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CONTENTS

AUDIO SYSTEM	iPod ADAPTER : Diagnosis Procedure20 F
BASIC INSPECTION	TEL ADAPTER UNIT20 TEL ADAPTER UNIT : Diagnosis Procedure21
DIAGNOSIS AND REPAIR WORKFLOW	STEEDING SWITCH SIGNAL A CIDCUIT
SYSTEM DESCRIPTION	7 ÙNIT) 22 H
AUDIO SYSTEM	Description22
System Diagram	
System Description	
Component Parts Location	
Component Description10	
	UNIT) 24
HANDS-FREE PHONE SYSTEM1	Description 24
System Diagram1	Diagnosis Procedure 24
System Description1	1 Component Inspection 25 K
Component Parts Location12	2
Component Description12	2 STEERING SWITCH SIGNAL GND CIRCUIT
DIAGNOSIS SYSTEM (AUDIO UNIT)14	(STEERING SWITCH TO TEL ADAPTER UNIT)26
MODELS WITH IPOD® CONNECTION FUNC-	Description26
TION14	Diagnosis Procedure26
MODELS WITH iPod® CONNECTION FUNC-	Component Inspection26
TION: Diagnosis Description14	 4
·	STEERING SWITCH SIGNAL A CIRCUIT
MODELS WITHOUT IPOD® CONNECTION	(TEL ADAPTER UNIT TO AUDIO UNIT)28 AV
FUNCTION10	
MODELS WITHOUT iPod® CONNECTION	Diagnosis Procedure28
FUNCTION: Diagnosis Description10	STEERING SWITCH SIGNAL B CIRCUIT
DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)18	
Diagnosis Description18	(
Diagnosis Description	2000
DTC/CIRCUIT DIAGNOSIS20	Diagnosis Procedure29
POWER SUPPLY AND GROUND CIRCUIT20	STEERING SWITCH SIGNAL GND CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT)30
AUDIO UNIT20	Description30
AUDIO UNIT : Diagnosis Procedure20	
	MICDODUONE SIGNAL CIDCUIT 24

Description	31	ANTENNA BASE	88
Diagnosis Procedure	31	Exploded View	88
TTI TTI ON OLONIAL OLDOLUT		Removal and Installation	88
TELEPHONE ON SIGNAL CIRCUIT			
Description		TEL ADAPTER UNIT	
Diagnosis Procedure	33	Exploded View	
ECU DIAGNOSIS INFORMATION	3/	Removal and Installation	89
	54	MICROPHONE	90
AUDIO UNIT	34	Exploded View	
Reference Value	34	Removal and Installation	
Wiring Diagram - AUDIO	37	Nomoval and motaliation	50
		iPod ADAPTER	91
TEL ADAPTER UNIT		Exploded View	91
Reference Value		Removal and Installation	91
Wiring Diagram - AUDIO	51	'D 00111150T0D	
iPod ADAPTER	62	iPod CONNECTOR	
Reference Value		Exploded View	
Wiring Diagram - AUDIO -		Removal and Installation	92
Willing Diagram - AODIO	04	ANTENNA FEEDER	03
SYMPTOM DIAGNOSIS	75	Harness Layout	
		DISPLAY AUDIO SYSTEM	93
AUDIO SYSTEM SYMPTOMS	75	DISPLAT AUDIO STSTEW	
Symptom Table	75	BASIC INSPECTION	94
HANDS-FREE PHONE SYMPTOMS			
		DIAGNOSIS AND REPAIR WORKFLOW	94
Symptom Table	//	Work Flow	94
NORMAL OPERATING CONDITION	79	CVCTEM DECCRIPTION	
Description		SYSTEM DESCRIPTION	96
		DISPLAY AUDIO SYSTEM	96
PRECAUTION	81	System Diagram	
		System Description	
PRECAUTIONS	81	Component Parts Location	
Precaution for Supplemental Restraint System		Component Description	
(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-		Component Description	50
SIONER"		REAR VIEW MONITOR SYSTEM	100
Precaution for Trouble Diagnosis		System Diagram	100
Precaution for Harness Repair	81	System Description	100
PREPARATION	83	Component Parts Location	101
	05	Component Description	101
PREPARATION	83	HANDO EDEE DUONE OVOTEM	
Commercial Service Tools	83	HANDS-FREE PHONE SYSTEM	
		System Diagram	
REMOVAL AND INSTALLATION	84	System Description	
AUDIO UNIT		Component Parts Location	
AUDIO UNIT		Component Description	103
Exploded View	84	DIAGNOSIS SYSTEM (AUDIO UNIT)	105
Removal and Installation	84	Diagnosis Description	
FRONT DOOR SPEAKER	85	Diagnosis Description	100
Exploded View		DIAGNOSIS SYSTEM (TEL ADAPTER UNIT).111
Removal and Installation		Diagnosis Description	111
TWEETER		DTC/CIRCUIT DIAGNOSIS	113
Exploded View		POWER SUPPLY AND GROUND CIRCUIT	440
Removal and Installation		FOWER SUFFLI AND GROUND CIRCUIT	113
		AUDIO UNIT	113
REAR DOOR SPEAKER		AUDIO UNIT : Diagnosis Procedure	
Exploded View		•	
Removal and Installation	8/	SATELLITE RADIO TUNER	113

SATELLITE RADIO TUNER : Diagnosis Proce-	Diagnosis Procedure	131
dure113	ECU DIAGNOSIS INFORMATION	133
TEL ADAPTER UNIT113	ALIDIO LINUT	
TEL ADAPTER UNIT : Diagnosis Procedure 114	AUDIO UNIT	
STEERING SWITCH SIGNAL A CIRCUIT	Reference Value	
(STEERING SWITCH TO TEL ADAPTER	Wiring Diagram - DISPLAY AUDIO	138
	SATELLITE RADIO TUNER	152
UNIT)115	Reference Value	
Description	Wiring Diagram - DISPLAY AUDIO	
Diagnosis Procedure		
Component inspection110	TEL ADAPTER UNIT	
STEERING SWITCH SIGNAL B CIRCUIT	Reference Value	
(STEERING SWITCH TO TEL ADAPTER	Wiring Diagram - DISPLAY AUDIO	171
ÙNIT)117	SYMPTOM DIAGNOSIS	405
Description117	STWFTOW DIAGNOSIS	185
Diagnosis Procedure117	AUDIO SYSTEM SYMPTOMS	185
Component Inspection118	Symptom Table	
·	• •	
STEERING SWITCH SIGNAL GND CIRCUIT	HANDS-FREE PHONE SYMPTOMS	
(STEERING SWITCH TO TEL ADAPTER	Symptom Table	187
UNIT)119	NORMAL OPERATING CONDITION	400
Description119	Description	
Diagnosis Procedure119	Description	169
Component Inspection119	PRECAUTION	191
STEERING SWITCH SIGNAL A CIRCUIT		
(TEL ADAPTER UNIT TO AUDIO UNIT) 121	PRECAUTIONS	191
Description	Precaution for Supplemental Restraint System	
Diagnosis Procedure121	(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	
	SIONER"	
STEERING SWITCH SIGNAL B CIRCUIT	Precaution for Trouble Diagnosis	
(TEL ADAPTER UNIT TO AUDIO UNIT)122	Precaution for Harness Repair	191
Description122	PREPARATION	193
Diagnosis Procedure122		133
STEEDING SWITCH SIGNAL GND CIDCUIT	PREPARATION	193
STEERING SWITCH SIGNAL GND CIRCUIT	Commercial Service Tools	193
(TEL ADAPTER UNIT TO AUDIO UNIT) 123	DEMOVAL AND INCTALLATION	
Description	REMOVAL AND INSTALLATION	194
Diagnosis Procedure123	AUDIO UNIT	10/
CAMERA IMAGE SIGNAL CIRCUIT124	Exploded View	
Description124	Removal and Installation	
Diagnosis Procedure124		
	FRONT DOOR SPEAKER	195
COMMUNICATION SIGNAL CIRCUIT126	Exploded View	
Description	Removal and Installation	195
Diagnosis Procedure126	TWEETED	400
REQUEST SIGNAL CIRCUIT (SAT TO AU-	TWEETER	
DIO)128	Exploded ViewRemoval and Installation	
Description	Nemoval and installation	190
Diagnosis Procedure	REAR DOOR SPEAKER	197
	Exploded View	
WOOFER AMP. ON SIGNAL CIRCUIT130	Removal and Installation	
Description130		
Diagnosis Procedure130	WOOFER	
MICROPHONE SIGNAL CIRCUIT131	Exploded View	
Description 131	Removal and Installation	198
141		

A

В

С

D

Е

F

Н

Κ

REAR VIEW CAMERA	199 Exploded View	202
Removal and Installation	199 Removal and Installation	202
Adjustment	MICROPHONE	203
ANTENNA BASE	200 Exploded View	203
Exploded View		
Removal and Installation	USB CONNECTOR	204
SATELLITE RADIO TUNER	201 Exploded View	204
Exploded View	Removal and Installation	204
Removal and Installation	ANTENNA FEEDER	205
TEL ADAPTER UNIT	202 Harness Layout	205

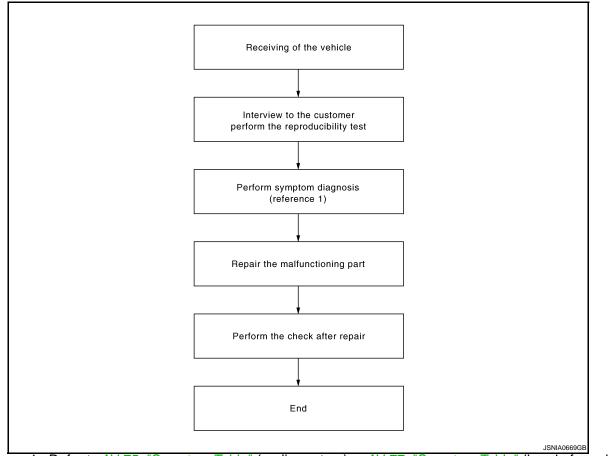
[AUDIO SYSTEM] < BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000005806240 В

OVERALL SEQUENCE



Reference 1...Refer to AV-75, "Symptom Table" (audio system) or AV-77, "Symptom Table" (hands-free phone system).

DETAILED FLOW

1.CHECK SYMPTOM

Check the malfunction symptoms by performing the following items.

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

>> GO TO 2.

2. PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to AV-75, "Symptom Table" (audio system) or AV-77, "Symptom Table" (hands-free phone system).

>> GO TO 3.

3.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

>> GO TO 4.

Revision: 2009 October

AV-5

2010 Z12

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION > [AUDIO SYSTEM]

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

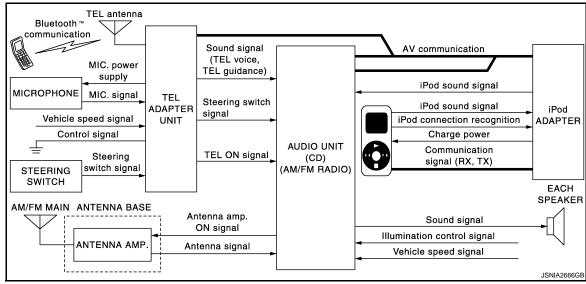
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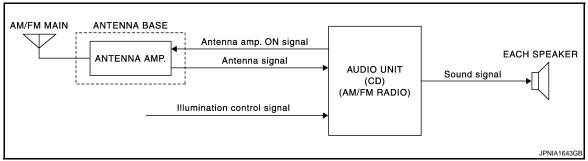
MODELS WITH $\mathsf{iPod}^{\texttt{®}}$ CONNECTION FUNCTION AND HANDS-FREE PHONE SYSTEM



NOTE:

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

MODELS WITHOUT iPod® CONNECTION FUNCTION



NOTE:

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

System Description

INFOID:0000000005490496

AUDIO SYSTEM

Audio functions

×: Applicable

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

Revision: 2009 October **AV-7** 2010 Z12

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[AUDIO SYSTEM]

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

When the audio system is on, radio signals are received by the radio antenna. The audio unit then sends audio signals to the each speaker.

FUNCTION DESCRIPTION

AM/FM Radio Mode

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

CD Mode

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

iPod® Connection

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

AUX Connection

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

Speed Sensitive Volume

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

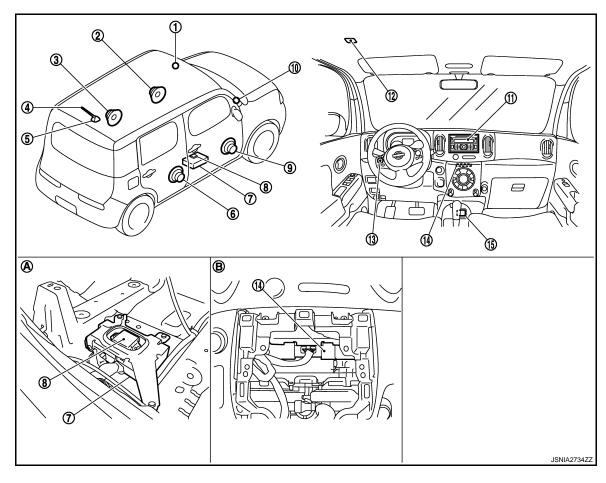
Hands-free phone system

For further information about the hands-free phone system, refer to AV-11, "System Description".

Component Parts Location

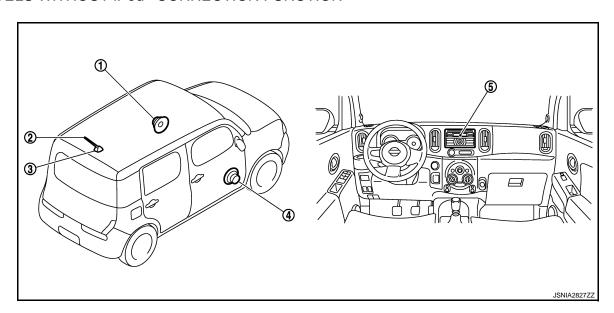
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MODELS WITH iPod® CONNECTION FUNCTION



- 1. Tweeter LH
- 4. Antenna rod
- 7. TEL adapter unit
- 10. Tweeter RH
- 13. Steering switch
- A. Floor spacer removed condition
- 2. Front door speaker LH
- 5. Antenna base (antenna amp.)
- 8. TEL antenna
- 11. Audio unit
- 14. iPod adapter
- B. A/C finisher removed condition
- 3. Rear door speaker LH
- 6. Rear door speaker RH
- 9. Front door speaker RH
- 12. Microphone
- 15. iPod connector

MODELS WITHOUT iPod® CONNECTION FUNCTION



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- 1. Front door speaker LH
- 4. Front door speaker RH
- Antenna rod
 Audio unit

3. Antenna base (antenna amp.)

Component Description

INFOID:0000000005490498

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

 $iPod^{\text{\ifmmode{8}}}$ is a trademark of Apple inc., registered in the U.S. and other countries.

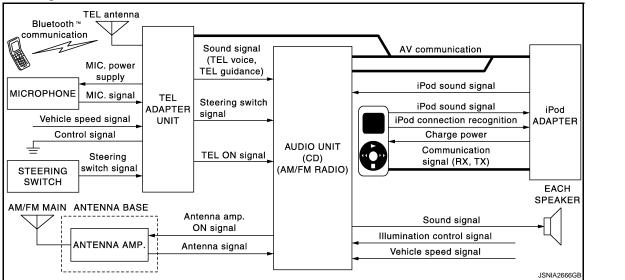
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HANDS-FREE PHONE SYSTEM

System Diagram



NOTE:

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

System Description

INFOID:0000000005735289

- The connection between cellular phone and TEL adapter unit is performed with Bluetooth[™] communication.
- The voice guidance signal is input from the TEL adapter unit to the audio unit and output to the front speaker when operating the telephone.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-18, "Diagnosis Description".

WHEN RECEIVING A CALL

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

WHEN A CALL IS ORIGINATED

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

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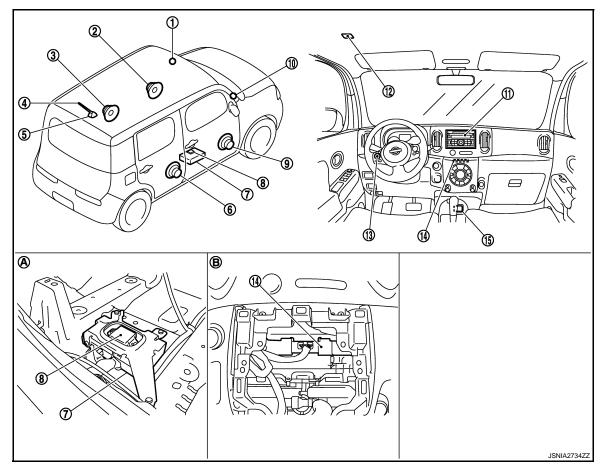
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Component Parts Location

INFOID:0000000005796997



- 1. Tweeter LH
- 4. Antenna rod
- 7. TEL adapter unit
- 10. Tweeter RH
- 13. Steering switch
- A. Floor spacer removed condition
- 2. Front door speaker LH
- 5. Antenna base (antenna amp.)
- 8. TEL antenna
- 11. Audio unit
- 14. iPod adapter
- B. A/C finisher removed condition
- 3. Rear door speaker LH
- 6. Rear door speaker RH
- 9. Front door speaker RH
- 12. Microphone
- 15. iPod connector

Component Description

INFOID:0000000005735291

Part name	Description
Audio unit	 Inputs TEL voice signal or voice guidance signal from TEL adapter unit and outputs it to the front speaker during reception. Audio unit and TEL adapter unit exchange data by AV communication. Inputs steering switch signal (operation signal) from steering switch through TEL adapter unit.
Front door speaker	Receives TEL voice and voice guidance signals from audio unit.
Tweeter	Receives TEL voice and voice guidance signals from additioning.
Steering switch	 The hands-free phone system can be operated. Steering switch signal (operation signal) is output to TEL adapter unit Steering switch signal (operation signal) is output to audio unit through TEL adapter unit.
Microphone	 Uses when operating the hands-free phone. Outputs microphone signal (TEL voice signal) to the TEL adapter unit. The power (microphone VCC) is supplied from the TEL adapter unit.

HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[AUDIO SYSTEM]

Part name Description	
TEL adapter unit	 Inputs the TEL voice signal from TEL antenna during reception and outputs into the audio unit. Inputs the TEL voice signal from microphone during speech recognition and outputs it to the TEL antenna.
TEL antenna	Connects with the cellular phone via Bluetooth [™] communication and communicates the TEL voice signal.

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[AUDIO SYSTEM]

DIAGNOSIS SYSTEM (AUDIO UNIT) MODELS WITH iPod® CONNECTION FUNCTION

MODELS WITH iPod® CONNECTION FUNCTION: Diagnosis Description INFOID-000000005490503

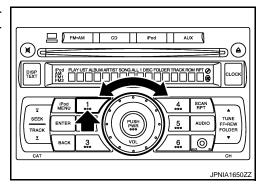
AUDIO UNIT SELF-DIAGNOSIS FUNCTION

Self-diagnosis mode can check the following items.

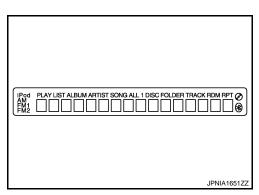
- · Display all icons and segments
- Audio unit hardware/software/CD mechanism/EEPROM versions
- · Satellite radio version
- Audio CD changer version
- iPod hardware/software versions

Operation Procedure

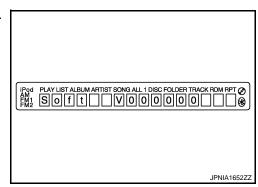
- 1. Turn ignition switch to the ON position.
- 2. Turn the audio unit off.
- While pressing the "1" button, turn the volume control dial clockwise or counterclockwise 30 clicks or more. When the self-diagnosis mode is started, a short beep will be heard.



4. Initially, all display segments will be illuminated.



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



DIAGNOSIS SYSTEM (AUDIO UNIT)

< S	YSTEM DESCRIPTION >	[AUDIO SYSTEM]
6.	Press the "DISP TEXT" switch again to display the "Hard" (audio hardware version).	А
		Pod PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT POD P
		JPNIA1653ZZ
7.	Press the "DISP TEXT" switch again to display the "CD Mech" (CD mechanism version).	D
		E
		IPod PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT
		G JPNIA1654ZZ
8.	Press the "DISP TEXT" switch again to display the "EEP" (audio unit EEPROM version).	Н
		Play List album artist song all 1 disc folder track rdm rPT PM2 EEP
		JPNIA1655ZZ
9.	Press the "DISP TEXT" switch again to display the "SDARS" (satellite radio version).	L
		IPod PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT M1 SDARS V000000 8
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Revision: 2009 October AV-15 2010 Z12

DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION > [AUDIO SYSTEM]

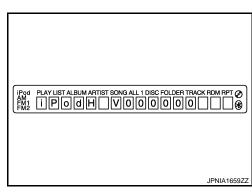
10.	 Press the "DISP TEXT" switch 	h again to display the	"CHG" (audio
	CD changer version). If au	dio CD changer is n	ot connected,
	"FFFFFF" is displayed.		

Pod PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT & FM2 CHG V0000000
JPNIA1657ZZ

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

PLAY LIST ALBUM ARTIST SONG ALL 1 DISC FOLDER TRACK RDM RPT Pod S V 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
JPNIA1658ZZ

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



Finishing Self-diagnosis Mode

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

MODELS WITHOUT iPod® CONNECTION FUNCTION

MODELS WITHOUT iPod® CONNECTION FUNCTION: Diagnosis Description

INFOID:0000000005490504

Self-diagnosis mode can check the following items.

- · Audio unit software version
- Audio CD changer version

OPERATION PROCEDURE

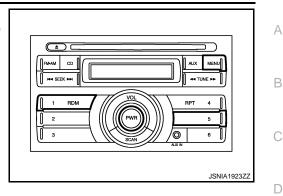
- 1. Turn ignition switch to the ON position.
- Turn the audio unit off.

DIAGNOSIS SYSTEM (AUDIO UNIT)

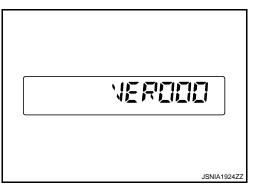
< SYSTEM DESCRIPTION >

[AUDIO SYSTEM]

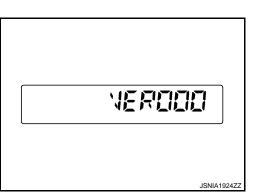
3. Press "PWR" button while pressing "MENU", "1" and "5" buttons. When the self-diagnosis mode is started, a short beep will be heard.



4. Initially, Audio software version is displayed.



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



Finishing Self-diagnosis Mode

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

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DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

< SYSTEM DESCRIPTION >

[AUDIO SYSTEM]

DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

Diagnosis Description

INFOID:0000000005792591

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 switch, and then reads out the results with the sound and indicates them on the audio screen.
STED 2	Hands-free phone system initialization	Hands-free phone system initialization mode can perform the initialization of hands-free phone system.
STEP 2	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 antonno	
DTC 00100	Bluetooth antenna shorted	TEL antenna	
DTC 00010	Button ladder A is stuck		
DTC 00001	Button ladder B is stuck	Steering switch	
DTC 00000	There are no failure records to report	_	

The Details of Error Count

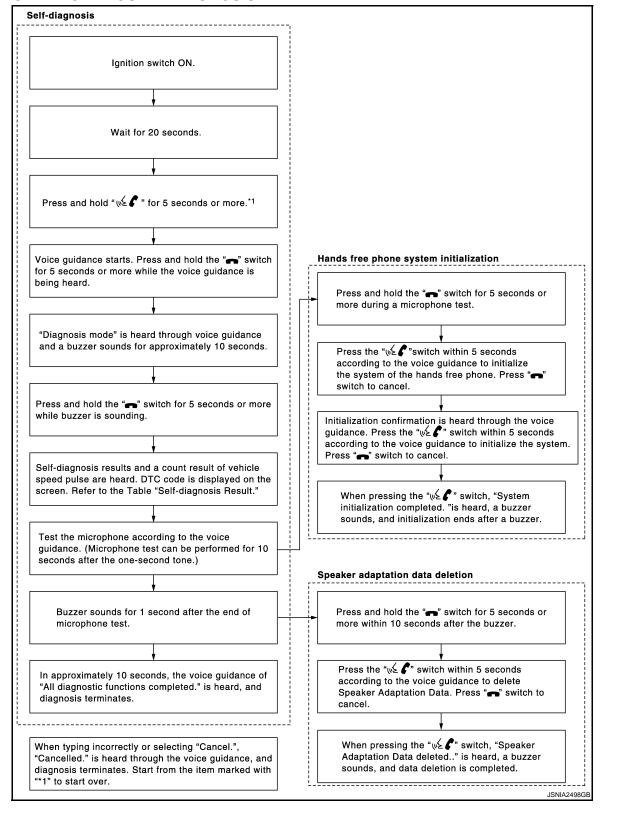
The error count guides "0" when the error occurs. The next time it counts up "1" if it is normal with the ignition switch ON. It continues the count up unless the initialization of hands-free phone system is performed.

DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

< SYSTEM DESCRIPTION >

[AUDIO SYSTEM]

FLOW CHART OF TROUBLE DIAGNOSIS



Revision: 2009 October AV-19 2010 Z12

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[AUDIO SYSTEM]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

AUDIO UNIT

AUDIO UNIT: Diagnosis Procedure

INFOID:0000000005797813

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	20	

Is inspection result OK?

YES >> GO TO 2.

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

2.CHECK AUDIO UNIT POWER SUPPLY CIRCUIT

Check voltage between the audio unit and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	M46	19	OFF	Battery voltage
ACC power supply	10140	7	ACC	Battery voltage

Is inspection result OK?

YES >> INSPECTION END

NO >> Check harness between audio unit and fuse.

iPod ADAPTER

iPod ADAPTER: Diagnosis Procedure

INFOID:0000000005799746

1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	34
Ignition switch ACC or ON	20

Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate the cause of malfunction before installing new fuse.

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between iPod adapter harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	M99	5	OFF	Battery voltage
ACC power supply	IVIJ	3	ACC	Dattery Voltage

Is the inspection result normal?

YES >> INSPECTION END

NO >> Check harness between iPod adapter and fuse.

TEL ADAPTER UNIT

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

TEL ADAPTER UNIT: Diagnosis Procedure

INFOID:0000000005797815

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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	20

Is inspection result OK?

YES >> GO TO 2.

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	B54	1	OFF	Battery voltage
ACC power supply	D04	2	ACC	Battery voltage

Is inspection result OK?

YES >> GO TO 3.

NO >> Check harness between TEL adapter unit and fuse.

3.CHECK GROUND CIRCUIT

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	B54	4	OFF	Existed

Is inspection result OK?

YES >> INSPECTION END

NO >> Repair harness or connector.

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Revision: 2009 October **AV-21** 2010 Z12

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STEERING SWITCH SIGNAL A CIRCUIT (STEERING SWITCH TO TEL ADAPT-ER UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

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

Description INFOID:000000005797816

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

Diagnosis Procedure

INFOID:0000000005797817

1.check steering switch signal a (steering switch to tel adapter unit) circuit

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

TEL ada	apter unit	Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B54	12	M33	24	Existed

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

TEL adapter unit			Continuity
Connector	Terminal	Ground	Continuity
B54	12		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

3. CHECK TEL ADAPTER UNIT VOLTAGE

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

(+)		(–)		
	Voltage (Approx.)			
Connector	nector Terminal Connector Terminal			(- /
B54	12	B54	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace TEL adapter unit. Refer to AV-89, "Exploded View".

4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-23, "Component Inspection"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch. Refer to <u>ST-9</u>, "Exploded View".

STEERING SWITCH SIGNAL A CIRCUIT (STEERING SWITCH TO TEL ADAPT-ER UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

INFOID:0000000005797818

Component Inspection

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

Standard

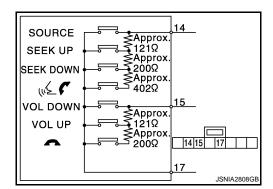
Between terminals 14 and 17

 $\begin{array}{lll} & \text{w} \not \leq & \text{switch ON} & : \text{Approx. } 709 - 737 \ \Omega \\ & \text{SEEK DOWN switch ON} & : \text{Approx. } 315 - 327 \ \Omega \\ & \text{SEEK UP switch ON} & : \text{Approx. } 119 - 123 \ \Omega \\ & \text{SOURCE switch ON} & : \text{Approx. } 0 \ \Omega \\ \end{array}$

Between terminals 15 and 17

 \blacktriangleright switch ON : Approx. 315 – 327 Ω VOL UP switch ON : Approx. 119 – 123 Ω

VOL DOWN switch ON : Approx. 0 Ω



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STEERING SWITCH SIGNAL B CIRCUIT (STEERING SWITCH TO TEL ADAPT-ER UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

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

Description

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

Diagnosis Procedure

INFOID:0000000005797820

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

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

TEL ada	TEL adapter unit		cable	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B54	13	M33	31	Existed

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

TEL ada	apter unit		Continuity
Connector	Terminal	Ground	Continuity
B54	13		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

3. CHECK TEL ADAPTER UNIT VOLTAGE

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

(-	+)	(-	-)	V 16
	Voltage (Approx.)			
Connector	Terminal	(11 -)		
B54	13	B54	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace TEL adapter unit. Refer to AV-89, "Exploded View".

