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

U1205 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359351

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1205	GPS ROM [U1205]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359352

1.PERFORM THE SELF-DIAGNOSIS

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

Is any DTC detected?

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

U1206 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359353

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1206	GPS RAM [U1206]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359354

1.PERFORM THE SELF-DIAGNOSIS

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

Is any DTC detected?

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

U1207 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359355

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1207	GPS RTC [U1207]	GPS malfunction is detected.	An intermittent error caused by strong radio interference may be detected unless any symptom (GPS reception error, etc.) occurs. Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359356

1.PERFORM THE SELF-DIAGNOSIS

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

Is any DTC detected?

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

U1216 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359357

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1216	CAN CONT [U1216]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1217 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359358

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1217	BLUETOOTH MODULE [U1217]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1218 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359359

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1218	HDD CONN [U1218]	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359360

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U1219 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359361

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1219	HDD READ [U1219]	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359362

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U121A AV CONTROL UNIT

DTC Logic

INFOID:0000000009359363

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U121A	HDD WRITE [U121A]	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359364

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U121B AV CONTROL UNIT

DTC Logic

INFOID:0000000009359365

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U121B	HDD COMM [U121B]	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359366

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U121C AV CONTROL UNIT

DTC Logic

INFOID:0000000009359367

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U121C	HDD ACCESS [U121C]	AV control unit malfunction is detected.	• If the music box function has no malfunctions, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359368

1.CHECK MUSIC BOX FUNCTION

Is music box function normal?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U121D AV CONTROL UNIT

DTC Logic

INFOID:0000000009359369

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U121D	DSP CONN [U121D]	AV control unit malfunction is detected.	• If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359370

1.CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U121E AV CONTROL UNIT

DTC Logic

INFOID:0000000009359371

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U121E	DSP COMM [U121E]	AV control unit malfunction is detected.	• If a disc can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359372

1.CHECK PLAYBACK OF A DISK (CD)

Can a disk (CD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U1225 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359373

DTC DETECTION LOGIC

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

U1227 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359374

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1227	DVD COMM [U1227]	AV control unit malfunction is detected.	• If DVD can be played, then there is a possibility of the detection of a temporary malfunction. • Replace the AV control unit if the malfunction occurs constantly.

Diagnosis Procedure

INFOID:0000000009359375

1.CHECK PLAYBACK OF A DISK (DVD)

Can a disc (DVD) be played?

YES >> Malfunction may be detected transitory.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U1228 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359376

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1228	SUB CPU CONN [U1228]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1229 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359377

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1229	iPod CERTIFICATION [U1229]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U122A AV CONTROL UNIT

DTC Logic

INFOID:0000000009359378

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

Diagnosis Procedure

INFOID:0000000009359379

1.PERFORM THE SELF-DIAGNOSIS

When U122A is detected, write configuration data with “MULTI AV” of CONSULT.

>> Write configuration data with “MULTI AV” of CONSULT. Refer to AV-203, "Work Procedure".

U122E AV CONTROL UNIT

DTC Logic

INFOID:0000000009359380

DTC DETECTION LOGIC

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U122E	Built-in AUDIO CONN [U122E]	AV control unit malfunction is detected.	Replace the AV control unit if the malfunction occurs constantly.

U1232 STEERING ANGLE SENSOR

DTC Logic

INFOID:0000000009359381

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1232	ST ANGLE SEN CALIB [1232]	Predictive course line center position adjustment of the steering angle sensor is incomplete.	Adjust the predictive course line center position of the steering angle sensor.

Diagnosis Procedure

INFOID:0000000009359382

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

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

>> Adjusts the steering angle sensor neutral position on ABS actuator and electrical unit (control unit) side. Refer to BRC-8, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement".

U1243 DISPLAY UNIT

DTC Logic

INFOID:0000000009359383

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

Diagnosis Procedure

INFOID:0000000009359384

1.CHECK FRONT DISPLAY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check front display unit power supply and ground circuit. Refer to AV-240, "FRONT DISPLAY UNIT : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK CONTINUITY COMMUNICATION CIRCUIT

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

Front display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M75	9	M86	89	Existed
	10		73	

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

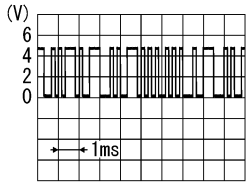
Front display unit		Ground	Continuity
Connector	Terminals		
M75	9		Not existed
	10		

Is the inspection result normal?

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

3.CHECK COMMUNICATION SIGNAL

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

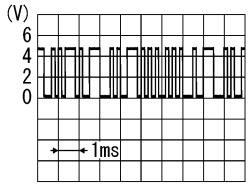
(+)		(–)	Condition	Reference value
Front display unit				
Connector	Terminal			
M75	9	Ground	When adjusting display brightness.	 PKIB5039J

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

4. CHECK COMMUNICATION SIGNAL

Check signal between front display unit harness connector and ground.

(+)		(–)	Condition	Reference value
Front display unit				
Connector	Terminal			
M75	10	Ground	When adjusting display brightness.	 PKIB5039J

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace front display unit. Refer to AV-272, "Removal and Installation".

U1244 GPS ANTENNA

DTC Logic

INFOID:0000000009359385

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

Diagnosis Procedure

INFOID:0000000009359386

1.GPS ANTENNA CHECK

Visually check GPS antenna and antenna feeder.

Is the inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U1258 SATELLITE RADIO ANTENNA

DTC Logic

INFOID:0000000009359387

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

Diagnosis Procedure

INFOID:0000000009359388

1. SATELLITE RADIO ANTENNA CHECK

Visually check satellite radio antenna and antenna feeder.

Is the inspection result normal?

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

2. CHECK AV CONTROL UNIT VOLTAGE

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U1263 USB

DTC Logic

INFOID:0000000009359389

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

Diagnosis Procedure

INFOID:0000000009359390

1.CHECK USB HARNESS

Visually check USB harness.

Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-270, "Removal and Installation"
NO >> Replace USB harness.

U1264 ANTENNA AMP.

DTC Logic

INFOID:0000000009359391

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1264	ANTENNA AMP TERMINAL [U1264]	Radio antenna amp. ON circuit is open or shorted.	• Check antenna amp. ON signal circuit between the AV control unit and radio antenna amp. (coupe models) • Check antenna amp. ON signal circuit between the AV control unit and antenna base. (roadster models)

COUPE

COUPE : Diagnosis Procedure

INFOID:0000000009359392

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

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

AV control unit		Antenna amp.		Continuity
Connector	Terminals	Connector	Terminals	
M450	152	D304	1	Existed

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

AV control unit		Ground	Continuity
Connector	Terminals		
M450	152		Not existed

Is the inspection result normal?

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

2.CHECK VOLTAGE AV CONTROL UNIT

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

(+)		(–)	Voltage (Approx.)
AV control unit			
Connector	Terminals		
M450	152	Ground	12.0 V

Is the inspection result normal?

YES >> Replace antenna amp. Refer to AV-280, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

ROADSTER

ROADSTER : Diagnosis Procedure

INFOID:0000000009359393

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND ANTENNA BASE

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

AV control unit		Antenna base		Continuity
Connector	Terminals	Connector	Terminals	
M450	152	B431	1	Existed

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

AV control unit		Ground	Continuity
Connector	Terminals		
M450	152		Not existed

Is the inspection result normal?

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

2.CHECK VOLTAGE AV CONTROL UNIT

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

AV control unit		(–)	Voltage (Approx.)
Connector	Terminals		
M450	152	Ground	12.0 V

Is the inspection result normal?

YES >> Replace antenna base Refer to AV-281, "Removal and Installation" .
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U1265 BOSE AMP.

DTC Logic

INFOID:0000000009359394

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

Diagnosis Procedure

INFOID:0000000009359395

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

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

AV control unit		BOSE amp.		Continuity
Connector	Terminals	Connector	Terminals	
M84	1	B41	31	Existed

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

AV control unit		Ground	Continuity
Connector	Terminals		
M84	1		Not existed

Is the inspection result normal?

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

2. CHECK VOLTAGE AV CONTROL UNIT

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

(+)		(–)	Voltage (Approx.)
AV control unit			
Connector	Terminals		
M84	1	Ground	12.0 V

Is the inspection result normal?

YES >> Replace BOSE amp. Refer to AV-278, "COUPE : Removal and Installation" (coupe type), or AV-278, "ROADSTER : Removal and Installation" (roadster models).
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

U1300 AV COMM CIRCUIT

Description

INFOID:0000000009359396

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

SELF-DIAGNOSIS RESULTS DISPLAY ITEM

DTC	Display contents of CONSULT	DTC detection condition	Possible malfunction factor
U1300 U1240	• AV COMM CIRCUIT [U1300] • SWITCH CONN [U1240]	When either one of the following items are detected: • Multifunction switch power supply and ground circuits are malfunctioning. • AV communication circuits between AV control unit and multifunction switch are malfunctioning.	• Multifunction switch power supply and ground circuits. • AV communication circuits between AV control unit and multifunction switch.

U1310 AV CONTROL UNIT

DTC Logic

INFOID:0000000009359397

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

POWER SUPPLY AND GROUND CIRCUIT

AV CONTROL UNIT

AV CONTROL UNIT : Diagnosis Procedure

INFOID:0000000009359398

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between AV control unit harness connectors and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M84	19	OFF	Battery voltage
ACC power supply		7	ACC	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M84	20	OFF	Existed

Is the inspection result normal?

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

FRONT DISPLAY UNIT

FRONT DISPLAY UNIT : Diagnosis Procedure

INFOID:0000000009359399

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	19

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between front display unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Value (Approx.)
Battery power supply	M75	11	OFF	Battery voltage
ACC power supply		23	ACC	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	M75	12	OFF	Existed

Is the inspection result normal?

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

BOSE AMP.

BOSE AMP. : Diagnosis Procedure

INFOID:0000000009359400

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	8

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between BOSE amp. harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage (Approx.)
Battery power supply	B42	11	OFF	Battery voltage

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

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

Signal name	Connector No.	Terminal No.	Ignition switch position	Continuity
Ground	B42	12	OFF	Existed

Is the inspection result normal?

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

RGB DIGITAL IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000009359401

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

Diagnosis Procedure

INFOID:0000000009359402

1.CHECK CONTINUITY RGB DIGITAL IMAGE SIGNAL CIRCUIT

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

Front display unit		AV control unit		Continuity
Connector	Terminals	Connector	Terminals	
M454	27	M452	157	Existed
	28		158	

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

Front display unit		Ground	Continuity
Connector	Terminals		
M454	27		Not existed
	28		

Is the inspection result normal?

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

2.CHECK RGB DIGITAL IMAGE SIGNAL

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

(+)		(–)	Condition	Voltage (Approx.)
Front display unit				
Connector	Terminal			
M454	27	Ground	Not connected connector.	1.3 V
	28			

Is the inspection result normal?

