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AUDIO, VISUAL, NAVIGATION & TELEPHONE SYSTEM

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PRECAUTIONS

PRECAUTIONS PFP:00001

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

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

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 section.
- 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.

AV-3 Revision: September 2006 2007 Frontier

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PREPARATION

PREPARATION PFP:00002

Commercial Service Tool

EKS00BYZ

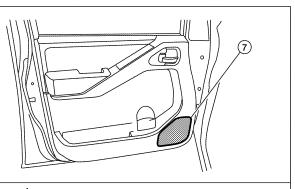
Tool name		Description
Power tool		Loosening bolts and nuts
	PBIC0191E	

AUDIO PFP:28111

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Component Parts and Harness Connector Location

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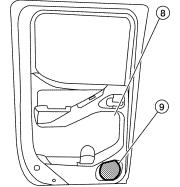
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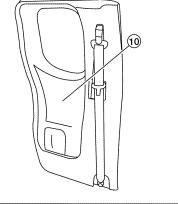
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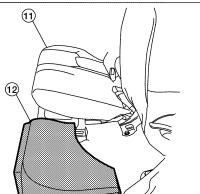


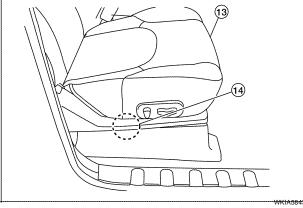
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King cab







- Front tweeter (Crew cab or King cab with premium system)
 LH M109
 RH M111
- LH M109
 RH M111

 4. AUX in jack (with premium system)
- 7. Front door speaker LH D12 RH D112

M85

- Rear door speaker (King cab)
 LH B76
 RH B160
- 13. Passenger seat

- Combination meter M24
- Satellite radio tuner (factory installed) 6. or Satellite radio tuner (pre-wiring) M41
- Rear tweeter (Crew cab with premium 9. system) LH D208
- 11. Rear seat

RH D308

Audio amplifier (Crew cab with premium system)
 B158, B159

- 3. Audio unit M42, M43, M44, M45
 - Steering wheel audio control switches (with premium system)
- Rear door speaker (Crew cab) LH D207 RH D307
- Subwoofer (Crew cab with premium system)
 B72

System Description BASE SYSTEM

EKS00BZ1

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

Power is supplied at all times

- through 20A fuse (No. 29, located in the fuse and fusible link box)
- to audio unit terminal 6.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 4, located in the fuse block (J/B)]
- to audio unit terminal 10.

Ground is supplied through the case of the audio unit.

Then audio signals are supplied

- through audio unit terminals 1, 2, 3, 4, 13, 14, 15 and 16
- to terminals + and of front door speaker LH and RH
- to terminals + and of front tweeter LH and RH (Crew cab)
- to terminals + and of rear door speaker LH and RH.

PREMIUM SYSTEM (KING CAB)

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

Power is supplied at all times

- through 20A fuse [No. 29, located in the fuse and fusible link box]
- to audio unit terminal 6.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 4, located in the fuse block (J/B)]
- to audio unit terminal 10.

Ground is supplied through the case of the audio unit.

Then audio signals are supplied

- through audio unit terminals 1, 2, 3, 4, 13, 14, 15 and 16
- to terminals + and of front door speaker LH and RH
- to terminals + and of front tweeter LH and RH
- to terminals + and of rear door speaker LH and RH.

When one of steering wheel audio control switches is pushed, the resistance in steering switch circuit changes depending on which button is pushed.

Satellite Radio Tuner (Factory Installed)

Refer to Owner's Manual for satellite radio system operating instructions.

Power is supplied at all times

- through 15A fuse [No. 17, located in the fuse block (J/B)]
- to satellite radio tuner terminal 32.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 4, located in the fuse block (J/B)]
- to satellite radio tuner terminal 36.

Radio signals are supplied from the satellite radio antenna to satellite radio tuner terminal 37.

Audio signals are supplied

- through satellite radio tuner terminals 21, 22, 23 and 24
- to terminals 41, 42, 43 and 44 of audio unit.

Ground is supplied through the case of the satellite radio tuner.

Satellite Radio Tuner (Pre-wiring)

The satellite radio tuner pre-wiring allows connection of a satellite radio tuner. Power is supplied at all times

- through 15A fuse [No. 17, located in the fuse block (J/B)]
- to satellite radio tuner pre-wiring terminal 32.

With the ignition switch in the ACC or ON position, power is supplied

through 10A fuse [No. 4, located in the fuse block (J/B)] to satellite radio tuner pre-wiring terminal 36. Ground is supplied to satellite radio tuner (pre-wiring) terminals 25 and 26 from audio unit terminals 45 and 46. Then audio signals are supplied through satellite radio tuner pre-wiring terminals 21, 22, 23 and 24 to audio unit terminals 41, 42, 43 and 44. AUX In Jack The AUX in jack allows input of audio signals to the audio unit from an auxiliary audio device. Audio signals are supplied from AUX in jack terminals 1, 2 and 4 to audio unit terminals 74, 75 and 76. PREMIUM SYSTEM (CREW CAB) Refer to Owner's Manual for audio system operating instructions. Power is supplied at all times through 15A fuse [No. 17, located in the fuse block (J/B)] to audio amplifier terminals 1 and 17 through 20A fuse [No. 29, located in the fuse and fusible link box] to audio unit terminal 6. With the ignition switch in the ACC or ON position, power is supplied through 10A fuse [No. 4, located in the fuse block (J/B)] to audio unit terminal 10. Ground is supplied through the case of the audio unit. Ground is also supplied to audio amplifier terminals 4 and 20 through body grounds B117 and B132. Then audio signals are supplied through audio unit terminals 1, 2, 3, 4, 13, 14, 15 and 16 to audio amplifier terminals 5, 6, 7, 8, 21, 22, 23 and 24.

Audio signals are amplified by the audio amplifier

The amplified audio signals are supplied

- through audio amplifier terminals 2, 3, 11, 12, 13, 14, 15, 16, 18, 19, 27, 28, 29, 30, 31 and 32
- to terminals + and of front door speaker LH and RH
- to terminals + and of front tweeter LH and RH
- to terminals + and of rear door speaker LH and RH
- to terminals + and of rear door tweeter LH and RH
- to terminals 1, 2, 3 and 4 of subwoofer.

When one of steering wheel audio control switches is pushed, the resistance in steering switch circuit changes depending on which button is pushed.

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Satellite Radio Tuner (Factory Installed)

Refer to Owner's Manual for satellite radio system operating instructions. Power is supplied at all times

- through 15A fuse [No. 17, located in the fuse block (J/B)]
- to satellite radio tuner terminal 32.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 4, located in the fuse block (J/B)]
- to satellite radio tuner terminal 36.

Revision: September 2006

Radio signals are supplied from the satellite radio antenna to satellite radio tuner terminal 37.

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Audio signals are supplied

- through satellite radio tuner terminals 21, 22, 23 and 24
- to terminals 41, 42, 43 and 44 of audio unit.

Ground is supplied through the case of the satellite radio tuner.

Satellite Radio Tuner (Pre-wiring)

The satellite radio tuner pre-wiring allows connection of a satellite radio tuner. Power is supplied at all times

- through 15A fuse [No. 17, located in the fuse block (J/B)]
- to satellite radio tuner pre-wiring terminal 32.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 4, located in the fuse block (J/B)]
- to satellite radio tuner pre-wiring terminal 36.

Ground is supplied

- to satellite radio tuner (pre-wiring) terminals 25 and 26
- from audio unit terminals 45 and 46.

Then audio signals are supplied

- through satellite radio tuner pre-wiring terminals 21, 22, 23 and 24
- to audio unit terminals 41, 42, 43 and 44.

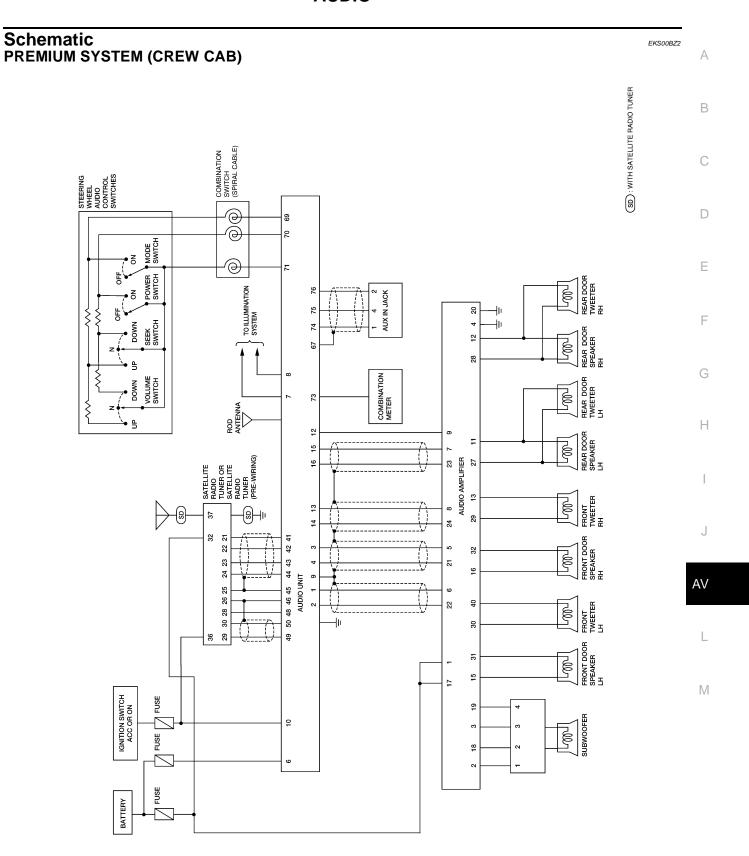
AUX In Jack

The AUX in jack allows input of audio signals to the audio unit from an auxiliary audio device. Audio signals are supplied

- from AUX in jack terminals 1, 2 and 4
- to audio unit terminals 74, 75 and 76.

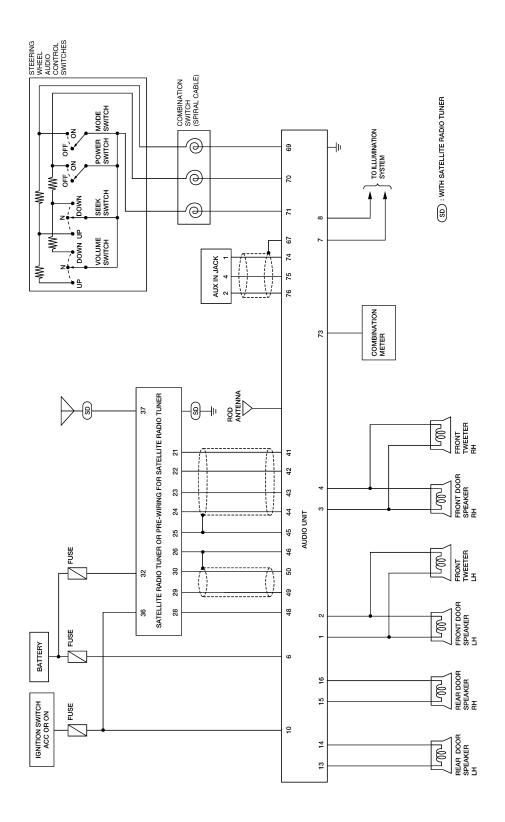
SPEED SENSITIVE VOLUME SYSTEM

Volume level of this system goes up and down automatically in proportion to the vehicle speed. The control level can be selected by the customer. Refer to Owner's Manual for operating instructions.