4. CHECK STEERING SWITCH

- 1. Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-25, "Component Inspection"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch. Refer to <u>ST-9</u>. "Exploded View".

STEERING SWITCH SIGNAL B CIRCUIT (STEERING SWITCH TO TEL ADAPT-ER UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

Component Inspection

INFOID:0000000005797821

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

Standard

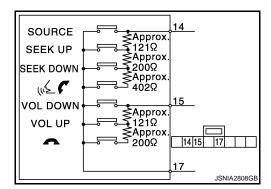
Between terminals 14 and 17

 $\begin{array}{lll} & \text{w} \not \leq & \text{switch ON} & : \text{Approx. } 709 - 737 \ \Omega \\ & \text{SEEK DOWN switch ON} & : \text{Approx. } 315 - 327 \ \Omega \\ & \text{SEEK UP switch ON} & : \text{Approx. } 119 - 123 \ \Omega \\ & \text{SOURCE switch ON} & : \text{Approx. } 0 \ \Omega \\ \end{array}$

Between terminals 15 and 17

 \blacktriangleright switch ON : Approx. 315 – 327 Ω VOL UP switch ON : Approx. 119 – 123 Ω

VOL DOWN switch ON : Approx. 0 Ω



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

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

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

Description INFOID:000000005797822

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

Diagnosis Procedure

INFOID:0000000005797823

- 1. CHECK STEERING SWITCH SIGNAL GROUND CIRCUIT (STEERING SWITCH TO TEL ADAPTER UNIT)
- 1. Turn ignition switch OFF.
- 2. Disconnect TEL adapter unit connector and spiral cable connector.
- 3. Check continuity between TEL adapter unit harness connector and spiral cable harness connector.

TEL ada	FEL adapter unit Spiral cable		Continuity	
Connector	Terminal	Connector Terminal		Continuity
B54	14	M33	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.

3.CHECK GROUND CIRCUIT

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

TEL ada	apter unit		Continuity
Connector	Terminal	Ground	Continuity
B54	14		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace TEL adapter unit. Refer to AV-89, "Exploded View"

4. CHECK STEERING SWITCH

Check steering switch. Refer to AV-26, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch. Refer to <u>ST-9</u>, "Exploded View"

Component Inspection

INFOID:0000000005797824

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

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

[AUDIO SYSTEM] < DTC/CIRCUIT DIAGNOSIS > Standard 14 Between terminals 14 and 17 Approx. 121Ω Approx. 200Ω Approx. 402Ω SOURCE SEEK UP w≤ 🖍 switch ON : Approx. $709 - 737 \Omega$ SEEK DOWN switch ON SEEK DOWN : Approx. $315 - 327 \Omega$ SEEK UP switch ON : Approx. 119 – 123 Ω (11/2 SOURCE switch ON : Approx. 0 Ω VOL DOWN Approx 121Ω Approx 200Ω VOL UP Between terminals 15 and 17 14 15 : Approx. 315 – 327 Ω switch ON 17 JSNIA2808GB VOL UP switch ON : Approx. 119 – 123 Ω VOL DOWN switch ON : Approx. 0 Ω

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

< DTC/CIRCUIT DIAGNOSIS >

STEERING SWITCH SIGNAL A CIRCUIT (TEL ADAPTER UNIT TO AUDIO

Description INFOID:0000000005797825

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

Diagnosis Procedure

UNIT)

INFOID:0000000005797826

${\bf 1.} {\sf check\ steering\ switch\ signal\ a\ circuit\ (tel\ adapter\ unit\ to\ audio\ unit)}$

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

Audi	o unit	TEL adapter unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M46	6	B54	17	Existed

Check continuity between audio unit harness connector and ground.

Audio unit			Continuity
Connector	Terminal	Ground	Continuity
M46	6		Not existed

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK AUDIO UNIT VOLTAGE

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

((+) (-)			V 16
Audio unit			Voltage (Approx.)	
Connector	Terminal	Connector	Terminal	(11 - /
M46	6	M46	15	3.3 V

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-89, "Exploded View".

NO >> Replace audio unit. Refer to AV-84, "Exploded View".

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

< DTC/CIRCUIT DIAGNOSIS >

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

Description INFOID:0000000005797827

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

Diagnosis Procedure

$1. {\sf check\ steering\ switch\ signal\ b\ circuit\ (tel\ adapter\ unit\ to\ audio\ unit)}$

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

Audi	o unit	TEL adapter unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M46	16	B54	18	Existed

Check continuity between audio unit harness connector and ground.

Audio unit			Continuity
Connector	Terminal	Ground	Continuity
M46	16		Not existed

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK AUDIO UNIT VOLTAGE

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

((+)		-)	Valla e
	Audio unit			Voltage (Approx.)
Connector	Terminal	Connector	Terminal	(11 -)
M46	16	M46	15	3.3 V

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-89, "Exploded View".

NO >> Replace audio unit. Refer to AV-84, "Exploded View".

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INFOID:0000000005797828

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AV-29 Revision: 2009 October 2010 Z12

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

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

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

Description

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

Diagnosis Procedure

INFOID:0000000005797830

1. Check steering switch signal ground circuit (tel adapter unit to audio unit)

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

Audio unit		TEL adapter unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
M46	15	B54	19	Existed

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK GROUND CIRCUIT

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

Audi	o unit		Continuity
Connector	Terminal	Ground	Continuity
M46	15		Existed

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-89, "Exploded View".

NO >> Replace audio unit. Refer to AV-84, "Exploded View".

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

INFOID:0000000005797838

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MICROPHONE SIGNAL CIRCUIT

Description INFOID:000000005797837

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

Diagnosis Procedure

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 ada	apter unit	Micro	phone	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	7		1		
B54	8	R21	2	Existed	
	29		4		

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

TEL ada	apter unit		Continuity	
Connector	Terminal	Ground	Continuity	
B54	7	Giounu	Not existed	
	29		Not existed	

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.
- Check voltage between TEL adapter unit harness connector and ground.

TEL ada	apter unit		Voltage
Connector	Terminal	Ground	(Approx.)
B54	29		5.0 V

Is inspection result OK?

YES >> GO TO 3.

NO >> Replace TEL adapter unit. Refer to AV-89, "Exploded View".

3.CHECK MICROPHONE SIGNAL

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

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Revision: 2009 October AV-31 2010 Z12

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MICROPHONE SIGNAL CIRCUIT

[AUDIO SYSTEM]

TEL ada	TEL adapter unit		apter unit	Condition	Reference value	
Connector	Terminal	Connector	Terminal	Condition	Reference value	
B54	7	B54	8	Give a voice.	(V) 1 0 -1 + 2ms SKIB3609E	

Is inspection result OK?

YES >> INSPECTION END

NO >> Replace microphone. Refer to AV-90, "Exploded View".

TELEPHONE ON SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AUDIO SYSTEM]

TELEPHONE ON SIGNAL CIRCUIT

Description INFOID:0000000005797840

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

Diagnosis Procedure

INFOID:0000000005797841

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1. CHECK CONTINUITY TELEPHONE ON SIGNAL CIRCUIT

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

TEL ada	apter unit	Audi	o unit	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B54	11	M49	54	Existed	

Check continuity between TEL adapter unit harness connector and ground.

TEL ada	apter unit		Continuity	
Connector	Terminal	Ground	Continuity	
B54	11		Not existed	

Is inspection result OK?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK TELEPHONE ON SIGNAL

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

Audio unit Connector Terminal			Condition	Voltage (Approx.)
M40	E A	Ground	While using hands-free phone system.	0 V
M49 54			While not using hands-free phone system.	5.0 V

Is inspection result OK?

YES >> INSPECTION END

NO >> Replace audio unit. Refer to AV-84, "Exploded View".

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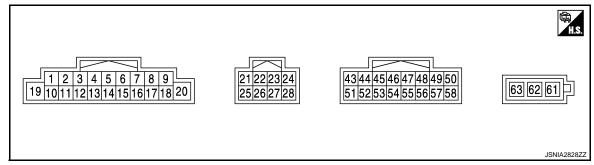
AV-33 Revision: 2009 October 2010 Z12

ECU DIAGNOSIS INFORMATION

AUDIO UNIT

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

	minal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Condition		(Approx.)	
2 (W)	3 (P)	Sound signal front speaker LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	
4 (V)	5 (R/B)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 *** 2ms SKIB3609E	
					Keep pressing SOURCE switch	0 V	
6	15	Steering switch signal A	Input	Ignition switch	Keep pressing SEEK UP switch	0.9 V	
(W/G) (L/E	(L/B)		r	ON	Keep pressing SEEK DOWN switch	1.6 V	
					Except for above	3.3 V	
7 (L/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	

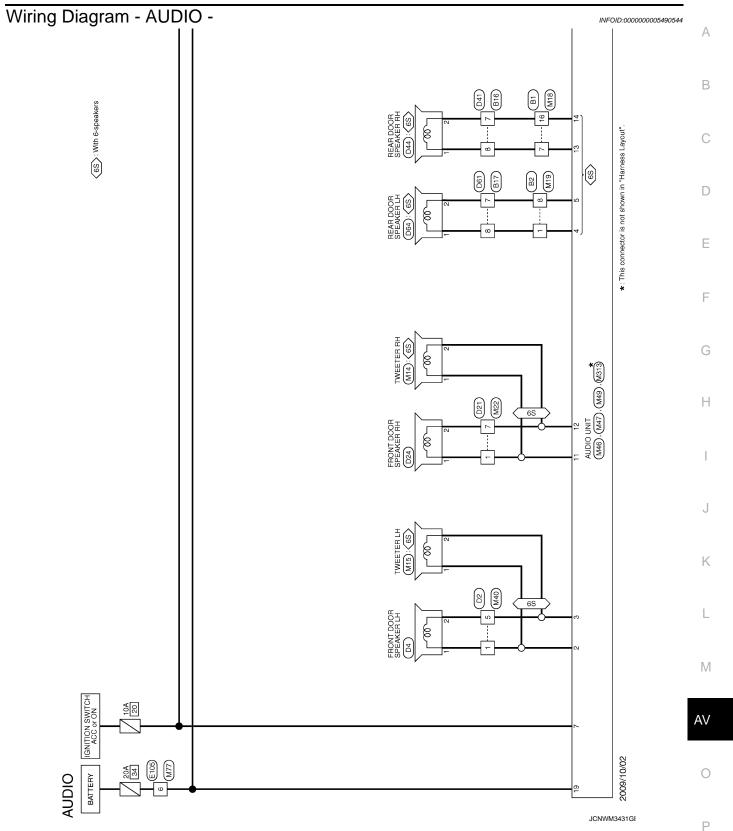
AUDIO UNIT

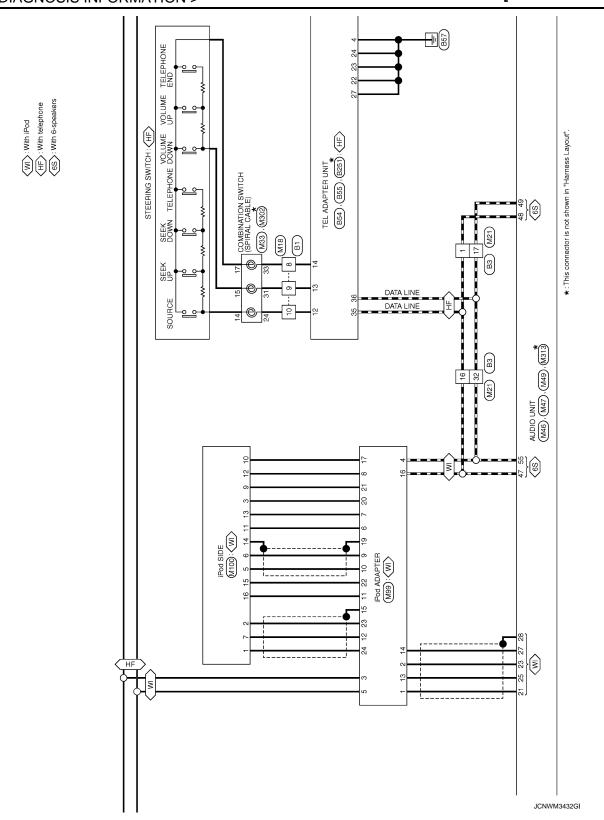
< ECU DIAGNOSIS INFORMATION >

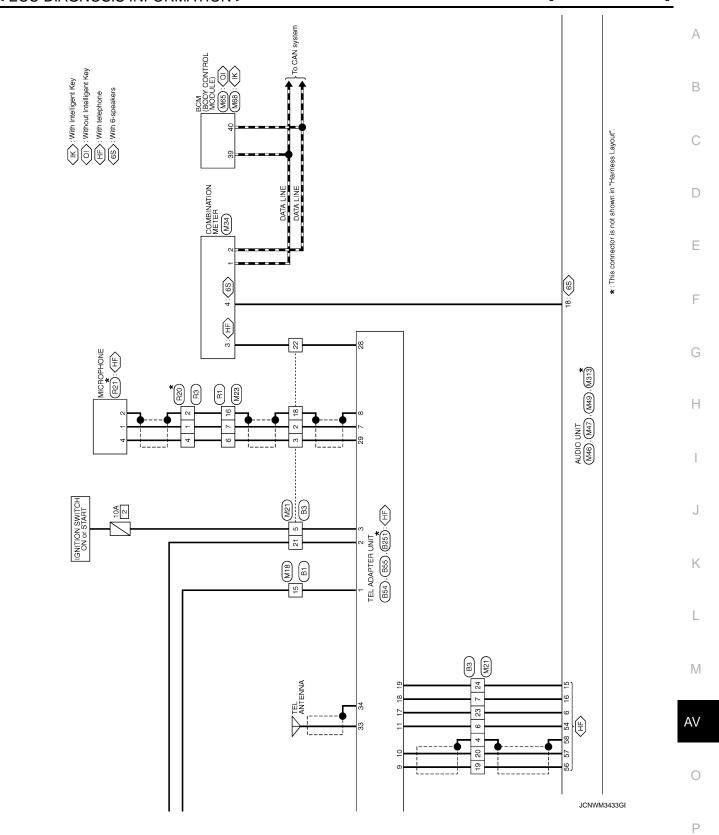
[AUDIO SYSTEM]

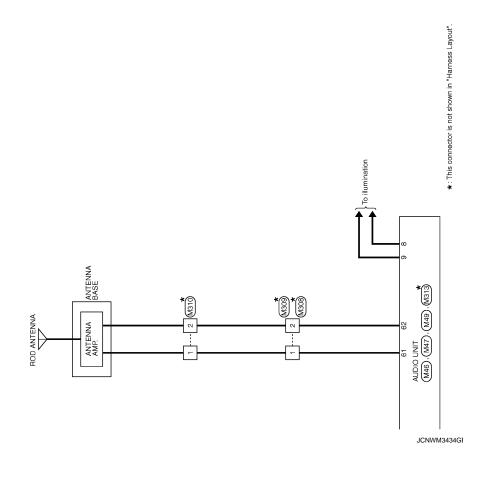
	minal color)	Description			Condition	Reference value	A
+	-	Signal name	Input/ Output		Condition	(Approx.)	
					Lighting switch 1ST When meter illumination is maximum	(V) 15 10 5 0 2.5 ms JPNIA1687GB	
9 (W)	8 (B/R)	Illumination control signal	Input	Ignition switch OFF	Lighting switch 1ST When meter illumination is step 11	(V) 15 10 5 0 	E
					Lighting switch 1ST When meter illumination is minimum	JPNIA1686GB 12.0 V	
11 (G)	12 (R)	Sound signal front speaker RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 + 2ms SKIB3609E	ŀ
13 (LG)	14 (GR)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output	(V) 1 0 -1 ++2ms SKIB3609E	1
16 (GR/R)	15 (L/B)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOL DOWN switch Keep pressing VOL UP switch Except for above	0 V 0.9 V 3.3 V	N
18 (L)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).	A\
19 (L)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	

	ninal color)	Description			Condition	Reference value	
+	_	Signal name	Input/ Output	Contantion		(Approx.)	
21 (R)	25 (W)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
23 (B)	27 (G)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected	(V) 1 0 -1 + 2ms SKIB3609E	
28	_	Shield	_	_	_	_	
47 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_	
48 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_	
49 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_	
54	Ground	TEL ON signal	Input	Ignition switch	While using hands-free phone system	0 V	
(G/O)	0.04.14			ON	While not using hands-free phone system	5.0 V	
55 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_	
56 (BR)	57 (Y)	Sound signal (TEL voice, voice guid- ance)	Input	Ignition switch ON	During voice guide output with the ò	(V) 1 0 -1 + 2ms SKIB3609E	
58	_	Shield	_	_	_	_	
61	Ground	Antenna amp. ON signal	Output	Ignition switch ON	_	12.0 V	
62	_	AM-FM main	Input	_	_	_	









Connector No. B54	A B C
Commedia Commedia	D
B16	F
Name	G
Terminal Terminal	Н
W-NH	I
B3 TH32MW-NH TH32MW-NH Signal N Signal N	J
11 P P 14 R 15 R 16 R	К
	L
CS Signal Name [Specification]	М
NS16MW NS16	AV
Connector Type Conn	0
	JCNWM3435GI

Revision: 2009 October AV-41 2010 Z12

Connector No. D44 Connector Name REAR DOOR SPEAKER RH Connector Type NISOZFW-CS H.S.	Terminal Color Color Color Color Cornector Cornector Cornector Cornector Cornector Cornector Cornector Cornector Cornector Color Color	Color of Wire C C C C C C C C C C C C C C C C C C C	
13 P	Connector Type NSQ2PW-CS	Connector No. D41 Connector Name WIRE TO WIRE Connector Type INSTOWN-CS 1 2	Terminal Color Signal Name [Specification] No. of Wive No.
3 R	Connector Type NSQ2PW-CS H.S. Terminal Color No. of Wire 1 W	Connector No. D21 Connector Type NH1GFW-CS10 AH10 13 11 11 0 9 13 12 11 10 9 13 12 11 10 9 13 13 13 13 14 14 14 14	Terminal Color Signal Name Specification Color Col
AUDIO Connector No. 855 Connector Type THOSFW-NH Connector Type THOSFW-NH A.S. 35	Terminal Color C	193 Signal Name [Specification] 194 194 195	MSI0FW-CS

JCNWM3436GI

	А
Signal Name (Specification)	В
MINE TO NATE T	С
1 1 1 1 1 1 1 1 1 1	D
offication]	Е
MI4 TWEETER RH TWEETER RH TWEETER LH TWEETER LH TWESTER LH T	F
	G
Connector No. Connector Name Connector No. Connector Name	Н
MATI MA	I
-	J
N	K
100 8 8 8 8 8 9 8 8 8 9 8 8 8 9 9 9 9 9 9	L
Specification] Specification] Specification]	M
Signal Name [Specification]	AV
AUDIO Connector Name	0
	Р

Revision: 2009 October AV-43 2010 Z12

AUDIO	0							
Connector No.	r No. M21	Connector No. M22	1,1	T	-	12	ΓV	ACC POWER SUPPLY
Connector Name	Name WIRE TO WIRE	Connector Name WIRE TO WIRE		16 SHIELD	-	17	o 3	WASHER LEVEL SWITCH SIGNAL
Connector Type	Type TH32FW-NH	Connector Type NH10MW-CS10	Τ			2 5	× ×	AMBIENT SENSOR SIGNAL
[7	7	Com	Connector No.	M33	50	R/W	AMBIENT SENSOR GROUND
修			iii	Occupation Name	COMBINATION SWITCH (SDIDAL CABLE)	21	В	GROUND
Ž		4 1 0 0 T	5	lector Marine	Compliance of the Control of the Con	22	В	GROUND
_	7 -	2 Z	Conn	Connector Type	TK08FGY-1V	23	В	GROUND
	32 31 30 29 27 26 25 24 23 22 1	9 10 11 12 13	€	•		24	> 0	FUEL LEVEL SENSOR GROUND
_		7 8 14 15 16 17 18 19 20	季	•		67 6	n C	PATTEDY DOMED SLIBBLY
		01 01 01 01	\	Ξ. S	٦L	788	2 B	IGNITION SIGNAL
<u>a</u>	Color Simpl Manua [Sanation]	Terminal Color Simple Manua Consideration	Г		24 25 26	59	П	PASSENGER SEAT BELT WARNING SIGNAL
No.	0	No. of Wire Signal Name Especimoation	7		31 32 33 34	31	П	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
-	SB -		П			32	BR	ENGINE COOLANT TEMPERATURE SIGNAL
2	- 5	2 G –	_[L		38	GR	ALTERNATOR SIGNAL
1	^	4 B -	Tern	lal	Signal Name [Specification]			
4	SHIELD -	2	o N	o. of Wire				
2	0	6 W/R	24	┨	1	Connector No.		M40
9	- 0/b	+	25	┪	1	Connect	Connector Name	WIRE TO WIRE
7	GR/R –	^ 8	26	┪	1		П	
8		9 G/R –	31	┥	1	Connector Type	П	NS10MW-CS
	SHIELD -	10 LG –	32	2 B/W	-	4		
10	G/R -		33	Н	-	B		
=	SHIELD -		34	4 R/B	1) I		
12	- 5	13 BR/Y –				2		1 2 3 4
	SHIELD -	14 B -						0 0
14	- 7		Conn	Connector No.	M34			
15	SB -	16 GR –	100	Connector Name	COMBINATION METER			
16	- BS	17 BR –	200	ector Name	COMBINATION METER			
	- FG		Conn	Connector Type	TH40FW-NH	Terminal	Color	[N G
	SHIELD -	20 Y/R –				No.	of Wire	oignal Ivame Lopechication
19	BR -			-		-	М	1
20	- ·		7	ů.		2	۸	1
21		Connector No. M23		-		3	^	-
22		Connector Name WIRE TO WIRE		20 19 18 1	13 11 10 9 8 7 6 5 4 3	4	G/R	_
23	M/G	\neg		38	35 31 28 26 27 26 25 24 23 22 21	9	۵	_
24	L/B –	Connector Type NS16MW-CS				9	L/B	_
22		₫.	L	- 1-			GR.	-
26	G/0 -	CHT.	Tern	rerminal Color	Signal Name [Specification]	6	H G	1
/2	1		NO.	+		0	2	1
87 5	n :	1 2 3 4 5 6 7		، ا	CAN-H			
62	· ·	8 9 10 11 12 13 14 15 16		+	CAN-L			
30			m	>	VEHICLE SPEED SIGNAL (2-PULSE)			
31	- re		4	+	VEHICLE SPEED SIGNAL (8-PULSE)			
32		L	<u>ا</u> ا	+	FUEL LEVEL SENSOR SIGNAL			
		Terminal Color Signal Name [Specification]	<u> </u>	+	AIR BAG SIGNAL			
		†	*\ '	+	OVERDRIVE CONTROL SWITCH SIGNAL			
			5	+	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)			
		. e	T	+	PARKING BRAKE SWITCH SIGNAL			
		+	<u> </u>	+	BRAKE FLUID LEVEL SWITCH SIGNAL			
		9 BR]]	13 B/R	ILLUMINATION CONTROL SIGNAL			

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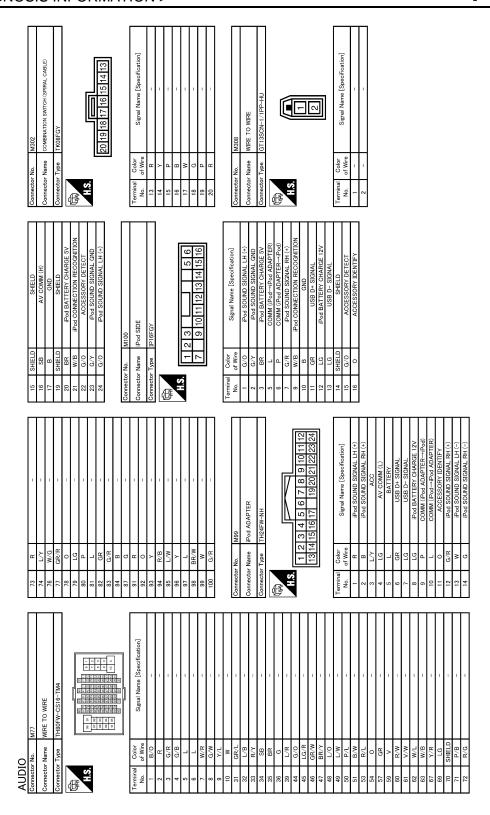
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REAR WINDOW DEFOGGER SW	OPTICAL SENSOR POWER SUPPLY	RECEIVER / SENSOR GND	KEYLESS ENTRY RECEIVER POWER SUPPLY	KEYLESS ENTRY RECEIVER COMM	NATS ANTENNA AMP.	KEYLESS ENTRY RECEIVER RSSI	SECURITY INDICATOR LAMP	DONGLE LINK	NATS ANTENNA AMP.	A/C SW	BLOWER FAN SW	HAZARD SW	DR DOOR UNLOCK SENSOR	COMBI SW OUTPUT 5	COMBI SW OUTPUT 4	COMBI SW OUTPUT 3	COMBI SW OUTPUT 2	COMBI SW OUTPUT 1	SHIFT P	IGN F/B	CAN-H	CAN-L																											
H	7 R/G	+	+	┨	\dashv			4 GR/R	+	7 Y/R	8 G/W	┨	1	+	3 Y/L	\dashv	5 R/L	0/J	0/5 2/0	0 8	J 6	0 P																											
15	17	€ :	19	50	21	22	23	24	25	27	28	29	8	35	33	34	32	36	37	38	39	40			_			-						r				_	_		_	_		_	_	_	_		
OPTICAL SENSOR POWER SUPPLY	RECEIVER/SENSOR GND	KEYLESS ENTRY RECEIVER POWER SUPPLY	KEYLESS ENTRY RECEIVER COMM	NATS ANTENNA AMP.	SECURITY INDICATOR LAMP	DONGLE LINK	NATS ANTENNA AMP.	THERMO CONTROL AMP.	A/C SW [With auto A/C]	A/C SW [With manual A/C]	BLOWER FAN SW	HAZARD SW	FR DEFROSTER SW	COMBI SW OUTPUT 5	COMBI SW OUTPUT 4	COMBI SW OUTPUT 3	COMBI SW OUTPUT 2	COMBI SW OUTPUT 1	KEY SWITCH	IGN	CAN−H	CAN-L			89	BCM (BODY CONTROL MODULE)	TH40FB-NH				7	5 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40			Signal Name [Specification]		COMBI SW INPUT 5	COMBI SW INPUT 4	COMBI SW INPUT 3	COMBI SW INPUT 2	COMBI SW INPUL I	KEY CYL UNLOCK SW	STOP I AMB SW	TIDE DEESS WARNING CHECK SW	ACC EVE	PASSENGER DOOR SW	REAR RH DOOR SW	OPTICAL SENSOR	
R/G		T	5/√	P/L	R∕≺	GR/R	ΓG	GR	J//	Y/R	Q/W	L/W	5⁄√	re	٧/٢	>	R/L	١/٥	R/W	0	٦	Д		ſ	No. M68		Т	1			ŀ	1 2 3 4 5 21 22 23 24 25			Color	ot Wire	BR/W	¥ .	۲/۱	g !	Y 9	Y/W	9/8	w//		88	GB/I	187	1
17	18	19	20	21	23	24	25	26	27	27	28	29	31	32	33	34	35	36	37	38	39	40			Connector No.	Connector Name	Connector Type		修	Ě	115				Terminal	Š.	2	.,	4	'n	٦ م	,	00 0	n 5	2 :	12	=	1 4	
Connector No. M49	Connector Name AUDIO UNIT	Т	Connector Type TH16FW-NH	á		V L		44 45 46 47 48 49	51 52 53 54 55 56 57 58			Ja	of Wire	SB	SB	LG	0/0	97	BR	57 Y SOUND SIGNAL (-)	58 SHIELD SHIELD			Connector No. M65	Connector Name BCM (BODY CONTROL MODULE)	Т	٦.		0 =		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20			nal		BR/W	GR	7	ا و		W/K	W/B	10 W/1 PEAB WINDOW DEFOCED SW	1	ONSCEN	GR/L	1/B	V/W TIRE PE	
M46	AUDIO UNIT		TH18FW-CS2			7		23456789	11 12 13 14 15 16 18			Signal Name [Specification]		SOUND SIGNAL FRONT SPEAKER LH (+)	SOUND SIGNAL FRONT SPEAKER LH (-)	SOUND SIGNAL REAR SPEAKER LH (+)	SOUND SIGNAL REAR SPEAKER LH (-)	STRG SW A	ACC	ILLUMINATION CONTROL SIGNAL (-)	ILLUMINATION CONTROL SIGNAL (+)	SOUND SIGNAL FRONT SPEAKER RH (+)	SOUND SIGNAL FRONT SPEAKER RH (-)	SOUND SIGNAL REAR SPEAKER RH (+)	AKER RH (-)	STRG SW GND	P(II SF)				M47	AUDIO UNIT	TH08FW-NH			K	Ţ	62	25 27 28			Signal Name [Specification]	(4) HT INNOIS GIVINGS FEG.	in ad southin stendt BH (+)	(-) INT DESIGNATION OF THE CO.	iPod SOUND SIGNAL BH (-)	SHED		-
Connector No. M.	Connector Name Al	Т	Connector Type TF	á	厚	S II		;	6		L	Ja .	ē	┪	е В	^	5 R/B	9 M/G	7 1.7	8 B/R	M 6	11 G	œ	+	+	15 L/B	+	19			Connector No. M.	Connector Name Al	Connector Type Th	1	厚	2					⊢	l erminal Golor	+	2 66	+	+	Ū,	1	