YES >> Replace front display unit. Refer to AV-272, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

COMPOSITE IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000009359403

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

Diagnosis Procedure

INFOID:0000000009359404

1.CHECK CONTINUITY COMPOSITE IMAGE SIGNAL CIRCUIT

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

AV control unit		Front display unit		Continuity
Connector	Terminal	Connector	Terminal	
M86	68	M75	18	Existed

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

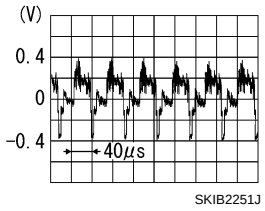
AV control unit		Ground	Continuity
Connector	Terminal		
M86	68		Not existed

Is the inspection result normal?

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

2.CHECK AUX COMPOSITE SIGNAL

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

(+) AV control unit		(–)	Condition	Reference value
Connector	Terminal			
M86	68	Ground	At DVD image is displayed.	

SKIB2251J

Is the inspection result normal?

YES >> Replace front display unit. Refer to AV-272, "Removal and Installation".
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

AUX IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000009359405

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

Diagnosis Procedure

INFOID:0000000009359406

1.CHECK CONTINUITY AUX IMAGE SIGNAL CIRCUIT

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

Auxiliary input jacks		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M258	7	M85	26	Existed

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

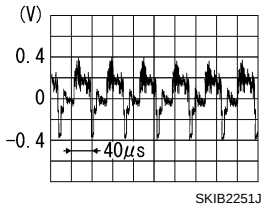
Auxiliary input jacks		Ground	Continuity
Connector	Terminal		
M258	7		Not existed

Is the inspection result normal?

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

2.CHECK AUX IMAGE SIGNAL

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

(+)		(–)	Condition	Reference value
Auxiliary input jacks				
Connector	Terminal			
M258	7	Ground	At AUX image is displayed.	

SKIB2251J

Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-270, "Exploded View".
NO >> Check that there is no malfunction in the external device.

DISK EJECT SIGNAL CIRCUIT

Description

INFOID:0000000009359407

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

Diagnosis Procedure

INFOID:0000000009359408

1.CHECK CONTINUITY DISK EJECT SIGNAL CIRCUIT

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

Multifunction switch		AV control unit		Continuity
Connector	Terminal	Connector	Terminal	
M72	14	M85	29	Existed

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

Multifunction switch		Ground	Continuity
Connector	Terminal		
M72	14		Not existed

Is the inspection result normal?

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

2.CHECK AV CONTROL UNIT VOLTAGE

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

(+)		(–)	Condition	Voltage (Approx.)
AV control unit				
Connector	Terminal			
M85	29	Ground	Pressing the eject switch	0 V
			Except for above	5.0 V

Is the inspection result normal?

YES >> Replace preset switch. Refer to AV-283, "Exploded View".
NO >> Replace AV control unit. Refer to AV-270, "Exploded View".

MICROPHONE SIGNAL CIRCUIT

Description

INFOID:0000000009359409

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

Diagnosis Procedure

INFOID:0000000009359410

1.CHECK CONTINUITY BETWEEN AV CONTROL UNIT AND MICROPHONE CIRCUIT

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

AV control unit		Microphone		Continuity
Connector	Terminals	Connector	Terminals	
M86	71	R5	2	Existed
	72		4	
	87		1	

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

AV control unit		Ground	Continuity
Connector	Terminals		
M86	72		Not existed
	87		

Is the inspection result normal?

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

2.CHECK VOLTAGE MICROPHONE VCC

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

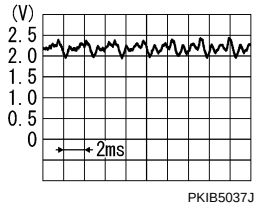
(+)		(–)		Voltage (Approx.)
AV control unit		AV control unit		
Connector	Terminal	Connector	Terminal	
M86	72	M86	71	5.0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

3.CHECK MICROPHONE SIGNAL

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

(+)		(–)		Condition	Reference value
AV control unit		AV control unit			
Connector	Terminal	Connector	Terminal		
M86	87	M86	71	Give a voice.	

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Is the inspection result normal?

YES >> Replace AV control unit. Refer to AV-270, "Removal and Installation".
NO >> Replace microphone. Refer to AV-287, "Removal and Installation".

CAMERA IMAGE SIGNAL CIRCUIT

Description

INFOID:0000000009359411

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

Diagnosis Procedure

INFOID:0000000009359412

1.CHECK CONTINUITY CAMERA POWER SUPPLY CIRCUIT

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

AV control unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M85	22	B157	1	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M85	22		Not existed

Is inspection result normal?

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

2.CHECK VOLTAGE CAMERA POWER SUPPLY

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

(+)		(–)	Condition	Voltage (Approx.)
AV control unit				
Connector	Terminal			
M85	22	Ground	Shift position is “R”.	6.0 V

Is inspection result normal?

YES >> GO TO 3.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

3.CHECK CONTINUITY CAMERA IMAGE SIGNAL CIRCUIT

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

Front display unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	
M75	8	B157	3	Existed

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

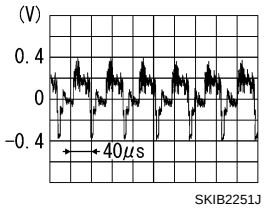
Front display unit		Ground	Continuity
Connector	Terminal		
M75	8		Not existed

Is inspection result normal?

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

4. CHECK CAMERA IMAGE SIGNAL

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

(+)		(–)	Condition	Reference value
Front display unit				
Connector	Terminal			
M75	8	Ground	At rear view camera image is displayed.	

SKIB2251J

Is inspection result normal?

YES >> Replace front display unit. Refer to AV-272, "Removal and Installation".
NO >> Replace rear view camera. Refer to AV-292, "Removal and Installation".

STEERING SWITCH SIGNAL A CIRCUIT

Description

INFOID:0000000009359413

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000009359414

1.CHECK STEERING SWITCH SIGNAL A CIRCUIT

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

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M84	6	M36	24	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M84	6		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-16, "Removal and Installation".

3.CHECK AV CONTROL UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
AV control unit		AV control unit		
Connector	Terminal	Connector	Terminal	
M84	6	M84	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-250, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-284, "Removal and Installation".

Component Inspection

INFOID:0000000009359415

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

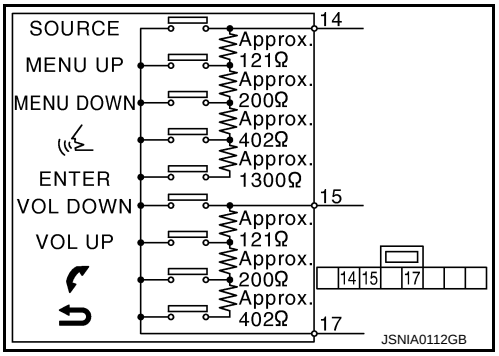
Standard

Between terminals 14 and 17

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

Between terminals 15 and 17

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



STEERING SWITCH SIGNAL B CIRCUIT

Description

INFOID:0000000009359416

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000009359417

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

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

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M84	16	M36	31	Existed

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

AV control unit		Ground	Continuity
Connector	Terminal		
M84	16		Not existed

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-16, "Removal and Installation".

3.CHECK AV CONTROL UNIT VOLTAGE

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

(+)		(–)		Voltage (Approx.)
AV control unit		AV control unit		
Connector	Terminal	Connector	Terminal	
M84	16	M84	15	5.0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-252, "Component Inspection".

Is the inspection result normal?

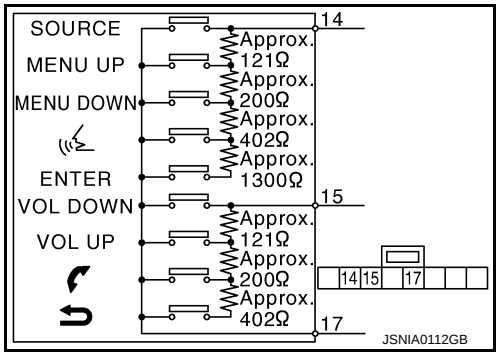
YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-284, "Removal and Installation".

Component Inspection

INFOID:0000000009359418

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

Standard



Between terminals 14 and 17

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

Between terminals 15 and 17

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

STEERING SWITCH GROUND CIRCUIT

Description

INFOID:0000000009359419

Transmits the steering switch signal to AV control unit.

Diagnosis Procedure

INFOID:0000000009359420

1.CHECK STEERING SWITCH SIGNAL GND CIRCUIT

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

AV control unit		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M84	15	M36	33	Existed

3. Connect AV control unit connector.

Is the inspection result normal?

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

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace spiral cable. Refer to SR-16, "Removal and Installation".

3.CHECK GROUND CIRCUIT

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

AV control unit		Ground	Continuity
Connector	Terminal		
M84	15		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace AV control unit. Refer to AV-270, "Removal and Installation".

4.CHECK STEERING SWITCH

1. Turn ignition switch OFF.
2. Check steering switch. Refer to AV-254, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to AV-284, "Removal and Installation".

Component Inspection

INFOID:0000000009359421

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

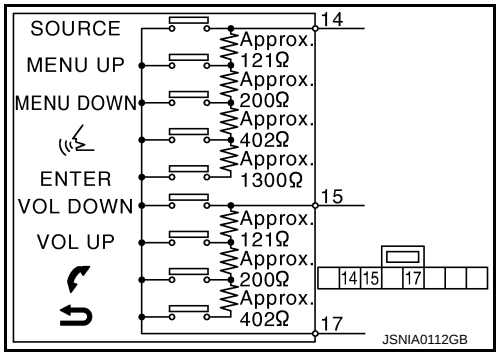
Standard

Between terminals 14 and 17

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

Between terminals 15 and 17

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



SYMPTOM DIAGNOSIS

MULTI AV SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000009359422

RELATED TO NAVIGATION

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
Multifunction switch and preset switch operation does not work.	• All switches cannot be operated. • “MULTI AV” is displayed on system selection screen when the CONSULT is started.	• Multifunction switch power supply and ground circuit. • AV communication circuit between AV control unit and multifunction switch. Perform CONSULT self-diagnosis. Refer to AV-163, "CONSULT Function (MULTI AV)".
	• All switches cannot be operated. • “MULTI AV” is not displayed on system selection screen when the CONSULT is initialized.	AV control unit power supply and ground circuit malfunction. Refer to AV-240, "AV CONTROL UNIT : Diagnosis Procedure".
	Only specified switch cannot be operated.	Multifunction switch or preset switch malfunction. Perform multifunction switch and preset switch self-diagnosis function. Refer to AV-152, "On Board Diagnosis Function".
Fuel economy display is abnormal.	There is malfunction in the CONSULT self-diagnosis result.	Perform detected DTC self-diagnosis. Refer to AV-163, "CONSULT Function (MULTI AV)".
	There is no malfunction in the self-diagnosis results.	Ignition signal circuit malfunction. Refer to AV-240, "AV CONTROL UNIT : Diagnosis Procedure".
Guide sound is not heard or too low.	On the setting display select “system sound (guide sound volume, etc.),” and confirm that guide sound is ON.	Voice guidance signal circuit malfunction.