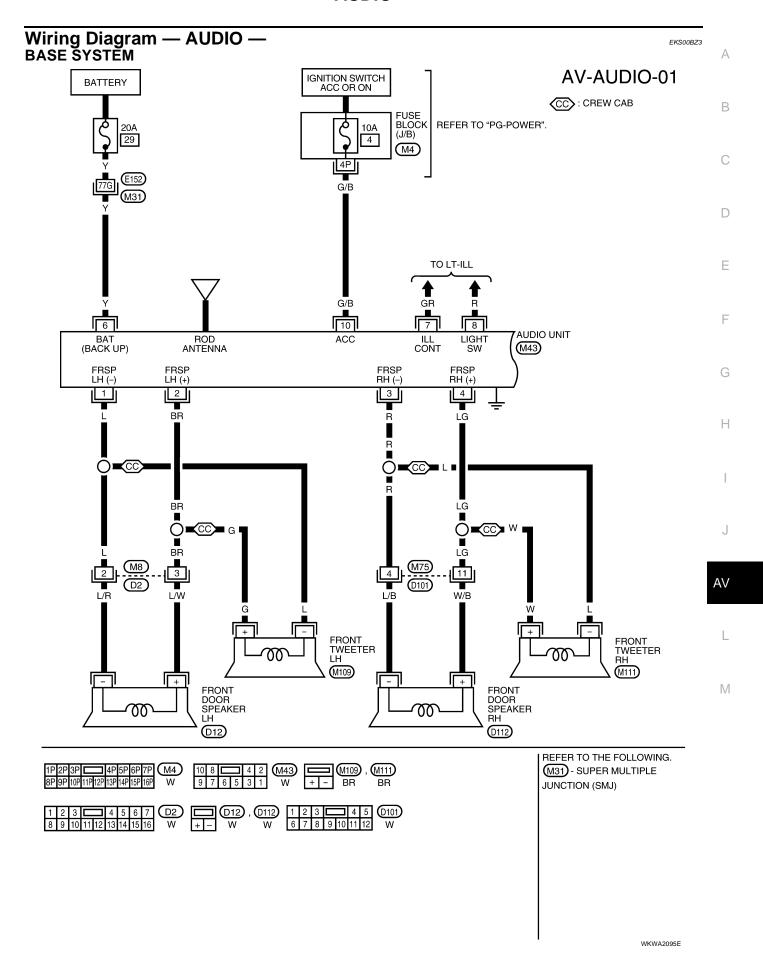


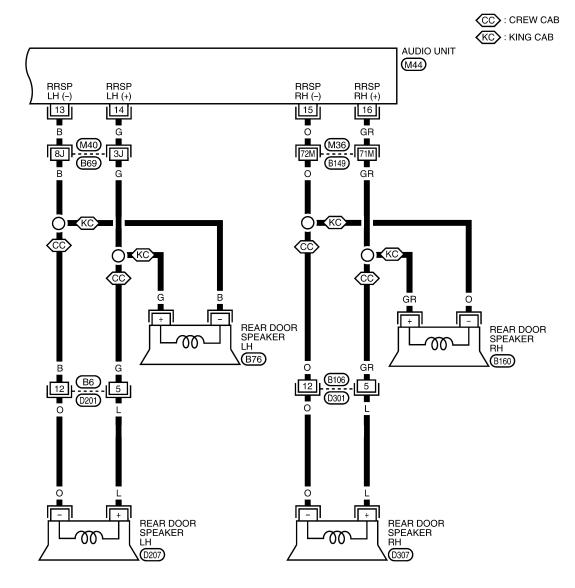
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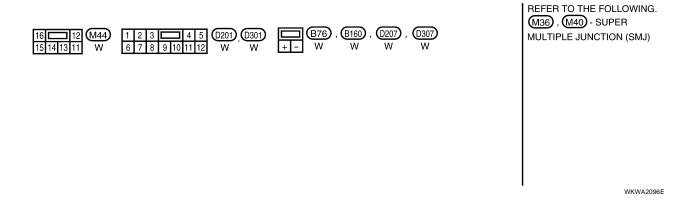
PREMIUM SYSTEM (KING CAB)

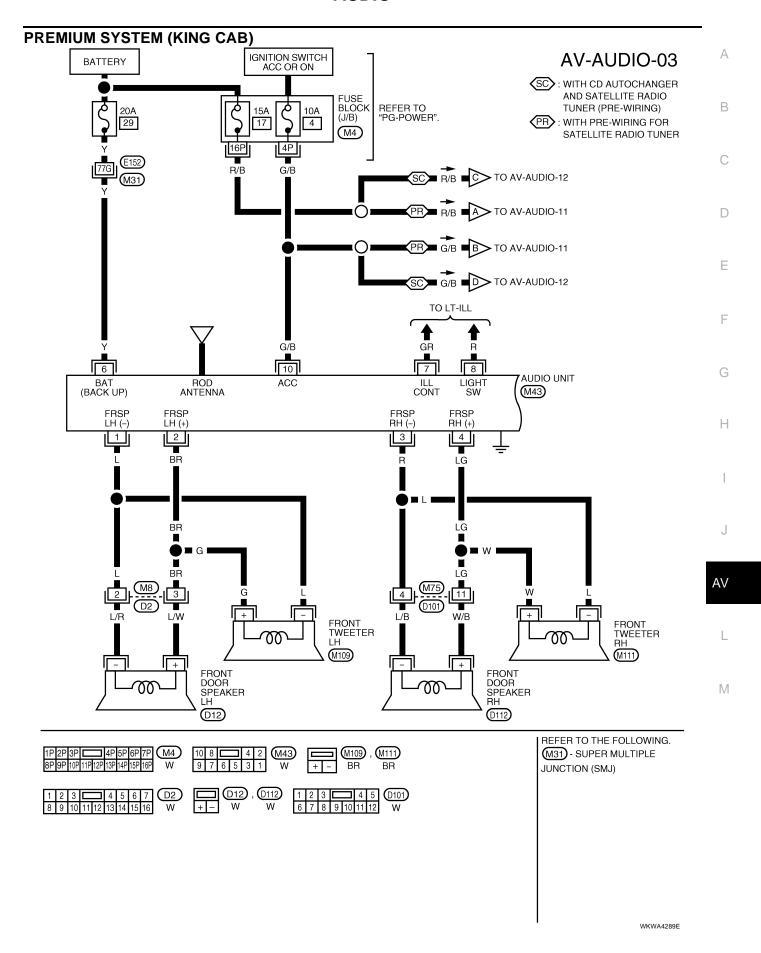


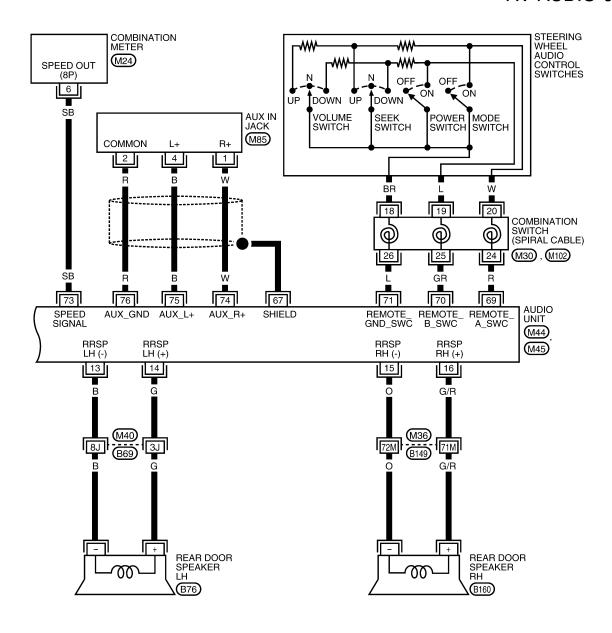
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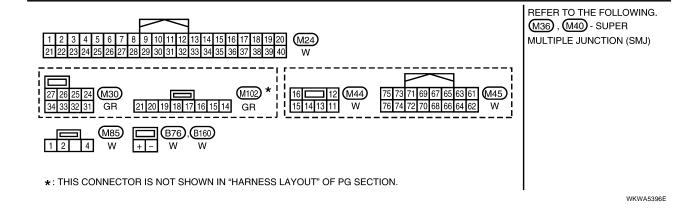


