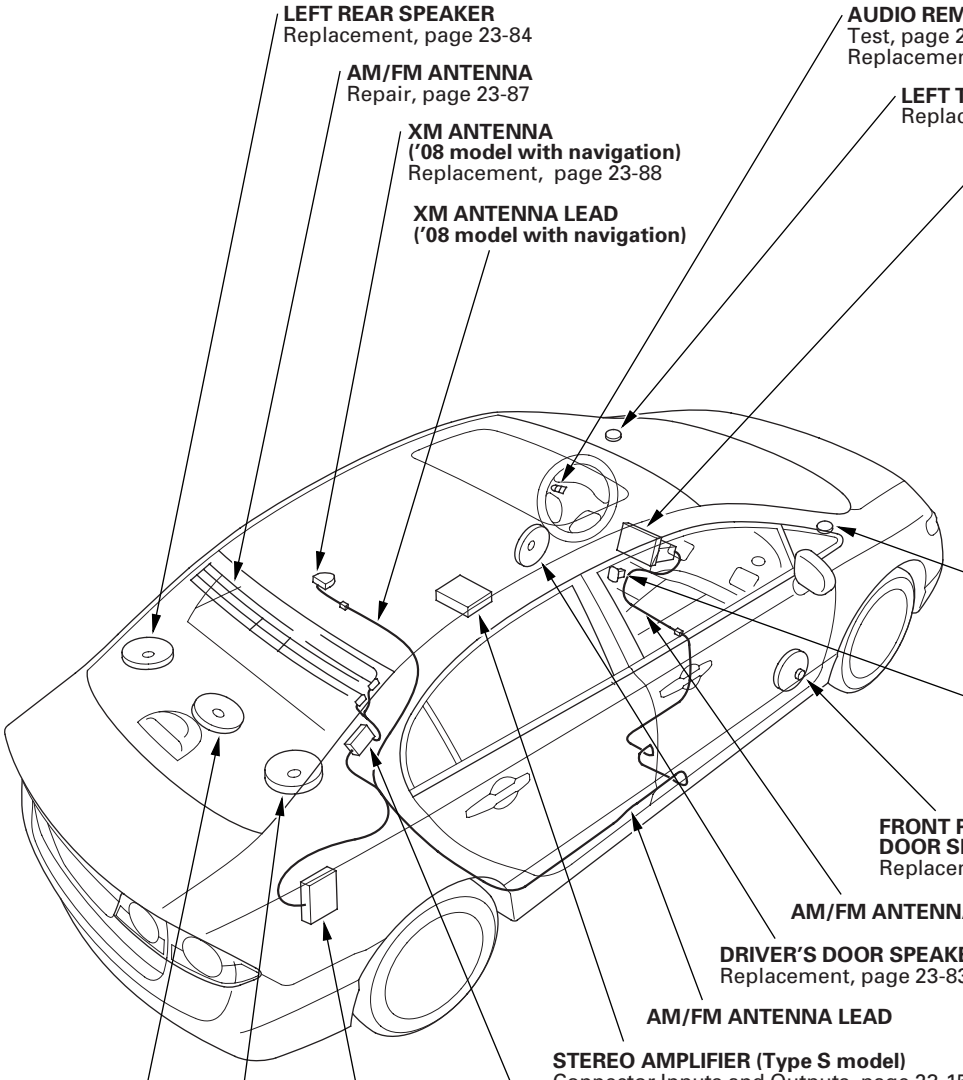
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Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Poor AM or FM radio reception or interference (with navigation)	Symptom Troubleshooting (see page 23-29)	AM/FM antenna lead and/or sublead short or open in the wire
Poor AM or FM radio reception or interference (without navigation)	Symptom Troubleshooting (see page 23-32)	AM/FM antenna lead and/or sublead short or open in the wire
Audio unit power switch will not turn on (No information display and no sound) (with navigation)	Symptom Troubleshooting (see page 23-35)	
Audio unit power switch will not turn on (No information display and no sound) (without navigation)	Symptom Troubleshooting (see page 23-36)	
Audio unit power switch will not turn off (with navigation)	Symptom Troubleshooting (see page 23-38)	
Audio unit power switch will not turn off (without navigation)	Symptom Troubleshooting (see page 23-39)	
No sound is heard from the speaker(s) (display is normal) (with navigation)	Symptom Troubleshooting (see page 23-39)	
No sound is heard from the speaker(s) (display is normal) (without navigation)	Symptom Troubleshooting (see page 23-48)	
Auxiliary input sound is low or cannot be heard	Symptom Troubleshooting (see page 23-50)	
Audio system sound is weak or distorted (display is normal)	Symptom Troubleshooting (see page 23-53)	
Radio preset memory is lost	Symptom Troubleshooting (see page 23-54)	Internal error
Volume does not change	Symptom Troubleshooting (see page 23-54)	
Volume does not increase with speed (with navigation)	Symptom Troubleshooting (see page 23-55)	
Volume does not increase with speed (without navigation)	Symptom Troubleshooting (see page 23-56)	
Volume is too high or too low when driving at freeway speeds	Symptom Troubleshooting (see page 23-57)	
Radio tuner does not change stations	Symptom Troubleshooting (see page 23-57)	