RELATED TO HANDS-FREE PHONE (EXCEPT FOR MEXICO)

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

Check Compatibility

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

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

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

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

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

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
Hands-free phone cannot be established.	• Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
The other party's voice cannot be heard by hands-free phone.	Check the “microphone speaker” in Inspection & Adjustment Mode if sound is heard.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-246, "Diagnosis Procedure".
The system cannot be operated.	Coupe models • The voice recognition can be controlled. • Steering switch's ”VOL UP”, “VOL DOWN”, “↩” switch works, but “📞” it does not work. Roadster models • The retractable soft top is fully closed. • The voice recognition can be controlled. • Steering switch's ”VOL UP”, “VOL DOWN”, “↩” switch works, but “📞” it does not work.	Steering switch malfunction.
	Coupe models • The retractable soft top is fully closed. • The voice recognition can be controlled. • Steering switch's “📞”, ”VOL UP”, “VOL DOWN”, “↩” switches do not work. Roadster models • The retractable soft top is fully closed. • The voice recognition can be controlled. • Steering switch's “📞”, ”VOL UP”, “VOL DOWN”, “↩” switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-252, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-254, "Diagnosis Procedure".

RELATED TO HANDS-FREE PHONE (FOR MEXICO)

Symptoms	Check items	Probable malfunction location
Does not recognize cellular phone connection. (no connection is displayed on the display at the guide.)	Repeat the registration of cellular phone.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
Hands-free phone cannot be established.	• Hands-free phone operation can be made, but the communication cannot be established. • Hands-free phone operation can be performed, however, voice between each other cannot be heard during the conversation.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
The other party's voice cannot be heard by hands-free phone.	Check the “microphone speaker” in Inspection & Adjustment Mode if sound is heard.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
Originating sound is not heard by the other party with hands-free phone communication.	Sound operation function is normal.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
	Sound operation function does not work.	Microphone signal circuit malfunction. Refer to AV-246, "Diagnosis Procedure".
The system cannot be operated.	Coupe models • The voice recognition can be controlled. • Steering switch's ”VOL UP”, “VOL DOWN”, “↩” switch works, but “📞” it does not work. Roadster models • The retractable soft top is fully closed. • The voice recognition can be controlled. • Steering switch's ”VOL UP”, “VOL DOWN”, “↩” switch works, but “📞” it does not work.	Steering switch malfunction.
	Coupe models • The retractable soft top is fully closed. • The voice recognition can be controlled. • Steering switch's “📞”, ”VOL UP”, “VOL DOWN”, “↩” switches do not work. Roadster models • The retractable soft top is fully closed. • The voice recognition can be controlled. • Steering switch's “📞”, ”VOL UP”, “VOL DOWN”, “↩” switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-252, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-254, "Diagnosis Procedure".

RELATED TO RGB IMAGE

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
RGB image is not shown.	—	RGB digital image signal circuit malfunction.

RELATED TO VOICE CONTROL

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location
The voice cannot be controlled even if the voice control screen is displayed.	Voice sounds at “Voice Microphone Test” of Confirmation/Adjustment mode.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".
	Voice does not sound at “Voice Microphone Test” of Confirmation/Adjustment mode.	Microphone circuit malfunction. Refer to AV-246, "Diagnosis Procedure".
The voice cannot be controlled (Voice control screen is not displayed).	• Steering switch's “SOURCE”, “MENU UP”, “MENU DOWN”, “ENTER” switch works, but “” it does not work. • Hands-free phone system cannot be operated.	Roof status signal circuit malfunction.
	• Steering switch's “SOURCE”, “MENU UP”, “MENU DOWN”, “ENTER” switch works, but “” it does not work. • Hands-free phone system can be operated.	Steering switch malfunction.
	Steering switch's “SOURCE”, “MENU UP”, “MENU DOWN”, “”, “ENTER” switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-250, "Diagnosis Procedure".
	All steering switches do not work.	Steering switch ground circuit malfunction. Refer to AV-254, "Diagnosis Procedure".

RELATED TO AUDIO

Coupe Models

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	—	Disk eject signal circuit malfunction. Refer to AV-245, "Diagnosis Procedure".
No sound comes out or the level of the sound is low.	No sound from all speakers.	• BOSE amp. ON signal circuit malfunction. • BOSE amp. power supply and ground circuits malfunction. Refer to AV-241, "BOSE AMP. : Diagnosis Procedure".
	Sound is not heard from woofer.	Sound signal (woofer) circuit malfunction.
	Only a certain speaker (front right, front left, rear right, or rear left) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and BOSE amp. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Malfunction in AV control unit. • Malfunction in BOSE amp.
Noise is mixed with audio.	Noise comes out from all speaker.	• Malfunction in AV control unit. • Malfunction in BOSE amp.
	Noise comes out only from a certain speaker (front right, front left, rear right, or rear left).	• Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and BOSE amp. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Poor installation of speaker (e.g. backlash and looseness) • Malfunction in AV control unit. • Malfunction in BOSE amp.
	Noise is mixed with radio only (when the car hits a bump or while driving over bad roads).	Poor connector connection of antenna or antenna feeder.

Symptoms	Check items	Probable malfunction location
Radio is not received or poor reception.	• Other audio sounds are normal. • Any radio cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	• Antenna amp. ON signal circuit malfunction. • Poor connector connection of antenna or antenna feeder.
Satellite radio is not received.	There is malfunction in the CONSULT self-diagnosis result. Refer to AV-163, "CONSULT Function (MULTI AV)".	• Malfunction in antenna, antenna feeder, or AV control unit. Perform DTC diagnosis. Refer to AV-173, "DTC Index". • Poor continuity in antenna feeder. • Poor connector connection of antenna or antenna feeder.
	There is no malfunction in the CONSULT self-diagnosis result. Refer to AV-163, "CONSULT Function (MULTI AV)".	• Poor continuity in antenna feeder. • Poor connector connection of antenna or antenna feeder. • Loose satellite radio antenna mounting nut. Refer to AV-291, "Exploded View".

Roadster Models

Symptoms	Check items	Probable malfunction location
The disk cannot be removed.	—	Disk eject signal circuit malfunction. Refer to AV-245, "Diagnosis Procedure".
No sound comes out or the level of the sound is low.	No sound from all speakers.	• BOSE amp. ON signal circuit malfunction. • BOSE amp. power supply and ground circuits malfunction. Refer to AV-241, "BOSE AMP. : Diagnosis Procedure".
	Sound is not heard from rear woofer.	Sound signal (woofer) circuit malfunction.
	Only a certain speaker (front right, front left, rear right, or rear left) does not output sound.	• Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and BOSE amp. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Malfunction in AV control unit. • Malfunction in BOSE amp.
Noise is mixed with audio.	Noise comes out from all speaker.	• Malfunction in AV control unit. • Malfunction in BOSE amp.
	Noise comes out only from a certain speaker (front right, front left, rear right, or rear left).	• Poor connector connection of speaker. • Sound signal circuit malfunction between AV control unit and BOSE amp. • Sound signal circuit malfunction between BOSE amp. and speaker. • Malfunction in speaker. • Poor installation of speaker (e.g. backlash and looseness) • Malfunction in AV control unit. • Malfunction in BOSE amp.
	Noise is mixed with radio only (when the car hits a bump or while driving over bad roads).	• Poor connector connection of antenna or antenna feeder. • Loose antenna base mounting nut. Refer to AV-281, "Exploded View".
Radio is not received or poor reception.	• Other audio sounds are normal. • Any radio cannot be received or poor reception is caused even after moving to a service area with good reception (e.g. a place with clear view and no obstacles generating external noises).	• Antenna amp. ON signal circuit malfunction. • Poor connector connection of antenna or antenna feeder. • Loose antenna base mounting nut. Refer to AV-281, "Exploded View".

Symptoms	Check items	Probable malfunction location
Satellite radio is not received.	There is malfunction in the CONSULT self-diagnosis result. Refer to AV-163, "CONSULT Function (MULTI AV)".	• Malfunction in antenna, antenna feeder, or AV control unit. Perform DTC diagnosis. Refer to AV-173, "DTC Index". • Poor continuity in antenna feeder. • Poor connector connection of antenna or antenna feeder.
	There is no malfunction in the CONSULT self-diagnosis result. Refer to AV-163, "CONSULT Function (MULTI AV)".	• Poor continuity in antenna feeder. • Poor connector connection of antenna or antenna feeder. • Loose antenna base mounting nut. Refer to AV-281, "Exploded View".

RELATED TO USB

NOTE:

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

Trouble Diagnosis Chart by Symptom

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

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

RELATED TO DVD MODE

Symptoms	Check items	Probable malfunction location
The DVD cannot be removed.	—	Disk eject signal circuit malfunction between AV control unit and preset switch. Refer to AV-245, "Diagnosis Procedure".
DVD image is not displayed.	—	Perform CONSULT self-diagnosis. Refer to AV-163, "CONSULT Function (MULTI AV)" . When detecting no malfunction in those components, the following items are a possible cause. • Composite image signal circuits malfunction. Refer to AV-243, "Diagnosis Procedure".
Audio sound is not heard.	No sound from all speakers.	• BOSE amp. ON signal circuit. • BOSE amp. power supply and ground circuit. Refer to AV-241, "BOSE AMP. : Diagnosis Procedure".
	Sound is heard only from specific places.	Sound signal circuit of suspect system.

RELATED TO CAMERA

Symptoms	Check items	Probable malfunction location
Camera image is not shown. (Vehicle width and predictive course line are displayed.)	—	Camera image signal circuit. Refer to AV-248, "Diagnosis Procedure".
Camera image does not switch.	Select “Camera Cont.” of Confirmation/ Adjustment mode, Reverse Sensor is not turned ON at “Connection Confirmation”.	Reverse signal circuit malfunction.
	Select “Camera Cont.” of Confirmation/ Adjustment mode, Reverse Sensor is turned ON at “Connection Confirmation”.	AV control unit malfunction. Replace AV control unit. Refer to AV-270, "Removal and Installation".

RELATED TO STEERING SWITCH

Trouble Diagnosis Chart by Symptom

Symptoms	Probable malfunction location
None of the steering switch operations work.	Steering switch ground circuit malfunction. Refer to AV-254, "Diagnosis Procedure".
Only specified switch cannot be operated.	Steering switch malfunction.
Steering switch's “SOURCE”, “MENU UP”, “MENU DOWN”,“ ”, “ENTER”switches do not work.	Steering switch signal A circuit malfunction. Refer to AV-250, "Diagnosis Procedure".
Steering switch's “ ”, “VOL UP”, “VOL DOWN”, “ ” switches do not work.	Steering switch signal B circuit malfunction. Refer to AV-252, "Diagnosis Procedure".