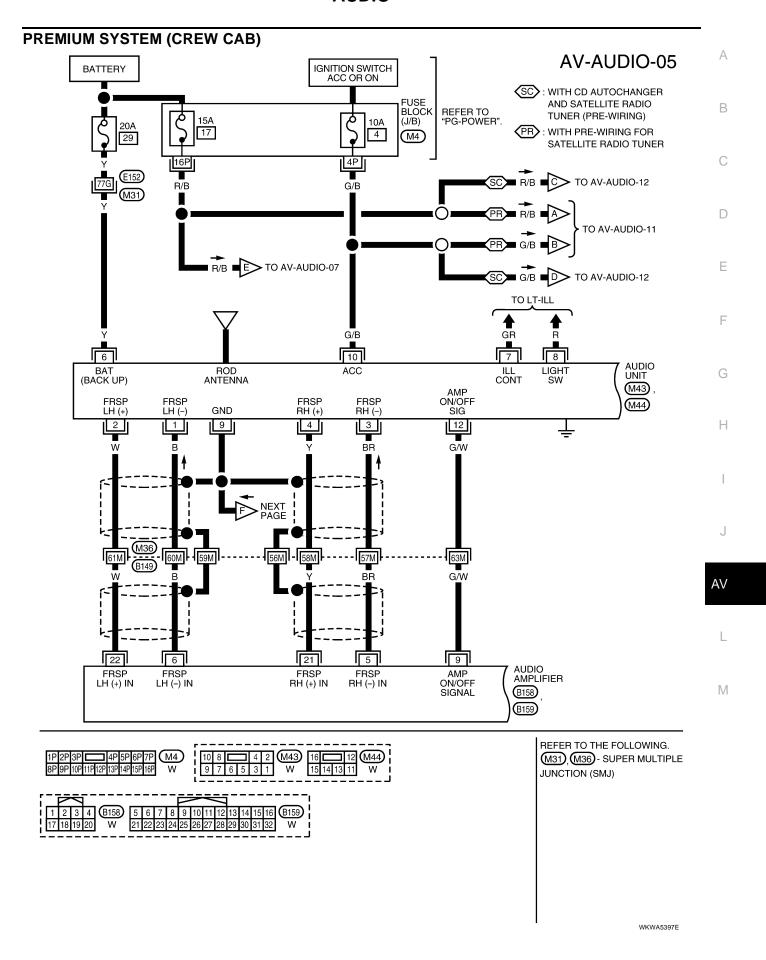


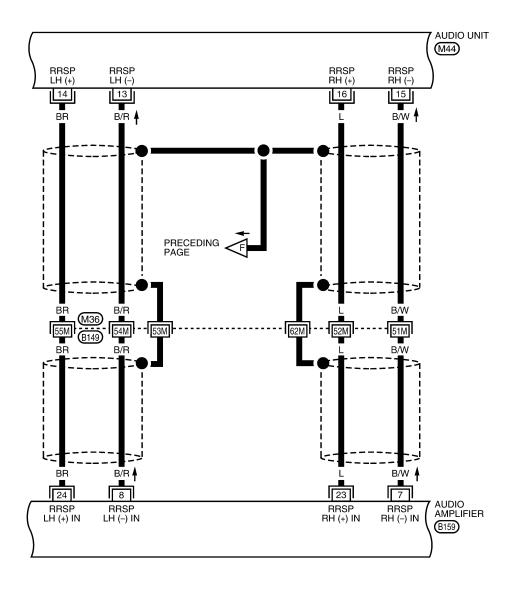


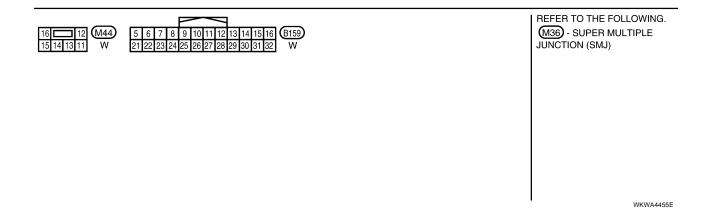












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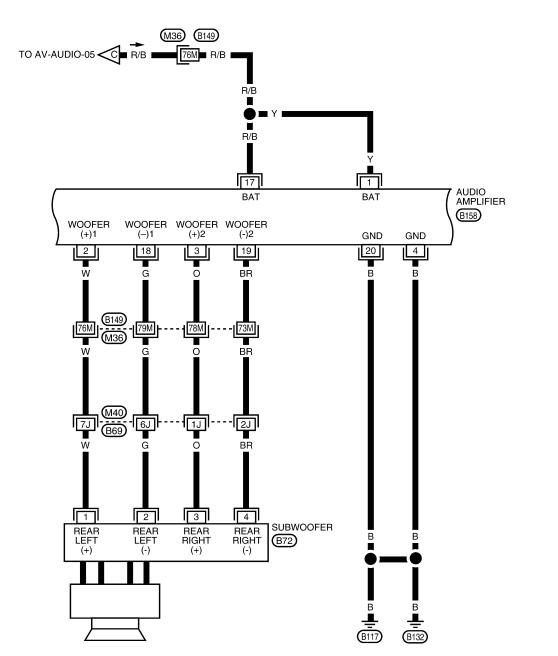
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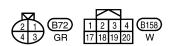
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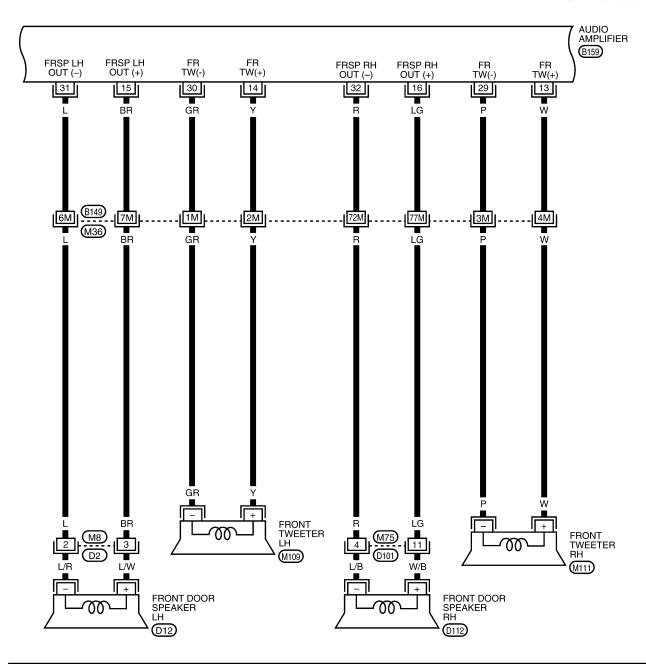


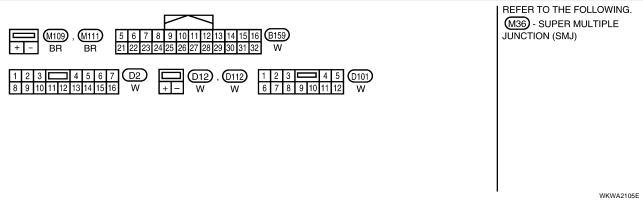


REFER TO THE FOLLOWING.

M36, M40 - SUPER MULTIPLE
JUNCTION (SMJ)

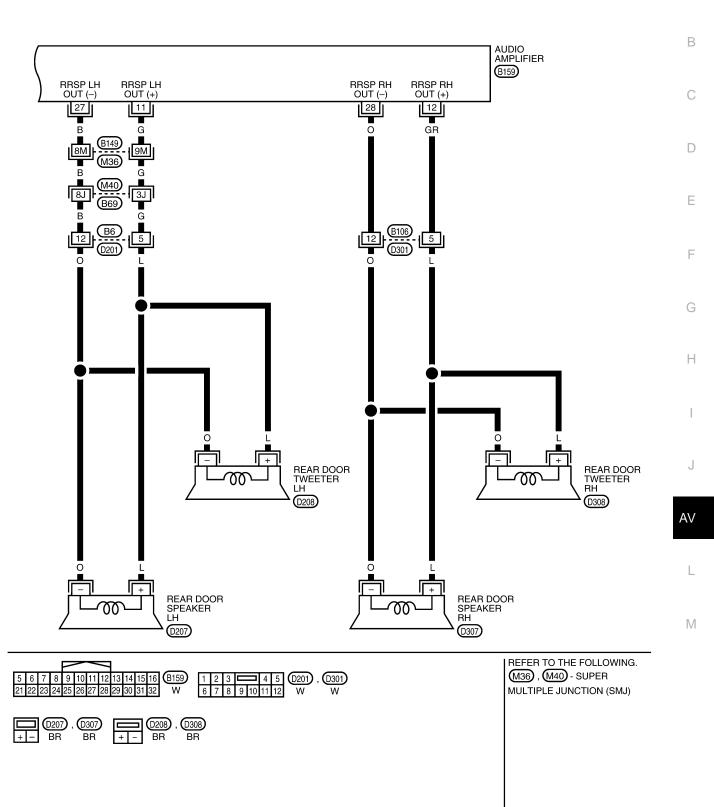
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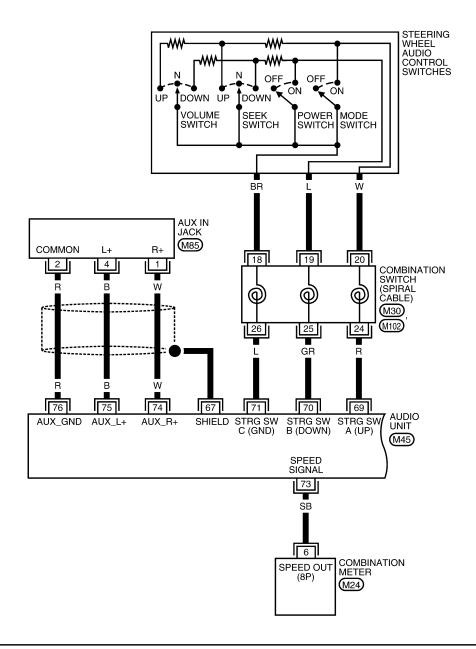


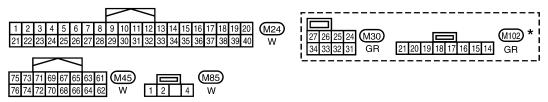


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*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

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SATELLITE RADIO TUNER (PRE-WIRING)

AV-AUDIO-11

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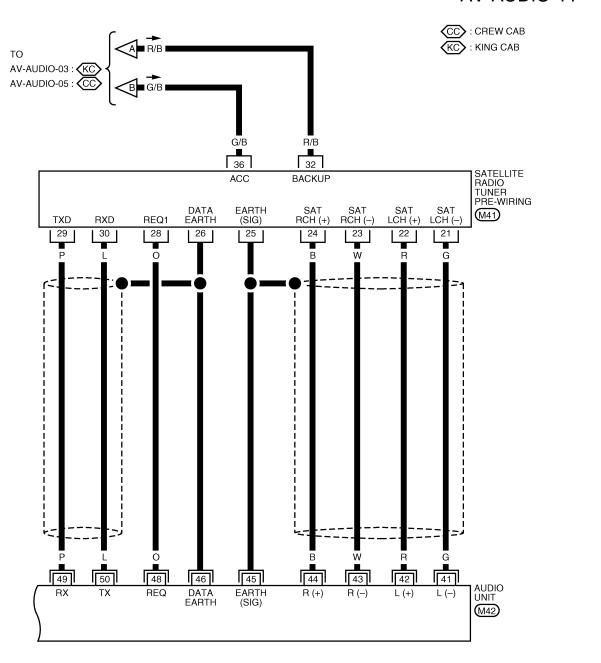
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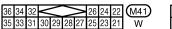
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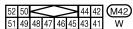
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SATELLITE RADIO TUNER (FACTORY INSTALLED) **AV-AUDIO-12** SATELLITE RADIO ANTENNA CC : CREW CAB : KING CAB ТО : WITH SIRIUS SATELLITE M251 AV-AUDIO-03 : KC RADIO TUNER AV-AUDIO-05 : CO : WITH XM SATELLITE **RADIO TUNER** (M68) R/B G/B 32 37 36 SATELLITE RADIO TUNER **BACKUP** M41), M129 SAT RCH (+) SAT RCH (–) SAT LCH (+) SAT LCH (-) DATA EARTH EARTH RXD REQ1 **TXD** (SIG) 28 24 29 30 26 23 22 25 21 R 0 G 49 48 43 42 41 50 46 45 44 AUDIO UNIT DATA EARTH EARTH (SIG) (M42) (M129) (M129) (SI) BR

 $\ensuremath{\bigstar}$: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

WKWA4294E

	ninal color)	- Item	Signal input/	(Condition	Reference value	Example of symptom
+	_	item	output	Ignition switch	Operation	(Approx.)	Example of Symptom
2 (BR)	1 (L)	Audio sound signal front LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from front door speaker LH or tweeter LH*.
4 (LG)	3 (R)	Audio sound signal front RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from front door speaker RH or tweeter RH*.
6 (Y)	Ground	Battery power	Input	_	_	Battery voltage	System does not work properly.
7 (GR)	Ground	Illumination control sig- nal	Input	ON	Illumination control switch is operated by lighting switch in 1st position.	Changes between 0 and 12V	Audio unit illumina- tion cannot be con- trolled.
8 (R)	Ground	Illumination	Input	OFF	Lighting switch is in 1st position.	Battery voltage	Audio unit illumina- tion does not come on when lighting
		signal			Lighting switch is OFF.	3V or less	switch is in 1st position.
10 (G/B)	Ground	ACC signal	Input	ON	Ignition switch ACC or ON	Battery voltage	System does not work properly.
14 (G)	13 (B)	Audio sound signal rear LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from rear door speaker LH.
16 (GR)	15 (O)	Audio sound signal rear RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from rear door speaker RH.

^{*:} Crew cab

Terminals and Reference Value for Audio Unit [Premium System (King Cab)]

	ninal color)		Signal		Condition	Reference value	EK\$00C2V
+	_	ltem	input/ output	Ignition switch	Operation	(Approx.)	Example of symptom
2 (BR)	1 (L)	Audio sound signal front LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from front door speaker LH or tweeter LH.
4 (LG)	3 (R)	Audio sound signal front RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from front door speaker RH or tweeter RH.
6 (Y)	Ground	Battery power	Input	_	_	Battery voltage	System does not work properly.
7 (GR)	Ground	Illumination control sig- nal	Input	ON	Illumination control switch is operated by lighting switch in 1st position.	Changes between 0 and 12V	Audio unit illumination cannot be controlled.
		Illumination			Lighting switch is in 1st position.	Battery voltage	Audio unit illumina- tion does not come
8 (R)	Ground	signal	Input	OFF	Lighting switch is OFF.	3V or less	on when lighting switch is in 1st posi- tion.
10 (G/B)	Ground	ACC signal	Input	ON	_	Battery voltage	System does not work properly.
14 (G)	13 (B)	Audio sound signal rear LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from rear door speaker LH.
16 (G/R)	15 (O)	Audio sound signal rear RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from rear door speaker RH.