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Connector No. R20 Connector Name WRE TO WIRE Connector Type THO4FW-NH LS. [4 3 2 1]	Terminal Color Signal Name [Specification] 1 1 2 2 SHELD - - -	
Connector No. R1 Connector Type NISI6FW-CS MS16FW-CS T 6 5 4	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] No. of Wire No. of Wire Signal Name [Specification] No. of Wire No. of Wire Signal Name [Specification] No. of Wire No. of Wire	
AUDIO Gornector No. M0308 Connector Name WIRE TO WIRE Connector Type GT13SC-V/IS-HU	Terminal Color Signal Name [Specification] 1 1 1 1 1 1 1 1 1	

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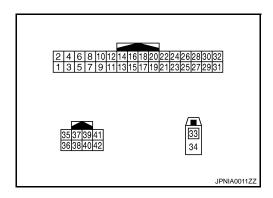
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TEL ADAPTER UNIT

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
2 (L)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
3 (LG)	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.	(V) 1 0 -1 + 2ms SKIB3609E
9 (BR)	10 (Y)	Sound signal (TEL voice, voice guid- ance)	Output	Ignition switch ON	During voice guide output with the vs witch pressed.	(V) 1 0 -1 + 2ms SKIB3609E
11	Ground	TEL ON signal	Output	Ignition switch	While using hands-free phone system.	0 V
(SB)			3 3 1 4 4 4	ON	While not using hands-free phone system.	5.0 V

TEL ADAPTER UNIT

< ECU DIAGNOSIS INFORMATION >

[AUDIO SYSTEM]

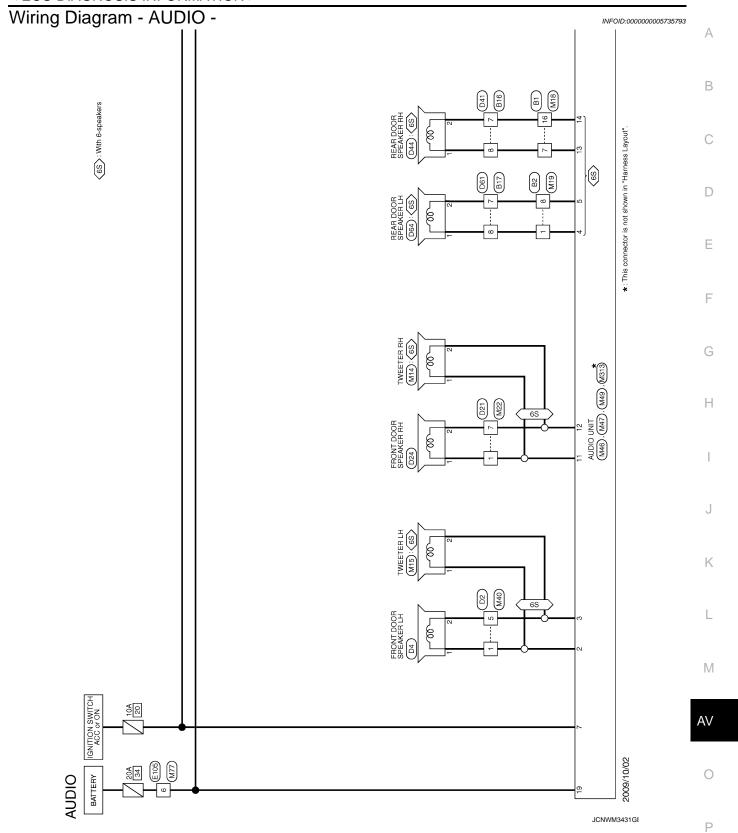
	minal color)	Description			O and distant	Reference value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
					Keep pressing SOURCE switch.	0 V	
				Ignition	Keep pressing SEEK UP switch.	1.3 V	
12 (W)	14 (GR)	Steering switch signal A	Input	switch ON	Keep pressing SEEK DOWN switch.	2.5 V	
					Keep pressing √{	3.4 V	
					Except for above.	5.0 V	
					Keep pressing VOL DOWN switch.	0 V	
13 (SB)	14 (GR)	Steering switch signal B	Input	Ignition switch	Keep pressing VOL UP switch.	1.3 V	
` '	, ,			ON	Keep pressing - switch.	2.5 V	
					Except for above.	5.0 V	
					Keep pressing SOURCE switch.	0 V	
17	19	Steering switch signal A	Output	Ignition switch	Keep pressing SEEK UP switch.	0.9 V	
(GR)	(L)			ON	Keep pressing SEEK DOWN switch.	1.6 V	
					Except for above.	3.3 V	
				Ignition	Keep pressing VOL DOWN switch.	0 V	
18 (P)	19 (L)	Steering switch signal B	Output	switch ON	Keep pressing VOL UP switch.	0.9 V	
					Except for above.	3.3 V	
22 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	
23 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	
24 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	
27 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V	
28 (O)	Ground	Vehicle speed signal (2-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	NOTE: The maximum voltage varies depending on the specification (destination unit).	

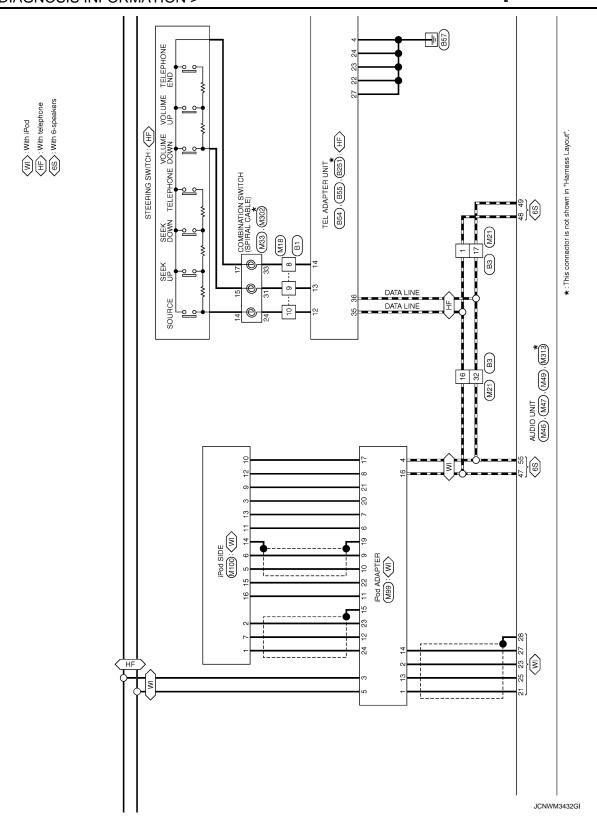
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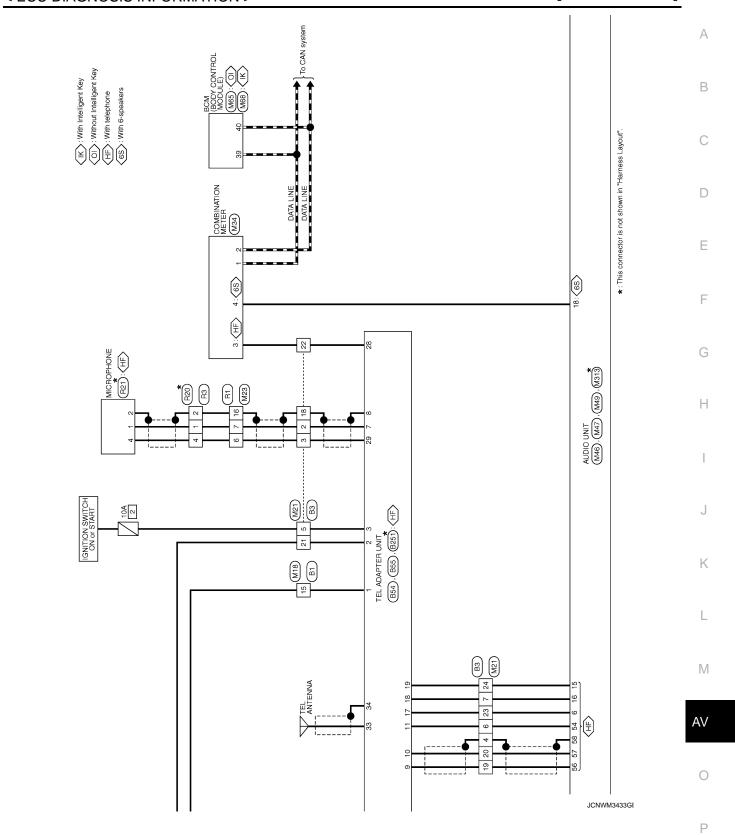
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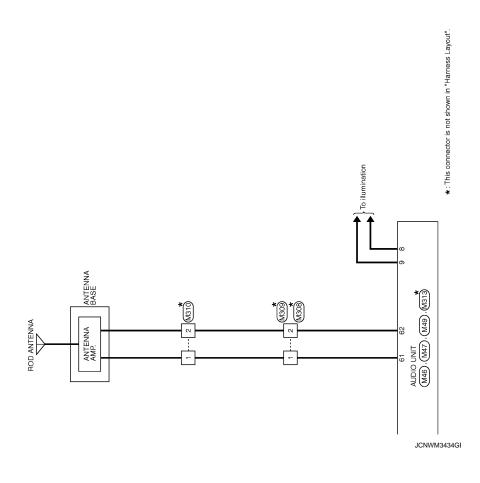
[AUDIO SYSTEM]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
29 (R)	Ground	Microphone power supply	Output	Ignition switch ON	_	5.0 V
33	_	TEL antenna signal	Input	_	Not connected to TEL antenna connector.	5.0 V
34	_	Shield	_	_	_	_
35 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_
36 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_









W-NH	A B
Connector No. 654	C
	E
B16 WIRE TO WIRE NISTOFW-CS	F
Connector No. Connector No. Connector Name Color Connector Type Connector Type Connector Name Color	G H
WIRE	1
10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	J
11 P 1 1 1 1 1 1 1	K
Specification] 5 6 7 14 15 16 15 16 16 14 15 16 14 15 16 14 15 16 15 16 16	L
Signal Name [S Signal	AV
AUDIO Commetter Name Wiff Connector Name Wiff H.S. Terminal Color No. of Wire 1	0
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Revision: 2009 October AV-55 2010 Z12

Connector No. D14 Connector Name REAR DOOR SPEAKER RH Connector Type NSSZFW-CS H.S.	Terminal Color Signal Name Specification No. of Wire Signal Name Specification No. of Wire Commercial No. D61 Commercial Name WIRE TO WIRE Commercial Name WIRE Commercial Name WIRE Commercial Name Commercial Name WIRE Commercial Name WIRE Commercial Name Commercial Name	Connector Type NSIOMW-CS H.S. 1 2	Terminal Color Signal Name Specification No. of Wire Signal Name Specification No. of Wire Specification No. of Wire Specification Signal Name Specification Specifi	-	
13 P	Connector Type NS02FW-CS	Terminal Color Signal Name [Specification]	Connector Type NSIOMW-CS H.S. 1 2 3 4 5 6 7 8 9 10	Terminal Color Signal Name [Specification]	
3 R	Connector Type NS02PN-CS	Terminal Color Signal Name [Specification] Color Signal Name [Specification]	Connector Type NHIOFW-CS10 1.8. 6 5 4 3 2 1 20 19 13 12 11 10 9 8 7	Terminal Color Signal Name (Specification) Color Color	9 R
AUDIO Connector No. Connector Name TEL ADAPTER UNIT Connector Type THOSEW-NH M.S. 36	Terminal Color Signal Name [Specification] Color Signal Name [Specification] Color Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] Color Col	Connector Type GT16C-1S-HU H.S. 34	Terminal Color Signal Name [Specification]	Connector Type NS 10FW-CS H.S. 4 3 2 1 10 9 8 7 6 5	Terminal Color Signal Name [Specification] 1

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TEL ADAPTER UNIT

[AUDIO SYSTEM]

[w]	А
Signal Name [Specification]	В
MISIGENW WIRE TO 15 6 5 16 14 14 14 14 14 14 14	С
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offication]	Е
MILE TROOFERR MIS NISIGEW-CS NISIGEW-CS Signal Name [Specification] NISIGEW-CS Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] Signal Name [Specification]	F
	G
Connector No. Connector Name Connector Type Terminal Color No. Connector Name Terminal Color No. Connector Name Connector Name Connector Name Terminal Color No. Connector Name Connector Name	Н
WYI WYI WYI WYI	I
- [With CVT] - [With WT] - [With W	J
× ×	K
4 4 4 8 4 8 4 8 8 8 8 8 8 8 8 8 8 8 8 8	
eation]	L
Signal Name (Specification) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification)	M
NSG2PW WIRE TO NSG2PW	AV
AUDIO Commettor Non Commettor Name Commettor Type 1 LG 2 GR 1 LG 2 GR 2 GR 1 LG 2 GR 1 LG 3 SB	0
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Revision: 2009 October AV-57 2010 Z12

AUDIO	Overnantes No.	9	18 1 /V ACC DOMICE CLIED! V
	Т	7	WASH
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	1	, <u>~</u>
Connector Type TH32FW-NH	Connector Type NH10MW-CS10		V/W AME
	1	Connector No. M33	R/W
		COMBINATION SWITCH (Spice)	21 B GROUND
		\neg	В
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 Z	Connector Type TK08FGY-1V	a
32/31/30/29/28/27/26/25/24/23/22/21/20/19/18/17	9 10 11 12 13	1	24 V FUEL LEVEL SENSOR GROUND 35 D VDC GROUND
	8 14 15 16 17 18 ¹⁹ 20		LG BATTI
		٦Ľ	æ
Terminal Color Signal Name [Specification]	Jal	97 97	BR
	No. of Wire	31 32 33 34	œ
1 SB -	1 6		BR ENGINE C
2 G –	2 G –	ŀ	38 GR ALTERNATOR SIGNAL
T	4 B	la	
σ	┪	of Wire	١
+	6 W/R –	W/L	Connector No. M40
= 0/5 9	+	K/L	Connector Name WIRE TO WIRE
7	> 1	+	_
1	G/R	+	Connector Type NS10MW-CS
7	\dashv	\dashv	á
10 G/R –	\dashv	33 L/G	医
11 SHIELD -	12 G –	34 R/B –	
П	В		1 2 - 3 4
13 SHIELD -	14 B -	١	7 8 0 10
_	15 G/B –	Connector No. M34	6 0 / 0
15 SB –	\dashv	Connector Name COMBINATION METER	
	17 BR –		
	18 L/Y -	Connector Type TH40FW-NH	la l
S	20 Y/R –	á	No. of Wire
19 BR –		医	- w
			2 V =
_	Connector No. M23	(3 \
-	Connector Name MIRE TO MIRE	20 19 18 17 15 13 11 10 9 8 7 6 5 4 3 2 1	4 G/R –
		31 29 28 27 26 25 24 23	5 P –
-	Connector Type NS16MW-CS		6 L/B -
-	ģ		8 GR –
٦	臣	lal	BR
+		No. of Wire	B
\dashv	1 2 3 - 4 5 6 7		
29 W –	8 0 10 11 12 13 14 15 16	2 P CAN-L	
4	5 10 11 15 10 14 13	3 V VEHICLE SPEED SIGNAL (2-PULSE)	
\dashv		L VE	
32 LG –		FUEL	
	la	R/G	
	of Wire	۵	
		O SEAT	
	g.	SB	
	+	G/R	
	9 BR	13 B/R ILLUMINATION CONTROL SIGNAL	

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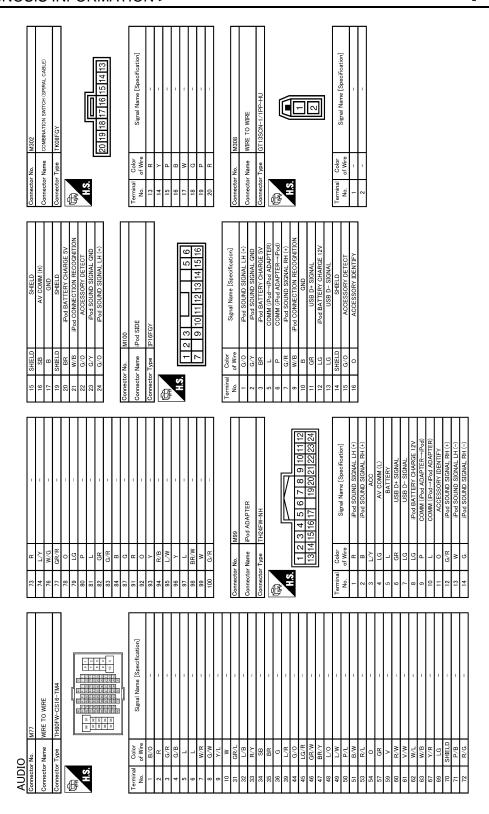
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W/L REAR WINDOW DEFOGGER SW R/G OPTICAL SENSOR POWER SUPPLY	_	BR KEYLESS ENTRY RECEIVER POWER SUPPLY	G/Y KEYLESS ENTRY RECEIVER COMM		<u>×</u>	SECUR	~	LG NATS ANTENNA AMP.		G/W BLOWER FAN SW	L/W HAZARD SW	G/B DR DOOR UNLOCK SENSOR	LG COMBI SW OUTPUT 5	Y/L COMBI SW OUTPUT 4			COMBI		O IGN F/B		P CAN-L																											
15	18	19	20	21	22	1	1	25	27	28	59	31	32	33	34	32	36	37	88	39	40																											
17 R/G OPTICAL SENSOR POWER SUPPLY 18 V RECEIVER/SENSOR GND	BR KEYLESS	J.√9	21 P/L NATS ANTENNA AMP.	R/Y SECUR	GR/R	PC	SB	27 Y/G A/C SW [With auto A/C]	Y/R A/C	\dashv	29 L/W HAZARD SW	G/Y	PT	33 Y/L COMBI SW OUTPUT 4	M	R/L	L/0 CON	R/W KEY	0	7	40 P CAN-L		Connector No Mgs	Т	Connector Name BCM (BODY CONTROL MODULE)	Connector Type TH40FB-NH	Q	CHIA)	HS.	11 12 13 14 15 16 17 18 19	22 23 24 25 26 27 28 29 30 31 32 33 34			Signal Name [Specification]	t		5 5	5	6 L/R COMBI SW INPUT 1	7 W/R KEY CYL UNLOCK SW	8 W/B KEY CYL LOCK SW	9 R STOP LAMP SW 1	10 V/W TIRE PRESS WARNING CHECK SW	11 L/Y ACC F/B	12 SB PASSENGER DOOR SW	13 GR/L REAR RH DOOR SW	14 L/B OPTICAL SENSOR	
	Connector Name AUDIO UNIT	Connector Type TH16FW-NH			7	0, 2, 0, 2,	45 46 47 48	51 52 53 54 55 56 57 58			_	of Wire	SB	SB	ΓG	0/0	57	BR	NOS >	S SHIELD SHIELD		Connector No Mes	Т	Connector Name BCM (BODY CONTROL MODULE)	Connector Type TH40FW-NH			HS.	N	21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 38 37 38 39 40		ı,	inal Color Signal Name [Specification]	t	W CO	<u> </u>	. c	7.	W/R KEY CYL UNLOCK SW	W/B KEY CYL LOCK SW	R STOP LAMP SW) W/L REAR WINDOW DEFOGGER SW	Δ,	SB	3 GR/L REAR RH DOOR SW	L/B	Н	
			Į (F		1012	4 5 6 / 8	12 13 14 15 16 18			Signal Name [Specification]	No.	_	<u>기</u>	_	EAKER LH (-)	STRG SW A 55]]		ILLUMINATION CONTROL SIGNAL (+) 58	SOUND SIGNAL FRONT SPEAKER RH (+)	- .آ.	E I	T		3-PULSE)	BATTERY	<u> </u>			LIN		Terminal		<u> </u>	21 23	80 20	2, 20	7	Simon Nome [Secution]	olgna i Name Lopecinication 9	iPod SOUND SIGNAL LH (+) 10	iPod SOUND SIGNAL RH (+)	iPod SOUND SIGNAL LH (-)	iPod SOUND SIGNAL RH (-) 13	SHIELD 14	15	
П	Connector Name AUDIO UNIT	Connector Type TH18FW-CS	q	厚	- N	 	7	19 111			lal	No. of Wire	┨	3 P SOUN	>	R/B	9/M 9	4	B/R	+	ŋ	+	2 6	<u> </u>	H	18 L	19 L		Connector No. M47	Т	Connector Name AUDIO UNIT	Connector Type TH08FW-NH	€	全方	H.S.					Terminal Golor	No. of Wire	21 R	23 B	25 W	27 G	28 SHIELD		

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Revision: 2009 October AV-59 2010 Z12



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Connector No. R20 Connector Name WIRE TO WIRE Connector Type THOGFW-NH LIS. TABLE TO WIRE A 3 2 1	Terminal Color Signal Name Specification 1	Terminal Color Signal Name [Speerfication] No. of Wire MICROPHONE SIGNAL 2 SHELD MICROPHONE GND 3
Connector No. R1 Connector Type WIFE TO WIFE Connector Type NS16FW-CS 7 6 5 4	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] No. of Wire No. No.	41 9 1 1
AUDIO Connector No. M309 Connector Name WIRE TO WIRE Connector Type GT13SC-1/1S-HU	No. O'dor Signal Name [Specification] 1 -	tor No. M313 tor Name AUDIO UI tor Type GT13SH- S

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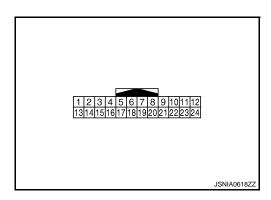
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IPOD ADAPTER

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (R)	13 (W)	iPod sound signal LH	Output	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 ** 2ms SKIB3609E
2 (B)	14 (G)	iPod sound signal RH	Output	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
3 (L/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
4 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_
5 (L)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
6 (GR)	_	USB D- signal	_	_	_	_
7 (LG)	_	USB D+ signal	_	_	_	_
8 (LG)	Ground	iPod battery charge 12 V	Output	Ignition switch ON	Connected to iPod [®]	12.0 V

IPOD ADAPTER

[AUDIO SYSTEM]

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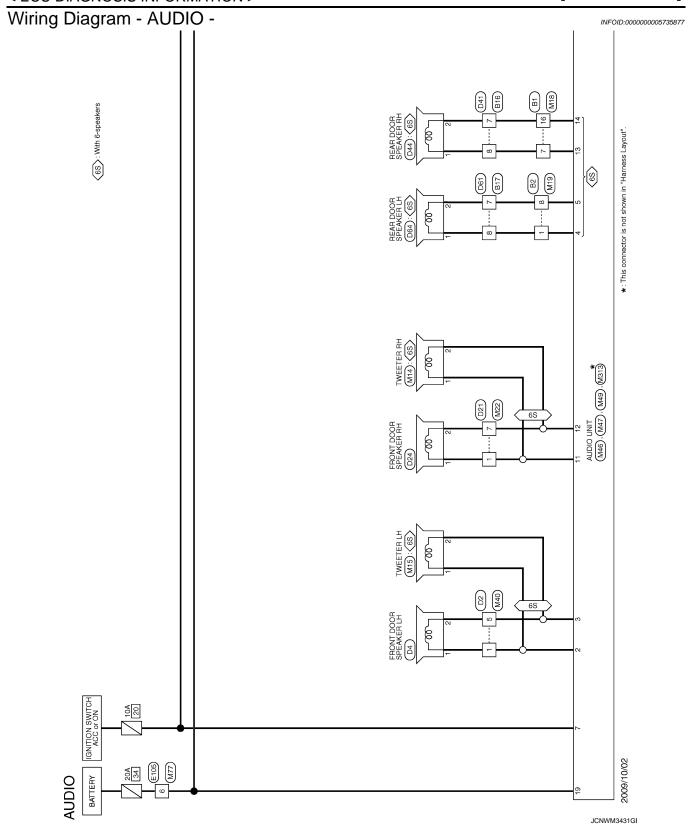
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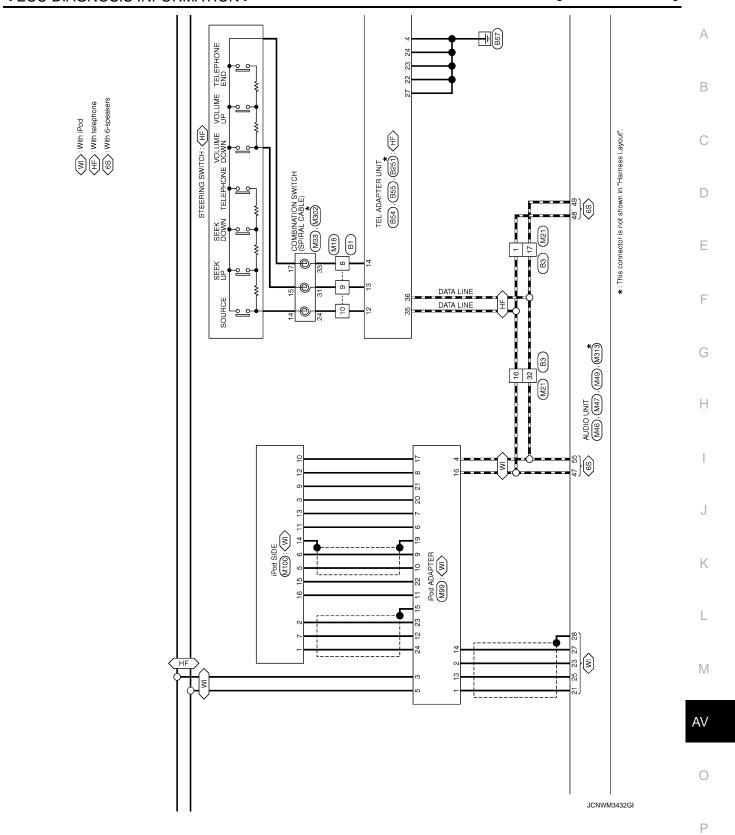
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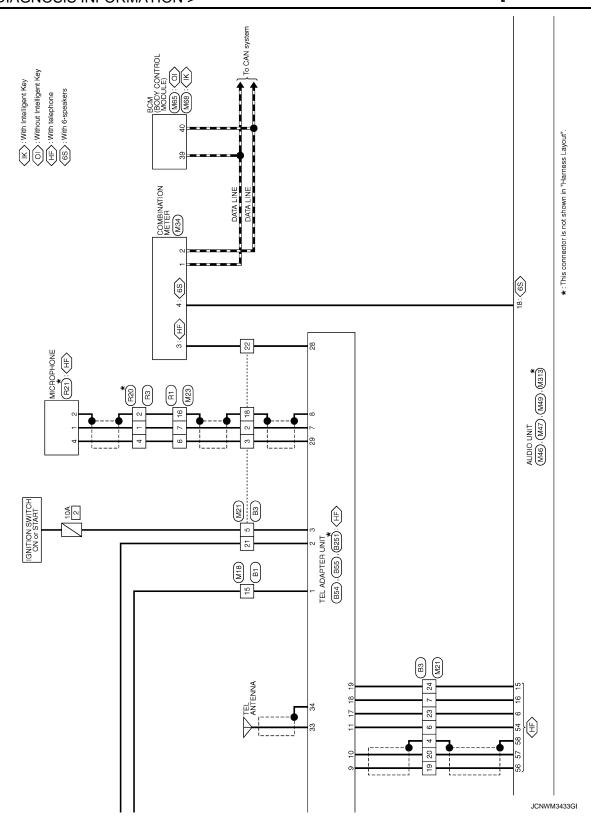
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	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
9 (P)	Ground	Communication signal (iPod adapter→iPod [®])	Output	Ignition switch ON	The wave pattern is displayed just after iPod connection.	JPNIA0462GB NOTE: After the wave pattern display, the value continues Approx 3.3 V
10 (L)	Ground	Communication signal (iPod [®] →iPod adapter)	Input	Ignition switch ON	Connected to iPod [®]	(V) 3 2 1 0 +
11 (O)	Ground	ACCESSORY-IDENTIFY	_	Ignition switch ON	Connected to iPod [®]	0 V
12 (G/R)	23 (G/Y)	iPod sound signal RH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
15		Shield	_	_	_	_
16 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_
17 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
19	_	Shield	_	_	_	_
20 (BR)	Ground	iPod battery charge 5 V	Output	Ignition switch ON	Connected to iPod [®]	5.0 V
21	Graves	iPod connection recogni-	Inn::4	Ignition	Not connected to iPod®	4.0 V
(W/B)	Ground	tion signal	Input	switch ON	Connected to iPod®	0 V
22 (G/O)	Ground	ACCESSORY-DETECT	_	Ignition switch ON	Connected to iPod [®]	0 V
24 (G/O)	23 (G/Y)	iPod sound signal LH	Input	Ignition switch ON	When iPod mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E