RELATED TO AUXILIARY INPUT

NOTE:

Check that there is no malfunction of AUX equipment main body before performing a diagnosis.

Trouble diagnosis chart by symptom

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.	AUX sound signal circuit.
Image is not displayed when AUX mode is selected.	DVD image is displayed.	AUX image signal circuit malfunction. Refer to AV-244, "Diagnosis Procedure".
	DVD image is not displayed.	Composite image signal circuit malfunction. Refer to AV-243, "Diagnosis Procedure".

NORMAL OPERATING CONDITION

Description

INFOID:0000000009359423

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

BASIC OPERATIONS

Symptom	Possible cause	Possible solution
No image is displayed.	The brightness is at the lowest setting.	Adjust the brightness of the display.
	The systems in the video mode.	Press “DISC-AUX” to change the mode.
	The display is turned off.	Press “☀/☽” to turn on the display.
	The interior of the vehicle becomes the a little less than 80°C (176°F) or high temperature, and the protection of the display acts, and a display is turned off.	Wait until the interior of the vehicle has cooled down.
Screen not clear.	Contrast setting is not appropriate.	Adjust the contrast of the display.
No voice guidance is available. Or The volume is too high or too low.	The volume is not set correctly, or it is turned off.	Adjust the volume of voice guidance.
	Voice guidance is not provided for certain streets (roads displayed in gray).	This is not a malfunction.
No map is displayed on the screen.	A screen other than map screen is displayed.	Press “MAP”.
The screen is too dim. The movement is slow.	The temperature in the interior of the vehicle is high.	Wait until the interior of the vehicle has cooled down.
Some pixels in the display are darker or brighter than others.	This condition is an inherent characteristic of liquid crystal displays.	This is not a malfunction.
Some menu items cannot be selected.	Some menu items become unavailable while the vehicle is driven.	Park the vehicle in a safe location, and then operate the navigation system.

NOTE:
Locations stored in the Address Book and other memory functions may be lost if the vehicle's battery is disconnected or becomes discharged. If this occurs, service the vehicle's battery as necessary and re-enter the information in the Address Book.

RELATED TO VOICE RECOGNITION

Related to Basic Operation

Symptom	Possible cause	Possible solution
The system does not recognize your command. or The system recognizes your command incorrectly	The interior of the vehicle is too noisy.	Close the windows or have other occupants quiet.
	The volume of your voice is too low.	Speak louder.
	The volume if your voice is too loud.	Speak softer.
	Your pronunciation is unclear.	Speak clearly.
	You are speaking before the voice recognition is ready	Press and release " " switch on the steering switch, and speak a command after the tone sounds.
	8 seconds or more have passed after you pressed and released " " switch on the steering switch.	Make sure to speak a command within 8 seconds after you press and release " " switch on the steering switch.
	Only a limited range of voice commands is usable for each screen.	Use a correct voice command appropriate for the current screen.
	The fan of the air conditioner is too loud.	Lower the fan speed as necessary as voice commands can be recognized more easily.
The system cannot be operated. (roadster models)	The retractable soft top is not closed properly.	• Close the retractable soft top. • Open and close the retractable soft top before operating the system. • Check if the retractable soft top warning lamp is lit in combination meter.

Related to Item Choice

The system should respond correctly to all voice commands without difficulty. If problems are encountered, follow the solutions given in this guide for the appropriate error.

Where the solutions are listed by number, try each solution in turn, starting with number one, until the problem is resolved.

Symptom/ error message	Solution
Displays "COMMAND NOT RECOGNIZED" or the system fails to interpret the command correctly.	1. Ensure that the command format is valid.
	2. Speak clearly without pausing between words and at a level appropriate to the ambient noise level.
	3. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. **NOTE:** If it is too noisy to use the phone, it is likely that voice commands will not be recognized.
	4. If optional words of the command have been omitted, then command should be tried with these in place.
The system consistently selects the wrong voicetag	1. Ensure that the voicetag requested matches what was originally stored. This can be confirmed by giving the "Addressbook" Directory or Phone Directory command.
	2. Replace one of the voicetags being confused with a different voicetag.

Related to Telephone

The system should respond correctly to all voice commands without difficulty. If problems are encountered, try the following solutions.

Where the solutions are listed by number, try each solution in turn, starting with number 1, until the problem is resolved.

Symptom	Solution
System fails to interpret the command correctly.	1. Ensure that the command is valid.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at level appropriate to the ambient noise level in the vehicle.
	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on). **NOTE:** If it is too noisy to use the phone, it is likely that the voice commands will not be recognized.
	5. If more than one command was said at a time, try saying the commands separately.
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See “Speaker adaptation (SA) mode” earlier in this section. Refer to “OWNER’S MANUAL”.
The system consistently selects the wrong voicetag	1. Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the “List Names” command.
	2. Replace one of the names being confused with a new name.

RELATED TO AUDIO

- The majority of the audio malfunctions are the result of outside causes (bad CD, electromagnetic interference, etc.). Check the symptoms below to diagnose the malfunction.
- The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and then determine the cause.

NOTE:

- CD-R is not guaranteed to play because they can contain compressed audio (MP3, WMA, AAC, M4A) or could be incorrectly mastered by the customer on a computer.
- Check if the CDs carry the Compact Disc Logo. If not, the disc is not mastered to the “red book” Compact Disc Standard and may not play.

Symptom	Cause and Counter measure
Cannot play	Check if the CD was inserted correctly.
	Check if the CD is scratched or dirty.
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA/AAC/M4A files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than “.MP3”, “.WMA”, “.AAC”, “.M4A”, “.mp3”, “.wma”, “.aac” or “.m4a” cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.
	Check if the disc or the file is generated in an irregular format, This may occur depending on the variation or the setting of MP3/WMA/AAC/M4A writing applications or other text editing applications.
	Check if the finalization process, such as session close and disc close, is done for the disc.
	Check if the CD is protected by copyright.
Poor sound quality	Check if the CD is scratched or dirty.
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA/AAC/M4A CD, or if it is a multisession disc, some time may be required before the music starts playing.
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width might not match the specifications. Try using the slowest writing speed.
Skipping with high bit rate files	Skipping may occur with large quantities if data such as for high bit rate data.

Symptom	Cause and Counter measure
Move immediately to the next song when playing	When a non-MP3/WMA/AAC file has been given an extension of ".MP3", ".WMA", ".AAC","M4A" ".mp3", ".wma", ".aac"or ".m4a" or when play is prohibited by copyright protection, the player will skip to the next song.
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the software, so the files might not play in the desired order.
Poor reception only from a certain radio broadcast station.	Check incoming radio wave signal strength of applicable broadcast station.
Buzz/rattle sound from speaker	The majority of rattle sounds are not indicative of an issue with the speaker, usually something nearby the speaker is causing the rattle.

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

NOTE:

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

RELATED TO DVD

Symptom	Possible cause	Possible solution
Not working as operated	Some operations may be rejected or may not function as intended because of the manufacturer's intent, depending on DVD.	This is not a malfunction.
Operation not accepted	If a requested operation is prohibited, then a message is displayed on the screen. (Message display depends on DVD.)	This is not a malfunction.
DVD can not be played	Check that the DVD is inserted in the right place.	Upturn the DVD (facing the title upward).
	Check if there is condensation inside the player.	wait until the condensation is gone (about 1 hour) before using the player.
	DVD menu is displayed.	Select item to touch "ENTER"
	Insertion of a DVD with a different region code.	DVDs with a different region code can not be played. Check DVD.
	Some DVD softwares may not be played because not all DVD softwares fully comply in the standard.	This is not a malfunction.
DVD-AUDIO can not be played	DVD-AUDIO may not be playable depending on the vehicle specifications	This is not a malfunction.
Interruption during playback or flicker in the display	Check that the DVD has no scratches and dirt.	Errors may not be corrected depending on the size of scratches.
Low sound quality		Wipe and clean the dirt on the disc.
Distortion in picture	In the process of fast-forward or fast-reverse.	This is not a malfunction.
Subtitles not shown	Subtitle setting is OFF.	Set subtitle.
	Subtitle is not included in the software.	Check DVD.
Not played in set language	If a language is not included in the DVD, then the DVD is played in a recommended language.	Check DVD.
Not played with set subtitle	If a set subtitle is not included in the DVD, then the DVD is played with a recommended subtitle.	Check DVD.
Subtitle and language not selectable (not played with set subtitle or in set language)	The DVD is not multilanguage-capable.	The inclusion of the number of languages depends on DVD. Languages may be selectable on the Menu screen. Check DVD.
	The DVD has a priority language or setting.	If the DVD has a priority language or settings, then settings changed with this device are not reflected.
Angle unchangeable	Plural angles are not recorded in the software.	Check if the DVD is multi-angle-capable.

Symptom	Possible cause	Possible solution
Unusual screen display	Display mode to the output aspect ratio for the DVD software is inappropriate.	Switch to the appropriate display mode.
Playback time is indicated, but no sound comes out.	Playback of Mix mode Truck 1. (Mix mode: Format including Truck 1 with data other than music and Trucks from Truck 2 with music data.)	Play music data included in trucks from Truck 2.

RELATED TO VEHICLE ICON

Symptom	Possible cause	Possible solution
Names of roads differ between Plan View and Birdview®.	This is because the quantity of the displayed information is reduced so that the screen does not become too crowded. There is also a chance that names of the roads may be displayed multiple times, and the names appearing on the screen may be different because of a processing procedure.	This is not a malfunction.
The vehicle icon is not displayed in the correct position.	The vehicle was transported after the ignition switch was pressed off, for example, by a ferry or car transporter.	Drive the vehicle for a while on a road where GPS signals can be received.
	The position and direction of the vehicle icon may be incorrect depending on the driving environments and the levels of positioning accuracy of the navigation system.	This is not a malfunction. Drive the vehicle for a while to automatically correct the position and direction of the vehicle icon.
When the vehicle is traveling on a new road, the vehicle icon is located on another road nearby.	Because the new road is not stored in the map data, the system automatically places the vehicle icon on the nearest road available.	Updated road information will be included in the next version of the map data.
The screen does not switch to the night screen even after turning on the headlights.	The daytime screen was set the last time the headlights were turned on.	Set the screen to the night screen mode using <Day/Night> when you turn on the headlights.
The map does not scroll even when the vehicle is moving.	The current location map screen is not displayed.	Press “MAP”.
The vehicle icon is not displayed.	The current location map screen is not displayed.	Press “MAP”.
The location of the vehicle icon is misaligned from the actual position.	When using tire chains or replacing the tires, speed calculations based on the speed sensor may be incorrect.	Drive the vehicle for a while [at approximately 30 km/h (19 MPH) for about 30 minutes] to automatically correct the vehicle icon position. If this does not correct the vehicle icon position, contact an NISSAN (INFINITI) dealer.
	The map data has a mistake or is incomplete (the vehicle icon position is always misaligned in the same area).	Updated road information will be included in the next version of the map data.