Terminal (Wire color)		. Item	Signal		Condition	Reference value	Example of symptom	
+	_	item	input/ output	Ignition switch	Operation	(Approx.)	Example of symptom	
42 (R)	41 (G)	Audio left channel sound sig- nal from sat- ellite radio tuner	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from satel- lite radio tuner left channel.	
44 (B)	43 (W)	Audio right channel sound sig- nal from sat- ellite radio tuner	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from satellite radio tuner right channel.	
45	-	Shield ground (audio sig- nal)	-	_	_	_	-	
46	_	Shield ground (data)	-	_	_	-	-	
48 (O)	Ground	Satellite radio tuner request to audio unit	Input	ON	Turn audio unit ON	5V	Satellite radio tuner does not operate properly.	
49 (P)	Ground	Audio RX	Input	ON	Operate audio volume	(V) 6 4 2 0 *** 5ms	Satellite radio tuner audio information does not display properly.	
50 (L)	Ground	Audio TX	Output	ON	Operate audio volume	(V) 6 4 2 0 ••• 2ms SKIA4402E	Satellite radio tuner audio information does not display properly.	
67	_	Shield ground	_	_	_	-	-	
					Press MODE switch	0V		
69 (R)	Ground	Remote control A	Input	ON	Press SEEK UP switch	0.75V	Steering wheel audio controls do not func-	
		CONTION A			Press VOL UP switch	2V	tion.	
					Except for above	5V		

	minal e color)	Item	Signal input/		Condition	Reference value	Example of symptom
+	_	- item	output	Ignition switch	Operation	(Approx.)	Example of Symptom
					Press POWER switch	OV	
70 (GR)	Ground	Remote control B	Input	ON	Press SEEK DOWN switch	0.75V	Steering wheel audio controls do not func-
		CONTIONE			Press VOL DOWN switch	2V	tion.
					Except for above	5V	
71 (L)	_	Remote control ground	_	_	-	_	Steering wheel audio controls do not function.
73 (SB)	Ground	Vehicle speed sig- nal	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	Vehicle speed : approx.40km/h a = 3.5V b = 1.5V SKIA0168E	Speed sensitive volume inoperative.
74 (W)	Ground	AUX R+	Input	ON	-	OV	No sound from auxiliary audio device right channel.
75 (B)	Ground	AUX L+	Input	ON	_	OV	No sound from auxiliary audio device left channel.
76 (R)	_	AUX Ground	_	_	-	-	No sound from auxiliary audio device.

Terminals and Reference Value for Audio Unit [Premium System (Crew Cab)]

							EN300B25
	minal e color)) Item	Signal input/		Condition	Reference value	Example of symptom
+	_	item	output	Ignition switch	Operation	(Approx.)	Example of symptom
2 (W)	1 (B)	Audio sound signal front LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from front door speaker LH or tweeter LH.
4 (Y)	3 (BR)	Audio sound signal front RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from front door speaker RH or tweeter RH.
6 (Y)	Ground	Battery power	Input	-	_	Battery voltage	System does not work properly.

	ninal color)	- Item	Signal		Condition	Reference value	Evenue of symptom
+	_	tem	input/ output	Ignition switch	Operation	(Approx.)	Example of symptom
7 (GR)	Ground	Illumination control sig- nal	Input	ON	Illumination control switch is operated by lighting switch in 1st position.	Changes between 0 and 12V	Audio unit illumination cannot be controlled.
0 (D)	Ground	Illumination	lanut.	OFF	Lighting switch is in 1st position.	Battery voltage	Audio unit illumina- tion does not come
8 (R)	Ground	signal	Input	OFF	Lighting switch is OFF.	3V or less	on when lighting switch is in 1st posi- tion.
9	_	Shield ground	-	_	-	-	-
10 (G/B)	Ground	ACC signal	Input	ON	-	Battery voltage	System does not work properly.
12 (G/W)	Ground	Amp. ON signal	Output	ON	-	More than 6.5V	Audio amplifier does not work properly.
14 (BR)	13 (B/R)	Audio sound signal rear LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from rear door speaker LH or rear door tweeter LH.
16 (L)	15 (B/W)	Audio sound signal rear RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from rear door speaker RH or rear door tweeter RH.
42 (R)	41 (G)	Audio left channel sound sig- nal from sat- ellite radio tuner	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from satellite radio tuner left channel.
44 (B)	43 (W)	Audio right channel sound sig- nal from sat- ellite radio tuner	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from satel- lite radio tuner right channel.
45	_	Shield ground (audio sig- nal)	_	_	-	-	-
46	-	Shield ground (data)	-	-	_	-	-

	minal e color)	ltom	Signal		Condition	Reference value	Everente et eurentere						
+	_	ltem	input/ output	Ignition switch	Operation	(Approx.)	Example of symptom						
48 (O)	Ground	Satellite radio tuner request to audio unit	Input	ON	Turn audio unit ON	5V	Satellite radio tuner does not operate properly.						
49 (P)	Ground	Audio RX	Input	ON	Operate audio volume	(V) 6 4 2 0 ••• 5ms SKIA4403E	Satellite radio tuner audio information does not display properly.						
50 (L)	Ground	Audio TX	Output	ON	Operate audio volume	(V) 6 4 2 0 	Satellite radio tuner audio information does not display properly.						
67	_	Shield ground	_	_	_	_	-						
		round Remote control A									Press MODE switch	0V	
69 (R)	Ground		Input	ON	Press SEEK UP switch	0.75V	Steering wheel audio controls do not func-						
		CONTOLA					Press VOL UP switch	2V	tion.				
								Except for above	5V	1			
					Press POWER switch	oV							
70 (GR)	Ground	Remote control B	Input	Input	ON	Press SEEK DOWN switch	0.75V	Steering wheel audio controls do not func-					
		CONTIONE				Press VOL DOWN switch	2V	tion.					
					Except for above	5V							
71 (L)	_	Remote control ground	_	_	-	_	Steering wheel audio controls do not function.						
73 (SB)	Ground	Vehicle speed sig- nal	Input	ON	When vehicle speed is approx. 40 km/h (25 MPH)	Vehicle speed : approx.40km/h a a 3.5V b ≤ 1.5V SKIA0168E	Speed sensitive volume inoperative.						
74 (W)	Ground	AUX R+	Input	ON	-	0V	No sound from auxiliary audio device right channel.						

Terminal (Wire color)		- Item	Signal input/	Condition		Condition		Reference value	Example of symptom	
+	_	- item	output	Ignition switch	Operation	(Approx.)	Example of Symptom			
75 (B)	Ground	AUX L+	Input	ON	-	0V	No sound from auxiliary audio device left channel.			
76 (R)	-	AUX Ground	_	-	-	-	No sound from auxiliary audio device.	(

Terminals and Reference Value for Audio Amplifier [Premium System (Crew Cab)]

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	minal		Cianal	(Condition		
(wire	color)	Item	Signal input/			Reference value	Example of
+	_		output	Ignition switch	Operation	(Approx.)	symptom
1 (Y)	Ground	Battery	Input	_	_	Battery voltage	System does not work properly.
2 (W)	18 (G)	Subwoofer	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from subwoofer.
3 (O)	19 (BR)	Subwoofer	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from subwoofer.
4 (B)	Ground	Ground	_	ON	_	_	_
9 (G/W)	Ground	Amp. ON sig- nal	Input	ON	_	More than 6.5V	System does not work properly.
11 (G)	27 (B)	Rear door speaker LH and rear door tweeter LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from rear door speaker LH or rear door tweeter LH.
12 (GR)	28 (O)	Rear door speaker RH and rear door tweeter RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from rear door speaker RH or rear door tweeter RH.

Torn	ninal							
	color)	Item	Signal input/	(Condition	Reference value	Example of	
+	_	No.	output	Ignition switch Operation		(Approx.)	symptom	
13 (W)	29 (P)	Front tweeter RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms skia0177E	No sound from front tweeter RH.	
14 (Y)	30 (GR)	Front tweeter LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from front tweeter LH.	
15 (BR)	31 (L)	Front door speaker LH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from front door speaker LH.	
16 (LG)	32 (R)	Front door speaker RH	Output	ON	Receive audio signal	(V) 1 0 -1 1 ms	No sound from front door speaker RH.	
17 (R/B)	Ground	Battery	Input	_	_	Battery voltage	System does not work properly.	
20 (B)	Ground	Ground	-	ON	_	-	_	
21 (Y)	5 (BR)	Audio sound signal front RH	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms \$\frac{1}{2}\$\$SKIA0177E	No sound from front door speaker RH or front tweeter RH.	
22 (W)	6 (B)	Audio sound signal front LH	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from front door speaker LH or front tweeter LH.	

Terminal (wire color)		Item	Signal input/			Reference value	Example of	
+	_	nem	output	Ignition switch	Operation	(Approx.)	symptom	
23 (L)	7 (B/W)	Audio sound signal rear RH	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from rear door speaker RH or rear door tweeter RH.	
24 (BR)	8 (B/R)	Audio sound signal rear LH	Input	ON	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	No sound from rear door speaker LH or rear door tweeter LH.	

Terminals and Reference Value for Satellite Radio Tuner

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remin	Terminals and Reference value for Satellite Radio Tuner						
	minal color)	ltem	Signal input/		Condition	Voltage	
+	_	. item	output	Ignition switch	Operation	(approx.)	
22 (R)	21 (G)	Audio signal LH	Output	ON	Receive audio signal.	(V) 1 0 -1 + 2ms SKIB3609E	
24 (B)	23 (W)	Audio signal RH	Output	ON	Receive audio signal.	(V) 1 0 -1 + 2ms SKIB3609E	
25		Chiald		_		_	
26	_	Shield	_	ON	_	Approx. 0 V	
28 (O)	Ground	REQ1 (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 10 5 0 → • 20ms SKIB3825E	
29 (P)	Ground	Communication signal (SAT-AUDIO)	Output	ON	Set to the satellite radio mode	(V) 15 10 5 0 → 20ms SKIB3824E	

	ninal color)	lto m	Signal		Condition	Voltage
+	_	Item	input/ output	Ignition switch	Operation	(approx.)
30 (L)	Ground	Communication signal (AUDIO-SAT)	Input	ON	Set to the satellite radio mode	(V) 15 10 5 0 *****************************
32 (R/B)	Ground	Battery power supply		OFF		Battery voltage
36 (G/B)	Giodila	ACC power supply	Input	ACC	-	Dattery Voltage
37	_	Antenna signal		_	_	_

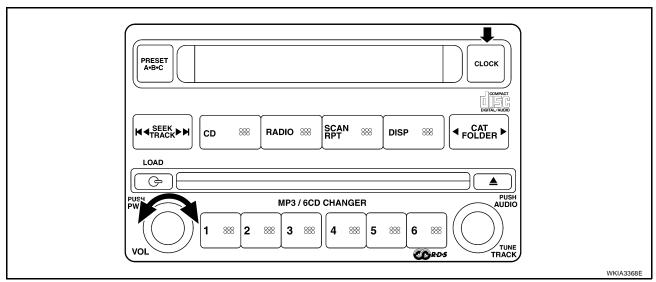
Audio Unit Self-Diagnosis Function (Premium System)

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It can check ON/OFF operation of each switch in the audio unit and diagnose the input signals from the steering switch.

STARTING THE SELF-DIAGNOSIS MODE

- 1. Turn ignition switch from OFF to ACC.
- 2. Press and hold the "CLOCK" switch and turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



Then the self-diagnosis operates. A single beep indicates self-diagnosis mode is active.

- 3. Initially, all display segments will be illuminated.
- 4. Press each switch. When each switch is pressed, a single beep will be heard. When the "CAT FOLDER" left arrow is pressed, each speaker will beep separately

EXITING THE SELF-DIAGNOSIS MODE

Turn the ignition switch OFF or pressing the power button ends self-diagnosis.

DIAGNOSIS FUNCTION

- It can check for continuity of the switches by sounding a beep when each audio unit switch and steering switch is pressed.
- It can check for continuity of harness between audio unit and steering switch.

Trouble Diagnosis

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The majority of the audio troubles are the result of outside causes (bad CD, electromagnetic interference, etc.). Check the inspection items below to diagnose the malfunction.

MALFUNCTION WITH RADIO AND CD (BASE SYSTEM)

Symptom	Possible cause
Inoperative	Audio unit power circuit check. Refer to AV-36, "Power Supply Circuit Inspection". If above check is OK, replace audio unit.
All speakers do not sound	Audio unit
One or several speakers do not sound	 Front door speaker check. Refer to AV-43, "Sound Is Not Heard From Front Door Speaker or Front Tweeter (Base System)". Rear door speaker check. Refer to AV-45, "Sound Is Not Heard From Rear Door Speaker (Base System)".
Poor sound	Audio unit Speaker
Noisy	Audio unit Electrical equipment (generator, bonding wire, etc.)