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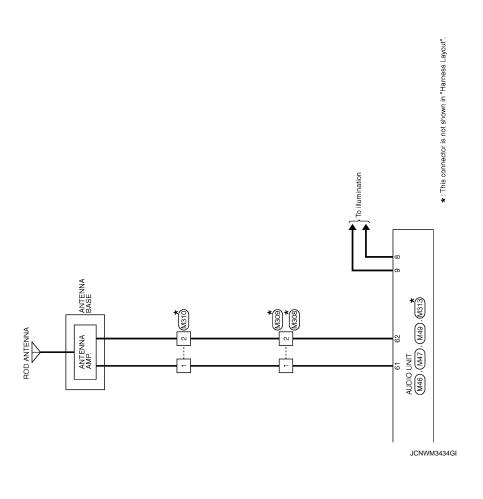
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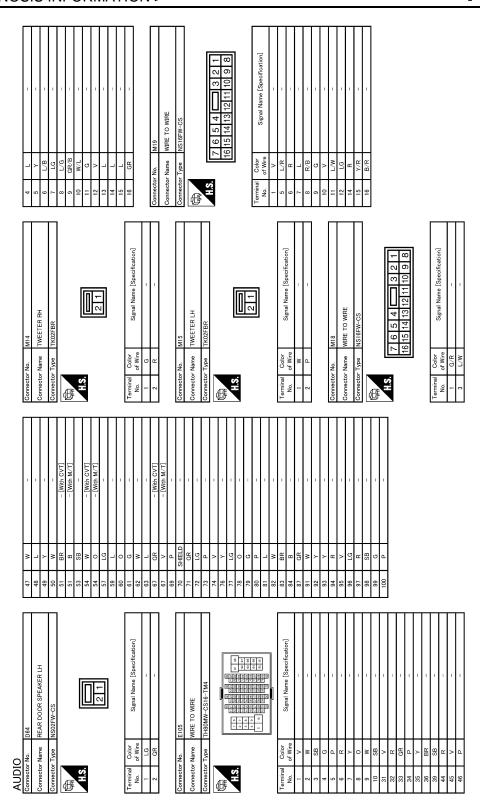
Revision: 2009 October AV-67 2010 Z12

AUDIO			
Connector No. B1		32 LG -	Connector No. B54
Connector Name WIRE TO WIRE	12 LG –		Connector Name TEL ADAPTER UNIT
Connector Type NS16MW-CS	۷ >-	Connector No. B16	Connector Type TH32FW-NH
-		Connector Name WIRE TO WIRE	
		Connector Type NS10FW-CS	
<u>-</u> 1	Connector No. B3	4	_
8 9 10 11 12 13 14 15 16	Connector Name WIRE TO WIRE	Atto	7 9 11 13 17 19 21 23
	Connector Type TH32MW-NH	43 21	
Terminal Color		10 9 8 7 6 5	Terminal Color
			_
			1 R BATTERY
Н	7 8 9 10 11 12 13 14 15	ıal	
7	17/18/19/20/21/22/23/24/25/26/24/29/30/31/32	re	LG IC
+		>	4 B GND
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e GR	+	¥5 .	9 BK SOUND SIGNAL (+)
90	98 -	. LG	<u>-</u> {
s (* ;	98
: e	†		+
+	SMIELD		98
+	T LG	ſ	E. C.
+	e SB	Connector No. B17	GR
+	n.	Connector Name WIRE TO WIRE	a.
16 GR =	>	T	7
	SHIELD	Connector Type NS10FW-CS	B
	_	4	an i
Connector No. B2	SHIELD	(本)	B
Connector Name WIRE TO WIRE	D I		20 00
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Connector Type NS16MW-CS	.e	10 9 8 7 6 5	я «
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CHAT	- SB SB		Z9 R MICROPHONE VCC
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123 - 45	SHIELD	No of Wire Signal Name [Specification]	
8 9 10 11 12 13 14 15 16		t	
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Terminal Color	GR	7	
	24 L –	- A 8	
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- B	Н		
7 L –	28 B –		
4	\dashv		
	\dashv		
10 V –	31 LG -		

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	А
REAR DOOR SPEAKER RH NSQFW-CS Signal Name [Specification] Signal Name [Specification] Signal Name [Specification]	В
Name REAR DG 1 Type NSDSPW O Color O Wire O S Wire O S Wire O S S S S S S S S S S S S S S S S S S	С
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Signal Name [Specification]	M
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Name [Specification]	M
WIRE TO TH32FPW-	AV
Connector Name M Connector No. M Connector Name M M M M M M M M M	0
	WM3438GI
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Revision: 2009 October AV-71 2010 Z12

AUDIO								
Connector No. M46	Connector No.	. M49	17	R/G	OPTICAL SENSOR POWER SUPPLY	15	T/M	REAR WINDOW DEFOGGER SW
TIMI OIGHW		TIMITOTOTIV	18	>	RECEIVER/SENSOR GND	17	R/G	OPTICAL SENSOR POWER SUPPLY
	Connector Name		19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY	18	>	RECEIVER / SENSOR GND
Connector Type TH18FW-CS2	Connector Type	De TH16FW-NH	20	J/9	KEYLESS ENTRY RECEIVER COMM	19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
	0		21	T/d	NATS ANTENNA AMP.	20	J/5	KEYLESS ENTRY RECEIVER COMM
修	F		23	Н	SECURITY INDICATOR LAMP	21	J/d	NATS ANTENNA AMP.
	ŠĪ.	7	24	GR/R	DONGLE LINK	22	M/G	KEYLESS ENTRY RECEIVER RSSI
		G, E, G, E,	25	LG	NATS ANTENNA AMP.	23	R⁄Y	SECURITY INDICATOR LAMP
2345678		44 45 46 47 48 49	26	GR	THERMO CONTROL AMP.	24	GR/R	DONGLE LINK
11 12 13 14 15 16 18		51 52 53 54 55 56 57 58	27	Y/G	A/C SW [With auto A/C]	25	P	NATS ANTENNA AMP.
			27	Y/R	A/C SW [With manual A/C]	27	Y/R	A/C SW
			28	G/W	BLOWER FAN SW	28	G/W	BLOWER FAN SW
lal	lal	Color Signal Name [Specification]	29	L/W	HAZARD SW	59	L/W	HAZARD SW
No. of Wire	No. of \	of Wire	31	G/Y	FR DEFROSTER SW	31	G/B	DR DOOR UNLOCK SENSOR
2 W SOUND SIGNAL FRONT SPEAKER LH (+)	47 S	SB AV COMM (H)	32	LG	COMBI SW OUTPUT 5	32	ΓC	COMBI SW OUTPUT 5
3 P SOUND SIGNAL FRONT SPEAKER LH (-)	48 S	SB AV COMM (H)	33	Y/L	COMBI SW OUTPUT 4	33	Y/L	COMBI SW OUTPUT 4
4 V SOUND SIGNAL REAR SPEAKER LH (+)	49 L	LG AV COMM (L)	34	M	COMBI SW OUTPUT 3	34	М	COMBI SW OUTPUT 3
SOUND SIGN	Н	G/O TEL ON SIGNAL	35	R/L	COMBI SW OUTPUT 2	32	R/L	COMBI SW OUTPUT 2
6 W/G STRG SW A	22 T	LG AV COMM (L)	36	0/7	COMBI SW OUTPUT 1	36	0/7	COMBI SW OUTPUT 1
7 L/Y ACC	H	BR SOUND SIGNAL (+)	37	R/W	KEY SWITCH	37	0/5	SHIFT P
8 B/R ILLUMINATION CONTROL SIGNAL (–)	┝		38	0	NSI	38	0	IGN F/B
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t				┨				
9	Connector No.	M65	Γ					
GR		Г	Connec	Connector No.	M68			
15 L/B STRG SW GND	Connector Name	me BCM (BODY CONTROL MODULE)	<u> </u>					
GR/R	Connector Type	oe TH40FW-NH	Conne	Connector Name	BCM (BODY CONTROL MODULE)			
18 L VEHICLE SPEED (8-PULSE)	4		Conne	Connector Type	TH40FB-NH			
19 L BATTERY	E		4					
	Š		厚	_				
I		/ 000	SH.	¢.				
Connector No. M47	- 6	7 8 9 10 11 12 13 14 15 16 07 27 28 28 38 38 38 38 38 38	<u> </u>	-	/			
Connector Name AUDIO UNIT			តា	21 22 23 2	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40			
Connector Type THOREW-NH								
1	Terminal Co	Color						
Œ	No. of	of Wire	Terminal	nal Color	9			
	2 BF	,	No	of Wire	olgnal Name [opecification]			
	3	GR COMBI SW INPUT 4	2	BR/W	COMBI SW INPUT 5			
21 23	4 L,	L/Y COMBI SW INPUT 3	°	GR	COMBI SW INPUT 4			
25 27 28	2	G COMBI SW INPUT 2	4	L/Y	COMBI SW INPUT 3			
	9		2	ŋ	COMBI SW INPUT 2			
Ŀ	+	¥	و ا	L/R	COMBI SW INPUT 1			
la l	┪	~ ×	_	W/R	KEY CYL UNLOCK SW			
. of Wire	┥		® 	M/B	KEY CYL LOCK SW			
œ	+	REAR WINDO	6	┪	STOP LAMP SW 1			
B	┥		<u>°</u> ∏	┪	TIRE PRESS WARNING CHECK SW			
м	┪	<u> </u>	= <u> </u> 	ζ	ACC F/B			
G iPod SOU	+		12	SB	PASSENGER DOOR SW			
28 SHIELD SHIELD	+	1	I T	GR/L	REAR RH DOOR SW			
	12 ^	V/W TIRE PRESS WARNING CHECK SW	14	8	OPTICAL SENSOR			

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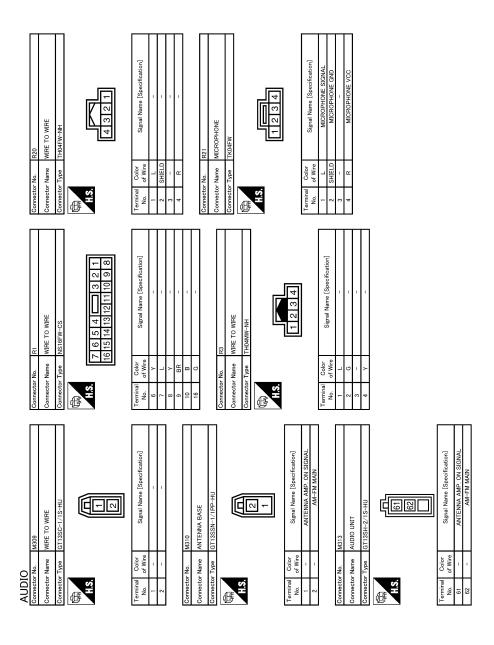
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Connector No. M302 Connector Name COMBINATION SWITCH (SPIRAL CABLE) Connector Type TK08FGY H.S. 20 19 18 17 16 15 14 13	Terminal Color Signal Name [Specification] 13 R	
	Connector Name Pod SIDE	
	N S C C C C C C C C C C C C C C C C C C	
No. M77 Name WIPE TO WIPE Type TH80FW-CS:16-TM4	Color Signal Name (Specification) BYO BYO CA/B CA/B CA/B CA/B CA/B W/R W/C	
AUDIO Connector Name Connector Type H.S.	Terminal No. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	CNWM3440Gi



JCNWM3441GI

AUDIO SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[AUDIO SYSTEM]

SYMPTOM DIAGNOSIS

AUDIO SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000005490545

AUDIO SYSTEM

Symptoms	Check items	Possible malfunction location / Action to take
Audio sound is not heard.	No sound from all speakers.	Audio unit power supply and ground circuit. Refer to AV-20. "AUDIO UNIT : Diagnosis Procedure".
Addio Sound is not neard.	Sound is not heard only from the specific places.	Sound signal circuit of malfunctioning system.
AM/FM radio is not received.	Other audio sounds are normal.	Antenna amp. ON signal circuit. Antenna base Antenna feeder

RELATED TO iPod®

Trouble Diagnosis Chart by Symptom

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

NOTE:

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

Trouble diagnosis chart by symptom

Symptoms	Check items	Possible malfunction location / Action to take
There is no sound from the iP-	Other cudio counds are normal	iPod sound signal circuit between audio unit and iPod adapter.
od [®] .	Other audio sounds are normal.	iPod sound signal circuit between iPod® and iPod adapter.
	iPod battery charging is normal. iPod software and hardware version are displayed when performing audio unit self-diagnosis.	Communication circuit between iPod [®] and iPod adapter.
"iPod No connect" is displayed when "iPod" switch is pressed.	iPod battery charging is normal. iPod software and hardware version are not displayed when performing audio unit self-diagnosis.	AV communication circuit between audio unit and iPod adapter.
	iPod battery charge does not work.	iPod adapter power supply and ground circuit. Refer to AV-20. "iPod ADAPTER: Diagnosis Procedure".
iPod [®] cannot charge the battery.	Not chargeable even when connecting other iPod [®] . Refer to NOTE.	iPod battery charge 5 V circuit between iPod [®] and iPod adapter.

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

RELATED TO STEERING SWITCH

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. (steering switch to TEL adapter unit) Refer to AV-26, "Diagnosis Procedure".
"SOURCE", "SEEK UP", "VOL UP", "SEEK DOWN" and "VOL DOWN" switches are not operated.	Steering switch signal ground circuit. (TEL adapter unit to audio unit) Refer to AV-30, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch.
" " " " " " " " " " " " "	Steering switch signal A circuit. (steering switch to TEL adapter unit) Refer to AV-22, "Diagnosis Procedure".

AV-75 Revision: 2009 October 2010 Z12

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AUDIO SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[AUDIO SYSTEM]

Symptoms	Possible malfunction location / Action to take
"SOURCE", "SEEK UP" and "SEEK DOWN" switches are not operated.	Steering switch signal A circuit. (TEL adapter unit to audio unit) Refer to AV-28. "Diagnosis Procedure".
"A", "VOL UP" and "VOL DOWN" switches are not operated.	Steering switch signal B circuit. (steering switch to TEL adapter unit) Refer to AV-24, "Diagnosis Procedure".
"VOL UP" and "VOL DOWN" switches are not operated.	Steering switch signal B circuit. (TEL adapter unit to audio unit) Refer to AV-29, "Diagnosis Procedure".

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HANDS-FREE PHONE SYMPTOMS

Symptom Table

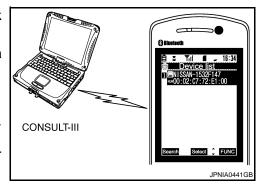
RELATED TO HANDS-FREE PHONE

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

Simple Check for Bluetooth[™] Communication

If cellular phone and TEL adapter unit cannot be connected with Bluetooth $^{\text{\tiny TM}}$ communication, following procedure allows the technician to judge which device has malfunction.

- Turn on a cellular phone, not connecting Bluetooth[™] communication.
- 2. Start CONSULT-III, then start Windows®.
- 3. Set CONSULT-III near a cellular phone.
- 4. When operated Bluetooth[™] registration by cellular phone, check if CONSULT-III^{*} would be displayed on the device name. (If other Bluetooth[™]device is located near cellular phone, a name of the device would be displayed also.)
 NOTE:
 - *:Displayed device name is "NISSAN-******.".
- If no device name is displayed, cellular phone is malfunction. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.



Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Possible malfunction location/Action to take	
Does not recognize cellular phone connection.	Repeat the registration of cellular phone.	TEL adapter unit	
Hands-free phone cannot be established.	Both the reception and the speech cannot be performed.	TEL adapter unit power supply and ground circuit. Refer to AV-21, "TEL ADAPTER UNIT: Diagnosis Procedure". Control signal circuit AV communication circuit between audio unit and TEL adapter unit.	ı
	 Both the reception and the speech cannot be performed. Audio can be operated by steering switch. 	TEL ON signal circuit.	A
The other party's voice cannot be heard by hands-free phone.	Audio system sound is normal.	Sound signal (telephone voice, telephone guidance) circuit	
be fleatu by flatius-flee priofie.	Audio system sound does not sound.	Refer to AV-75, "Symptom Table".	
Originating sound is not heard	Sound operation function is normal.	TEL adapter unit	
by the other party with hands- free phone communication.	Sound operation function does not work.	Microphone signal circuit. Refer to AV-31, "Diagnosis Procedure".	

RELATED TO STEERING SWITCH

HANDS-FREE PHONE SYMPTOMS

< SYMPTOM DIAGNOSIS >

[AUDIO SYSTEM]

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. (steering switch to TEL adapter unit) Refer to AV-26, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch.
" " " " " " " " " " " " "	Steering switch signal A circuit. (steering switch to TEL adapter unit) Refer to AV-22, "Diagnosis Procedure".
"A", "VOL UP" and "VOL DOWN" switches are not operated.	Steering switch signal B circuit. (steering switch to TEL adapter unit) Refer to AV-24. "Diagnosis Procedure".

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[AUDIO SYSTEM]

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NORMAL OPERATING CONDITION

Description INFOID:0000000005490547

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	
	Check that the disc was inserted correctly.	
	Check that the disc is scratched or dirty.	
	Check if there is condensation inside the player. If there is, wait until the condensation is gone (about 1 hour) before using the player.	
	If there is a temperature increase error, the CD player will play correctly after it returns to the normal temperature.	
Cannot play	Files with extensions other than ".MP3", ".WMA", ".mp3", or ".wma" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.	
	Check if the disc or the file is generated in an irregular format. This may occur depending on the variation or the setting of MP3/WMA writing applications or other text editing applications.	
	Check if the finalization process, such as session close and disc close, is done for the disc.	
	Check if the disc is protected by copyright.	
Daniel de la	Check if the disc is scratched or dirty.	
Poor sound quality	Bit rate may be too low.	
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the MP3/WMA CD, or if it is a multisession disc, some time may be required before the music starts playing.	
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width, etc., might not match the specifications. Try using the slowest writing speed.	
Skipping with high bit rate files	Skipping may occur with large quantities of data, such as for high bit rate data.	
Move immediately to the next song when playing.	When a non-MP3/WMA file has been given an extension of ".MP3", ".WMA", ".mp3" or ".wma", or when play is prohibited by copyright protection, there will be approximately 5 seconds of no sound and then the player will skip to the next song.	
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the writing software. Therefore, the files might not play in the desired order.	

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

NOTE:

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

RELATED TO TELEPHONE

NORMAL OPERATING CONDITION

[AUDIO SYSTEM]

Symptoms	Cause and Counter measure	
	Ensure that the command format is valid.	
	2. Ensure that the command is spoken after the tone.	
	3. Speak clearly without pausing between words and at a level appropriate to the ambient noise level in the vehicle.	
System fails to interpret the command correctly.	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on). NOTE: If it is too noisy to use the phone, it is likely that the voice commands will not be recognized.	
	5. If more than one command was said at a time, try saying the commands separately.	
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. Refer to AV-18. "Diagnosis Description".	
The system consistently selects the wrong entry from the phone	Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.	
book.	2. Replace one of the names being confused with a new name.	

< PRECAUTION > [AUDIO SYSTEM]

PRECAUTION

PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal
 injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag
 Module, see the "SRS AIR BAG".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
 ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s)
 with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly
 causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Trouble Diagnosis

INFOID:0000000005745317

AV COMMUNICATION SYSTEM

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

Precaution for Harness Repair

INFOID:0000000005745318

AV COMMUNICATION SYSTEM

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

OK: Soldered and wound with tape

Revision: 2009 October

AV-81

2010 Z12

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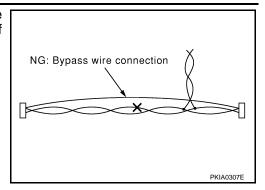
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< PRECAUTION > [AUDIO SYSTEM]

 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 > [AUDIO SYSTEM]

PREPARATION

PREPARATION

Commercial Service Tools

Tool name		Description
Power tool		Loosening screws
	PBIC0191E	

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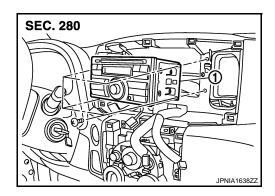
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REMOVAL AND INSTALLATION

AUDIO UNIT

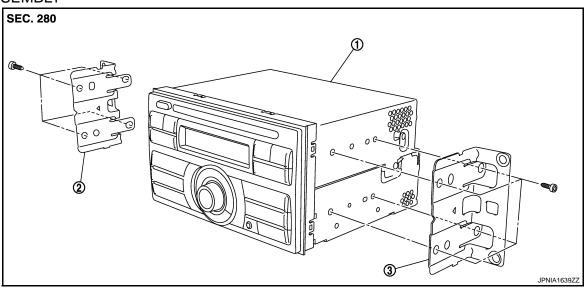
Exploded View

REMOVAL



1. Audio unit

DISASSEMBLY



1. Audio unit 2. Bracket LH 3. Bracket RH

Removal and Installation

INFOID:0000000005490551

REMOVAL

- 1. Remove cluster lid C. Refer to IP-12, "Exploded View".
- 2. Remove audio unit screws, then disconnect audio unit connector and remove audio unit.
- 3. Remove bracket screws to remove audio unit.

INSTALLATION

Install in the reverse order of removal.

FRONT DOOR SPEAKER

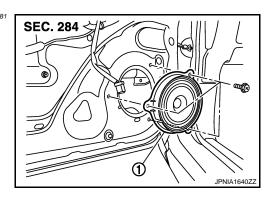
< REMOVAL AND INSTALLATION >

[AUDIO SYSTEM]

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000005736781



. Front door speaker

Removal and Installation

INFOID:0000000005736782

REMOVAL

- Remove front door finisher. Refer to <u>INT-11, "Exploded View"</u>.
- 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.

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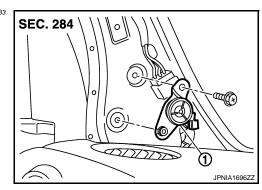
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TWEETER

Exploded View

INFOID:0000000005736783



1. Tweeter

Removal and Installation

INFOID:0000000005736784

REMOVAL

- 1. Remove front pillar garnish. Refer to INT-15, "Exploded View".
- 2. Remove tweeter screw and clip, then disconnect tweeter connector and remove tweeter.

INSTALLATION

Install in the reverse order of removal.

REAR DOOR SPEAKER

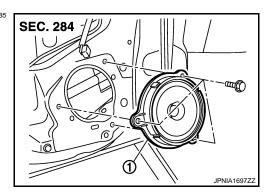
< REMOVAL AND INSTALLATION >

[AUDIO SYSTEM]

REAR DOOR SPEAKER

Exploded View

INFOID:0000000005736785



. Rear door speaker

Removal and Installation

INFOID:0000000005736786

REMOVAL

- 1. Remove rear door finisher. Refer to INT-13, "Exploded View".
- Remove rear door speaker screws, then disconnect rear door speaker connector and remove rear door speaker.

INSTALLATION

Install in the reverse order of removal.

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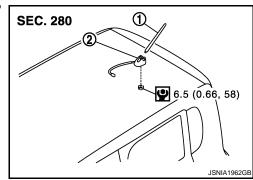
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ANTENNA BASE

Exploded View

INFOID:0000000005736789



- 1. Antenna rod
- 2. Antenna base

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

Removal and Installation

INFOID:0000000005736790

REMOVAL

- 1. Remove luggage side upper finisher. Refer to INT-23, "Exploded View".
- 2. Remove assist grip and headlining clips. Refer to INT-20, "Exploded View".
- 3. Pull headlining (rear). Obtain a service area.
- 4. Remove antenna base mounting nut.
- 5. Remove antenna base.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

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

INFOID:0000000005736820

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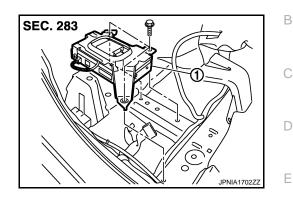
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TEL ADAPTER UNIT

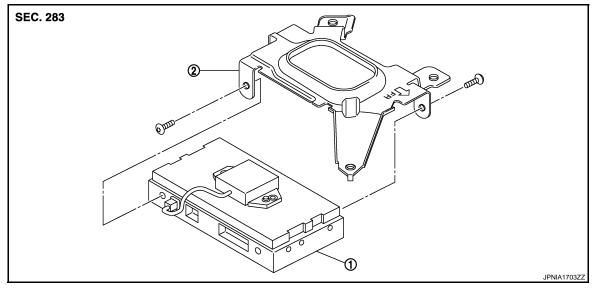
Exploded View

REMOVAL



1. TEL adapter unit

DISASSEMBLY



1. TEL adapter unit

Bracket

Removal and Installation

REMOVAL

- 1. Remove rear floor spacer RH. Refer to INT-18, "Exploded View".
- 2. Disconnect TEL adapter unit connector.
- 3. Remove TEL adapter unit screws, then remove TEL adapter unit.
- 4. Remove bracket screws, and then remove TEL adapter unit.

INSTALLATION

Install in the reverse order of removal.

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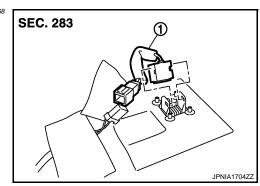
INFOID:0000000005736821

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MICROPHONE

Exploded View

INFOID:0000000005490568



1. Microphone

Removal and Installation

INFOID:0000000005490569

REMOVAL

- 1. Remove front pillar garnish LH and center pillar upper garnish LH. Refer to INT-15, "Exploded View".
- 2. Remove sun visor assy, map lamp assy, assist grip LH, and inside mirror cover. Refer to INT-20. "Exploded View".
- 3. Pull headlining (left front). Obtain a service area.
- 4. Remove microphone connector and pawl to remove microphone.

INSTALLATION

Install in the reverse order of removal.

INFOID:0000000005490570

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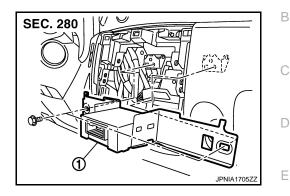
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IPOD ADAPTER

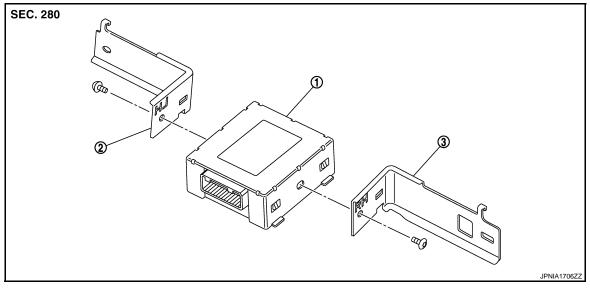
Exploded View

REMOVAL



1. iPod adapter

DISASSEMBLY



1. iPod adapter

INFOID:0000000005490571

Bracket RH

REMOVAL

Remove A/C finisher. Refer to IP-12, "Exploded View".

Remove iPod adapter connector and screws to remove iPod adapter.

2. Bracket LH

INSTALLATION

Install in the reverse order of removal.

Removal and Installation

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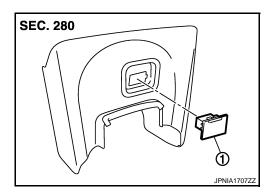
IPOD CONNECTOR

Exploded View

REMOVAL

Refer to IP-12, "Exploded View".

DISASSEMBLY



iPod connector

Removal and Installation

INFOID:0000000005490573

REMOVAL

- Remove instrument lower cover. Refer to <u>IP-12, "Exploded View"</u>.
- 2. Push the pawl from the back of instrument lower cover to remove iPod connector.

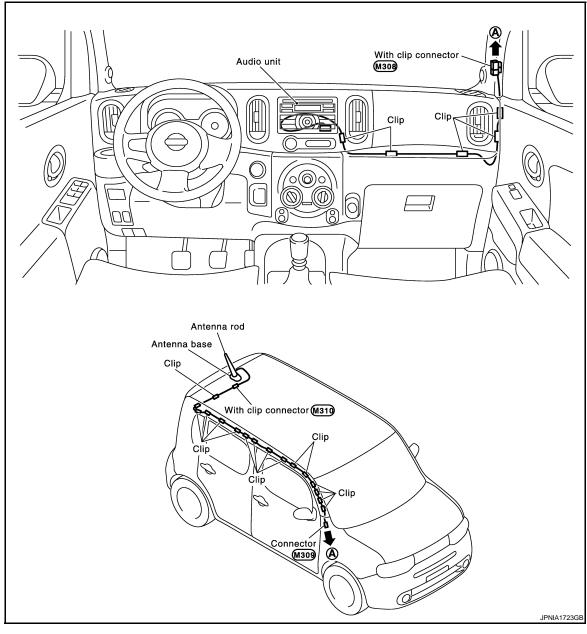
INSTALLATION

Install in the reverse order of removal.