RELATED TO ROUTE CALCULATION AND VISUAL GUIDANCE

Symptom	Possible cause	Possible solution
Waypoints are not included in the auto reroute calculation.	Waypoints that you have already passed are not included in the auto reroute calculation.	If you want to go to that waypoint again, you need to edit the route.
Route information is not displayed.	Route calculation has not yet been performed.	Set the destination and perform route calculation.
	You are not driving on the suggested route.	Drive on the suggested route.
	Route guidance is set to off.	Turn on route guidance.
	Route information is not provided for certain types of roads (roads displayed in gray).	This is not a malfunction.

Symptom	Possible cause	Possible solution
The auto reroute calculation (or detour calculation) suggests the same route as the one previously suggested.	Route calculations took priority conditions into consideration, but the same route was calculated.	This is not a malfunction.
A waypoint cannot be added.	Five waypoints are already set on the route, including ones that you have already passed.	A maximum of 5 waypoints can be set on the route. If you want to go to 6 or more waypoints, perform route calculations multiple times as necessary.
The suggested route is not displayed.	Roads near the destination cannot be calculated.	Reset the destination to a main or ordinary road, and recalculate the route.
	The starting point and destination are too close.	Set a more distant destination.
	The starting point and destination are too far away.	Divide your trip by selecting one or two intermediate destinations, and perform route calculations multiple times.
	There are time restricted roads (by the day of the week, by time) near the current vehicle location or destination.	Set [Use Time Restricted Roads] to off.
The part of the route that you have already passed is deleted.	A route is managed by sections between waypoints. If you passed the first waypoint, the section between the starting point and the waypoint is deleted. (It may not be deleted depending on the area.)	This is not a malfunction.
An indirect route is suggested.	If there are restrictions (such as one-way streets) on roads close to the starting point or destination, the system may suggest an indirect route.	Adjust the location of the starting of the starting point or destination.
	The system may suggest an indirect route because route calculation does not take into consideration some areas such as narrow streets (gray roads.)	Reset the destination to a main or ordinary road, and recalculate the route.
The landmark information does not correspond to the actual information.	This may be caused by insufficient or incorrect map data.	Updated information will be included in the next version of the data.
The suggested route does not exactly connect to the starting point, waypoints, or destination.	There is no data for route calculation closes to these locations.	Set the starting point, waypoints and destination on a main road, and perform route calculation.

RELATED TO VOICE GUIDANCE

Symptom	Possible cause	Possible solution
Voice guidance is not available	Voice guidance is only available at certain intersections marked with? In some case, voice guidance is not available even when the vehicle should make a turn.	This is not a malfunction.
	The vehicle has deviated from the suggested route.	Go back to the suggested route or request route calculation again
	Voice guide is set to off.	Turn on voice guidance.
	Route guidance is set to off.	Turn on voice guidance.
The guidance contact does not correspond to the actual condition.	The contact of voice guidance may vary, depending on the types of intersections at which turn are made.	Follow all traffic rules and regulations.

RELATED TO HANDS-FREE PHONE (EXCEPT FOR MEXICO)

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

RELATED TO HANDS-FREE PHONE (FOR MEXICO)

Symptom	Cause and Counter measure
Cannot use hands-free phone	Customer will not be able to use a hands-free phone under the following conditions. • The vehicle is outside of the telephone service area. • The vehicle is in an area where it is difficult to receive radio waves; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area. • The cellular phone is locked to prevent it from being dialed. **NOTE:** While a cellular phone is connected through the Bluetooth® wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth® Hands-Free Phone System cannot charge cellular phones.
The other party's voice cannot be heard by hands-free phone.	When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
Poor sound quality	Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.

REMOVAL AND INSTALLATION

AV CONTROL UNIT

Exploded View

INFOID:0000000009359424

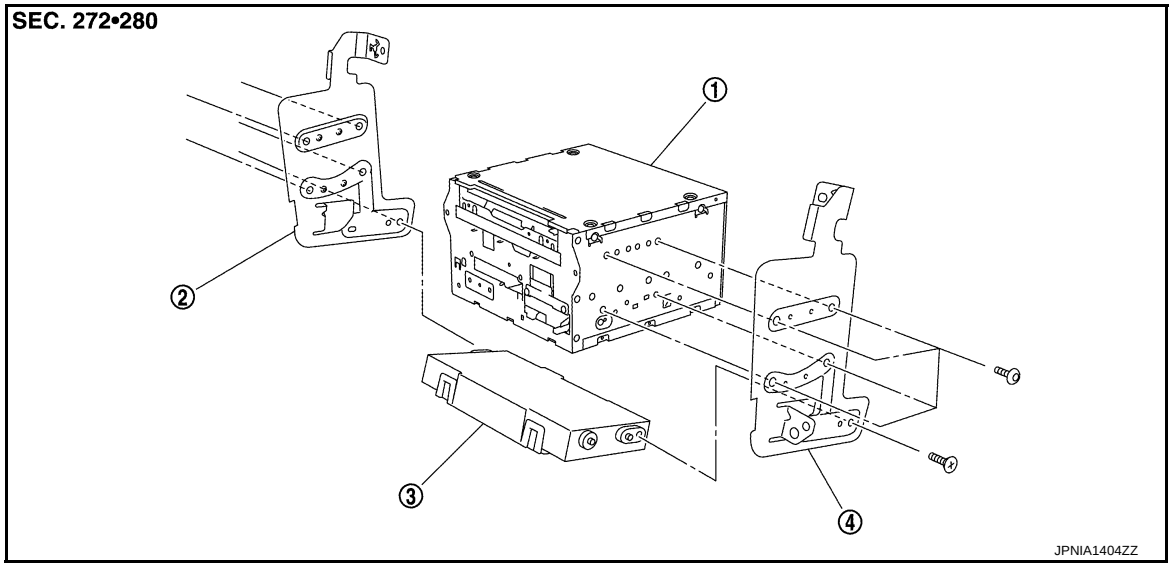
CAUTION:
- **Before replacing AV control unit, perform “Read/Write Configuration” to save or print current vehicle specification. For details, refer to AV-203, "Work Procedure".**
- **Remove battery terminal and AV control unit after a lapse of 30 seconds or more after turning the ignition switch OFF.**

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

REMOVAL

Refer to IP-13, "Exploded View".

DISASSEMBLY



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

Removal and Installation

INFOID:0000000009359425

REMOVAL

CAUTION:
- **Before replacing AV control unit, perform “Read/Write Configuration” to save or print current vehicle specification. For details, refer to AV-202, "Work Procedure".**
- **Remove battery terminal and AV control unit after a lapse of 30 seconds or more after turning the ignition switch OFF.**

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

1. Remove preset switch. Refer to AV-283, "Exploded View".
2. Remove AV control unit with A/C auto amp. as a single unit from the body.
3. Remove bracket screws, and then remove AV control unit.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- **Since AV control unit connector and unified meter and A/C amp. connector have the same form, be careful not to insert them wrongly.**
- **Be sure to perform “Read/Write Configuration” when replacing AV control unit. For details, refer to AV-203, "Work Procedure".**

FRONT DISPLAY UNIT

Exploded View

INFOID:0000000009359426

Refer to IP-13, "Exploded View".

Removal and Installation

INFOID:0000000009359427

REMOVAL

1. Remove cluster lid D. Refer to IP-13, "Exploded View".
2. Remove front display unit with bracket as a single unit.

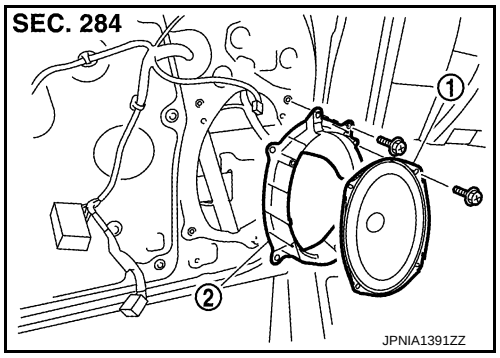
INSTALLATION

Install in the reverse order of removal.

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000009359428



1. Front door speaker
2. Speaker bracket

Removal and Installation

INFOID:0000000009359429

REMOVAL

1. Remove door finisher. Refer to INT-15, "Exploded View" (coupe models) or INT-47, "Exploded View" (roadster models).
2. Remove front door speaker screws, then disconnect front door speaker connector and remove front door speaker.

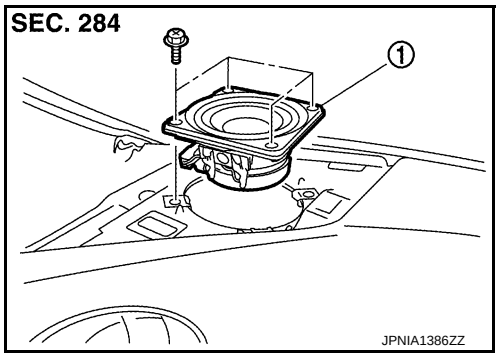
INSTALLATION

Install in the reverse order of removal.

TWEETER

Exploded View

INFOID:0000000009359430



1. Tweeter

Removal and Installation

INFOID:0000000009359431

REMOVAL

1. Remove speaker grille. Refer to IP-13, "Exploded View".
2. Remove tweeter screws, then lift up tweeter, disconnect connector and remove tweeter.

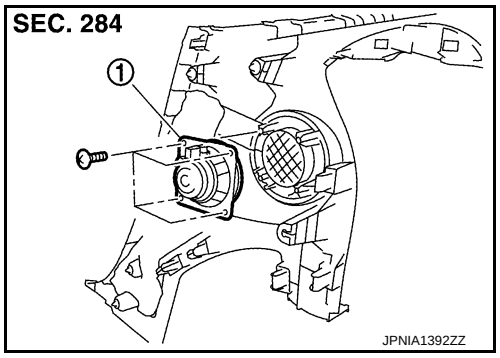
INSTALLATION

Install in the reverse order of removal.

REAR SPEAKER

Exploded View

INFOID:0000000009359432



1. Rear speaker

Removal and Installation

INFOID:0000000009359433

REMOVAL

1. Remove rear side finisher. Refer to INT-18, "Exploded View" (coupe models) or INT-51, "Exploded View" (roadster models).
2. Remove rear speaker screws, then remove rear speaker.

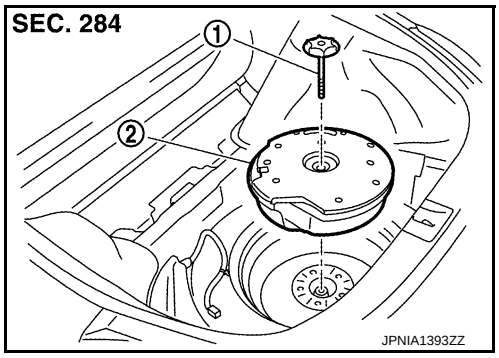
INSTALLATION

Install in the reverse order of removal.