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MALFUNCTION WITH RADIO AND CD [PREMIUM SYSTEM (KING CAB)]

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One or several speakers do not sound

Door Speaker or Front Tweeter [Premium System (King Cab)]".

Rear door speaker check. Refer to AV-49, "Sound Is Not Heard From Rear Door Speaker [Premium System (King Cab)]".

Audio unit

If above check is OK, replace audio unit.

If above check is OK, replace audio unit.

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Poor sound • SI

Symptom

Inoperative

Noisy

Steering switch does not operate

All speakers do not sound

Speaker

Inspection".

System)".

Audio unit

Audio unitElectrical equipment (generator, bonding wire, etc.)

Possible cause

• Audio unit power circuit check. Refer to AV-36, "Power Supply Circuit

• Steering switch check. Refer to AV-41, "Steering Switch Check (Premium

• Front door speaker check. Refer to AV-47, "Sound Is Not Heard From Front

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MALFUNCTION WITH RADIO AND CD [PREMIUM SYSTEM (CREW CAB)]

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Symptom	Possible cause
Inoperative	Audio unit power circuit check. Refer to AV-36, "Power Supply Circuit Inspection".
·	If above check is OK, replace audio unit.
Steering switch does not operate	Steering switch check. Refer to AV-41, "Steering Switch Check (Premium System)".
·	If above check is OK, replace audio unit.
	Audio unit
All speakers do not sound	 Audio amplifier power supply and ground circuit check. Refer to <u>AV-36</u>, <u>"Power Supply Circuit Inspection"</u>.
·	Audio amplifier ON signal
	Audio amplifier

Symptom	Possible cause
	Front door speaker check. Refer to AV-51, "Sound Is Not Heard From Front Door Speaker or Front Tweeter [Premium System (Crew Cab)]".
One or several speakers do not sound	 Rear door speaker check. Refer to <u>AV-54</u>, "Sound Is Not Heard From Rear <u>Door Speaker or Rear Door Tweeter [Premium System (Crew Cab)]"</u>.
	Subwoofer check. Refer to <u>AV-58</u> , "Sound Is Not Heard From Subwoofer [Premium System (Crew Cab)]".
	Audio unit
Poor sound	Audio amplifier
	Speaker
	Audio unit
Noisy	Audio amplifier
	Electrical equipment (generator, bonding wire, etc.)

FOR RADIO ONLY

Symptom	Possible cause
No sound	Audio unit
No Sound	Antenna feeder, wiring or connections
	Audio unit
	Audio unit case ground
Noiny	Antenna feeder, wiring or connections
Noisy	Noise prevention parts
	Electrical equipment
	Wire harness of each piece of electrical equipment
All radio stations stored in memory are deleted	Audio unit power circuit. Refer to AV-36, "Power Supply Circuit Inspection". Audio unit

NOTE:

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

- 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 the waves sent directly from the broadcast station arriving at the antenna at a different time from the waves which reflect off mountains or buildings.

FOR CD ONLY

Symptom	Possible cause		
CD cannot be inserted.			
CD cannot be ejected.	• CD		
The CD cannot be played.	Audio unit		
The sound skips, stops suddenly, or is distorted.			

FOR SATELLITE RADIO TUNER (FACTORY INSTALLED) ONLY				
Symptom	Possible cause			
	 Satellite radio tuner (factory installed) power and ground circuit inspection. Refer to AV-37, "Satellite Radio Tuner (Factory Installed) Power and Ground Supply Circuit Inspection". 			
Inoperative	 Satellite radio tuner (factory installed) communication circuit inspection. Refer to AV-38, "Satellite Radio Tuner (Factory Installed) Communication Circuit Inspection" 			
	If above check is OK, replace satellite radio tuner. Refer to AV-61, "SATEL-LITE RADIO TUNER".			
Right or left channel does not sound	 Satellite radio tuner (factory installed) right channel audio signal circuit inspection. Refer to <u>AV-41</u>, "Satellite Radio Tuner (Factory Installed) Right <u>Channel Audio Signal Circuit Inspection"</u>. 			
	 Satellite radio tuner (factory installed) left channel audio signal circuit inspection. Refer to <u>AV-40</u>, "Satellite <u>Radio Tuner</u> (<u>Factory Installed</u>) <u>Left</u> <u>Channel Audio Signal Circuit Inspection"</u>. 			
	If above check is OK, replace satellite radio tuner. Refer to <u>AV-61, "SATEL-LITE RADIO TUNER"</u> .			
	Location of vehicle. Make certain vehicle is in an open area.			
Poor reception	Satellite radio antenna or antenna feeder. Refer to <u>AV-64, "Location of Audio Antenna System Components"</u> .			
	Satellite radio tuner (factory installed) ground.			
Noisy	Satellite radio tuner (factory installed) harness shield wires.			
Noisy	 Electrical equipment (generator, bonding wire, etc.). Refer to <u>AV-35, "Noise Inspection"</u>. 			

Noise Inspection

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The vehicle itself can be a source of noise if noise prevention parts or electrical equipment is malfunctioning. Check if noise is caused and/or changed by engine speed, ignition switch turned to each position, and operation of each piece of electrical equipment, and determine the cause.

NOTE:

The source of the noise can be found easily by listening to the noise while removing the fuses of electrical components, one by one.

TYPE OF NOISE AND POSSIBLE CAUSE

Occurrence condition		Possible cause		
	A continuous growling noise occurs. The speed of the noise varies with changes in the engine speed.	Ignition components		
Occurs only when engine is ON.	A whistling noise occurs while the engine speed is high. A booming noise occurs while the engine is running and the lighting switch is ON.	Generator		
The occurrence of the noise is linked with the operation of the fuel pump.		Fuel pump condenser		
Noise only occurs when various electrical components are operating.	A cracking or snapping sound occurs with the operation of various switches.	Relay malfunction, audio unit malfunction		
	The noise occurs when various motors are operating.	Motor case ground Motor		
The noise occurs constantly, not just under certain conditions.		 Rear defogger coil malfunction (crew cab) Open circuit in printed heater (crew cab) Poor ground of antenna feeder line 		
A cracking or snapping sound occurs while the vehicle is being driven, especially when it is vibrating excessively.		 Ground wire of body parts Ground due to improper part installation Wiring connections or a short circuit		

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Power Supply Circuit Inspection

1. CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.	
Audio unit	6	Battery power	29	
	10	Ignition switch ACC or ON	4	
Audio amplifier	1	Pattony power	17	
	17	Battery power		

OK or NG

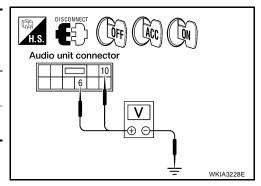
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to <u>PG-4</u>, "POWER SUPPLY ROUTING CIRCUIT" .

2. POWER SUPPLY CIRCUIT CHECK

- 1. Disconnect audio unit connector M43 and audio amplifier connector B158 [premium system (crew cab)].
- 2. Check voltage between the audio unit and ground.

Unit	Terminal No.					
	(+)		(-)	OFF	ACC	ON
	Connector	Terminal	(-)			l
Audio unit	M43	6	Ground	Battery voltage	Battery voltage	Battery voltage
		10	Ground	0V	Battery voltage	Battery voltage



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3. Check voltage between audio amplifier [premium system (crew cab)] and ground.

Unit	Terminal No.					
	(+)		()	OFF	ACC	ON
	Connector	Terminal	(-)			
Audio amplifier	B158	1	Ground	Battery voltage	Battery voltage	Battery voltage
		17				

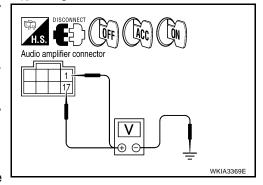
OK or NG

OK >> • Crew cab models with premium system, GO TO 3.

• All other models, Inspection End.

NG >> • Check connector housings for disconnected or loose terminals.

• Repair harness or connector.



3. ground circuit check

- 1. Turn ignition switch OFF.
- 2. Check continuity between audio amplifier harness connector B158 terminal 4 and terminal 20 and ground.

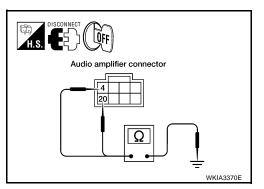
Continuity should exist.

OK or NG

OK NG

>> Inspection End.

- >> Check connector housing for disconnected or loose terminals.
 - Repair harness or connector.



Satellite Radio Tuner (Factory Installed) Power and Ground Supply Circuit Inspection

1. CHECK FUSES

Check that the following fuses are not blown.

Unit	Terminals	Signal name	Fuse No.
Satellite radio tuner (factory	32	Battery power	17
installed)	36	Ignition switch ACC or ON	4

OK or NG

OK NG >> GO TO 2.

>> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to PG-4, <a href="POWER SUPPLY ROUTING CIRCUIT".

2. POWER SUPPLY CIRCUIT CHECK

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector M41.
- 3. Check voltage between the satellite radio tuner (factory installed) and ground.

	Terminal No.					
Unit	(+)		()	OFF	ACC	ON
	Connector	Terminal	(-)			
Satellite radio tuner	M41	32	Ground	Battery voltage	Battery voltage	Battery voltage
(factory installed)	10141	36	Ground	0V	Battery voltage	Battery voltage

DISCONNECT H.S. CACC CON H.S. CACC CON WKIA4539E

OK or NG

OK >> GO TO 3. NG >> • Check

>> • Check connector housings for disconnected or loose terminals.

Repair harness or connector.

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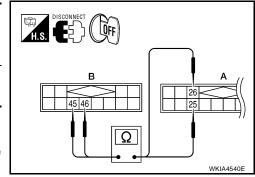
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3. GROUND CIRCUIT CHECK

- Turn ignition switch OFF. 1.
- 2. Inspect satellite radio tuner (factory installed) case ground.
- 3. Disconnect satellite radio tuner (factory installed) connector M41 (A) and audio unit connector M42 (B).
- Check continuity between satellite radio tuner (factory installed) and audio unit.

Satellite ra	Satellite radio tuner Audio unit			
Connector	Terminal	Connector Terminal		
A: M41	25	B: M42	45	Yes
A. W4 I	26		46	165



OK or NG

OK NG >> Inspection End.

- >> Check connector housings for disconnected or loose
 - Repair harness, connector or satellite radio tuner (factory installed) case ground.

Satellite Radio Tuner (Factory Installed) Communication Circuit Inspection EKSOOHLW

1. CHECK HARNESS - 1

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector M41 and audio unit connector M42.
- Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 28 and audio unit harness connector M42 (B) terminal 48

Continuity should exist.

Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 28 and ground.

Continuity should not exist.

OK or NG

OK >> GO TO 2.

>> Repair harness or connector.

2. CHECK HARNESS - 2

Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 29 and audio unit harness connector M42 (B) terminal 49

Continuity should exist.

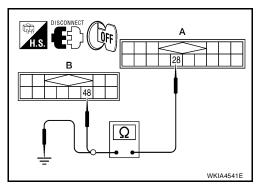
Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 29 and ground.

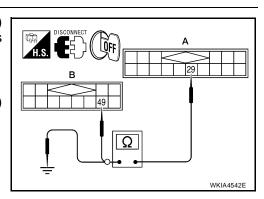
Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.





3. CHECK HARNESS - 3

 Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and audio unit harness connector M42 (B) terminal 50

Continuity should exist.

2. Check continuity between satellite radio tuner (factory installed) harness connector M41 (A) terminal 30 and ground.

Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.

4. CHECK REQ1 SIGNAL

- 1. Connect satellite radio tuner (factory installed) connector and audio unit connector.
- 2. Turn ignition switch to ACC
- Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 28 and ground with CONSULT-II or oscilloscope.

28 - Ground : Refer to AV-31, "Terminals and Reference Value for Satellite Radio Tuner".

OK or NG

OK >> GO TO 5.