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Symptom	Diagnostic procedure	Also check for
Navigation unit button illumination does not work (with navigation)	Symptom Troubleshooting (see page 23-58)	
Audio unit button illumination does not work (without navigation)	Symptom Troubleshooting (see page 23-59)	
Display does not dim or brighten with dimmer (without navigation)	Symptom Troubleshooting (see page 23-60)	
Audio disc does not load	Symptom Troubleshooting (see page 23-61)	
Audio disc does not eject	Symptom Troubleshooting (see page 23-61)	
Audio disc does not play	Symptom Troubleshooting (see page 23-62)	
Audio disc skips	Symptom Troubleshooting (see page 23-62)	
Audio remote switch does not work properly (with navigation)	Symptom Troubleshooting (see page 23-63)	
Audio remote switch does not work properly (without navigation)	Symptom Troubleshooting (see page 23-65)	
Audio disc cannot be inserted and/or ejected (with navigation)	Symptom Troubleshooting (see page 23-66)	
Display can be opened and/or closed even when an audio disc is being inserted or ejected	Replace the navigation unit (see page 23-155)	
PC card will not play/card icon on audio screen cannot be selected (with navigation)	Symptom Troubleshooting (see page 23-67)	
Error code: XM NO SIGNAL or XM ANTENNA is displayed (with navigation)	Symptom Troubleshooting (see page 23-68)	
XM radio display is blank and no station information is displayed (with navigation)	Symptom Troubleshooting (see page 23-68)	
XM radio preset memory is lost (with navigation)	Symptom Troubleshooting (see page 23-71)	
Poor or no sound with XM radio (Audio unit does display XM channels) (with navigation)	Symptom Troubleshooting (see page 23-72)	

System Description

Overview

The audio unit acts as the processor for all audio functions. Select audio functions from the audio unit, the audio remote (on the steering wheel), or by using the navigation voice control system. The audio display provides the current audio status. For vehicles with navigation, additional audio information is available by touching the audio button on the navigation audio screen (See the owner's manual and the navigation system manual for more details.).

The XM receiver passes its signal to the audio unit. In addition, it communicates with the audio unit via the GA-Net bus. Any open connections in the GA-Net bus circuit causes audio and navigation functions to appear inoperative.

For vehicles with navigation, pressing the open/close switch on the navigation display panel allows access to the CD slot and PC card.

A security signal is daisy-chained between the audio and vehicle components for integration into the vehicle's security system.

Speed-sensitive volume compensation (SVC)
Some audio systems are equipped with speed-sensitive volume compensation (SVC). The navigation or audio unit receives the vehicle speed pulse (VSP) from the ECM/PCM. The system processes the speed input and increases the navigation or audio system volume level as the vehicle speed increases to compensate for the various interior noises that occur at higher speeds. When the vehicle slows down, the volume returns to its normal level. The SVC has four settings: SVC OFF, LOW, MID and HIGH that can be adjusted using the navigation or audio unit. The SVC comes from the factory with the MID setting as the default.

To change the audio unit SVC setting, press the tune folder sound knob repeatedly until the SVC is displayed, rotate the knob to adjust the SVC to the desired setting (SVC OFF, LOW, MID, or HIGH).

To change the navigation unit SVC setting, press the AUDIO button, and then select the SOUND icon on the navigation display. Press the navigation display to select the desired setting (OFF, LOW, MID, HI).

The navigation system allows voice control for the audio, XM, PC card, and CD player. The GA-Net (audio unit) communicates the voice control commands. When using the navigation TALK/BACK button, the audio is muted on all speakers and you hear navigation sound on the front channels. When using the navigation or route guidance (RG), the front speakers provides the navigation sound and the rear speakers continue to play. For more information, see the navigation section. The outline of the interruption function is shown in this table.