WOOFER

Exploded View

INFOID:0000000009359434



1. Clamp
2. Woofer

Removal and Installation

INFOID:0000000009359435

REMOVAL

1. Remove luggage spacer. Refer to INT-31, "Exploded View".
2. Remove clamp, then disconnect woofer connector and remove the woofer.

INSTALLATION

Install in the reverse order of removal.

REAR WOOFER

Removal and Installation

INFOID:0000000009359436

REMOVAL

1. Remove the mounting clip on the front side of the storage room finisher and the soft top bumper rubber. Refer to RF-233, "STORAGE ROOM FINISHER : Removal and Installation".
2. Turn up the storage room finisher to obtain work space.
3. Remove rear woofer bracket.
4. Remove the screw and disconnect the connecter to remove the rear woofer.

INSTALLATION

Install in the reverse order of removal.

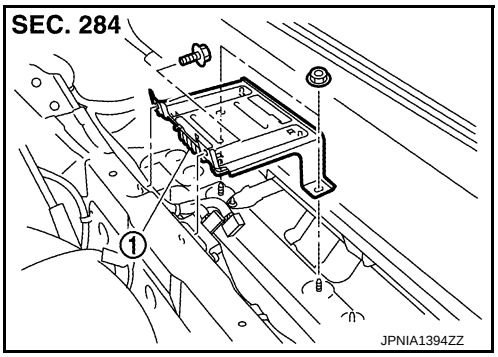
BOSE AMP.

COUPE

COUPE : Exploded View

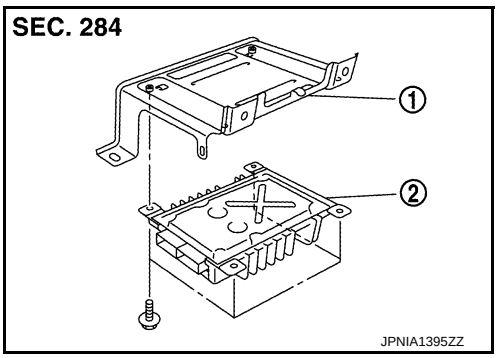
INFOID:0000000009359437

REMOVAL



1. BOSE amp.

DISASSEMBLY



1. Bracket
2. BOSE amp.

COUPE : Removal and Installation

INFOID:0000000009359438

REMOVAL

1. Remove luggage floor spacer front. Refer to INT-31, "Exploded View".
2. Disconnect BOSE amp. connector, remove BOSE amp. with bracket as a single unit from body.
3. Remove BOSE amp. bracket screws to remove BOSE amp.

INSTALLATION

Install in the reverse order of removal.

ROADSTER

ROADSTER : Removal and Installation

INFOID:0000000009359439

REMOVAL

1. Remove the mounting clip on the front side of the storage room finisher and the soft top bumper rubber. Refer to RF-233, "STORAGE ROOM FINISHER : Removal and Installation".
2. Turn up the storage room finisher to obtain work space.
3. Remove storage room spacer. Refer to RF-233, "STORAGE ROOM FINISHER : Exploded View".
4. Disconnect BOSE amp. connector, remove BOSE amp. with bracket as a single unit from body.
5. Remove BOSE amp. bracket screws to remove BOSE amp.

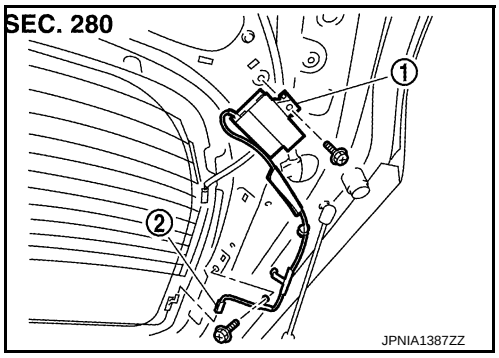
INSTALLATION

Install in the reverse order of removal.

ANTENNA AMP.

Exploded View

INFOID:0000000009359440



1. Antenna amp.
2. Connector

Removal and Installation

INFOID:0000000009359441

REMOVAL

1. Remove back door finisher side. Refer to INT-33, "Exploded View".
2. Disconnect connector and remove screw, then remove antenna amp.

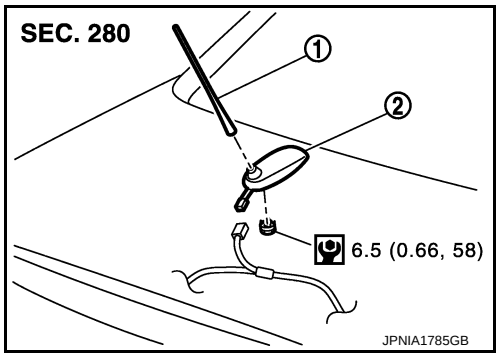
INSTALLATION

Install in the reverse order of removal.

ANTENNA BASE

Exploded View

INFOID:0000000009359442



1. Antenna rod
2. Antenna base

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

Removal and Installation

INFOID:0000000009359443

REMOVAL

1. Remove trunk lid finisher inner. Refer to INT-79, "Exploded View".
2. Remove antenna base mounting nut, disconnect the antenna base connector.
3. Remove antenna base.

INSTALLATION

Installation is the reverse order of removal.

CAUTION:

Be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, trunk lid panel may be deformed, when antenna base mounting nut tightening torque is loose.

MULTIFUNCTION SWITCH

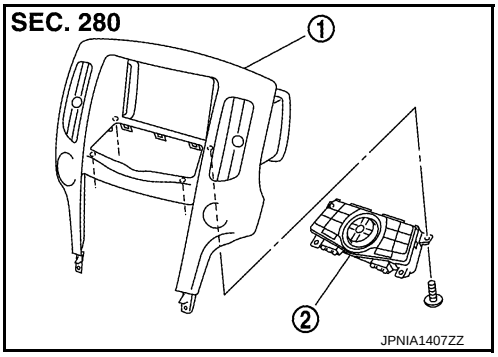
Exploded View

INFOID:0000000009359444

REMOVAL

Refer to IP-13, "Exploded View".

DISASSEMBLY



1. Cluster lid C
2. Multifunction switch

Removal and Installation

INFOID:0000000009359445

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove multifunction switch screws, then remove multifunction switch from cluster lid C.

INSTALLATION

Install in the reverse order of removal.

PRESET SWITCH

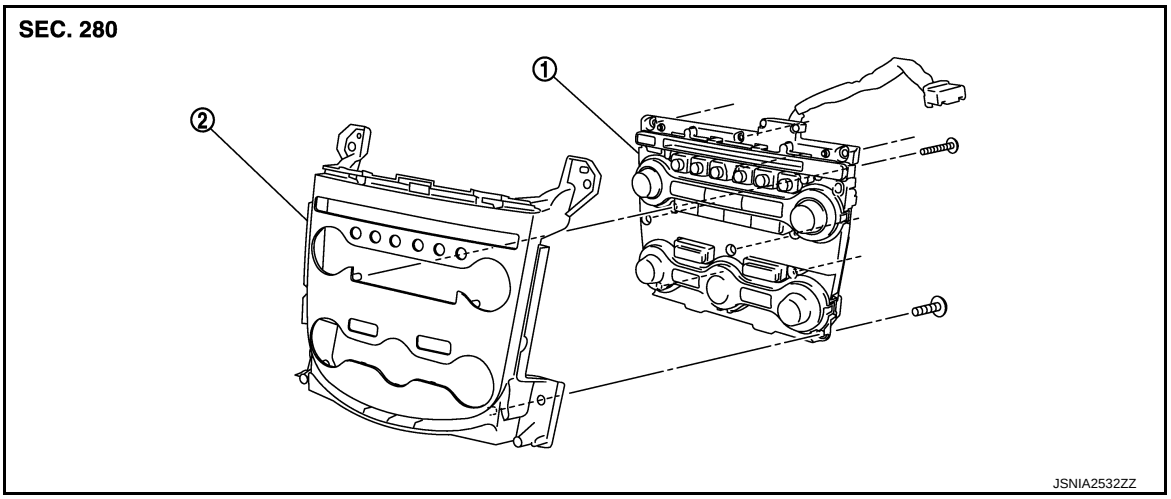
Exploded View

INFOID:0000000009359446

REMOVAL

Refer to IP-13, "Exploded View".

DISASSEMBLY



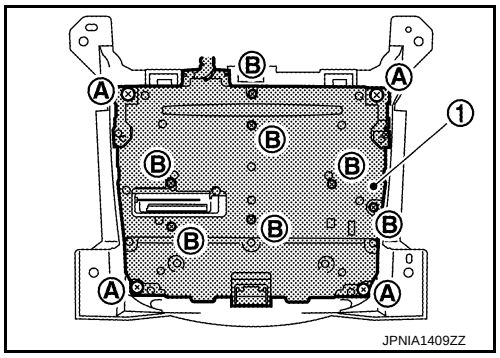
1. Preset switch
2. Cluster lid C finisher

Removal and Installation

INFOID:0000000009359447

REMOVAL

1. Remove cluster lid C. Refer to IP-13, "Exploded View".
2. Remove preset switch with cluster lid C finisher as a single unit from the body.
3. Remove preset switch screws (A) (B) to remove preset switch (1) from cluster lid C finisher.



INSTALLATION

Install in the reverse order of removal.

STEERING SWITCH

Exploded View

INFOID:0000000009359448

Refer to SR-13, "Exploded View" .

Removal and Installation

INFOID:0000000009359449

REMOVAL

Refer to SR-13, "Exploded View".

INSTALLATION

Install in the reverse order of removal.

USB CONNECTOR

Removal and Installation

INFOID:0000000009359450

REMOVAL

1. Remove center console. Refer to IP-25, "Exploded View".
2. Push the pawl from the back of center console to remove USB connector.

INSTALLATION

Install in the reverse order of removal.

AUXILIARY INPUT JACKS

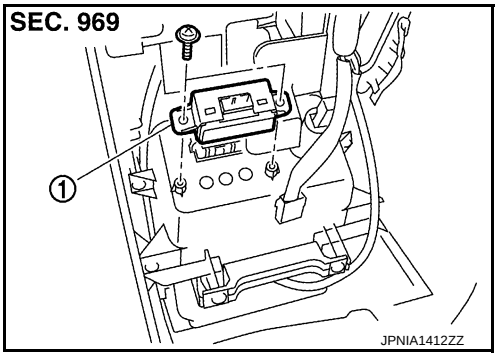
Exploded View

INFOID:0000000009359451

REMOVAL

Refer to IP-25, "Exploded View".

DISASSEMBLY



1. Auxiliary input jacks

Removal and Installation

INFOID:0000000009359452

REMOVAL

1. Remove center console. Refer to IP-25, "Exploded View".
2. Remove screws to remove auxiliary input jacks from the center console.

INSTALLATION

Install in the reverse order of removal.