NG >> Replace audio unit. Refer to AV-59, "AUDIO UNIT".

5. CHECK TXD SIGNAL

Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 29 and ground with CONSULT-II or oscilloscope.

29 - Ground : Refer to AV-31, "Terminals and Reference Value for Sat-

ellite Radio Tuner".

OK or NG

OK >> GO TO 6. NG >> Replace audio unit. Refer to AV-59, "AUDIO UNIT" .

6. CHECK RXD SIGNAL

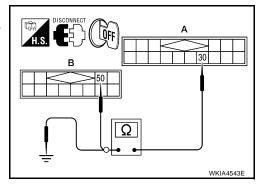
Check signal between satellite radio tuner (factory installed) harness connector M41 terminal 30 and ground with CONSULT-II or oscilloscope.

30 - Ground : Refer to AV-31, "Terminals and Reference Value for Satellite Radio Tuner".

OK or NG

OK >> Replace satellite radio tuner (factory installed). Refer to AV-61, "SATELLITE RADIO TUNER".

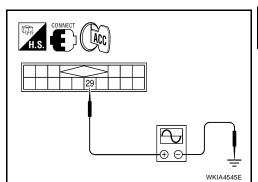
NG >> Replace audio unit. Refer to AV-59, "AUDIO UNIT".

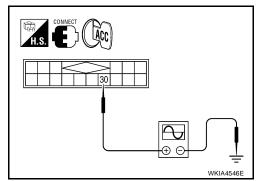


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Satellite Radio Tuner (Factory Installed) Left Channel Audio Signal Circuit Inspection

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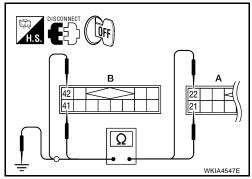
1. CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector M41 (A) and audio unit connector M42 (B).
- 3. Check continuity between satellite radio tuner (factory installed) and audio unit.

Satellite radio tuner (factory installed) Audio unit			Continuity	
Connector	Terminal	Connector Terminal		
A: M41	21	B: M42	41	Yes
A. WH I	22	D. 1V142	42	163

 Check continuity between satellite radio tuner (factory installed) and ground.

Satellite radio	Continuity		
Connector	Terminal		
A: M41	21 Ground		No
A. W41	22	Giouna	INO



OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.

2. CHECK LEFT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- Check signal between satellite radio tuner (factory installed) connector M41 terminals 21 and 22 with CONSULT-II or oscilloscope.

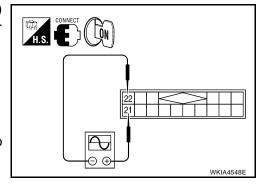
21 - 22

: Refer to <u>AV-31</u>, "Terminals <u>and Reference Value for Sat-</u>ellite Radio Tuner".

OK or NG

OK >> Replace satellite radio tuner (factory installed). Refer to AV-61, "SATELLITE RADIO TUNER".

NG >> Replace audio unit. Refer to AV-59, "AUDIO UNIT".



Satellite Radio Tuner (Factory Installed) Right Channel Audio Signal Circuit Inspection

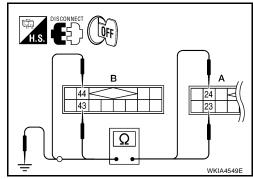
1. CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect satellite radio tuner (factory installed) connector M41 (A) and audio unit connector M42 (B).
- 3. Check continuity between satellite radio tuner (factory installed) and audio unit.

	Satellite radio tuner (factory installed) Audio unit			Continuity
Connector	Terminal	Connector Terminal		
A: M41	23	B: M42	43	Yes
A. 1VI4 I	24	D. 10142	44	165

4. Check continuity between satellite radio tuner (factory installed) and ground.

Satellite radio	Continuity		
Connector	Terminal	_	
A: M41	23	Ground	No
A. WI4 I	24	Giouna	140



OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.

2. CHECK RIGHT CHANNEL AUDIO SIGNAL

- 1. Connect satellite radio tuner (factory installed) and audio unit.
- 2. Turn ignition switch ON.
- Check signal between satellite radio tuner (factory installed) connector M41 terminals 23 and 24 with CONSULT-II or oscilloscope.

23 - 24

: Refer to AV-31, "Terminals and Reference Value for Satellite Radio Tuner".

OK or NG

OK >> Replace satellite radio tuner (factory installed). Refer to AV-61, "SATELLITE RADIO TUNER".

NG >> Replace audio unit. Refer to AV-59, "AUDIO UNIT" .

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Steering Switch Check (Premium System)

1. SELF-DIAGNOSIS FUNCTION CHECK

1. Start audio unit self-diagnosis function. Refer to AV-32, "Audio Unit Self-Diagnosis Function (Premium System)".

AV-41

2. Operate steering switch.

Does steering switch operate normally?

YES >> Inspection End.

NO >> GO TO 2.

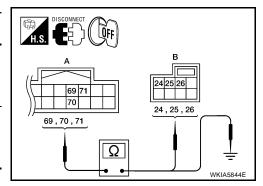
2007 Frontier

Revision: September 2006

$\overline{2}$. CHECK HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect audio unit connector M45 (A) and spiral cable connector M30 (B).
- Check continuity between spiral cable harness connector terminal and audio unit harness connector terminal.

Spiral cable Audio unit			Continuity	
Connector	Terminal	Connector	Terminal	
	24		69	
B: M30	25	A: M45	70	Yes
	26		71	



4. Check continuity between audio unit and ground.

- A	Audio unit		Continuity
Connector	Terminal	_	
	69		
A: M45	70	Ground	No
	71		

OK or NG

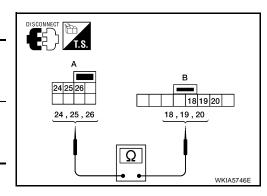
OK >> GO TO 3.

NG >> Repair harness.

3. SPIRAL CABLE CHECK

- 1. Disconnect spiral cable connectors M30 (A) and M102 (B).
- 2. Check continuity between spiral cable terminals.

Tern	ninals	
Spira	l cable	Continuity
Terminal	Terminal	
24	20	
25	19	Yes
26	18	



OK or NG

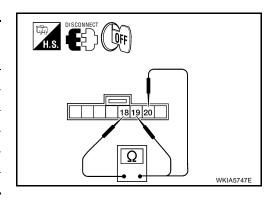
OK >> GO TO 4.

NG >> Replace spiral cable. Refer to <u>SRS-40, "Removal and Installation"</u>.

4. CHECK STEERING SWITCH RESISTANCE

Check resistance between steering switch terminals.

Terr	minal	Signal name	ignal name Condition	
		Seek (down)	Depress (station) down switch.	165
19	18	Power	Depress power switch.	0
		Volume (down)	Depress volume down switch.	652
		Seek (up)	Depress (station) up switch.	165
20	18	Mode	Depress mode switch.	0
		Volume (up)	Depress volume up switch.	652



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OK or NG

OK >> Inspection End.

NG >> Replace steering switch. Refer to AV-61, "STEERING WHEEL AUDIO CONTROL SWITCHES".

Sound Is Not Heard From Front Door Speaker or Front Tweeter (Base System)

1. HARNESS CHECK

- 1. Disconnect audio unit connector M43 and suspect speaker or tweeter (crew cab) connector.
- Check continuity between audio unit harness connector M43 terminal and suspect speaker or tweeter (crew cab) harness connector terminal.

	Tern					
Audi	o unit	Speaker or tweeter		unit Speaker or tweeter		Continuity
Connector	Terminal	Connector	Terminal			
	2	D12	+			
	1	DIZ	-			
	4 3	D112 - M109*	+			
M43			-	Yes		
10143	2		+	165		
1	WITU9	-				
	4	M111*	+			
	3	M111*	•			

*: Crew cab

3. Check continuity between audio unit harness connector M43 terminal and ground.

	Terminals					
	Continuity					
Connector	Terminal	_				
	2		No			
M43	1	Ground				
IVI43	4	Ground				
	3					

Front door speaker or tweeter LH connector Q Q Front door speaker or tweeter LH connector Front door speaker or tweeter RH connector The speaker or tweeter RH connector

OK or NG

OK >> GO TO 2.

NG >> • Check connector housings for disconnected or loose terminals.

• Repair harness or connector.

2. FRONT SPEAKER SIGNAL CHECK

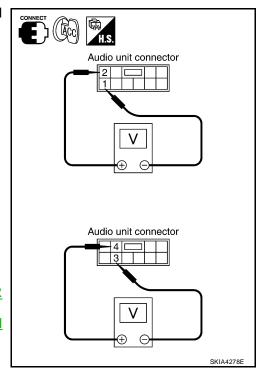
- 1. Connect audio unit connector and front speaker or tweeter (crew cab) connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector terminal and ground with CONSULT-II or oscilloscope.

	Term	ninals			
	(+)		(-)	Condi-	Reference
Con- nec- tor	Termi- nal	Con- nec- tor	Termi- nal	tion	signal
	2		1		
M43	4	M43	3	Receive audio signal	(V) 1 0 -1 1 ms

OK or NG

OK >> Replace speaker. Refer to <u>AV-59, "FRONT DOOR SPEAKER"</u>.

NG >> Replace audio unit. Refer to <u>AV-59, "Removal and Installation"</u>.



Sound Is Not Heard From Rear Door Speaker (Base System)

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1. HARNESS CHECK

1. Disconnect audio unit connector M44 and suspect speaker connector.

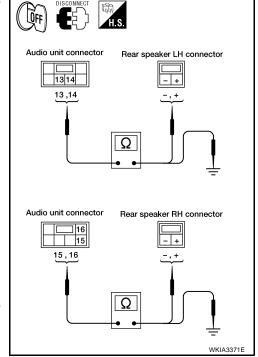
2. Check continuity between audio unit harness connector M44 terminal and suspect speaker harness connector terminal.

	Tern			
Audi	o unit	Speaker	or tweeter	Continuity
Connector	Terminal	Connector Terminal		
	13	B76 *1	-	
	14	D/0 1	+	
	15	B160 *1	-	
M44	16	D100 1	+	Yes
10144	13	D207 *2	-	163
	14	D207 Z	+	
	15	D307 *2	-	
	16	D307 Z	+	

^{*1:} King cab

3. Check continuity between audio unit harness connector M44 terminal and ground.

	Continuity			
Connector	Terminal	_		
	13			
M44	14	Ground	No	
IVI	15	Giodila		
	16			



OK or NG

OK >> GO TO 2.

NG >> • Check connector housings for disconnected or loose terminals.

• Repair harness or connector.

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^{*2:} Crew cab

2. REAR SPEAKER SIGNAL CHECK

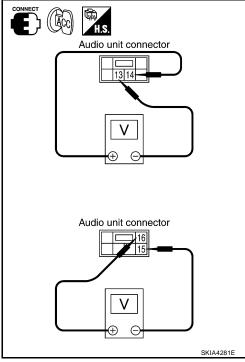
- 1. Connect audio unit connector and rear speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-II or oscilloscope.

	Term	ninals				
(+)		(-)		Condi-	Reference	
Con- nector	Termi- nal	Con- nector	Termi- nal	tion	signal	
	14		13			
M44	16	M44	15	Receive audio signal	-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -	

OK or NG

OK >> Replace rear door speaker. Refer to AV-60, "REAR DOOR SPEAKER - CREW CAB" or AV-60, "REAR DOOR SPEAKER - KING CAB".

NG >> Replace audio unit. Refer to AV-59, "Removal and Installation".



2007 Frontier

Sound Is Not Heard From Front Door Speaker or Front Tweeter [Premium System (King Cab)]

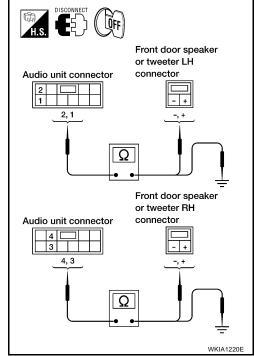
1. HARNESS CHECK

- 1. Disconnect audio unit connector M43 and suspect speaker or tweeter connector.
- 2. Check continuity between audio unit harness connector M43 terminal and suspect speaker or tweeter harness connector terminal.