INFOID:0000000005490575

ANTENNA FEEDER

Harness Layout



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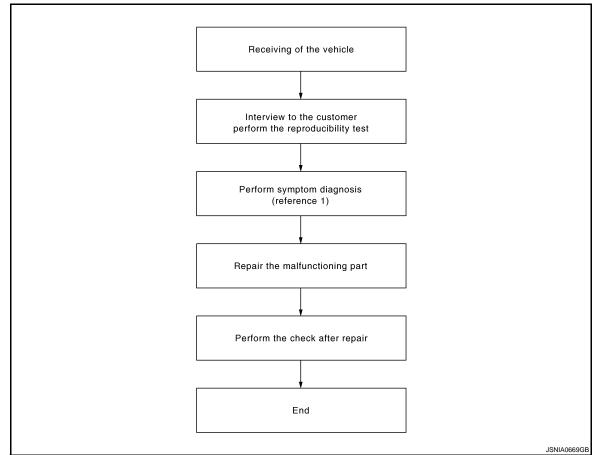
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



Reference 1...Refer to <u>AV-185, "Symptom Table"</u> (audio system) or <u>AV-187, "Symptom Table"</u> (hands-free phone system).

DETAILED FLOW

1. CHECK SYMPTOM

Check the malfunction symptoms by performing the following items.

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

>> GO TO 2.

2.PERFORM DIAGNOSIS BY SYMPTOM

Perform the relevant diagnosis referring to the diagnosis chart by symptom. Refer to <u>AV-185, "Symptom Table"</u> (audio system) or <u>AV-187, "Symptom Table"</u> (hands-free phone system).

>> GO TO 3.

3.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

>> GO TO 4.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[DISPLAY AUDIO SYSTEM]

4.FINAL CHECK

Perform the operation to check that the malfunction symptom is solved or any other symptoms are present. <u>Is there any symptom?</u>

YES >> GO TO 2.

NO >> INSPECTION END

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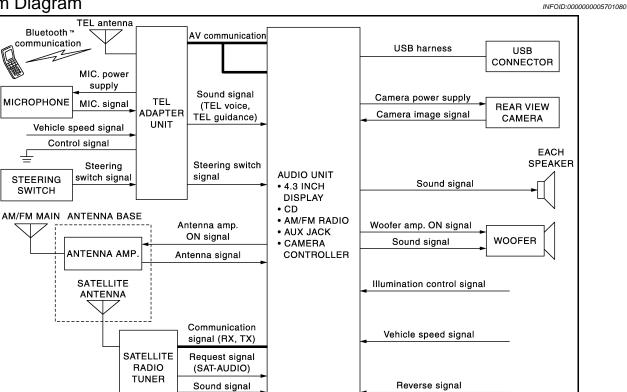
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SYSTEM DESCRIPTION

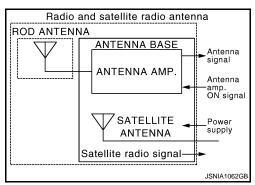
DISPLAY AUDIO SYSTEM

System Diagram



NOTE:

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



JSNIA2665GE

Reverse signal

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

System Description

INFOID:0000000005701081

AUDIO SYSTEM

The audio system consists of the following components.

COMPONENT NAME
Audio unit (display unit is built in to audio unit)
Rod antenna and antenna base (AM/FM and satellite radio)
Steering switch
Each speaker and woofer

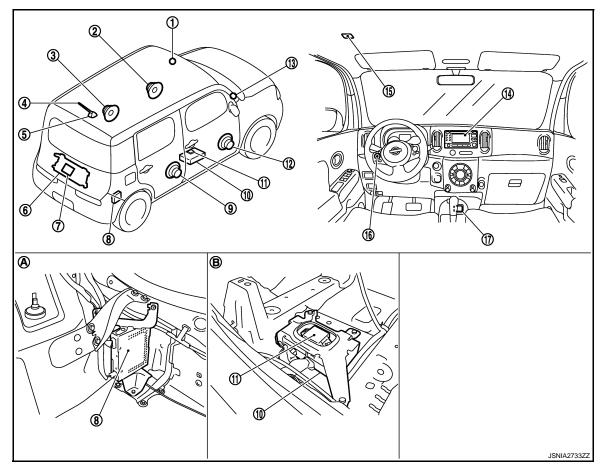
FUNCTION DESCRIPTION

DISPLAY AUDIO SYSTEM

< SYSTEM DESCRIPTION >	[DISPLAY AUDIO SYSTEM]
Operating Signal	
Audio system operation can be performed with audio switch and steering swit	ch. A
 AM/FM Radio Mode AM/FM radio tuner is built into audio unit. Radio signals are received by rod antenna, next they are amplified by anten input to audio unit. (Antenna amp. is built into antenna base.) Audio unit outputs the sound signal to each speaker and woofer. 	na amp., and finally the they are
CD Mode CD function is built into audio unit. Audio unit outputs sound signal to each speaker when CD is inserted to audio	dio unit.
 Satellite Radio System Radio signals are supplied to satellite radio tuner from the satellite radio an built into antenna base.) The satellite radio tuner sends sound signal to the audio unit. Audio unit outputs the sound signal to each speaker and woofer. 	D
USB Connection Function • iPod [®] or music files in USB memory can be played.	F
 iPod[®] sound signals are transmitted from USB connector to each speaker a iPod[®] is recharged when connected to USB connector. iPod[®] is a trademark of Apple inc., registered in the U.S. and other countries. NOTE: 	nd woofer via audio unit.
Use the enclosed USB harness when connecting iPod® to USB connector.	Н
 AUX Connection When the external device is connected to the AUX (auxiliary) input jack of the inputs a sound signal to the audio unit. When AUX mode is selected, audio unit outputs sound signal to each speak 	e audio unit, the external device
Speed Sensitive Volume • Volume level of this system gone up and down automatically in proportion to • The control level can be selected by the customer.	o the vehicle speed.
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Component Parts Location

INFOID:0000000005701082



- 1. Tweeter LH
- 4. Antenna rod
- 7. Rear view camera
- 10. TEL adapter unit
- 13. Tweeter RH
- 16. Steering switch
- A. Luggage side RH

- 2. Front door speaker LH
- 5. Antenna base (antenna amp. and satellite antenna)
- 8. Satellite radio tuner
- 11. TEL antenna
- 14. Audio unit
- 17. USB connector
- B. Floor spacer removed condition

- 3. Rear door speaker LH
- 6. Woofer
- 9. Rear door speaker RH
- 12. Front door speaker RH
- 15. Microphone

Component Description

INFOID:0000000005701083

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

DISPLAY AUDIO SYSTEM

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO SYSTEM]

Part name	Description	
Steering switch	 Operation for audio and hands-free phone are possible. Steering switch signal (operation signal) is output to TEL adapter unit. Steering switch signal (operation signal) is output to audio unit through TEL adapter unit. 	
Antenna base	A radio antenna base integrated with radio antenna amp. and satellite radio antenna is adopted. ANTENNA AMP. Radio signal received by rod antenna is amplified and transmitted to audio unit. Power (antenna amp. ON signal) is supplied from audio unit. SATELLITE RADIO ANTENNA Receives satellite radio waves and outputs it to audio unit.	
Satellite radio tuner	 Receives radio signals from satellite radio antenna (satellite radio antenna is built into antenna base). Sends sound signals to audio unit. 	
USB connector	Sound signal of USB input is transmitted to audio unit.	

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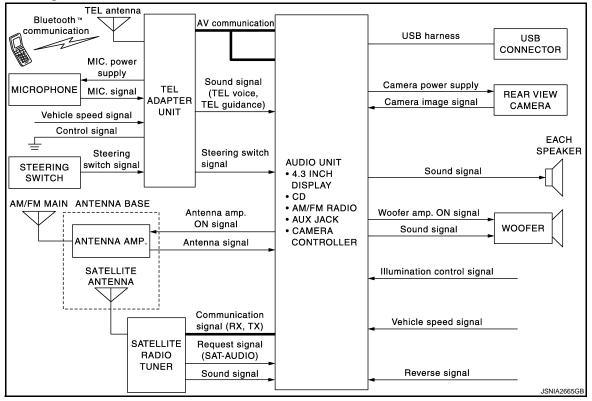
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REAR VIEW MONITOR SYSTEM

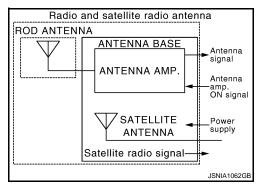
System Diagram

INFOID:0000000005805679



NOTE:

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



System Description

INFOID:0000000005805672

CAMERA IMAGE OPERATION PRINCIPLE

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

Component Parts Location

INFOID:0000000005805677

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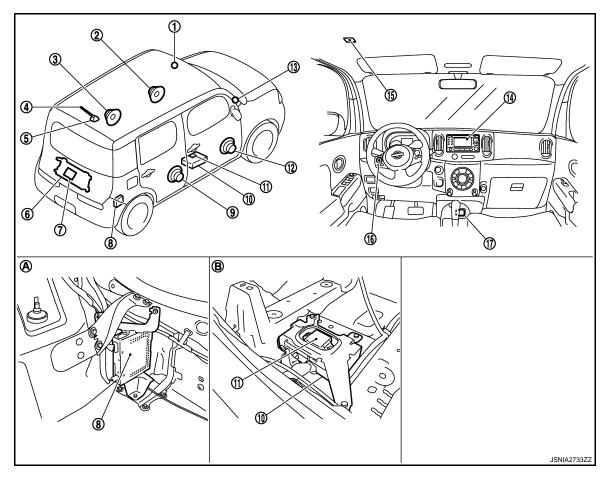
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- 1. Tweeter LH
- 4. Antenna rod
- 7. Rear view camera
- 10. TEL adapter unit
- 13. Tweeter RH
- 16. Steering switch
- A. Luggage side RH

- 2. Front door speaker LH
- 5. Antenna base (antenna amp. and satellite antenna)
- 8. Satellite radio tuner
- 11. TEL antenna
- 14. Audio unit
- 17. USB connector
- B. Floor spacer removed condition

- 3. Rear door speaker LH
- 6. Woofer
- 9. Rear door speaker RH
- 12. Front door speaker RH
- 15. Microphone

Component Description

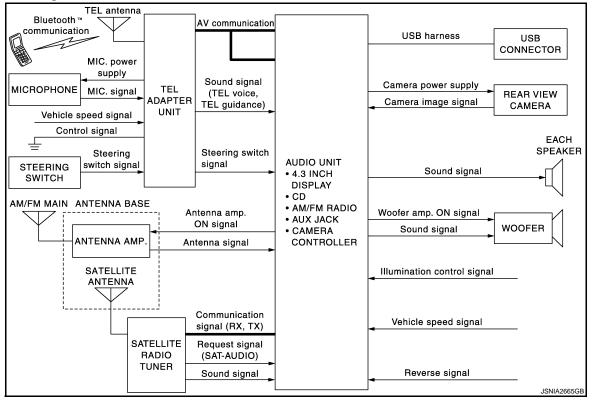
INFOID:0000000005805674

Part name	Description	AV
Audio unit	 Camera power supply is transmitted to rear view camera. Camera image signal is input from rear view camera. Warning message in rear view monitor image is illustrated. 	0
Rear view camera	 Camera power supply is input from audio unit. The image of vehicle rear view is transmitted to audio unit. 	

HANDS-FREE PHONE SYSTEM

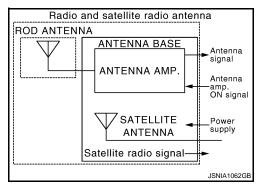
System Diagram

INFOID:0000000005701084



NOTE:

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



System Description

INFOID:0000000005701085

- The connection between cellular phone and TEL adapter unit is performed with Bluetooth[™] communication.
- The voice guidance signal is input from the TEL adapter unit to the audio unit and output to the front speaker when operating the telephone.
- TEL adapter unit has the on board self-diagnosis function. Refer to AV-111, "Diagnosis Description".

WHEN RECEIVING A CALL

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

WHEN A CALL IS ORIGINATED

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

Component Parts Location

INFOID:0000000005820228

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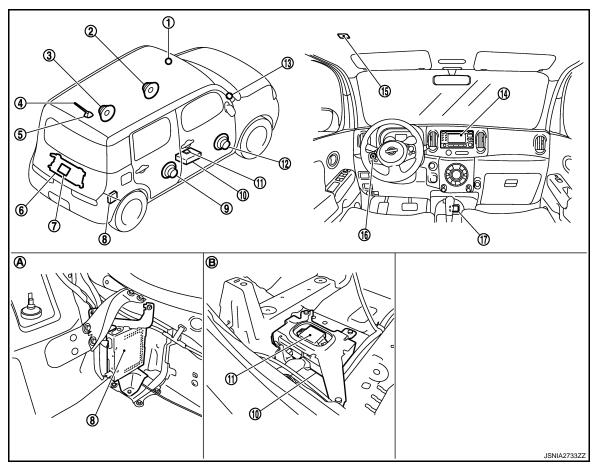
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- 1. Tweeter LH
- 4. Antenna rod
- 7. Rear view camera
- 10. TEL adapter unit
- 13. Tweeter RH
- 16. Steering switch
- A. Luggage side RH

- 2. Front door speaker LH
- 5. Antenna base (antenna amp. and satellite antenna)
- 8. Satellite radio tuner
- 11. TEL antenna
- 14. Audio unit
- 17. USB connector
- B. Floor spacer removed condition

- 3. Rear door speaker LH
- 6. Woofer
- 9. Rear door speaker RH
- 12. Front door speaker RH
- 15. Microphone

Component Description

INFOID:0000000005701087

Part name	Description	1
Audio unit	 Inputs TEL voice signal or voice guidance signal from TEL adapter unit and outputs it to the front speaker during reception. Audio unit and TEL adapter unit exchange data by AV communication. Inputs steering switch signal (operation signal) from steering switch through TEL adapter unit. 	•
Front door speaker	Receives TEL voice and voice guidance signals from audio unit.	•
Tweeter	Receives TEL voice and voice guidance signals from additioning.	
Steering switch	 The hands-free phone system can be operated. Steering switch signal (operation signal) is output to TEL adapter unit Steering switch signal (operation signal) is output to audio unit through TEL adapter unit. 	

HANDS-FREE PHONE SYSTEM

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO SYSTEM]

Part name	Description	
Microphone	 Uses when operating the hands-free phone. Outputs microphone signal (TEL voice signal) to the TEL adapter unit. The power (microphone VCC) is supplied from the TEL adapter unit. 	
TEL adapter unit	 Inputs the TEL voice signal from TEL antenna during reception and outputs into the audio unit. Inputs the TEL voice signal from microphone during speech recognition and outputs it to the TEL antenna. 	
TEL antenna	Connects with the cellular phone via Bluetooth [™] communication and communicates the TEL voice signal.	

DIAGNOSIS SYSTEM (AUDIO UNIT)

Diagnosis Description

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ON BOARD DIAGNOSIS

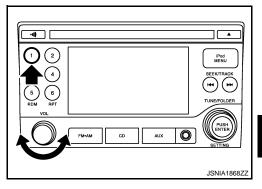
- The trouble diagnosis function has a self-diagnosis mode for conducting trouble diagnosis automatically and a confirmation/adjustment mode for operating manually.
- Self-diagnosis mode performs the audio unit diagnosis, and it indicates the results to the display.
- The confirmation/adjustment mode allows the technician to check, modify or adjust the vehicle signals and set values, as well as to monitor the system error records. The checking, modifying or adjusting generally require human intervention and judgment (the system cannot make judgment automatically).

On Board Diagnosis Item

Mode		Description	
Self Diagnosis		Audio unit diagnosis.	
Display Diagnosis Vehicle Signals Speaker Test		The following check functions are available: color tone check by color bar display, light and shade check by gray scale display.	
		Diagnosis of signals can be performed for vehicle speed, lights, reverse and vehicle recognition.	
		The connection of a speaker can be confirmed by test tone.	
Adjustment	Error History	The system malfunction and the frequency when occurring in the past are displayed. When the malfunctioning item is selected, the time and place that the selected malfunction last occurred are displayed.	
	Camera System	Guiding line position that overlaps rear view camera image can be adjusted.	
	AV COMM Diagnosis	The communication condition of each unit of display audio system can be monitored.	
	Delete Unit Connection Log	Not used for this vehicle.	
Initialize Setting		Initializes the audio unit memory.	

STARTING PROCEDURE

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



Shifting from current screen to system initial screen is performed by pressing "iPod MENU" button.

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AV-105 Revision: 2009 October 2010 Z12

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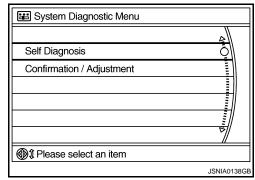
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DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO SYSTEM]

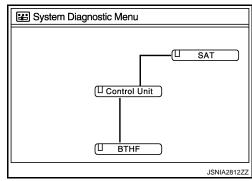
The trouble diagnosis initial screen is displayed, and then the items of "Self Diagnosis" and "Confirmation/Adjustment" can be selected.



SELF-DIAGNOSIS MODE

- Start the self-diagnosis function and select "Self Diagnosis".
- Self-diagnosis subdivision screen is displayed, and the self-diagnosis mode starts.
- The bar graph visible on the center of the self-diagnosis subdivision screen indicates progress of the trouble diagnosis.
- Diagnosis results are displayed after the self-diagnosis is completed. The unit names and the connection lines are color-coded according to the diagnostic results.

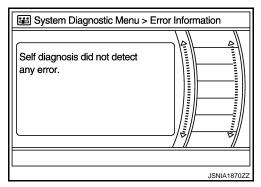
Diagnosis results	Unit	Connection line
Normal	Green	Green
Connection malfunction	Gray	Yellow
Unit malfunction Note	Red	Green



NOTE:

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

- Replace audio unit if "Self-Diagnosis did not run because of a control unit malfunction" is indicated. The symptom is audio unit internal error. Refer to <u>AV-194</u>, "<u>Exploded View</u>".
- If multiple errors occur at the same time for a single unit, the screen switch colors are determined according to the following order of priority: red > gray.
- The comments of the self-diagnosis results can be viewed with a component in the diagnosis result screen.



Detection Range of Self-diagnosis Mode

- The self-diagnosis mode allows the technician to diagnose the connection in the communication line between audio unit and each unit and the internal operation of the audio unit.
- If there is malfunction to the switch of the audio unit because the start condition of the diagnosis function is switch operation, the on board diagnosis function cannot be started.

SELF-DIAGNOSIS RESULTS

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

Only Unit Part Is Displayed In Red.

DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO SYSTEM]

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Screen switch	Description	Possible malfunction location / Action to take
Control unit	Malfunction is detected in audio unit power supply and ground circuits.	Check audio unit power supply and ground circuits. When detecting no malfunction in those components, replace audio unit. Refer to AV-194, "Exploded View".

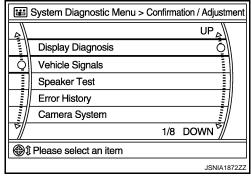
A Connecting Cable Between Units Is Displayed In Yellow.

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

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.

 Select each switch on the "Confirmation/Adjustment Mode" screen to display the relevant trouble diagnosis screen. Press the "iPod MENU" switch to return to the initial Confirmation/ Adjustment mode screen.



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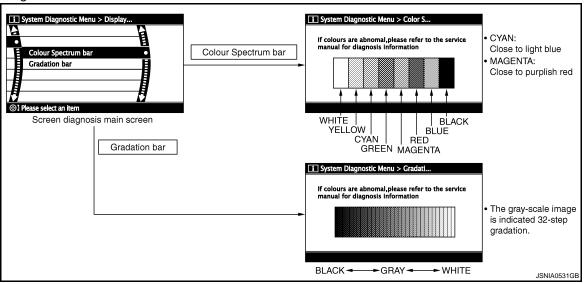
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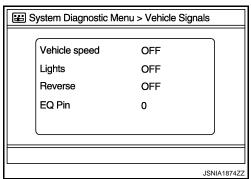
< SYSTEM DESCRIPTION >

Display Diagnosis



Vehicle Signals

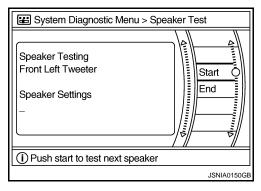
A comparison check can be made of each actual vehicle signal and the signals recognized by the system.



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)	Changes in indication may be delayed. This is normal.	
Lights	ON	Light switch is ON		
	OFF	Light switch is OFF	_	
Reverse	ON	Shift position is "R"	Changes in indication may be delayed. This is normal.	
	OFF	Shift position is other than "R"	- Changes in indication may be delayed. This is normal	
EQ Pin	0	_	Status of EQ profile selection signal. "0" is displayed for this vehicle.	

Speaker Test

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



DIAGNOSIS SYSTEM (AUDIO UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO SYSTEM]

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

However, the diagnosis results are judged normal if an error has occurred before the ignition switch is turned ON and then no error has occurred until the self-diagnosis start. Check the "Error Record" to detect any error that may have occurred before the self-diagnosis start because of this situation.

The frequency of occurrence is displayed in a count up manner. The actual count up method differs depending on the error item.

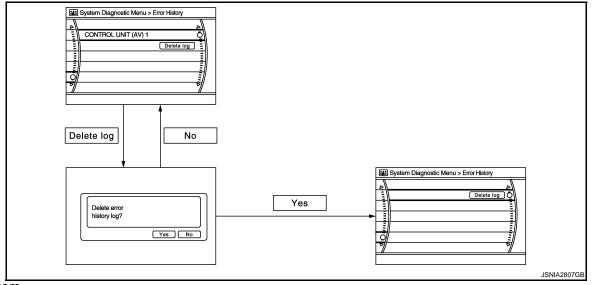
Count up method A

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

Count up method B

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

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



Error item

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

Error item	Description	Possible malfunction factor/Action to take
CONTROL UNIT (AV)	AV communication circuit initial diagnosis malfunction is detected.	Replace the audio unit. Refer to AV-194, "Exploded View"
CAN Controller Memory Error	AV control unit malfunction is detected.	Trefer to AV-134, Exploded view

Revision: 2009 October AV-109 2010 Z12

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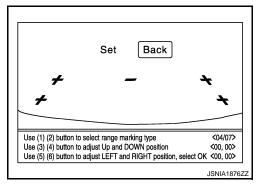
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Error item	Description	Possible malfunction factor/Action to take
SAT Connection Error	 When either one of the following items is detected: satellite radio tuner power supply and ground circuit malfunction is detected. malfunction is detected in communication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

Camera System

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



System Diagnostic Menu > AV COMM Diagnosis

StatusCount

OK OK

AV COMM Diagnosis

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

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

Signal

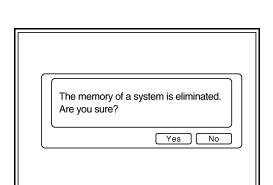
C Rx(BTHF-ITM)

NOTE:

"???" indicates UNKWN.

Initialize Settings

Deletes data stored from the audio unit.



JSNIA0155GB

DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

< SYSTEM DESCRIPTION >

[DISPLAY AUDIO SYSTEM]

DIAGNOSIS SYSTEM (TEL ADAPTER UNIT)

Diagnosis Description

INFOID:0000000005701090

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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 switch, 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.
SIEF Z	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	TEL antenna
DTC 00010	Button ladder A is stuck	Stooring quitab
DTC 00001	Button ladder B is stuck	Steering switch
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.

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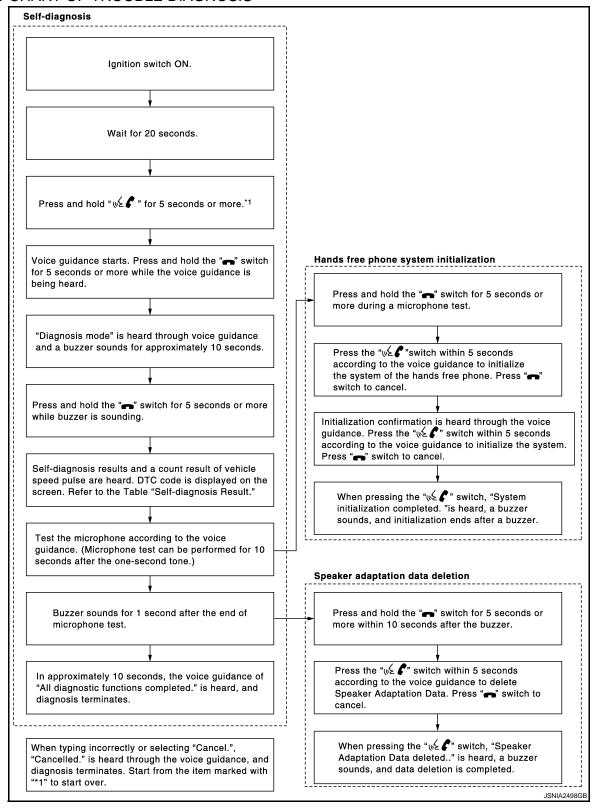
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Revision: 2009 October AV-111 2010 Z12

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FLOW CHART OF TROUBLE DIAGNOSIS



POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

AUDIO UNIT

AUDIO UNIT: Diagnosis Procedure

INFOID:0000000005797262

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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	20

Is inspection result OK?

YES >> GO TO 2.

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

2.CHECK AUDIO UNIT POWER SUPPLY CIRCUIT

Check voltage between the audio unit and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	M93	19	OFF	Battery voltage
ACC power supply		7	ACC	Battery voltage

Is inspection result OK?

YES >> INSPECTION END

NO >> Check harness between audio unit and fuse.

SATELLITE RADIO TUNER

SATELLITE RADIO TUNER: Diagnosis Procedure

INFOID:0000000005797264

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	20

Is inspection result OK?

YES >> GO TO 2.

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

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between the satellite radio tuner and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	B73	12	OFF	Battery voltage
ACC power supply	D/3	16	ACC	Battery voltage

Is inspection result OK?

YES >> INSPECTION END

NO >> Check harness between satellite radio tuner and fuse.

TEL ADAPTER UNIT

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

TEL ADAPTER UNIT: Diagnosis Procedure

INFOID:0000000005797265

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	20

Is inspection result OK?

YES >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between TEL adapter unit harness connector and ground.

Signal name	Connector No.	Terminal No.	Ignition switch position	Voltage
Battery power supply	B54	1	OFF	Battery voltage
ACC power supply		2	ACC	Battery voltage

Is inspection result OK?

YES >> GO TO 3.

NO >> Check harness between TEL adapter unit and fuse.

3. CHECK GROUND CIRCUIT

- 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	B54	4	OFF	Existed

Is inspection result OK?

YES >> INSPECTION END

NO >> Repair harness or connector.

STEERING SWITCH SIGNAL A CIRCUIT (STEERING SWITCH TO TEL ADAPT-ER UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

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

Description

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

Diagnosis Procedure

INFOID:0000000005797304

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

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

TEL ada	apter unit	Spira	l cable	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B54	12	M33	24	Existed

Check continuity between TEL adapter unit harness connector and ground.

TEL ada	apter unit		Continuity
Connector	Terminal	Ground	Continuity
B54	12		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

3.CHECK TEL ADAPTER UNIT VOLTAGE

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

(+)			–)	17.16
	TEL adapter unit			Voltage (Approx.)
Connector	Terminal	Connector	Terminal	(11 -)
B54	12	B54	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace TEL adapter unit. Refer to AV-202, "Exploded View".

4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-116, "Component Inspection"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch. Refer to <u>ST-9</u>, "Exploded View".

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STEERING SWITCH SIGNAL A CIRCUIT (STEERING SWITCH TO TEL ADAPT-ER UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

Component Inspection

INFOID:0000000005797305

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

Standard

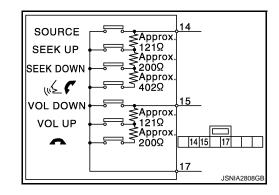
Between terminals 14 and 17

 $\begin{array}{lll} & \text{w} \not \succeq & \text{switch ON} & : \text{Approx. } 709 - 737 \ \Omega \\ & \text{SEEK DOWN switch ON} & : \text{Approx. } 315 - 327 \ \Omega \\ & \text{SEEK UP switch ON} & : \text{Approx. } 119 - 123 \ \Omega \\ & \text{SOURCE switch ON} & : \text{Approx. } 0 \ \Omega \\ \end{array}$

Between terminals 15 and 17

 \blacksquare switch ON : Approx. 315 – 327 Ω VOL UP switch ON : Approx. 119 – 123 Ω

VOL DOWN switch ON : Approx. 0 Ω



STEERING SWITCH SIGNAL B CIRCUIT (STEERING SWITCH TO TEL ADAPT-ER UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

INFOID:0000000005797307

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

Description

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

Diagnosis Procedure

1. Check steering switch signal B (steering switch to tel adapter unit) circuit

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

TEL ada	apter unit	Spira	l cable	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B54	13	M33	31	Existed

Check continuity between TEL adapter unit harness connector and ground.