MICROPHONE

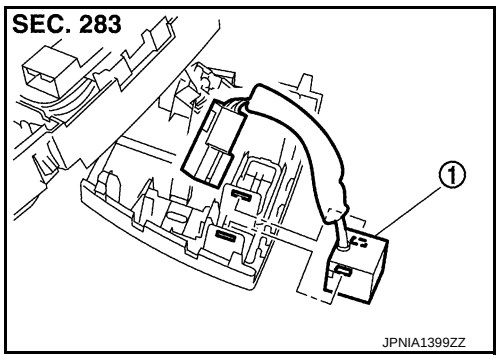
Exploded View

INFOID:0000000009359453

REMOVAL

Refer to INL-55, "Exploded View" (Coupe models) or INL-118, "Exploded View" (Roadster models).

DISASSEMBLY



1. Microphone

Removal and Installation

INFOID:0000000009359454

REMOVAL

1. Remove map lamp. Refer to INL-55, "Exploded View" (coupe models), or INL-118, "Exploded View" (roadster models).
2. Press the pawl to remove microphone from map lamp.

INSTALLATION

Install in the reverse order of removal.

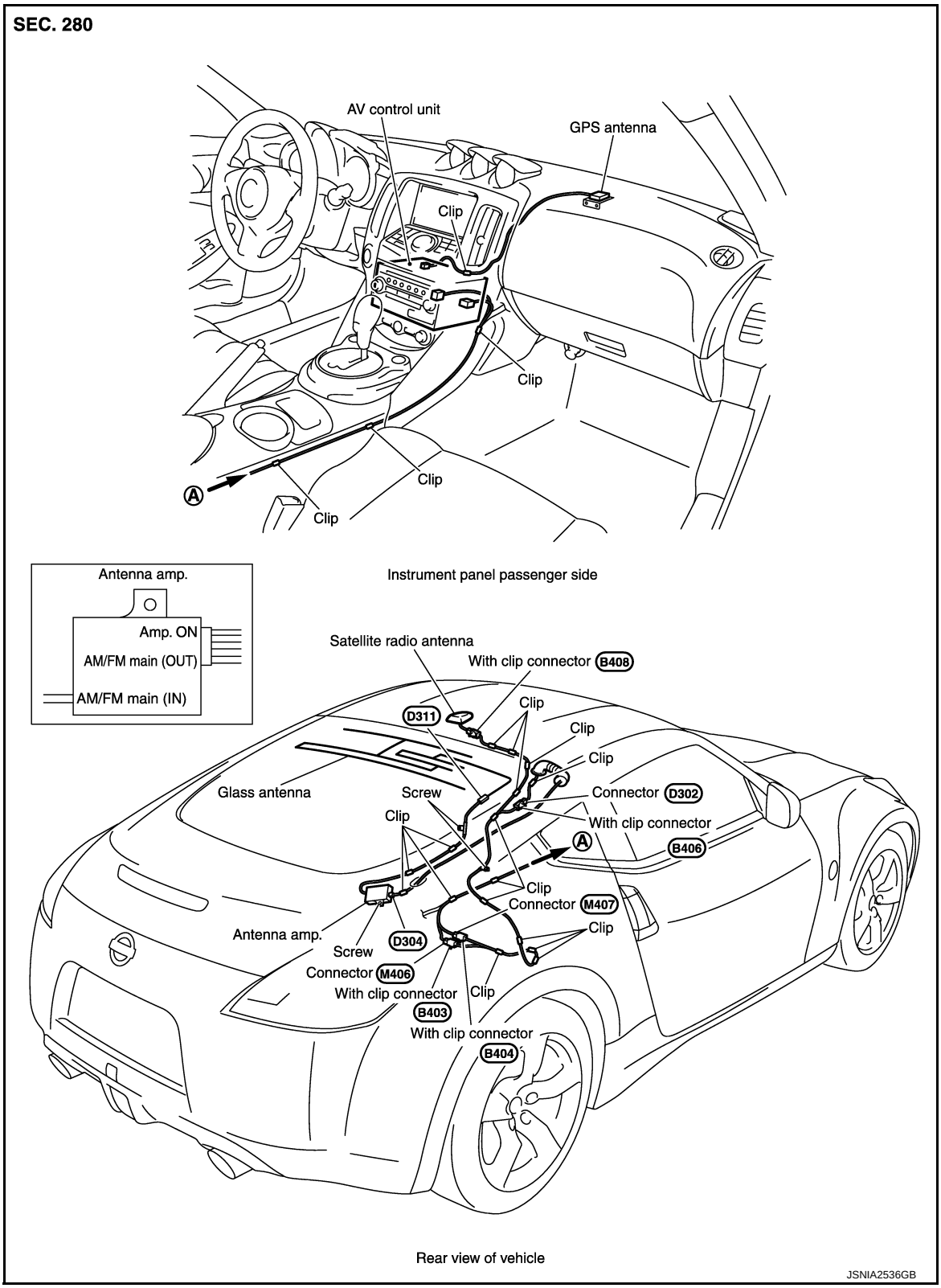
GPS ANTENNA

Feeder Layout

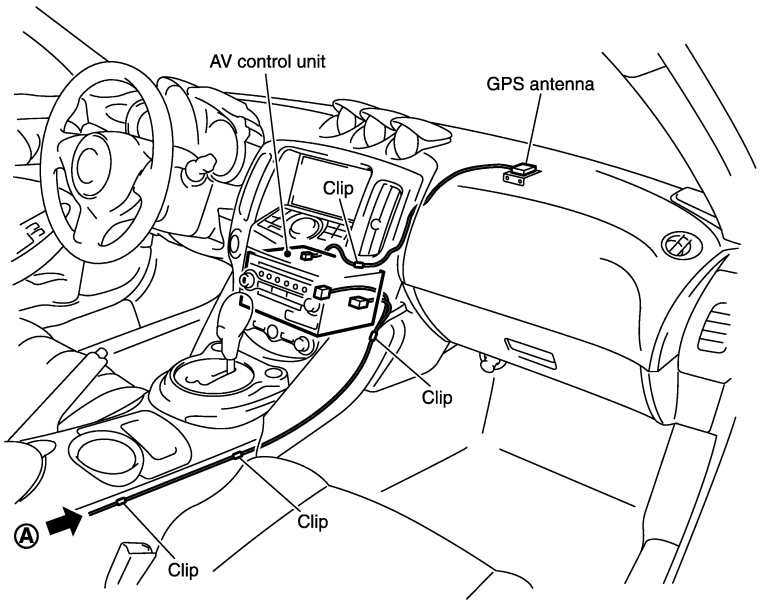
INFOID:0000000009359455

COUPE MODELS

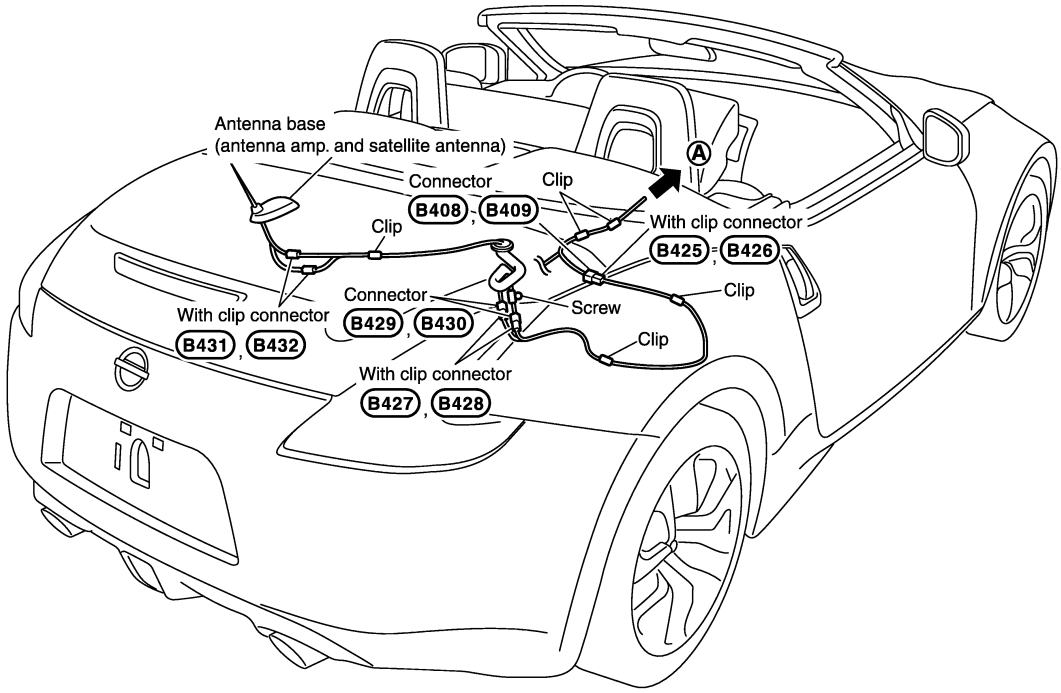
SEC. 280



SEC. 280



Instrument panel passenger side



Rear view of vehicle

JPNIA1839GB

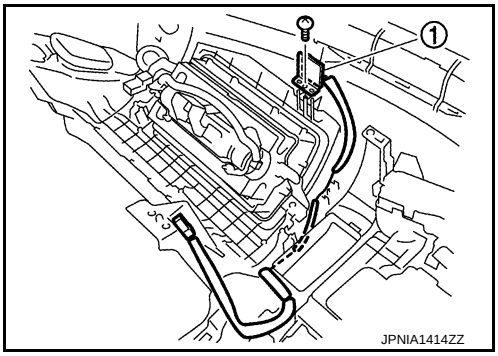
Removal and Installation

INFOID:0000000009359456

REMOVAL

1. Remove installment panel. Refer to IP-13, "Exploded View".

2. Remove screw to remove GPS antenna (1) from instrument panel.



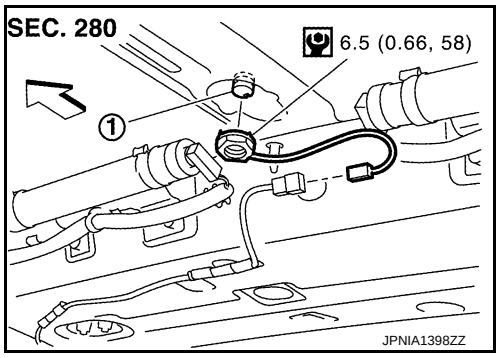
INSTALLATION

Install in the reverse order of removal.

SATELLITE RADIO ANTENNA

Exploded View

INFOID:0000000009359457



1. Satellite radio antenna

⇦ : Vehicle front

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

Removal and Installation

INFOID:0000000009359458

REMOVAL

1. Remove rear pillar finisher (LH/RH). Refer to INT-18, "Exploded View".
2. Pull down headlining (rear side) and obtain space for work between vehicle and headlining. Refer to INT-28, "Exploded View".
3. Disconnect satellite radio antenna connector.
4. Remove satellite radio antenna mounting nut, then remove satellite radio antenna from roof panel.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- **Never bend headlining when pull down headlining (rear side).**
- **When satellite radio antenna mounting nut tightening torque is loose, be careful about tightening torque. Antenna sensitivity becomes poor, and when it is excessive, roof panel may become deformed.**

REAR VIEW CAMERA

Removal and Installation

INFOID:0000000009359459

REMOVAL

1. Remove license plate lamp bracket. Refer to EXT-17, "Removal and Installation".
2. Remove rear camera mounting screws to remove rear camera.