	Tern			
Audi	o unit	Speaker	or tweeter	Continuity
Connector	Terminal	Connector Terminal		
	2	D12	+	
	1	012	-	
	4	D112	+	
M43	3	DIIZ	-	Yes
10143	2	M109	+	165
	1	WITOS	-	
	4	M111	+	
	3	IVIIII	-	

3. Check continuity between audio unit harness connector M43 terminal and ground.

	Continuity		
Connector	Terminal	_	
	2		No
M43	1	Ground	
10143	4	Ground	
	3		



OK or NG

OK >> GO TO 2.

NG >> • Check connector housings for disconnected or loose terminals.

Repair harness or connector.

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2. FRONT SPEAKER SIGNAL CHECK

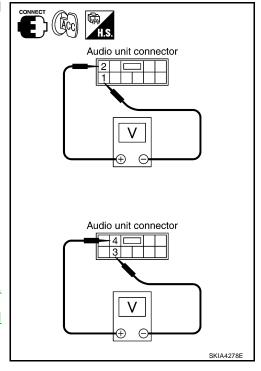
- 1. Connect audio unit connector and front speaker or tweeter connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector terminal and ground with CONSULT-II or oscilloscope.

	Term	ninals			
	(+)		(-)	Condi-	Reference
Con- nec- tor	Termi- nal	Con- nec- tor	Termi- nal	tion	signal
	2		1		
M43	4	M43	3	Receive audio signal	(V) 1 0 -1 1 ms

OK or NG

OK >> Replace speaker. Refer to <u>AV-59, "FRONT DOOR SPEAKER"</u>.

NG >> Replace audio unit. Refer to <u>AV-59, "Removal and Installation"</u>.



Sound Is Not Heard From Rear Door Speaker [Premium System (King Cab)] EKSONCZX

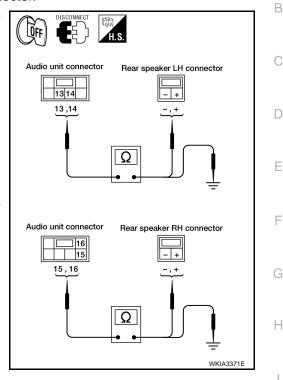
1. HARNESS CHECK

- 1. Disconnect audio unit connector M44 and suspect speaker connector.
- 2. Check continuity between audio unit harness connector M44 terminal and suspect speaker harness connector terminal.

	Tern			
Audi	o unit	Continuity		
Connector	Terminal	Connector	Terminal	
	13	B76	-	
M44	14	570	+	Yes
IVITT	15	B160	-	165
	16	D 100	+	

3. Check continuity between audio unit harness connector M44 terminal and ground.

	Audio unit		Continuity	
Connector	Terminal	_		
	13			
M44	14	Ground	No	
IVI44	15	Giouna		
	16			



OK or NG

NG

OK >> GO TO 2.

>> • Check connector housings for disconnected or loose terminals.

• Repair harness or connector.

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$\overline{2}$. REAR SPEAKER SIGNAL CHECK

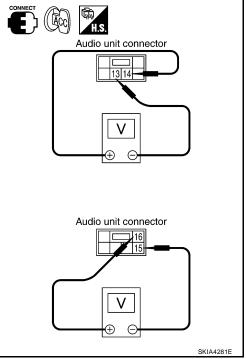
- 1. Connect audio unit connector and rear speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-II or oscilloscope.

	Terminals					
(-	(+) (-)				Reference	
Con- nector	Termi- nal	Con- nector	Termi- nal	tion	signal	
	14		13			
M44	16	M44	15	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E	

OK or NG

OK >> Replace rear door speaker. Refer to <u>AV-60, "REAR DOOR SPEAKER - KING CAB"</u>.

NG >> Replace audio unit. Refer to AV-59, "Removal and Installation".



Sound Is Not Heard From Front Door Speaker or Front Tweeter [Premium System (Crew Cab)]

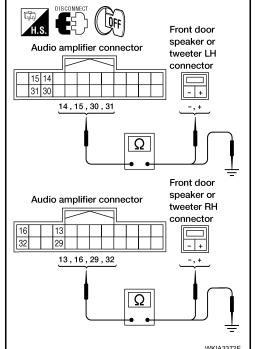
1. HARNESS CHECK

- 1. Disconnect audio amplifier connector B159 and suspect speaker connector.
- 2. Check continuity between audio amplifier harness connector terminal B159 and suspect speaker harness connector terminal.

Audio a	amplifier	Speaker	or tweeter	Continuity
Connector	Terminal	Connector	Connector Terminal	
	15	D12	+	
	31	012	-	
	16	D112	+	
B159	32	DIIZ	-	Yes
D133	14	M109	+	163
	30	WITOS	-	
	13	M111	+	
	29	IVITI	-	

3. Check continuity between audio amplifier harness connector terminal B159 and ground.

Au	Audio amplifier				
Connector	Terminal] _			
	13				
	14]			
ĺ	15	1			
B159	16	Crownd	No		
D139	29	Ground	INO		
	30]			
	31	1			
	32]			



OK or NG

NG

OK >> GO TO 2.

>> • Check connector housings for disconnected or loose terminals.

• Repair harness or connector.

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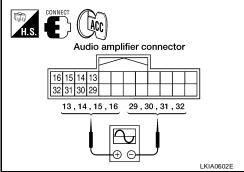
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$\overline{2}$. Front speaker signal check

- 1. Connect audio amplifier connector B159 and suspect speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio amplifier harness connector B159 terminals with CONSULT-II or oscilloscope.

Terminals						
(-	(+) (-)		Condi-	Reference		
Con- nector	Termi- nal	Con- nector	Termi- nal	tion	signal	
	13		29		(V)	
	14	B159	30	Receive audio		
B159	15		31			
	16		32	signal	-1 1 ms SKIA0177E	



OK or NG

OK >> Replace suspect speaker. Refer to AV-59, "FRONT DOOR SPEAKER".

NG >> GO TO 3.

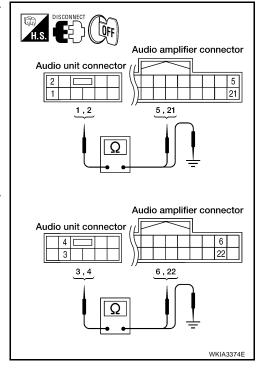
3. HARNESS CHECK

- 1. Turn ignition switch OFF.
- 2. Disconnect audio unit connector M43 and audio amplifier connector B159.
- 3. Check continuity between audio unit harness connector terminals and audio amplifier harness connector terminals.

	Terminals						
Audi	Audio unit Audio amplifier						
Connector	Terminal	Connector					
	1		6	Yes			
M43	2	B159	22				
	3	D139	5	165			
	4		21				

 Check continuity between audio unit harness connector terminals and ground.

	Continuity		
Connector	Terminal	_	
	1		No
M43	2	Ground	
IVI+O	3	Ground	
	4		



OK or NG

OK >> GO TO 4.

NG >> • Check connector housings for disconnected or loose terminals.

Repair harness or connector.

4. FRONT SPEAKER SIGNAL CHECK

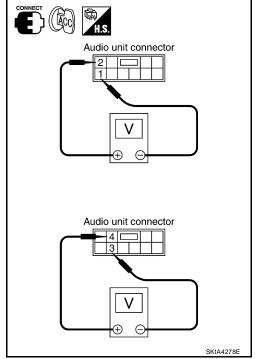
- 1. Connect audio unit connector and audio amplifier connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector terminals with CONSULT-II or oscilloscope.

Terminals						
(-	(+)		-) Condi-		Reference	
Con- nector	Termi- nal	Con- nector	Termi- nal	tion	signal	
	2		1			
M43	4	M43	3	Receive audio signal	(V) 1 0 -1 1 ms	

OK or NG

OK >> Replace audio amplifier. Refer to <u>AV-59, "AUDIO AMPLIFIER (PREMIUM SYSTEM) - CREW CAB"</u>.

NG >> Replace audio unit. Refer to <u>AV-59, "Removal and Installation"</u>.



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Sound Is Not Heard From Rear Door Speaker or Rear Door Tweeter [Premium System (Crew Cab)]

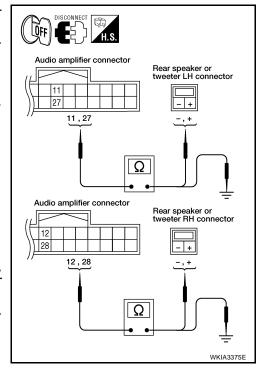
1. HARNESS CHECK

- 1. Disconnect audio amplifier connector B159 and suspect speaker connector.
- 2. Check continuity between audio amplifier harness connector terminal B159 and suspect speaker harness connector terminal.

Audio a	amplifier	Speaker	or tweeter	Continuity
Connector	Terminal	Connector	Terminal	
	11	D207	+	
	27	D201	-	
	12	D307	+	
B159	28	D307	-	Yes
D133	11	D208	+	163
	27	D200	-	
	12	D308	+	
	28	D300	-	

 Check continuity between audio amplifier harness connector B159 terminal and ground.

	Terminals				
Au	Audio amplifier				
Connector	Terminal	_			
	11		No		
B159	27	Ground			
B139	12				
	28				



OK or NG

NG

OK >> GO TO 2.

>> • Check connector housings for disconnected or loose terminals.

• Repair harness or connector.

2. REAR SPEAKER SIGNAL CHECK

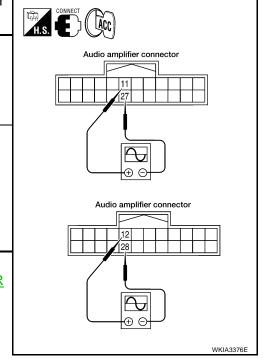
- 1. Connect audio amplifier connector B159 and suspect speaker connector.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio amplifier harness connector B159 terminals with CONSULT-II or oscilloscope.

	Term	ninals			
	(+)		(-)	Condi-	Reference
Con- nec- tor	Terminal	Con- nec- tor	Terminal	tion	signal
	11		27		
B159	12	B159	28	Receive audio signal	(V) 1 0 -1 1 ms SKIA0177E

OK or NG

OK >> Replace suspect speaker. Refer to <u>AV-60, "REAR DOOR SPEAKER - CREW CAB"</u>.

NG >> GO TO 3.



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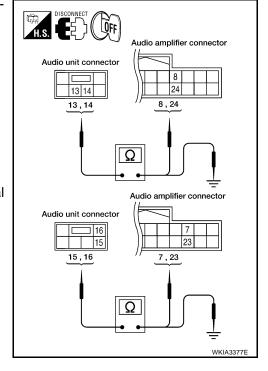
3. HARNESS CHECK

- 1. Turn ignition switch OFF.
- 2. Disconnect audio unit connector M44 and audio amplifier connector B159.
- 3. Check continuity between audio unit harness connector M44 terminals and audio amplifier harness connector B159 terminals.

	Terminals						
Audi	o unit	Audio a	Continuity				
Connector	Terminal	Connector	Terminal				
	13		8	Yes			
M44	14	B159	24				
IVI44	15	D109	7	res			
	16		23				

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

	Audio unit		Continuity	
Connector	Terminal			
-	13			
M44	14	Ground	No	
IVI 44	15			
	16			



OK or NG

OK >> GO TO 4.

NG

- >> Check connector housings for disconnected or loose terminals.
 - Repair harness or connector.