TEL ada	apter unit		Continuity
Connector	Terminal	Ground	Continuity
B54	13		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK SPIRAL CABLE

Check spiral cable.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace spiral cable.

3. CHECK TEL ADAPTER UNIT VOLTAGE

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

(+)	(–)		Voltage
	TEL adapter unit			
Connector	Terminal	Connector	Terminal	(Approx.)
B54	13	B54	14	5.0 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace TEL adapter unit. Refer to AV-202, "Exploded View".

4. CHECK STEERING SWITCH

- Turn ignition switch OFF.
- Check steering switch. Refer to <u>AV-118</u>, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch. Refer to <u>ST-9</u>, "Exploded View".

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Revision: 2009 October **AV-117** 2010 Z12

STEERING SWITCH SIGNAL B CIRCUIT (STEERING SWITCH TO TEL ADAPT-ER UNIT)

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

Component Inspection

INFOID:0000000005797308

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

Standard

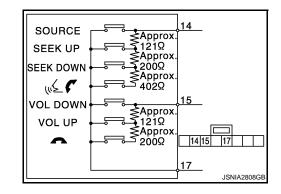
Between terminals 14 and 17

 $\begin{array}{lll} & \text{w} \not \succeq & \text{switch ON} & : \text{Approx. } 709 - 737 \ \Omega \\ & \text{SEEK DOWN switch ON} & : \text{Approx. } 315 - 327 \ \Omega \\ & \text{SEEK UP switch ON} & : \text{Approx. } 119 - 123 \ \Omega \\ & \text{SOURCE switch ON} & : \text{Approx. } 0 \ \Omega \\ \end{array}$

Between terminals 15 and 17

 \blacksquare switch ON : Approx. 315 – 327 Ω VOL UP switch ON : Approx. 119 – 123 Ω

VOL DOWN switch ON : Approx. 0 Ω



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

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

INFOID:0000000005797310

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

Description INFOID:0000000005797309

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

Diagnosis Procedure

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

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

TEL ada	TEL adapter unit		l cable	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B54	14	M33	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.

>> Replace spiral cable. NO

3.CHECK GROUND CIRCUIT

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

TEL adapter unit			Continuity
Connector	Terminal	Ground	Continuity
B54	14		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace TEL adapter unit. Refer to AV-202, "Exploded View"

4. CHECK STEERING SWITCH

Check steering switch. Refer to AV-119, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace steering switch. Refer to ST-9, "Exploded View"

Component Inspection

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

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

IDISPLAY AUDIO SYSTEM

< DTC/CIRCUIT DIAGNOSIS >		[DISPLAT AUDIO STSTEM]
Standard		
Between terminals 14 and 17		SOURCE SApprox. 14
w≨ 🥒 switch ON	: Approx. 709 – 737 Ω	SEEK UP ₹121Ω \$Approx.
SEEK DOWN switch ON	: Approx. 315 – 327 Ω	SEEK DOWN \$200Ω ₹Approx.
SEEK UP switch ON	: Approx. 119 – 123 Ω	((Σ Γ
SOURCE switch ON	: Approx. 0 Ω	VOL DOWN SApprox. 15
		VOL UP \$\frac{121Ω}{\$Approx.}
Between terminals 15 and 17		Αρριολ. 1415 17
switch ON	: Approx. 315 – 327 Ω	17
VOL UP switch ON	: Approx. 119 $-$ 123 Ω	JSNIA2808GB
VOL DOWN switch ON	: Approx. 0 Ω	

STEERING SWITCH SIGNAL A CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT) [DISPLAY AUDIO SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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

Description INFOID:0000000005797312

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

Diagnosis Procedure

${\bf 1.} {\sf check\ steering\ switch\ signal\ a\ circuit\ (tel\ adapter\ unit\ to\ audio\ unit)}$

- Turn ignition switch OFF.
- 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	Continuity
M93	6	B54	17	Existed

Check continuity between audio unit harness connector and ground.

Audio unit			Continuity
Connector	Terminal	Ground	Continuity
M93	6		Not existed

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK AUDIO UNIT VOLTAGE

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

(-	+)	(-	-)	Villa :
	Audi	o unit		Voltage (Approx.)
Connector	Terminal	Connector	Terminal	(11 -)
M93	6	M93	15	3.3 V

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-202, "Exploded View".

NO >> Replace audio unit. Refer to AV-194, "Exploded View".

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AV-121 Revision: 2009 October 2010 Z12

STEERING SWITCH SIGNAL B CIRCUIT (TEL ADAPTER UNIT TO AUDIO UNIT) [DISPLAY AUDIO SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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

Description INFOID:0000000005797314

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

Diagnosis Procedure

INFOID:0000000005797315

${\bf 1.} {\sf check\ steering\ switch\ signal\ b\ circuit\ (tel\ adapter\ unit\ to\ audio\ unit)}$

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

Audi	Audio unit		apter unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M93	16	B54	18	Existed

Check continuity between audio unit harness connector and ground.

Audi	o unit		Continuity
Connector	Terminal	Ground	Continuity
M93	16		Not existed

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK AUDIO UNIT VOLTAGE

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

(+)	(-)	V 16
	Audi			Voltage (Approx.)
Connector	Terminal	Connector	Terminal	(11 - /
M93	16	M93	15	3.3 V

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-202, "Exploded View".

NO >> Replace audio unit. Refer to AV-194, "Exploded View".

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

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

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

Description INFOID:000000005797316

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

Diagnosis Procedure

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

- 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.

Audi	Audio unit		apter unit	Continuity
Connector	Terminal	Connector Terminal		Continuity
M93	15	B54	19	Existed

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK GROUND CIRCUIT

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

Audio unit			Continuity
Connector	Terminal	Ground	Continuity
M93	15		Existed

Is inspection result normal?

YES >> Replace TEL adapter unit. Refer to AV-202, "Exploded View".

NO >> Replace audio unit. Refer to AV-194, "Exploded View".

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Revision: 2009 October AV-123 2010 Z12

CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

CAMERA IMAGE SIGNAL CIRCUIT

Description INFOID:000000005805167

The audio unit supplies power to the rear view camera when receiving a reverse signal.

• The rear view camera transmits camera images to the audio unit when power is supplied from the audio unit.

Diagnosis Procedure

INFOID:0000000005805168

1. CHECK CONTINUITY CAMERA POWER SUPPLY CIRCUIT

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

Audio unit		Rear view camera		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M95	35	D111	1	Existed

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

Audi	o unit		Continuity
Connector	Terminal	Ground	Continuity
M95	35		Not existed

Is inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK VOLTAGE CAMERA POWER SUPPLY

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

(+) Audio unit				
		(–)	Condition	Voltage (Approx.)
Connector	Terminal			(+ + +
M95	35	Ground	Shift position is "R".	6.0 V

Is inspection result normal?

YES >> GO TO 3.

NO >> Replace audio unit. Refer to AV-194, "Exploded View".

3.check continuity camera image signal circuit

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

Audi	Audio unit		w camera	Continuity
Connector	Terminal	Connector Terminal		Continuity
M95	34	D111	3	Existed

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

CAMERA IMAGE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

Audi	o unit		Continuity
Connector	Terminal	Ground	Continuity
M95	34		Not existed

Is inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4. CHECK CAMERA IMAGE SIGNAL

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

(+) Audio unit		(–)	Condition	Reference value
Connector	Terminal			
M95	34	Ground	At camera image is displayed.	(V) 0. 4 0 -0. 4 + 40μs SKIB2251J

Is inspection result normal?

YES >> Replace audio unit. Refer to AV-194, "Exploded View".

NO >> Replace rear view camera. Refer to AV-199, "Removal and Installation".

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COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

COMMUNICATION SIGNAL CIRCUIT

Description INFOID:000000005797281

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:0000000005797282

${\bf 1.} {\sf CHECK} \; {\sf CONTINUITY} \; {\sf COMMUNICATION} \; {\sf SIGNAL} \; ({\sf AUDIO-SAT}) \; {\sf CIRCUIT}$

- 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 r	Satellite radio tuner		o unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B73	9	M94	31	Existed
D/3	10	10194	23	Existed

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

Satellite radio tuner			Continuity
Connector	Terminal	Ground	Continuity
B73	9	Giodila	Not existed
D/3	10		inot 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			Voltage
Connector	Terminal	Ground	(Approx.)
M94	31		4.0 V

Is inspection result OK?

YES >> GO TO 3.

NO >> Replace audio unit. Refer to AV-194, "Exploded View".

3.CHECK SATELLITE RADIO TUNER

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

Satellite radio tuner			Voltage
Connector	Terminal	Ground	(Approx)
B73	10		7.5 V

Is inspection result OK?

YES >> GO TO 4.

NO >> Replace satellite radio tuner. Refer to AV-201, "Exploded View".

COMMUNICATION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

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4. CHECK COMMUNICATION SIGNAL (SAT TO AUDIO)

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

Satellite ra	adio tuner		Condition	Reference value
Connector	Terminal		Condition	ixeletetice value
B73	9	Ground	When satellite radio mode is selected.	(V) 6 4 2 0 *** 1ms

Is inspection result OK?

YES >> GO TO 5.

NO >> Replace satellite radio tuner. Refer to AV-201, "Exploded View".

5. CHECK COMMUNICATION SIGNAL (AUDIO TO SAT)

Check signal between audio unit harness connector and ground.

Audi	o unit		Condition	Reference value
Connector	Terminal		Condition	ixelefelice value
M94	23	Ground	When satellite radio mode is selected.	(V) 10 0 -10 + 1ms SKIA9301J

Is inspection result OK?

YES >> INSPECTION END

NO >> Replace audio unit. Refer to AV-194, "Exploded View".

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REQUEST SIGNAL CIRCUIT (SAT TO AUDIO)

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

REQUEST SIGNAL CIRCUIT (SAT TO AUDIO)

Description INFOID:000000005797283

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

Diagnosis Procedure

INFOID:0000000005797284

1. CHECK CONTINUITY REQUEST SIGNAL CIRCUIT

- 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 r	adio tuner	Audio unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
B73	8	M94	30	Existed

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

Satellite radio tuner			Continuity
Connector	Terminal	Ground	Continuity
B73	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			Voltage
Connector	Terminal	Ground	(Approx.)
M94	30		4.0 V

Is inspection result OK?

YES >> GO TO 3.

NO >> Replace audio unit. Refer to <u>AV-194, "Exploded View"</u>.

3. CHECK CONTINUITY REQUEST SIGNAL

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

Satellite r	radio tuner		Condition	Reference value
Connector	Terminal		Condition	Reference value
B73	8	Ground	When satellite radio mode is selected	(V) 10 0 -10 + 10ms SKIA9299J

REQUEST SIGNAL CIRCUIT (SAT TO AUDIO)

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

<u>Is inspe</u>	ection result OK?
YES	>> INSPECTION END
NO	>> Replace satellite radio tuner Refer to AV-201 "Exploded View"

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WOOFER AMP. ON SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

WOOFER AMP. ON SIGNAL CIRCUIT

Description

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

Diagnosis Procedure

INFOID:0000000005797286

2010 Z12

1. CHECK CONTINUITY WOOFER AMP. ON SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect audio unit connector and woofer connector.
- 3. Check continuity between audio unit harness connector and woofer harness connector.

Audio unit		Woofer		Continuity
Connector	Terminal	Connector Terminal		Continuity
M95	46	D127	4	Existed

4. Check continuity between woofer harness connector and ground.

Wo	ofer		Continuity
Connector	Terminal	Ground	Continuity
D127	4		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.

Audi	o unit		Voltage
Connector	Terminal	Ground	(Approx.)
M95	46		12.0 V

Is inspection result OK?

YES >> Replace woofer. Refer to AV-198, "Exploded View".

NO >> Replace audio unit. Refer to AV-194, "Exploded View".

MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

INFOID:0000000005797288

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MICROPHONE SIGNAL CIRCUIT

Description INFOID:0000000005797287

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

Diagnosis Procedure

1. CHECK CONTINUITY BETWEEN TEL ADAPTER UNIT AND MICROPHONE CIRCUIT

- 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 ada	apter unit	Micro	phone	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	7		1	
B54	8	R21	2	Existed
	29		4	

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

TEL ada	apter unit		Continuity
Connector	Terminal	Ground	Continuity
B54	7	Giodila	Not existed
D04	29		Not existed

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 ada	apter unit		Voltage	
Connector	Terminal	Ground	(Approx.)	
B54	29		5.0 V	

Is inspection result OK?

YES >> GO TO 3.

NO >> Replace TEL adapter unit. Refer to AV-202, "Exploded View".

3.CHECK MICROPHONE SIGNAL

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

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MICROPHONE SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

TEL ada	apter unit	TEL ada	apter unit	Condition	Reference value
Connector	Terminal	Connector	Terminal	Condition	Reference value
B54	7	B54	8	Give a voice.	(V) 1 0 -1 → 2ms SKIB3609E

Is inspection result OK?

YES >> INSPECTION END

NO >> Replace microphone. Refer to AV-203, "Exploded View".

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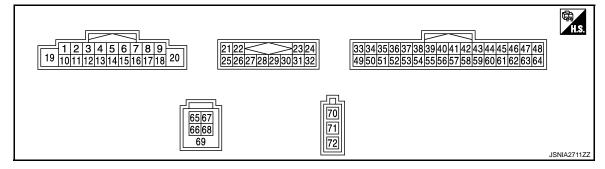
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ECU DIAGNOSIS INFORMATION

AUDIO UNIT

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
2 (W)	3 (P)	Sound signal front speaker LH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E
4 (V)	5 (R/B)	Sound signal rear speaker LH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 → 2ms SKIB3609E
					Keep pressing SOURCE switch.	0 V
6 (W/G)	15 (L/B)	Steering switch signal A	Input	Ignition switch	Keep pressing SEEK UP switch.	0.7 V
(VV/G)	(L/B)			ON	Keep pressing SEEK DOWN switch.	1.3 V
					Except for above.	3.3 V
7 (L/Y)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage

Revision: 2009 October AV-133 2010 Z12

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	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
					Lighting switch 1ST.When meter illumination is maximum.	(V) 15 10 5 0
9 (W)	8 (B/R)	Illumination control signal	Input	Ignition switch OFF	Lighting switch 1ST.When meter illumination is step 11.	(V) 15 10 5 0 2.5 ms JPNIA1686GB
					Lighting switch 1ST. When meter illumination is minimum.	12.0 V
11 (G)	12 (R)	Sound signal front speaker RH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E
13 (LG)	14 (GR)	Sound signal rear speaker RH	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E
				Ignition	Keep pressing VOL DOWN switch.	0 V
16 (GR/R)	15 (L/B)	Steering switch signal B	Input	switch ON	Keep pressing VOL UP switch.	0.7 V
					Except for above.	3.3 ∨
18 (L)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH).	NOTE: The maximum voltage varies depending on the specification (destination unit).
19 (L)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage

AUDIO UNIT

[DISPLAY AUDIO SYSTEM]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
20 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
21 (R)	25 (G)	Satellite radio sound signal LH	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
22 (B)	26 (W)	Satellite radio sound signal RH	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 + 2ms SKIB3609E
23 (G/R)	Ground	Communication signal (AUDIO TO SAT)	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 + 1ms SKIA9301J
24 (Y)	_	Request signal (CHG TO AUDIO)	_	_	_	
27	_	Shield	_	_	_	_
28	_	Shield	_	_	_	_
29 (W/G)	_	Source change	_	_	_	_
30 (G/Y)	Ground	Request signal (SAT TO AUDIO)	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 +10ms SKIA9299J
31 (G/O)	Ground	Communication signal (SAT TO AUDIO)	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 6 4 2 0 • • • 1ms
32 (R/B)	_	Control signal	_	_	_	_
33	_	Shield	_	_	_	_

< ECU DIAGNOSIS INFORMATION >

	minal color)	Description			O a madisti a m	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
34 (G/Y)	Ground	Camera image signal	Input	Ignition switch ON	At camera image is displayed.	(V) 0. 4 0 -0. 4 -× 40μs SKIB2251J
35 (G/O)	Ground	Camera power supply	Output	Ignition switch ON	At camera image is displayed. Except for above.	6.0 V
36 (G/R)	Ground	Camera ground	_	Ignition switch ON	_	0 V
37 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_
38 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_
40 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_
41 (SB)	_	AV communication signal (H)	Input/ Output	_		-
42 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
43	_	Shield	_		_	_
44 (BR)	45 (Y)	Sound signal (TEL voice, voice guid- ance)	Input	Ignition switch ON	During voice guide output with the v € switch pressed.	(V) 1 0 -1 + 2ms SKiB3609E
46 (Y/B)	Ground	Woofer amp. ON signal	Output	Ignition switch ON	_	12.0 V
47 (P)	48 (L)	Sound signal woofer	Output	Ignition switch ON	Sound output.	(V) 1 0 -1 + 2ms SKIB3609E
51 (Y)	Ground	Reverse signal	Input	Ignition switch ON	Shift position is R. Shift position is other than R.	12.0 V 0 V
65 (G)	_	USB ground	_	_	_	
66 (R)	_	USB D- signal	_	_	-	

AUDIO UNIT

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO SYSTEM]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
67 (W)	_	V BUS signal	_	_	_	_
68 (L)	_	USB D+ signal	_	_	_	_
69	_	Shield	_	_	_	_
70	Ground	Antenna amp. ON signal	Output	Ignition switch ON	_	12.0 V
71	_	AM-FM main	Input	_		_

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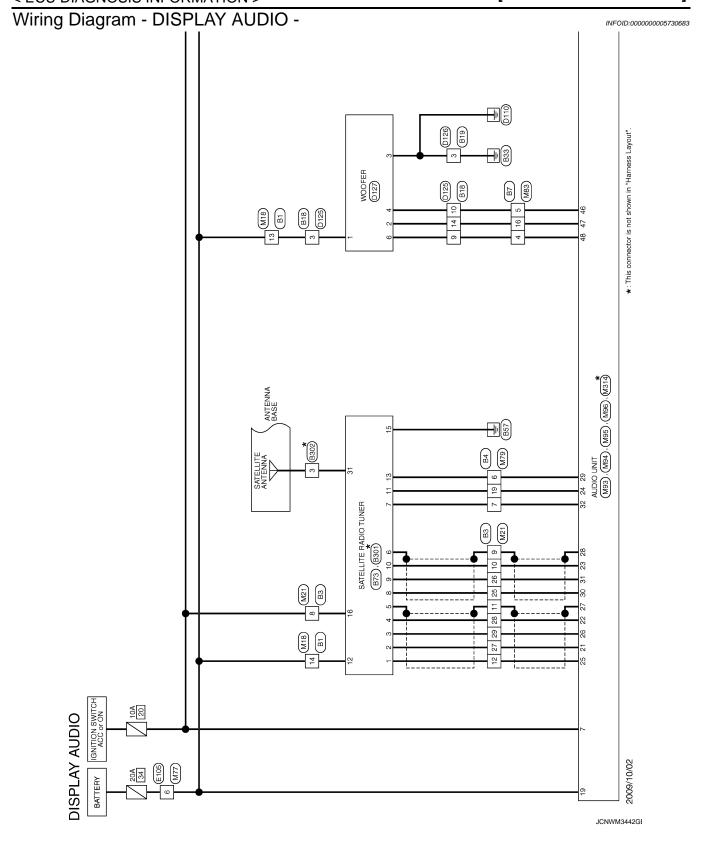
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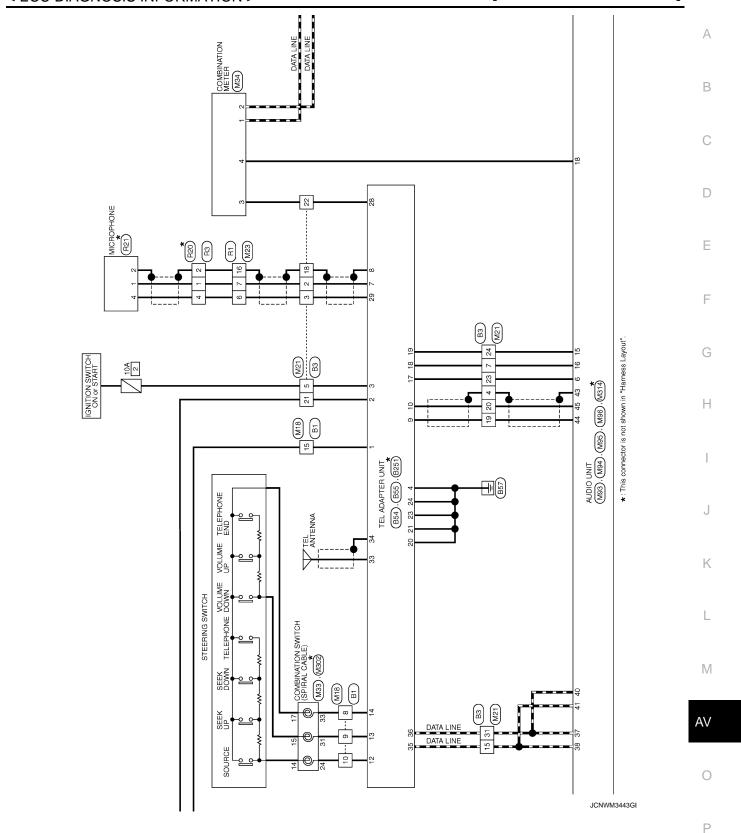
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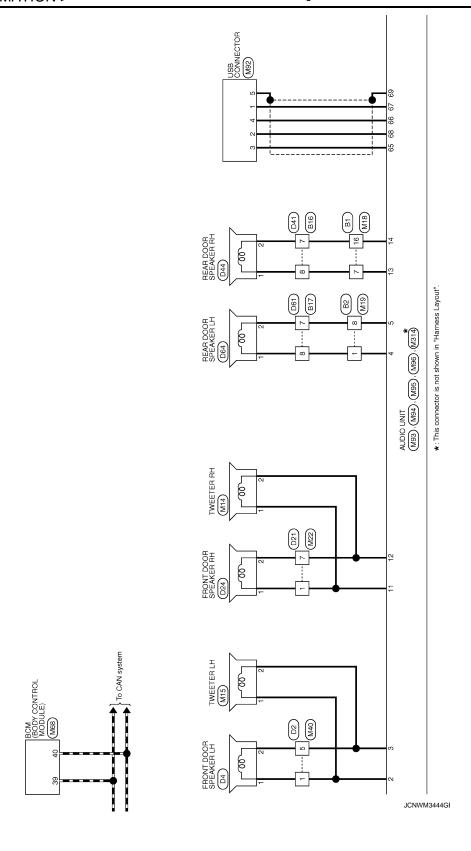
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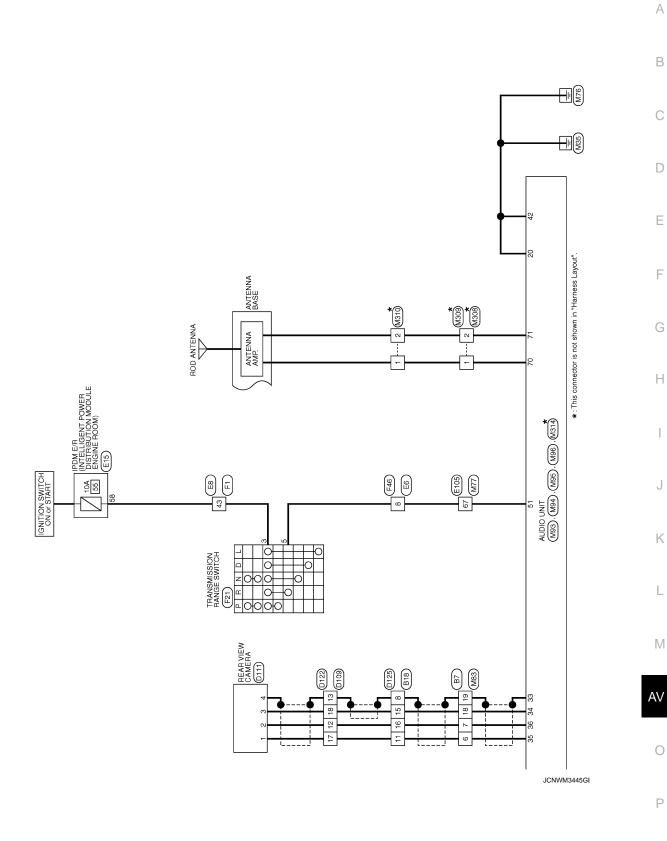
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DISPLAY AUDIO	ŀ	ŀ	- 1
Connector No. B1	Ф	32 LG –	-B
Connector Name WIRE TO WIRE	LG F		ot Wire
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	-	Connector Name WIRE TO WIRE	5 - 2
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8 9 10 11 12 13 14 15 16	Connector Name WIRE TO WIRE		<u> </u>
	Connector Type TH32MW-NH		SHIELD
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		13 14 15 16 17 18 19 20 21 22 23 24	l
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	6 SB –	12 SB –	-E
15 R –	L	13 L –	No. of Wire Signal Marine Lopecinication
	- × 8	15 R -	- ·
	9 SHIELD -	16 GR –	4 L –
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Connector No. B2	Ś	H	
	T	- × 61	
Connector Name WIRE O WIRE	S	20 LG -	*
Connector Type NS16MW-CS	T	H	10 Y
		23 BR -	
		H	
	17 LG –		
1 2 3 - 4 5 6 7	18 SHIELD -		
11 10 10 17	19 BR –	Connector No. B7	
0 8 10 17 17 17 10 16	20 Y -	Connector Name WIDE TO WIDE	
	21 L –		
	22 0 -	Connector Type TH24MW=NH	
Terminal Color Simal Name [Securification]	23 GR –	¢	
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REQUEST SIGNAL (CHG—AUDIO) BAT BAT BAT SOURCE CHANGE CND AOD AOD ADD Signal Name [Specification] SATELLITE RADIO ANTENNA SIGNAL SATELLITE RADIO ANTENNA SIGNAL	В
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Revision: 2009 October AV-143 2010 Z12

Connector No. 1044 Connector Name REAR DOOR SPEAKER RH Connector Type INSQEPU-CS MAS	Terminal Color Signal Name [Specification] 1 LG 2 GR	Connector No. D61 Connector Type NSIOMW-CS Connector Type 1 2	Terminal Color No. of Wire Signal Name [Specification]	
Ocumector No. D24 Connector Name FRONT DOOR SPEAKER RH Connector Type NS92FW-CS H.S.	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] 1 G 2 R	Connector No. D41 Connector Name WIRE TO WIRE Connector Type NS10MW-CS H.S. 1 2 m 3 4 5 6 7 8 9 10	Terminal Color No. of Wire Signal Name [Specification] No. of Wire No. of Wi	
Connector No. D4 Connector Name FRONT DOOR SPEAKER LH Connector Type NS025W-CS H.S.	Terminal Golor Signal Name [Specification] 1 W 2 P - -	Connector No. D21 Connector Name WIRE TO WIRE Connector Type NH10FW-CS10 #\$3 2 1 20 19 13 12 11 10 9 20 19 18 17 16 15 14 8 7	Terminal Golor Signal Name [Specification]	M N N N N N N N N N N N N N N N N N N N
DISPLAY AUDIO Connector No. 8302 Connector Name ANTENNA BASE Connector Type GT16C-IPP-HU MS	Terminal Color Signal Mane [Specification] No. of Wire Signal Mane [Specification]	D2 WIRE TO NS10FW- 10 9	Farminal of Wire Signal Name [Specification] No. of Wire Signal Name [Specification] No. of Wire No. o	-

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15 7 16 16 17 18 19 19 19 19 19 19 19	Н
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1 G Connector No. D122 Connector Name WIFE Connector Name Co	K
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Ors SPEAKER LH CS Signal Name [Specification] WIRE CS10 WIRE CS10 Signal Name [Specification] Signal Name [Specification]	M
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SSB	P P P P P P P P P P	LG
2 5 6 6 7 7 7 9 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		77 78 79 80 81 82 83 84
44 R	10 10 10 10 10 10 10 10	14.8
	Signal Name [Specification]	- - - - - - - - - - - - - - - - - - -