INSTALLATION

Install in the reverse order of removal.

NOTE:

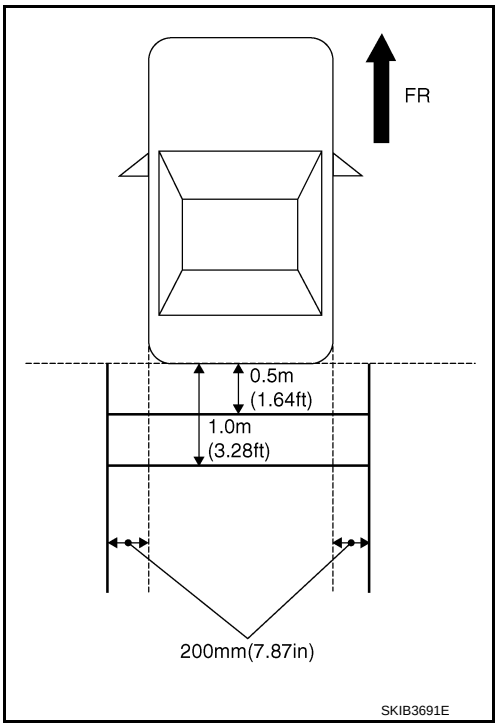
Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to AV-292, "Adjustment".

Adjustment

INFOID:0000000009359460

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

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

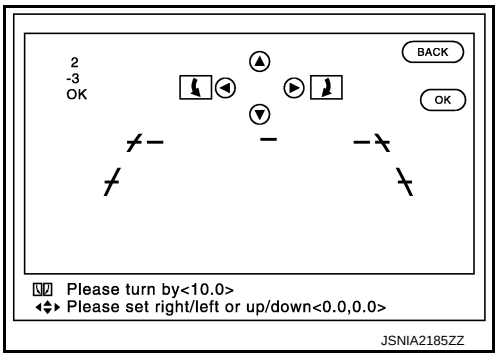


3. Rotate the center dial, and then select the guiding line pattern so that its angle is aligned with the correction line of the rear of the vehicle.

Selected pattern	: (–10°) – (10°)

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

Up/Down adjustment range	: (–10°) – (10°)
Left/Right adjustment range	: (–10°) – (10°)



CAUTION:

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

STEERING ANGLE SENSOR

Removal and Installation

INFOID:0000000009359461

REMOVAL

1. Remove the spiral cable. Refer to SR-16, "Removal and Installation".
2. Remove the screws to remove the steering angle sensor from the spiral cable.

INSTALLATION

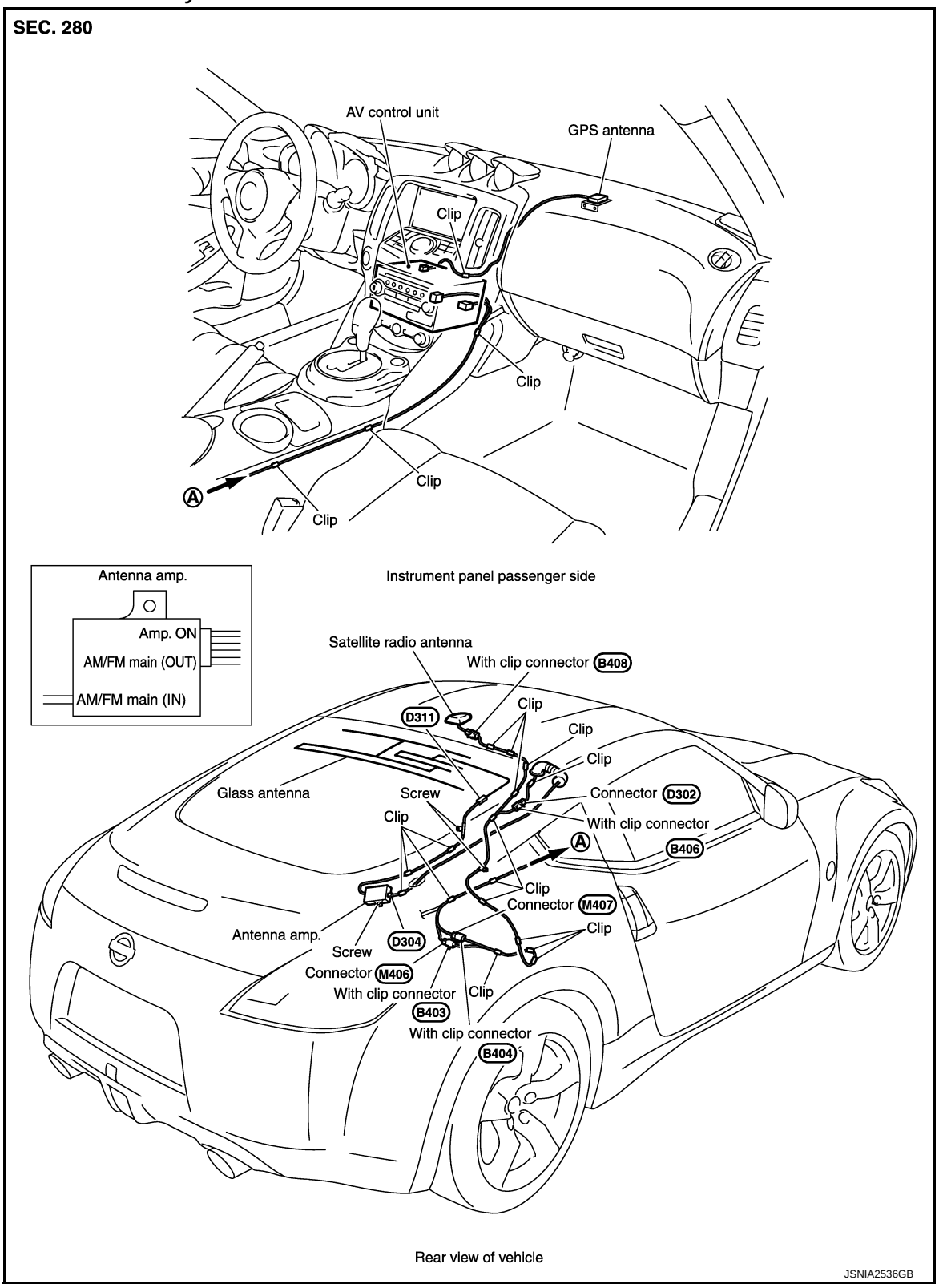
Install in the reverse order of removal.

ANTENNA FEEDER

COUPE

COUPE : Feeder Layout

INFOID:0000000009359462

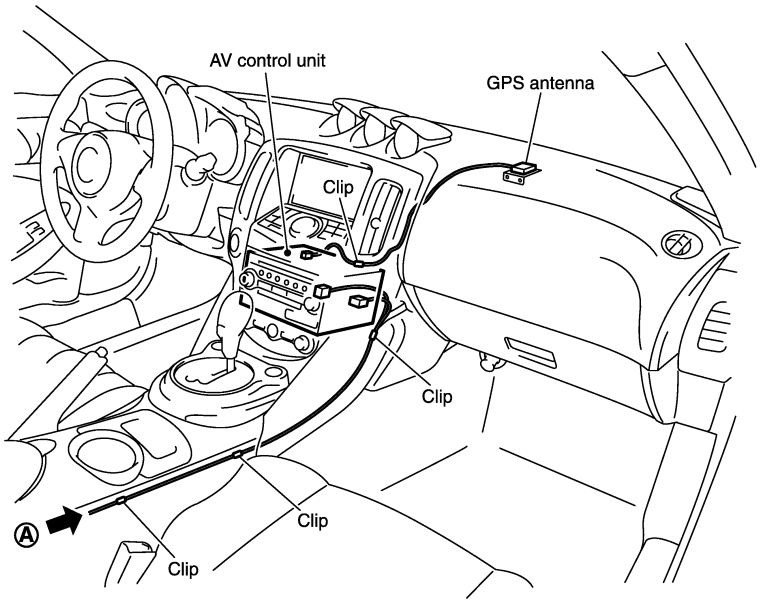


ROADSTER

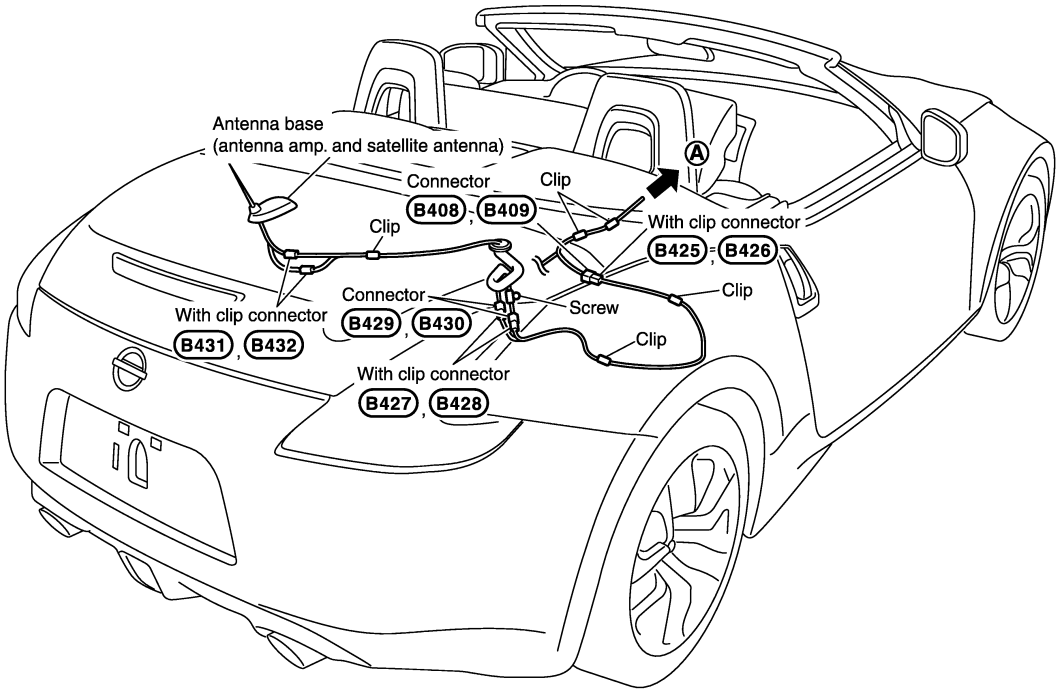
ROADSTER : Feeder Layout

INFOID:0000000009359463

SEC. 280



Instrument panel passenger side



Rear view of vehicle

JPNIA1839GB