4. REAR SPEAKER SIGNAL CHECK

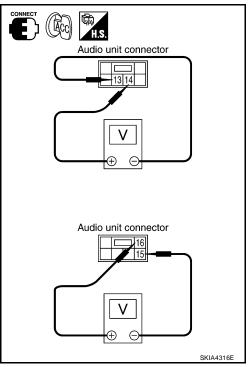
- 1. Connect audio unit connector M44 and audio amplifier connector B159.
- 2. Turn ignition switch to ACC.
- 3. Push "POWER" switch.
- 4. Check the signal between audio unit harness connector M44 terminals with CONSULT-II or oscilloscope.

	Term	ninals				
	(+) (-)				Reference	
Con- nector	Terminal	Con- nector	Terminal	tion	signal	
	14		13			
M44	16	M44	15	Receive audio signal	(V) 1 0 -1 1 ms	

OK or NG

OK >> Replace audio amplifier. Refer to <u>AV-59, "AUDIO AMPLIFIER (PREMIUM SYSTEM) - CREW CAB"</u>.

NG >> Replace audio unit. Refer to <u>AV-59, "Removal and Installation"</u>.



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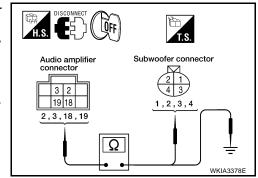
Sound Is Not Heard From Subwoofer [Premium System (Crew Cab)]

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1. HARNESS CHECK

- 1. Disconnect audio amplifier connector B158 and subwoofer connector B72.
- Check continuity between audio amplifier harness connector terminal and subwoofer harness connector terminal.

Audio	Continuity			
Connector	Terminal	Connector	Terminal	
B158	2		1	Yes
	3	B72	3	
	18	D/2	2	
	19		4	



3. Check continuity between audio amplifier harness connector terminal and ground.

	Audio amplifier		Continuity
Connector	Terminal	_	
B158	2		No
	3	Ground	
	18	Ground	
	19		

OK or NG

NG

OK >> GO TO 2.

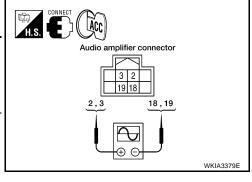
>> • Check connector housings for disconnected or loose terminals.

• Repair harness or connector.

2. SUBWOOFER SIGNAL CHECK

- 1. Connect audio amplifier connector and subwoofer connector.
- 2. Turn ignition switch to ACC.
- 3. Check the signal between audio amplifier harness connector terminals with CONSULT-II or oscilloscope.

Terminals				Condi-	Reference	
(+)		(-)				
Con- nector	Termi- nal	Con- nector	Termi- nal	tion	signal	
B158	2	2	18	Receive audio signal	(V) 1 0 -1 1 ms	
	3	B158	19			



OK or NG

OK >> Replace subwoofer. Refer to AV-62, "SUBWOOFER (PREMIUM SYSTEM) - CREW CAB".

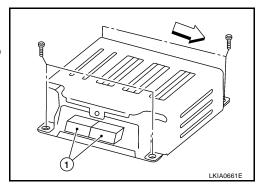
NG >> Replace audio amplifier. Refer to <u>AV-59, "AUDIO AMPLIFIER (PREMIUM SYSTEM) - CREW CAB"</u>.

Removal and Installation AUDIO AMPLIFIER (PREMIUM SYSTEM) - CREW CAB

EKS00BZI

Removal

- 1. Remove front passenger seat. Refer to <a>SE-17, "FRONT SEAT".
- 2. Remove kick shield screws, using power tool.
 - ⇒: Vehicle front
- 3. Disconnect audio amplifier connectors (1) and remove audio amplifier.



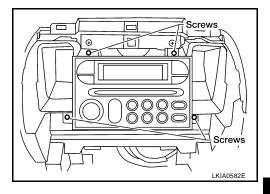
Installation

Installation is in the reverse order of removal.

AUDIO UNIT

Removal

- 1. Remove cluster lid C. Refer to IP-11, "CLUSTER LID C".
- 2. Remove the audio unit screws, using power tool.
- 3. Remove audio unit and disconnect audio unit connectors.



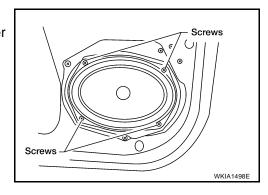
Installation

Installation is in the reverse order of removal.

FRONT DOOR SPEAKER

Removal

- 1. Remove front door finisher. Refer to EI-32, "FRONT DOOR".
- 2. Remove the front door speaker screws.
- Remove front door speaker and disconnect front door speaker connector.



Installation

Installation is in the reverse order of removal.

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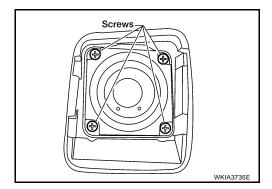
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FRONT TWEETER

Removal

- 1. Remove the front tweeter grille.
- 2. Remove the front tweeter screws.



3. Remove front tweeter and disconnect front tweeter connector.

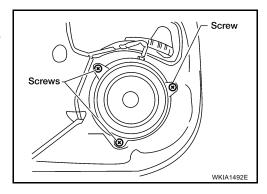
Installation

Installation is in the reverse order of removal.

REAR DOOR SPEAKER - CREW CAB

Removal

- 1. Remove the rear door finisher. Refer to EI-33, "REAR DOOR CREW CAB" or EI-34, "REAR DOOR KING CAB" .
- 2. Remove the rear door speaker screws.
- 3. Remove rear door speaker and disconnect rear door connector.



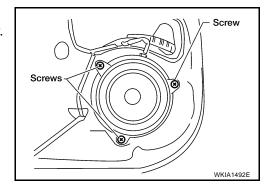
Installation

Installation is in the reverse order of removal.

REAR DOOR SPEAKER - KING CAB

Removal

- 1. Remove the rear door finisher. Refer to rear door-king cab EI-34, "REAR DOOR KING CAB".
- 2. Remove the rear door speaker screws.
- 3. Remove rear door speaker and disconnect rear door connector.



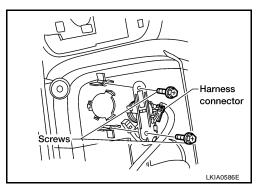
Installation

Installation is in the reverse order of removal.

REAR DOOR TWEETER - CREW CAB

Removal

- 1. Remove rear door finisher. Refer to EI-33, "REAR DOOR CREW CAB" or EI-34, "REAR DOOR KING CAB".
- 2. Remove the rear door tweeter screws.
- Remove rear door tweeter.



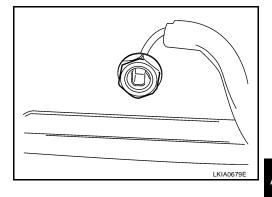
Installation

Installation is in the reverse order of removal.

SATELLITE RADIO ANTENNA

Removal

- 1. Lower headlining. Refer to EI-42, "HEADLINING".
- 2. Disconnect satellite radio antenna connector.
- 3. Remove satellite radio antenna nut.
- 4. Remove satellite radio antenna.

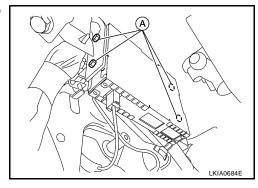


Installation

Installation is in the reverse order of removal.

SATELLITE RADIO TUNER

- 1. Disconnect battery negative terminal.
- 2. Disconnect satellite radio tuner connectors.
- 3. Remove satellite radio tuner screws, and remove satellite radio tuner.



Installation

Installation is in the reverse order of removal.

STEERING WHEEL AUDIO CONTROL SWITCHES Removal

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1. Remove driver air bag module. Refer to SRS-38, "DRIVER AIR BAG MODULE".

Revision: September 2006 AV-61 2007 Frontier

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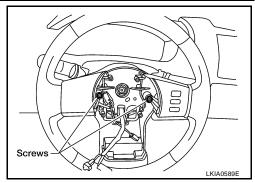
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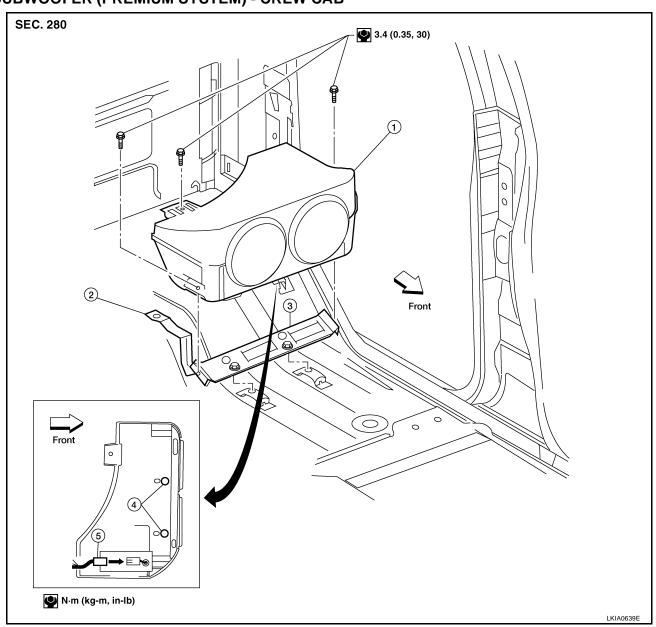
- 2. Remove steering wheel audio control switch assembly screws.
- 3. Disconnect steering wheel audio control switches connector and remove steering wheel audio control switches.



Installation

Installation is in the reverse order of removal.

SUBWOOFER (PREMIUM SYSTEM) - CREW CAB



- 1. Subwoofer
- 4. Locating pin

- 2. Bracket
- 5. Connector

Locating pin plate

Removal

1. Position the LH rear seat cushion in the folded up position.

- 2. Remove storage box RH (crew cab). Refer to EI-40, "FLOOR TRIM".
- 3. Remove the subwoofer screws.
- 4. Disconnect the connector and remove the subwoofer.

Installation

Installation is in the reverse order of removal.

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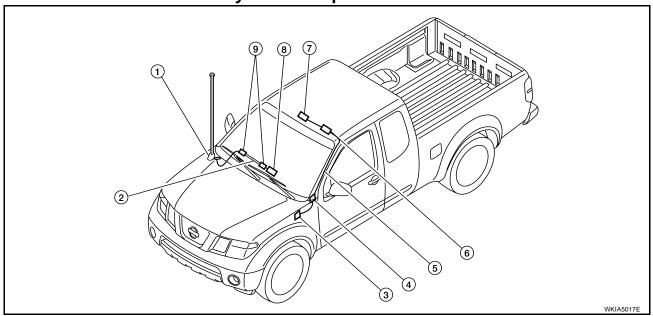
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AUDIO ANTENNA PFP:28200

Location of Audio Antenna System Components

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- 1. Audio antenna
- 4. Harness Connectors M250, M68
- 7. Satellite antenna

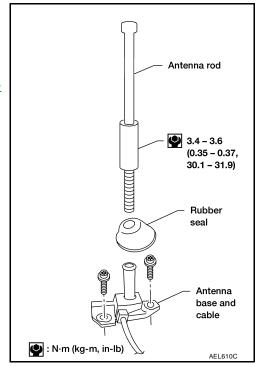
- 2. Antenna feeder
- 5. Satellite antenna feeder
- 8. Audio unit

- 3. Satellite radio tuner M41, M129
- 6. Connector M251
- 9. Harness connectors

Removal and Installation AUDIO ANTENNA

Removal

- Remove lower glove box. Refer to <u>IP-14</u>, "<u>LOWER INSTRUMENT PANEL RH AND LOWER GLOVE BOX"</u>.
- 2. Remove antenna rod.
- 3. Remove rubber seal.
- 4. Remove cowl top. Refer to EI-20, "COWL TOP".
- 5. Disconnect audio antenna from antenna feeder.
- 6. Remove front fender protector. Refer to $\underline{\text{EI-22, "FENDER PRO-TECTOR"}}$.
- 7. Remove antenna base bolts.
- 8. Remove antenna base and cable.



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AUDIO ANTENNA Installation Installation is in the reverse order of removal. **CAUTION:** Always properly tighten the antenna rod during installation or the antenna rod may bend or break during vehicle operation.

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AUDIO ANTENNA