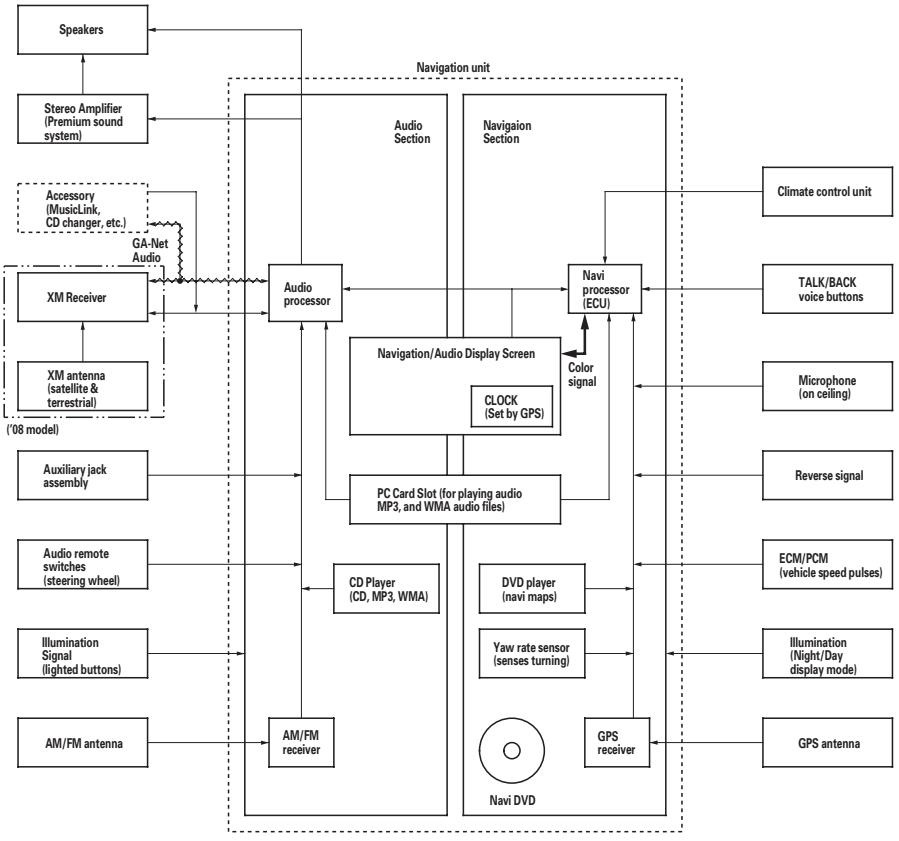
Contents	Audio output			
	Left front CH	Right front CH	Right rear CH	Left rear CH
Navigation TALK/BACK Buttons	Navigation voice output	Navigation voice output	Muted	Muted
Route guidance	Navigation voice output	Navigation voice output	Audio	Audio

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GA-Net Bus Configuration

The GA-Net bus passes audio and navigation commands throughout the navigation and audio components. These commands include navigation touch screen and hard button signals, audio/XM selections by voice, and XM station and music title names. Because the entire bus is daisy chained between components (see diagram), any open or short in the GA-Net bus harness will cause any or all of these functions to become inoperative. The addition of any audio accessory must maintain the continuity of the GA-Net bus by installing the Y cable included with the accessory kit.

System Diagram (With navigation)



(cont'd)

System Description (cont'd)

NOTE: All items may not apply to this vehicle. See the owner's manual for more information.

Audio Glossary

Item	Definition
Active noise cancellation	The active noise cancellation system cancels some of the vehicle noise. This occurs in the 1,500—2,400 rpm range. Microphones detect the low frequency sound, and the system outputs a canceling sound from the audio speaker.
AM (Amplitude Modulation)	The type of transmission used in the standard radio broadcast band from 530 to 1710 kHz.
Amplifier	A device that increases the level of a signal by increasing the current or voltage.
Antenna	A device used to send or receive electromagnetic waves through the air.
ATA (PC Card)	A type of card that has been tested for use in playing WMA, and MP3 music files in the PC Card slot. Sizes of up to 1 GB have been tested.
Audio remote switch	The switches on the steering wheel that control the audio system.
Auxiliary jack	Allows the customer to use a portable audio device to input audio recordings.
Balance	A control that changes the relative volume of the left and right channels.
Band	A range of frequencies between two definite limits. Bands are assigned by the Federal Communications Commission for specific uses.
Bass	An adjustment for the low frequency sounds of around 160 Hz and below.
Byte	A unit of storage for computer files and memory. A CD holds approximately 700 million bytes.
Cassette	Audio or video magnetic tape container having two reels. Customers can insert it for play back
Compact flash	A standard for small-size (3 x 4 cm), memory cards used in mobile computers, PDAs, digital cameras. Compact flash memory cards are available in size of 32 MB up to 4 GB or more and can be played in the audio PC slot. Sizes above 1 GB have not been tested.
CD (Compact Disc)	A 4.5-inch plastic disc containing digital audio recording that is played optically on a laser equipped player. Never use discs with a paper label. In a hot vehicle, labels can curl up and jam the unit.
CD (audio disc) changer	CD player that can store and play more than one CD. Two types are available. Some units accept CDs fed into the changer one at a time, and others accept a magazine (with CDs stacked in a container).
CD player	A component designed to play compact disc recordings using a laser optical pickup. The signal from a CD player usually requires amplification.
Decibels (db)	A method of measuring sound or radio signal strength received by the audio unit antenna.
Distortion	Inexact reproduction of an audio signal caused by playing music at levels the audio system cannot handle.
Dolby (noise reduction)	A processing system developed by Dolby Laboratories that reduces the background noise on recording media. The result is a cleaner playback from the audio system.
DUET	A serial data communication line used for sub display.
DVD (Digital Versatile Disc)	A 4.5-inch CD-like format used for storing movies with digital audio and video features. The DVD-A format is a DVD format designed for DVD audio systems. Some vehicles can play DVD and DVD-A formats.
Equalizer	A device that changes the relative volume of individual frequency bands to suit personal tastes of the listener.
Fader	The control that adjusts the relative volume levels of front and rear speakers in a four-speaker system.
Format	To prepare a PC Card to receive files this function is done on a PC. Always choose either FAT or FAT32, as the NTFS format is not accepted by the system. Pick the default sectors for the format method selected.
FM (Frequency Modulation)	The form of modulation used for radio and television sound transmission in most of the world. Less prone to interference than AM. The FM broadcast band in North America covers roughly 87.7 to 107.9 MHz.