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Revision: 2009 October

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AV-147 2010 Z12

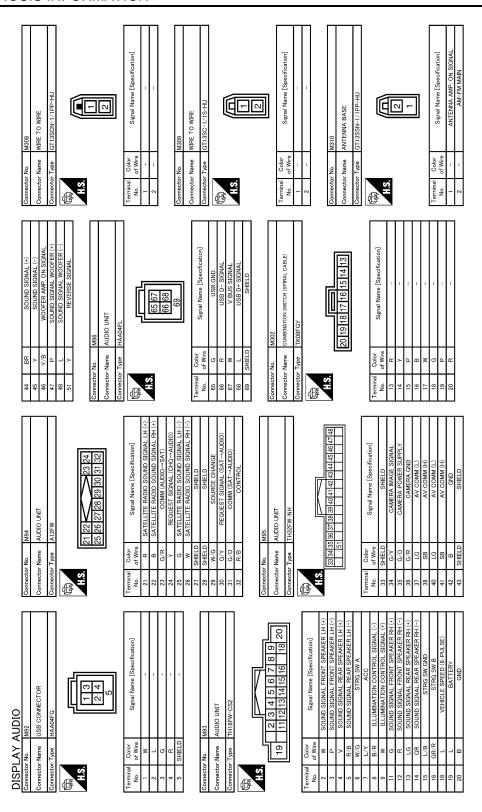
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Connector No. M21	Connector No. M22	T	
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	16 SHIELD -	17 G WASHER LEVEL SWITCH SIGNAL 18 P.V SECLIPITY SIGNAL
Connector Type TH32FW-NH	Connector Type NH10MW-CS10		V/W AME
Ð	Æ	Connector No. M33	_
A A A A A A A A A A A A A A A A A A A		Connector Name COMBINATION SWITCH (SPIRAL CABLE)	22 B GROUND
7	1 2 3 4 5 6	Connector Type TK08FGY-1V	В
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	9 10 11 12 13		24 V FUEL LEVEL SENSOR GROUND 25 R VDC GROIND
	7 8 14 15 16 17 18 ¹⁹ 20		LG BAT
- 0	⁻┢	24 25 26	R 6
Signal Name [Specification] No. of Wire	l erminal Color Signal Name [Specification] No. of Wire	32	31 R A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
	1 6		BR
H	2 G –	ŀ	38 GR ALTERNATOR SIGNAL
1	8	la l	
φ	7	of Wire	1
+	6 W/R	W/L	Connector No. M40
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+	G/B	Connector No. M34	,
15 SB 16 SB 16 SB 17 SB	16 GR =	Connector Name COMBINATION METER	
	╁	Connector Type TH40FW-NH	
18 SHIELD -	H	1	No. of Wire Signal Name [Specification]
П			1 W -
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Н	CI +1 CI 71 11 01 6	3 V VEHICLE SPEED SIGNAL (2-PULSE)	
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	╈	- 0	
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	8	11 G/R BRAKE FLUID LEVEL SWITCH SIGNAL	
	9 BR -	13 B/R ILLUMINATION CONTROL SIGNAL	

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18 V 19 V 19 V 19 V 19 V 19 V V 10 V V V V V V V V V
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Bose (fication)
27 T V M RE
Commettor No.
Signal Name (Speedication) Signal Name (Speedication) Signal Name (Speedication) Signal Name (Speedication) COMBI SW INPUT 5 COMBI SW INPUT 3 COMBI SW INPUT 3 COMBI SW INPUT 3 COMBI SW INPUT 4 COMBI SW INPUT 4 COMBI SW INPUT 3 COMBI SW INPUT 4 COMBI SW INPUT 5 COMBI SW INPUT 5 COMBI SW INPUT 6 COMBI SW INPUT 6 COMBI SW INPUT 1 COMBI SW INPUT 1 KEY CYL UNIOCK SW KEY CYL UNIOCK SW KEY CYL LOKK SW COMBI SW OUTPUT 5 COMBI SW OUTPUT 7 COMBI SW OUTPUT 7 COMBI SW OUTPUT 1 COMBI SW OUTPUT 3 COMBI SW OUT
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Commeter No. Commeter No. Commeter No. Commeter Name
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AV-149 2010 Z12 Revision: 2009 October



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Terminal Color Signal Nane [Specification] Color Col	#S H 8 2 1		Connector Name MICROPHONE Connector Type TKOAFW ILS ILS ILS 3 4	Terminal Color Signal Name [Specification] Color No. MICROPHONE SIGNAL S. S. S. MICROPHONE GND S. MICROPHONE CND S. MICROPHONE CND S. MICROPHONE VCC S. MICROPHONE VCC MICROPHONE VCC S. MICROPHONE VCC MICROPHONE VCC
DISPLAY AUDIO	Terminal Color Signal Name Specification No. of Wire No. of	Connector Type INSIGFW-CS H.S. T 6 5 4 13 2 1 16 15 14 13 12 11 10 9 8	Terminal Color Signal Name [Specification] Color Cf Wire Cpecification] Cf Wire Cpecification] Cf Wire Cf	Connector No. R3 Connector Type ITHOMWY-NH H.S IT 2 3 4

lector No.	R3 WIRE TO WIRE THO4MW-NH
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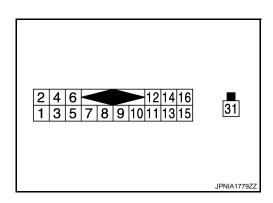
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Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

Terr	minal	Description				Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
2 (R)	1 (G)	Satellite radio sound signal LH	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 + 2ms skib3609E
4 (B)	3 (W)	Satellite radio sound signal RH	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 1 0 -1 *** 2ms SKIB3609E
5	_	Shield	_	_	_	_
6	_	Shield	_	_	_	_
7 (P)	_	Control signal	_	_	_	_
8 (W)	Ground	Request signal (SAT→ AUDIO)	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 -10 SKIA9299J
9 (B)	Ground	Communication signal (SAT→ AUDIO)	Output	Ignition switch ON	When satellite radio mode is selected.	(V) 6 4 2 0 + 1ms PKIB5039J

< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO SYSTEM]

Ter	minal	Description				Reference value	Λ
+	_	Signal name	Input/ Output		Condition	(Approx.)	А
10 (R)	Ground	Communication signal (AUDIO → SAT)	Input	Ignition switch ON	When satellite radio mode is selected.	(V) 10 0 -10 + 1ms SKIA9301J	В
11 (Y)	_	Request signal (CHG → AUDIO)	_	_	_	_	D
12 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	Е
13 (W)	_	Source change	_	_	_	_	F
15 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	G
16 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	Н
31	_	Satellite radio antenna sig- nal	Input	_	_	_	

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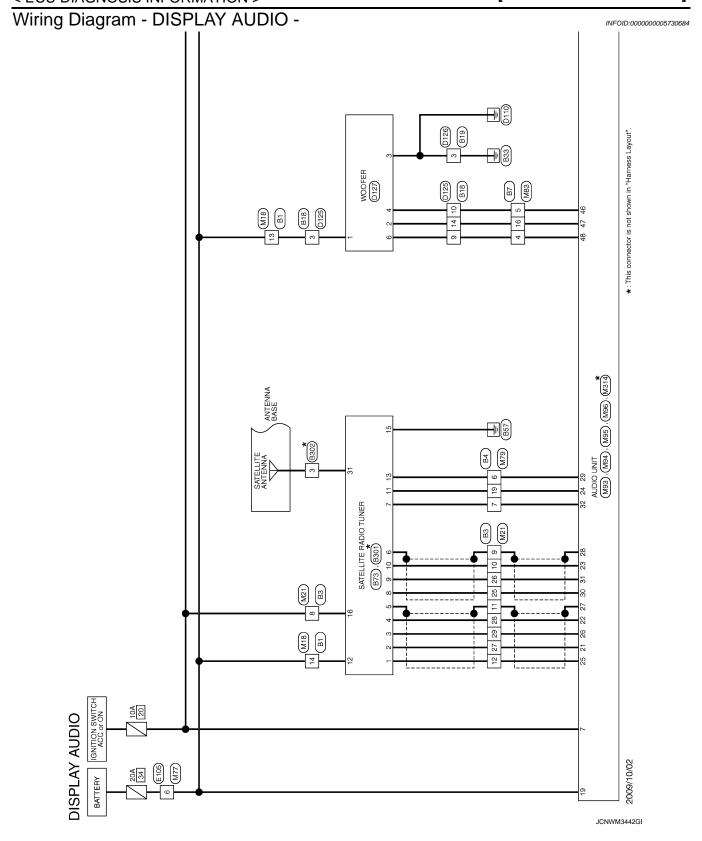
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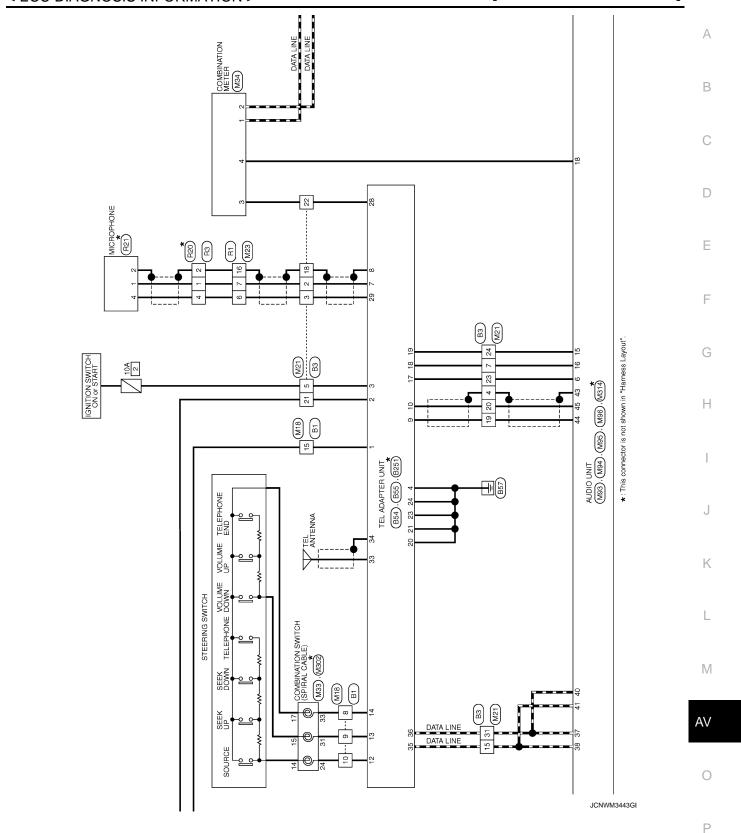
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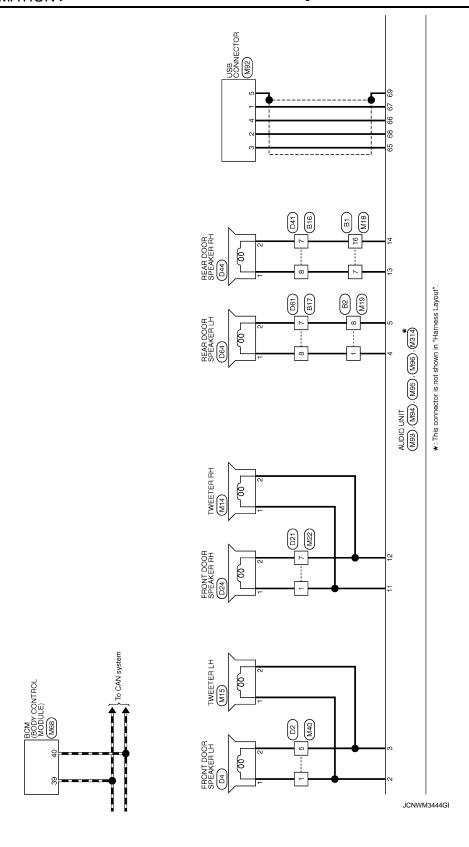
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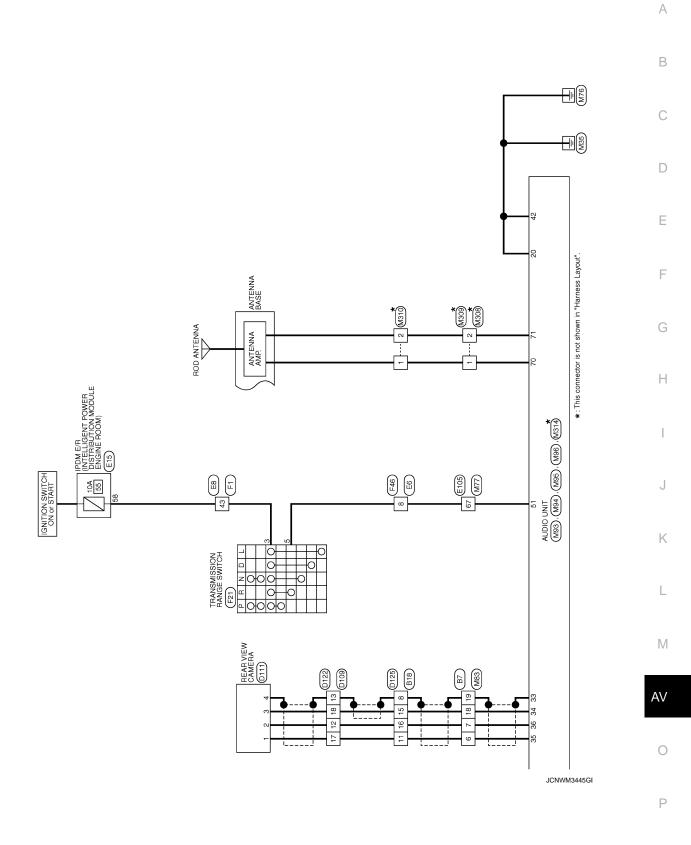
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1 1 2 2 2 2 2 2 2 2	Sector NO. Di	ľ	+	1 1	35	r.c	1	E S		Signal Name [Specification]	
1 2 4	Connector Name WIRE TO WIRE	ľ	+					N. 4	2		1
	Connector Type NS16MW-CS	ľ	H	ı	Connect	or No.	B4	. 5	>	-	П
1 5 6 7 2 1 2 3 4 5 6 7 3 1 3 4 5 6 7 3 3 3 4 5 6 7 3 3 3 3 3 3 3 3 3				İ	Connect	or Name	WIRE TO WIRE	9	9	1	П
1 5 6 7					c	1		_ ;	٦ (,	Т
1 1 1 1 1 1 1 1 1 1	4 6	Con	nector No.	R3	Connect	or lype	IHZ4MW=NH	2 =	> ≥	1 1	<u> </u>
Connector Name Wife TO Wife Connector Name Connector Na	0 0 4				Œ			9	: a		Т
Name (Specification) Commender Type FHS2NW 4841 Commender Type C	8 9 10 11 12 13 14 15 16	S S	nector Name	WIRE TO WIRE	Ė			2	>	1	Г
The Specification		ပို	-	TH32MW-NH	Ž			19	Н		Г
Name Specification Name Name] [q				1 2	6 / 8 9 10	24	Н	-	П
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Terminal Color Signal Name (Specification] 1	^		1 2 3	14 5 6 7 8 9 10 11 12 13 14 15 16	Termina	_	Signal Name [Specification]	Connec	tor Name	WIRE TO WIRE	
Terminal Color Name (Specification) Color Name (Specif	-		3 0 / 1	9 20 21 22 23 24 23 20 27 20 29 30 31 32	S	of Wire					Т
Terminal Color C	λ ,				-	≯	1	Conne	tor Type	NS10FW-CS	\neg
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Color Signal Name [Specification] 22 O			L	-		or ivaline	Wine 10 Mine				
Color Signal Name [Specification] 23 GR		``	H	-	Connect	or Type	TH24MW-NH				
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[DISPLAY AUDIO SYSTEM]

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REQUEST SIGNAL (CHC—AUDIO) BAT SOURCE CHANGE GND ACC ACC GND A	В
	С
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IZENAL (1900) E VCC E	Е
CONTROL S SHELL SHELDIO SOU RADIO SOU RADIO SIGNA SIGNAL SHELL	F
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Connector Name Colonector	Н
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Commerce	L
TO WIRE	M
Signal N Sig	AV
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Revision: 2009 October AV-159 2010 Z12

Connector No. 1044 Connector Name REAR DOOR SPEAKER RH Connector Type INSQEPU-CS MAS	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] LG C C C C C C C C C	Connector No. D61 Connector Type NSIOMW-CS Connector Type 1 2	Terminal Color Signal Name [Specification] 1	
Ocurrector No. D24 Connector Name FRONT DOOR SPEAKER RH Connector Type NS02FW-CS H.S.	Terminal Color Signal Name [Specification] No. of Wire Google Color Color	Connector No. D41 Connector Name WIRE TO WIRE Connector Type NS10MW-CS H.S. 1 2	Terminal Color Signal Name [Specification] No. of Wires	
Connector No. D4 Connector Name FRONT DOOR SPEAKER LH Connector Type NS025W-CS H.S.	Terminal Golor Signal Name [Specification] 1 W 2 P - - - -	Connector No. D21 Connector Name WIRE TO WIRE Connector Type NH10FW-CS10 #\$3 2 1 20 19 13 12 11 10 9 20 19 18 17 16 15 14 8 7	Terminal Golor Signal Name [Specification]	M N N N N N N N N N N N N N N N N N N N
DISPLAY AUDIO Commetter No. 8502 Commetter Name ANTENNA BASE Commetter Type GT16C-1PP-HU	Terminal Color Signal Mane [Specification] No. of Wire Signal Mane [Specification]	r Name WIRE TO Type NS10FW	Familian Color Signal Name [Specification] No. WWee Signal Name [Specification] WWee Color C	-

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[DISPLAY AUDIO SYSTEM]

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Signal Name (Specification)	В
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fication] Fication OFER (+) OFER (-) OFER (-)	Е
Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] R R R R Signal Name [Specification]	F
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IR SLIPPLY OND OND OND OND OND OND OND OND	I
2 3	J
SHELD Name	К
Connector Conn	L
CS10 Signal Name [Specification] Specification] Signal Name [Specification] Signal Name [Specification] Specification] Signal Name [Specification] Specification] Specific	M
	AV
SS Color Name ector Type ector Name ector Na	0
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Revision: 2009 October AV-161 2010 Z12

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	-	X (<u>Г</u>	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE	ENGINE ROOM)	Connector Type NS16FW-CS 31		<u>33</u>		53 52 51 50 7		82 10 10 20 20 20 20 20 2	44	45	lal Color Simpl Name [Secretary]	_	47 BR – 48		GR		1	1		SB		58 R - [With CVT] 56	F. /w >	_ ^	- M	62 L – – (Connector No. E105	Connector Name WIRE TO WIRE	T. T	- INC. 0100 MM00111		88 08 08 08 08 08 08 08 08 08 08 08 08 0	96 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8 8 8	20 20 20 20 20 20 20 20 20 20 20 20 20 2			Signal Name [Specification]	_ ^
Y AUDIO		WIRE TO WIRE	48 88			E15	PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE	ENGINE ROOM)	Connector Type NS16FW-CS		I I I I I I I I I I I I I I I I I I I	Cimal Name [Canadisation]	Olgia Name Capecinication 153 52 54 50 17 18 47 18 48 47 18 48 47 18 48 48 48 48 48 48 48	N 3 3 3 5 3 5 3 5 3 5 3 5 5 5 5 5 5 5 5	1 PG 2G 2G 2G 2G 2G 2G 2G			Terminal Color Cimel Mana [Candification]	No. of Wire Signal Name Lopecincation	BR -	- 49 W	50 GR -	_ = 51 R = =	- 52 P	_ = 54 GR ==		- 88 99	5 2 2 5	= 58 R = [With CVT]	F1 (m) = 1		- M 19 -	= 62 L =	1		- Connector No.	Connector Name WIRE TO WIRE	Co TICOMBIL OCLO TIM	- Comission 1995 Highwin Coll Int					\$ 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			- Ierminal Color Signal Name [Specification]	- [With M/T] 1 V -
DISPLAY AUDIO		46 W	SAA36MB-RS10-SJZ2 - 48 BR -			1 12 12 14 5 16 7 18 9 Connector No. E15	PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE	COILIECTOR NATINE ENGINE ROOM)	Connector Type NS16FW-CS	ď	E	Color Cimcal Mana [Consistantial]	e Signal Native Especification 1		1 PG 2G 2G 2G 2G 2G 2G 2G		4 W 45	Terminal Color Cimel Mana [Candification]	of Wire	BR -		P - 50 GR -		LG - 52 P -	Y - 54 GR -	SB - 55 P -	- 26 SB - 1	5 7 5 W	0 - 58 R - 04th OVT	- 20 - 1	_ ^	BR - 61 W -	B - 62 L	GR -		V Connector No.	G Connector Name WIRE TO WIRE	THIRDWIN ONC THE TOTAL THE	- INC. 0100 MM00111				5 S S S S S S S S S S S S S S S S S S S	\$ 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GR		V	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

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[DISPLAY AUDIO SYSTEM]

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ification]	Е
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Signal Name [Specification] Sign	I
	J
Color Name Colo	К
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Signal Name [Specification]	M
AUDIC SAA36FB SAA36FB	AV
Fig. 20 Fig. 20 Fig. 20	0
	JCNWM3451GI

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Connector No. M21	Connector No. M22	T	
Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	16 SHIELD -	17 G WASHER LEVEL SWITCH SIGNAL 18 P.V SECLIPITY SIGNAL
Connector Type TH32FW-NH	Connector Type NH10MW-CS10		V/W AME
Ð	Æ	Connector No. M33	_
A A A A A A A A A A A A A A A A A A A		Connector Name COMBINATION SWITCH (SPIRAL CABLE)	22 B GROUND
7	1 2 3 4 5 6	Connector Type TK08FGY-1V	В
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	9 10 11 12 13		24 V FUEL LEVEL SENSOR GROUND 25 R VDC GROIND
	7 8 14 15 16 17 18 ¹⁹ 20		LG BAT
- 0	⁻┢	24 25 26	R 6
Signal Name [Specification] No. of Wire	l erminal Color Signal Name [Specification] No. of Wire	32	31 R A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
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H	2 G –	ŀ	38 GR ALTERNATOR SIGNAL
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φ	7	of Wire	1
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T	В		1 2 - 3 4
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+	G/B	Connector No. M34	,
15 SB 16 SB 16 SB 17 SB	16 GR =	Connector Name COMBINATION METER	
	╁	Connector Type TH40FW-NH	
18 SHIELD -	H	1	No. of Wire Signal Name [Specification]
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Н			2 v –
4	Connector No. M23	7	+
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32 LG -	ŀ	FUEL	
	Terminal Color Signal Name [Specification]	7 R/G AIR BAG SIGNAL	
	╈	- 0	
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	8	11 G/R BRAKE FLUID LEVEL SWITCH SIGNAL	
	9 BR -	13 B/R ILLUMINATION CONTROL SIGNAL	

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< ECU DIAGNOSIS INFORMATION >

[DISPLAY AUDIO SYSTEM]

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WIRE NAME [Stgrnal Name [Stgrn	F
No No No No No No No No	G
T3	Н
Signal Name (Specification)	ı
WINE TO WHE THEOFW-CSI6-TMA Signal Nam Signal Nam	J
	K
Connector No.	
	L
MR88 BCM (BODY CONTROL MODULE) TH40FB-NH Signal Name (Specification) Signal Name (Specification) COMBI SW INPUT 3 INPUT SERSON SW REY CYL LOCK SW REY CYL LOCK SW REY CYL LOCK SW REP RED ONE SW REY CYL LOCK SW REAR RH DOOR SW RECHES WARRING CHECK SW RECHES PRINTY RECEIVER POWER SU REC	M
Connector Name DISPLAY AUDIO	AV
Connector Name Conn	
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Revision: 2009 October AV-165 2010 Z12

Connector No M308	9	Connector Type GT13SCN-1/1PP-HU				Terminal Color Signal Name [Specification]			Connector No Mana	9	Connector Type GT13SC-1/1S-HU		(E)	<u>-</u>	2		Terminal Color Signal Name [Specification] No. of Wire	H	2 = =				Connector Type GT13SSN-1/1PP-HU		HS.]-	-]	ŀ	Signal Name [Specification] of Wire Signal Name [Specification]	Ħ	2 – AM-FM MAIN
(+) SOLIND SIGNAL (+)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u>.</u>	48 L SOUND SIGNAL WOOFER (-) 51 Y REVERSE SIGNAL	Connector No. M86	Connector Name AUDIO UNIT	7	<u>S</u>	/9 59	69	T	_	65 G USB GND 66 R IISR D- SIGNAL	: M	68 L USB D+ SIGNAL 69 SHIELD SHIELD		N	Je.	Connector Type TK08FGY				20 19 18 17 16 15 14 13			φ.	x > %	- a	16 B –	Н		Н	
Connector No Mad	Je J	Connector Type A12FW	E	21 22 72 23 24 25 26 27 28 29 30 31 32		Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification]	ac a	22 B SATELLITE KADIO SOUND SIGNAL KH (+) 23 G/R COMM (AUDIO—SAT)	24 Y REQUEST SIGNAL (CHG→AUDIO) 25 G SATELLITE RADIO SOLIND SIGNAL LH (−)	× 1	SHIELD	29 W/G SOURCE CHANGE 30 G/Y REQUEST SIGNAL (SAT—ALIDIO)	0/5	32 R/B CONTROL		Connector No. M95	Connector Name AUDIO UNIT Connector Type TH32PW-NH	1			33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48		Tarminal Color		"	34 G/T CAMERA IMAGE SIGNAL	0/B	FC	SB	40 LG AV COMM (L) 41 SB AV COMM (H)	8	43 SHIELD SHIELD
DISPLAY AUDIO	e	Connector Type HAA04FG		7. 7. 7. 7. 7. 7. 7.	2	Terminal Color Signal Name [Specification]	- W	3 G	A R R	1	Connector No. M93	Connector Name AUDIO UNIT	Connector Type TH18FW-CS2				12 13 14 15 16		Terminal Color Signal Name [Specification] No. of Wire	2 W SOUND SIGNAL FRONT SPEAKER LH (+)	۵.	₩	6 W/G STRG SW A	ILLUMINATION	Н	19 D SOUND SIGNAL FRONT SPEAKER RH (+)	LG 7	GR SOUND SIG	1/B	16 GR/R SIRG SW B 18 L VEHICLE SPEED (8-PULSE)		20 B GND

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Terminal Color Signal Name [Specification]	1		Connector Name MUSHOPHONE Connector Type TKO4FW H.S. 1 2 3 4	Terminal Color Signal Name [Specification] No. of Wire NICHOPHONE SIGNAL 1 L MICROPHONE SIGNAL 2 SHIELD MICROPHONE CAND 3 -
DISPLAY AUDIO Connector No. M314 Connector Name AUDIO UNIT Connector Type GT13SH-2/15-HU M.A. M.A. M.A. M.A. M.A. M.A. M.A. M.A	Terminal Color Signal Name [Specification] March Signal Name [Specification] March Signal Name [Specification] March Signal Name Specification Specification	NS 16 W HC	Terminal Color Signal Name [Specification] Color Color	Connector No. R3 Connector Name Wire TO Wire Connector Type TH04MM-NH

nector No.	R3
nector Name	WIRE TO WIRE
nector Type	TH04MW-NH
T.S.	1234

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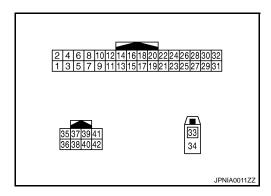
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TEL ADAPTER UNIT

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
2 (L)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
3 (LG)	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.	(V) 1 0 -1 + 2ms SKIB3609E
9 (BR)	10 (Y)	Sound signal (TEL voice, voice guid- ance)	Output	Ignition switch ON	During voice guide output with the vs witch pressed.	(V) 1 0 -1 → 2ms SKIB3609E

< ECU DIAGNOSIS INFORMATION >

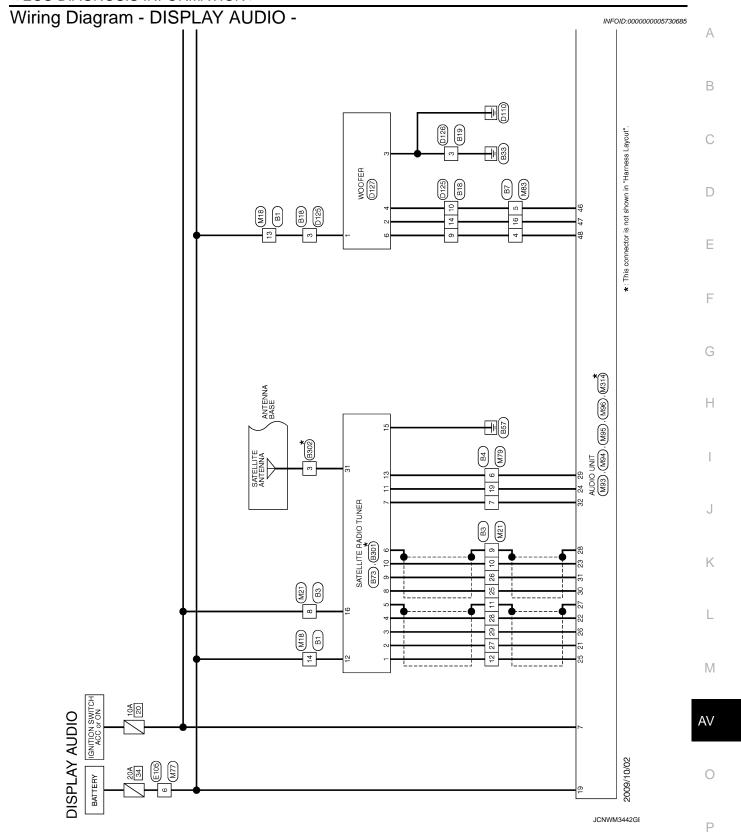
[DISPLAY AUDIO SYSTEM]

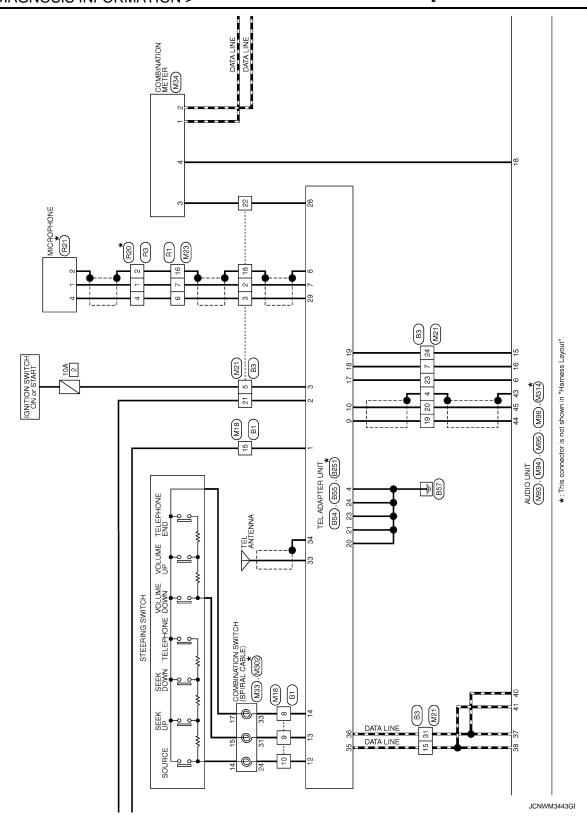
	minal e color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
					Keep pressing SOURCE switch.	0 V
				Ignition	Keep pressing SEEK UP switch.	1.3 V
12 (W)	14 (GR)	Steering switch signal A	Input	switch ON	Keep pressing SEEK DOWN switch.	2.5 V
					Keep pressing √ € € switch.	3.4 V
					Except for above.	5.0 V
					Keep pressing VOL DOWN switch.	0 V
13 (SB)	14 (GR)	Steering switch signal B	Input	Ignition switch	Keep pressing VOL UP switch.	1.3 V
. ,				ON	Keep pressing switch.	2.5 V
					Except for above.	5.0 V
					Keep pressing SOURCE switch.	0 V
17	19	Steering switch signal A	Output	Ignition switch	Keep pressing SEEK UP switch.	0.7 V
(GR)	(L)		·	ON	Keep pressing SEEK DOWN switch.	1.3 V
					Except for above.	3.3 V
				Ignition	Keep pressing VOL DOWN switch.	0 V
18 (P)	19 (L)	Steering switch signal B	Output	switch ON	Keep pressing VOL UP switch.	0.7 V
					Except for above.	3.3 V
20 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V
21 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V
23 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V
24 (B)	Ground	Control signal	_	Ignition switch ON	_	0 V
						NOTE: The maximum voltage varies de pending on the specification (destination unit).
28 (O)	Ground	Vehicle speed signal (2-pulse)	Input	Ignition switch ON	When vehicle speed is approx. 40 km/h (25 MPH)	0

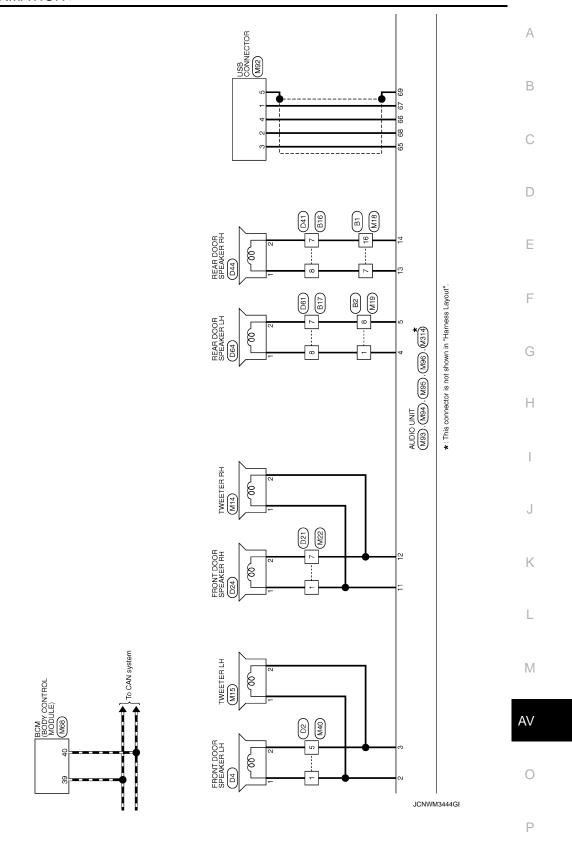
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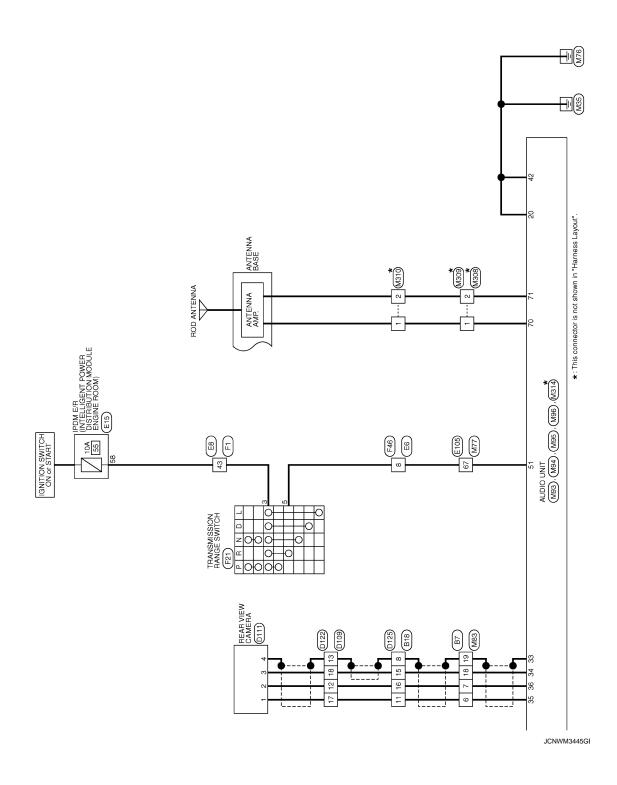
[DISPLAY AUDIO SYSTEM]

	minal color)	Description			Condition	Reference value
+	_	Signal name	Input/ Output		Condition	(Approx.)
29 (R)	Ground	Microphone power supply	Output	Ignition switch ON	_	5.0 V
33	_	TEL antenna signal	Input	_	Not connected to TEL antenna connector.	5.0 V
34	_	Shield	_	_	_	_
35 (SB)	_	AV communication signal (H)	Input/ Output	_	_	_
36 (LG)	_	AV communication signal (L)	Input/ Output	_	_	_









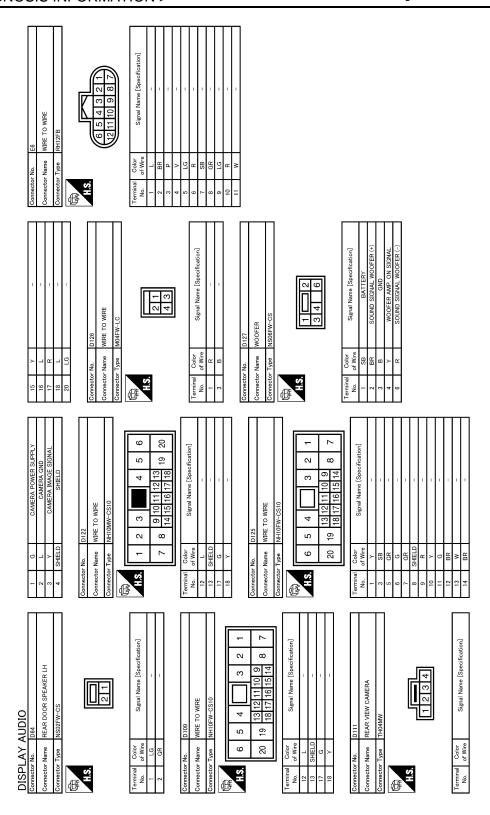
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Revision: 2009 October AV-175 2010 Z12

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Connector Type TH32PW-NH		_	LG	
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Revision: 2009 October AV-179 2010 Z12

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TEL ADAPTER UNIT

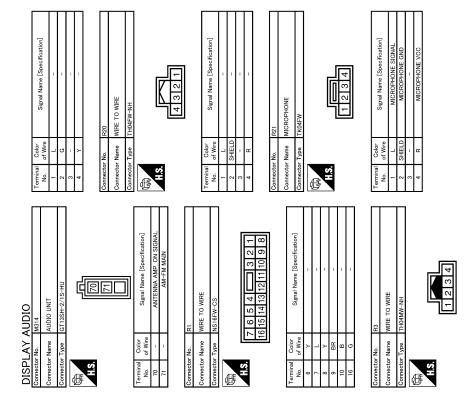
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TEL ADAPTER UNIT

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JCNWM3455GI

AUDIO SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

SYMPTOM DIAGNOSIS

AUDIO SYSTEM SYMPTOMS

Symptom Table

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AUDIO SYSTEM

Symptoms	Check items	Possible malfunction location / Action to take	
The audio system does not turn ON.	_	Audio unit power supply and ground circuit. Refer to AV-113, "AUDIO UNIT: Diagnosis Procedure".	D
Audio sound is not heard or volume is small.	Sound is not heard from woofer.	Sound signal woofer circuit Woofer amp. ON signal circuit. Refer to AV-130, "Diagnosis Procedure".	_
ume is smail.	Sound is not heard only from the specific places.	Sound signal circuit of malfunctioning system.	_
AM/FM radio is not received.	Other audio sounds are normal.	Antenna amp. ON signal circuit. Antenna base Antenna feeder	F
	it change to satellite radio mode.	Satellite radio sound signal circuit Satellite radio antenna (antenna base)	G
Satellite radio is not received.	it does not change to satellite radio mode.	Satellite radio tuner power supply and ground circuit. Refer to AV-113, "SATELLITE RADIO TUNER: Diagnosis Procedure". Request signal circuit. Refer to AV-128, "Diagnosis Procedure". Communication circuit between audio unit and satellite radio tuner. Refer to AV-126, "Diagnosis Procedure".	Н

RELATED TO USB

NOTE

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

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

 $iPod^{\text{\it le B}}$ is a trademark of Apple inc., registered in the U.S. and other countries.

RELATED TO CAMERA

Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Probable malfunction location	_
Camera image is not shown.	The guide line display is normal.	Camera image signal circuit. Refer to <u>AV-124, "Diagnosis Procedure"</u> .	AV
Camera image does not switch.	"Reverse" is not turned ON on "Vehicle Signals" screen of "Confirmation/Adjustment".	Reverse signal circuit malfunction.	0
Camera image does not switch.	"Reverse" is turned ON on "Vehicle Signals" screen of "Confirmation/Adjustment".	Replace audio unit. Refer to AV-194, "Exploded View".	P

RELATED TO STEERING SWITCH

AUDIO SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. (steering switch to TEL adapter unit) Refer to AV-119, "Diagnosis Procedure".
"SOURCE", "SEEK UP", "VOL UP", "SEEK DOWN" and "VOL DOWN" switches are not operated.	Steering switch signal ground circuit. (TEL adapter unit to audio unit) Refer to AV-123, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch. Refer to ST-9, "Exploded View".
" " " " " " " " " " " " "	Steering switch signal A circuit. (steering switch to TEL adapter unit) Refer to AV-115, "Diagnosis Procedure".
"SOURCE", "SEEK UP" and "SEEK DOWN" switches are not operated.	Steering switch signal A circuit. (TEL adapter unit to audio unit) Refer to AV-121, "Diagnosis Procedure".
"A", "VOL UP" and "VOL DOWN" switches are not operated.	Steering switch signal B circuit. (steering switch to TEL adapter unit) Refer to AV-117, "Diagnosis Procedure".
"VOL UP" and "VOL DOWN" switches are not operated.	Steering switch signal B circuit. (TEL adapter unit to audio unit) Refer to AV-122, "Diagnosis Procedure".

HANDS-FREE PHONE SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

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HANDS-FREE PHONE SYMPTOMS

Symptom Table

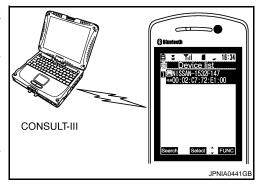
RELATED TO HANDS-FREE PHONE

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

Simple Check for Bluetooth[™] Communication

If cellular phone and TEL adapter unit cannot be connected with Bluetooth $^{\text{\tiny TM}}$ communication, following procedure allows the technician to judge which device has malfunction.

- 1. Turn on a cellular phone, not connecting Bluetooth[™] communication.
- 2. Start CONSULT-III, then start Windows®.
- 3. Set CONSULT-III near a cellular phone.
- 4. When operated Bluetooth[™] registration by cellular phone, check if CONSULT-III^{*} would be displayed on the device name. (If other Bluetooth[™]device is located near cellular phone, a name of the device would be displayed also.)
 NOTE:
 - *:Displayed device name is "NISSAN-******."
- If no device name is displayed, cellular phone is malfunction. Repair the cellular phone first, then perform diagnosis.
- If CONSULT-III is displayed on device name, cellular phone is normal. Perform diagnosis as per the following table.



Trouble Diagnosis Chart by Symptom

Symptoms	Check items	Possible malfunction location/Action to take
Does not recognize cellular phone connection.	Repeat the registration of cellular phone.	TEL adapter unit
Hands-free phone cannot be	Both the reception and the speech cannot be performed.	TEL adapter unit power supply and ground circuit. Refer to AV-114, "TEL ADAPTER UNIT : Diagnosis Procedure". Control signal circuit
established.	 Both the reception and the speech cannot be performed. Audio can be operated by steering switch. 	AV communication circuit between audio unit and TEL adapter unit.
The other party's voice cannot be heard by hands-free phone.	Audio system sound is normal.	Sound signal (telephone voice, telephone guidance) circuit
be fleatu by flatius-free priorie.	Audio system sound does not sound.	Refer to AV-185, "Symptom Table".
Originating sound is not heard	Sound operation function is normal.	TEL adapter unit
by the other party with hands- free phone communication.	Sound operation function does not work.	Microphone signal circuit. Refer to AV-131, "Diagnosis Procedure".

RELATED TO STEERING SWITCH

HANDS-FREE PHONE SYMPTOMS

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

Symptoms	Possible malfunction location / Action to take
All steering switches are not operated.	Steering switch signal ground circuit. (steering switch to TEL adapter unit) Refer to AV-119, "Diagnosis Procedure".
Only specified switch cannot be operated.	Replace steering switch. Refer to ST-9, "Exploded View".
" " " " " " " " " " " " "	Steering switch signal A circuit. (steering switch to TEL adapter unit) Refer to AV-115, "Diagnosis Procedure".
"A", "VOL UP" and "VOL DOWN" switches are not operated.	Steering switch signal B circuit. (steering switch to TEL adapter unit) Refer to AV-117, "Diagnosis Procedure".

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[DISPLAY AUDIO SYSTEM]

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NORMAL OPERATING CONDITION

Description

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	
	Check if the disc or USB device was inserted correctly.	
	Check that the disc is scratched or dirty.	
	Check if there is condensation inside the player, and if there is, wait until the condensation is gone (about 1 hour) before using the player.	
	If there is a temperature increase error, the player will play correctly after it returns to the normal temperature.	
Cannot play	Files with extensions other than ".MP3 (.mp3)", ".WMA (.wma)", ".AAC (.aac)" or ".M4A (.m4a)" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.	
	Check if the disc or the file is generated in an irregular format. This may occur depending on the variation or the setting of compressed audio writing applications or other text editing applications.	
	Check if the finalization process, such as session close and disc close, is done for the disc.	
	Check if the disc or USB device is protected by copyright.	
Poor sound quality	Check if the disc is scratched or dirty.	
It takes a relatively long time before the music starts playing.	If there are many folder or file levels on the disc or USB device, some time may be required before the music starts playing.	
Music cuts off or skips The writing software and hardware combination might not match, or the writing specifications. Try using the slowest		
Skipping with high bit rate files	Skipping may occur with large quantities of data, such as for high bit rate data.	
Move immediately to the next song when playing.	If an unsupported compressed audio file has been given a supported extension like ".MP when play is prohibited by copyright protection, the player will skip to the next song.	
The songs do not play back in the desired order.	The playback order is the order in which the files were written by the writing software, so the files might not play in the desired order.	
	Random/Shuffle may be active on the audio system or on a USB device.	

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

NOTE:

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

RELATED TO TELEPHONE

Revision: 2009 October AV-189 2010 Z12

AV

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NORMAL OPERATING CONDITION

[DISPLAY AUDIO SYSTEM]

Symptoms	Cause and Counter measure		
	Ensure that the command format is valid.		
	2. Ensure that the command is spoken after the tone.		
	3. Speak clearly without pausing between words and at a level appropriate to the ambient noise level in the vehicle.		
System fails to interpret the command correctly.	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on). NOTE: If it is too noisy to use the phone, it is likely that the voice commands will not be recognized.		
	5. If more than one command was said at a time, try saying the commands separately.		
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. Refer to AV-111, "Diagnosis Description".		
The system consistently selects the wrong entry from the phone	Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command.		
book.	2. Replace one of the names being confused with a new name.		

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PRECAUTION

PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal
 injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag
 Module, see the "SRS AIR BAG".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
 ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s)
 with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly
 causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Trouble Diagnosis

INFOID:0000000005745315

AV COMMUNICATION SYSTEM

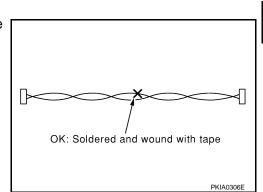
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

INFOID:0000000005745316

AV COMMUNICATION SYSTEM

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



Revision: 2009 October AV-191 2010 Z12

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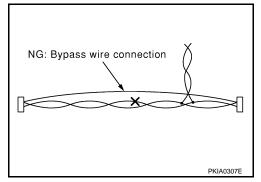
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PRECAUTIONS

< PRECAUTION >

[DISPLAY AUDIO SYSTEM]

 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 >

[DISPLAY AUDIO SYSTEM]

INFOID:0000000005745220

PREPARATION

PREPARATION

Commercial Service Tools

Tool name		Description	C
Power tool		Loosening screws	D
	PBIC0191E		Е

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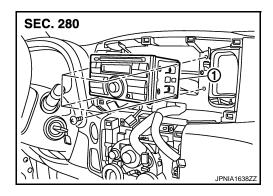
Р

REMOVAL AND INSTALLATION

AUDIO UNIT

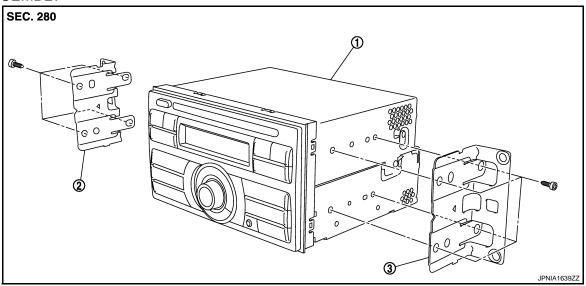
Exploded View

REMOVAL



1. Audio unit

DISASSEMBLY



1. Audio unit 2. Bracket LH 3. Bracket RH

Removal and Installation

INFOID:0000000005732898

REMOVAL

- 1. Remove cluster lid C. Refer to IP-12, "Exploded View".
- 2. Remove audio unit screws, then disconnect audio unit connector and remove audio unit.
- 3. Remove bracket screws to remove audio unit.

INSTALLATION

FRONT DOOR SPEAKER

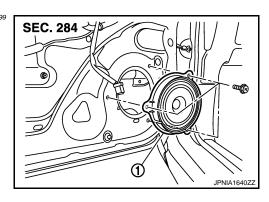
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO SYSTEM]

FRONT DOOR SPEAKER

Exploded View

INFOID:0000000005732899



. Front door speaker

Removal and Installation

REMOVAL

- Remove front door finisher. Refer to <u>INT-11, "Exploded View"</u>.
- Remove front door speaker screws, then disconnect front door speaker connector and remove front door speaker.

INSTALLATION

Install in the reverse order of removal.

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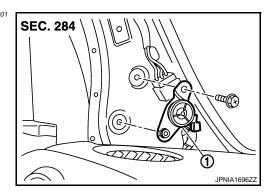
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[DISPLAY AUDIO SYSTEM]

TWEETER

Exploded View

INFOID:0000000005732901



Tweeter

Removal and Installation

INFOID:0000000005732902

REMOVAL

- 1. Remove front pillar garnish. Refer to INT-15, "Exploded View".
- 2. Remove tweeter screw and clip, then disconnect tweeter connector and remove tweeter.

INSTALLATION

REAR DOOR SPEAKER

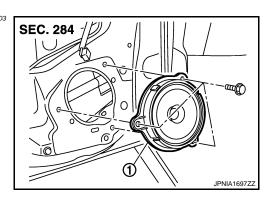
< REMOVAL AND INSTALLATION >

[DISPLAY AUDIO SYSTEM]

REAR DOOR SPEAKER

Exploded View

INFOID:0000000005732903



. Rear door speaker

Removal and Installation

REMOVAL

- 1. Remove rear door finisher. Refer to INT-13, "Exploded View".
- Remove rear door speaker screws, then disconnect rear door speaker connector and remove rear door speaker.

INSTALLATION

Install in the reverse order of removal.

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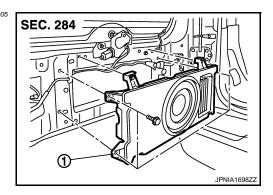
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[DISPLAY AUDIO SYSTEM]

WOOFER

Exploded View

INFOID:0000000005732905



1. Woofer

Removal and Installation

INFOID:0000000005732906

REMOVAL

- 1. Remove back door finisher lower. Refer to INT-26, "Exploded View".
- 2. Remove screws and clips, then disconnect woofer connector and remove the woofer.

INSTALLATION

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REAR VIEW CAMERA

Removal and Installation

REMOVAL

- Remove back door finisher lower. Refer to INT-26, "Exploded View".
- Disconnect rear view camera connector.
- Remove rear view camera nuts to remove rear view camera.

INSTALLATION

Install in the reverse order of removal.

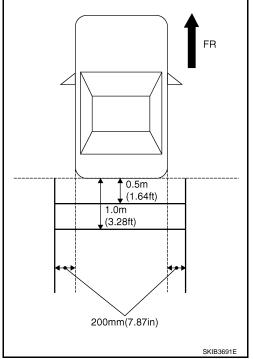
NOTE:

Adjust the guide line position if the guide line position is shifted after installing the rear view camera. Refer to AV-199, "Adjustment".

Adjustment INFOID:0000000005732997

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
- Set into "Camera system" mode of Confirmation / Adjustment mode.



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

Selected pattern : 7

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



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

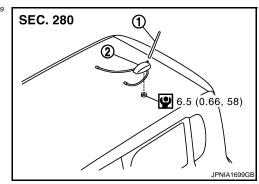
AV-199

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ANTENNA BASE

Exploded View

INFOID:0000000005732909



- 1. Antenna rod
- 2. Antenna base

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

Removal and Installation

INFOID:0000000005732910

REMOVAL

- 1. Remove luggage side upper finisher. Refer to INT-23, "Exploded View".
- 2. Remove assist grip and headlining clips. Refer to INT-20, "Exploded View".
- 3. Pull headlining (rear). Obtain a service area.
- 4. Remove antenna base mounting nut.
- 5. Remove antenna base.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

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

[DISPLAY AUDIO SYSTEM]

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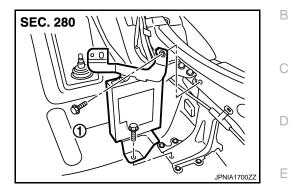
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SATELLITE RADIO TUNER

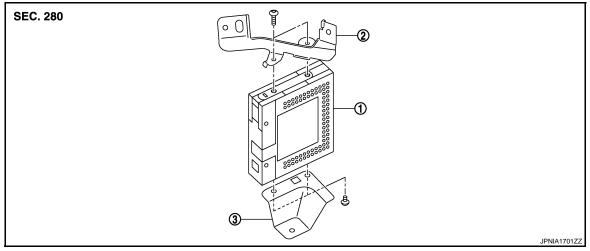
Exploded View

REMOVAL



1. Satellite radio tuner

DISASSEMBLY



1. Satellite radio tuner 2. Bracket A 3. Bracket B

Removal and Installation

REMOVAL

- Remove luggage side lower finisher RH. Refer to <u>INT-23, "Exploded View"</u>.
- 2. Disconnect satellite radio tuner connector.
- 3. Remove satellite radio tuner screws, harness clip, and antenna feeder clip.
- 4. Remove satellite radio tuner and bracket from the vehicle as a single unit.
- 5. Remove bracket screws to remove satellite radio tuner.

INSTALLATION

Install in the reverse order of removal.

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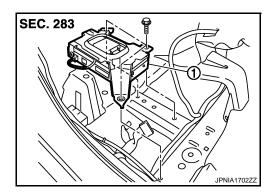
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INFOID:0000000005732913

TEL ADAPTER UNIT

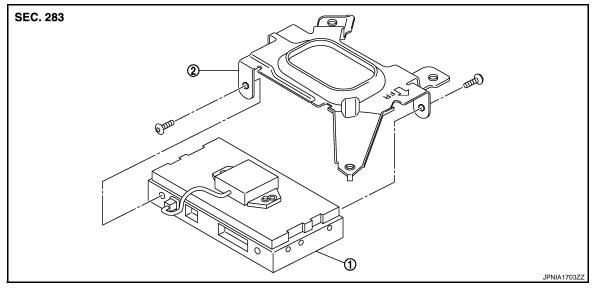
Exploded View

REMOVAL



1. TEL adapter unit

DISASSEMBLY



1. TEL adapter unit

Bracket

Removal and Installation

INFOID:0000000005732914

REMOVAL

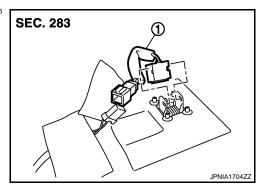
- 1. Remove rear floor spacer RH. Refer to INT-18, "Exploded View".
- 2. Disconnect TEL adapter unit connector.
- 3. Remove TEL adapter unit screws, then remove TEL adapter unit.
- 4. Remove bracket screws, and then remove TEL adapter unit.

INSTALLATION

MICROPHONE

Exploded View

INFOID:0000000005732915



Microphone

Removal and Installation

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REMOVAL

- 1. Remove front pillar garnish LH and center pillar upper garnish LH. Refer to INT-15, "Exploded View".
- 2. Remove sunvisor assy, map lamp assy, assist grip LH, and inside mirror cover. Refer to INT-20. "Exploded View".
- 3. Pull headlining (left front). Obtain a service area.
- 4. Remove microphone connector and pawl to remove microphone.

INSTALLATION

Install in the reverse order of removal.

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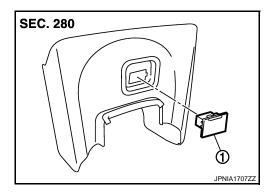
USB CONNECTOR

Exploded View

REMOVAL

Refer to IP-12, "Exploded View".

DISASSEMBLY



iPod connector

Removal and Installation

INFOID:0000000005732920

REMOVAL

- 1. Remove instrument lower cover. Refer to IP-12, "Exploded View".
- 2. Push the pawl from the back of instrument lower cover to remove iPod connector.

INSTALLATION

INFOID:0000000005732921

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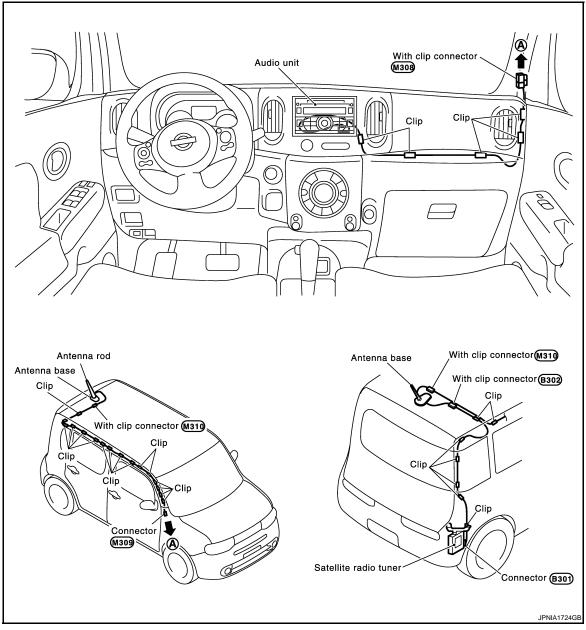
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ANTENNA FEEDER

Harness Layout



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