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Audio Glossary

Item	Definition
GA-Net	The GA-Net allows the audio unit to communicate with all the audio and navigation components in a vehicle. If there is an open in the GA-Net or components, components or the entire audio and navigation system may appear inoperative.
GB (Gigabyte)	A unit of memory or disk storage equal to billion bytes (1000 million bytes).
HDD	Abbreviation for hard disc drive. They are sensitive to heat and it is not recommended that they be used in the PC card slot for playing audio files.
Hertz (Hz)	The unit of frequency equal to one cycle per second (cps). One kilohertz (kHz) equals 1,000 cps; one megahertz (MHz) equals 1 million cps.
Integrated amplifier	A component that combines a pre amp and a power amp into a single unit. A receiver combines an integrated amp and a tuner into a single unit.
Jewel case	The hard plastic case that contains a compact disc or DVD. Always use a jewel case to prevent scratches on the underside of a CD or DVD.
LCD (Liquid Crystal Display)	A type of digital display that changes reflectance or transmittance when an electrical field is applied to it.
Memory	Circuitry or devices that hold information in electrical or magnetic form, such as the AM/FM radio presets.
MB (Megabyte)	One million bytes. Written as 1 MB. Megabytes are used as a measure of digital storage space. For example, a CD can hold 650 MB.
Mic	An abbreviation for microphone. For vehicles with navigation, the microphone accepts navigation voice commands to control audio and navigation functions.
MP3 music files	MP3 is an audio coding format. MP3 is a popular audio compression format on the Internet and computers. CDs and PC Cards with these files can be played on some vehicle's audio system.
Mute	When the navigation gives guidance, the front speakers are muted (no music). When you use the voice control system, all of the speakers are muted.
Noise	Unwanted random sounds like buzzing, hiss, pops, static, whine, etc.
PC card	The slot used for playing MP3 and WMA music files. The PC Card is usually a combination of a small flash card in a PCMCIA adaptor that slides into the slot. The ATA, SD, and compact flash types of cards have been tested up to 1 GB.
PCMCIA	A computer standard for the slot that the PC card slides into. Another term for the PC card slot.
Processor	The part of an audio device that performs tasks/calculations. In the audio unit the processor handles muting to allow the navi to speak its voice commands, and the decoding/playback of the sound files etc.
Radio	A head unit that combines a tuner, a preamplifier, and often a power-amplifier.
Route guidance (RG)	Spoken voice used for turn-by-turn navigation from the audio speakers.
SCF (Cold Start Fix) screens	These screens are displayed if the system requires a GPS initialization. The vehicle should be moved outside into an open area away from buildings/power lines.
Stereo	A recording of at least two channels where you can hear sound or music from the left or right side.
SD (Secure Digital) card	This compact type of memory card allows for fast data transfer and has built-in security functions. SD cards have a small write-protection switch on the side.
Shield	A metallic foil or braided wire layer surrounding conductors which are designed to prevent electrostatic or electromagnetic interference (noise) from external sources such as buzzing, or popping sounds heard on the speakers.
Speaker (Loudspeaker)	A device that converts electrical energy into acoustical energy (sound).
Speed-sensitive volume compensation (SVC)	The SVC increases the audio volume to compensate for increased interior noise when the vehicle drivers at freeway speeds.
Subwoofer	A loudspeaker made to reproduce the lowest audio frequencies, about 25 Hz to 125 Hz.

(cont'd)

System Description (cont'd)

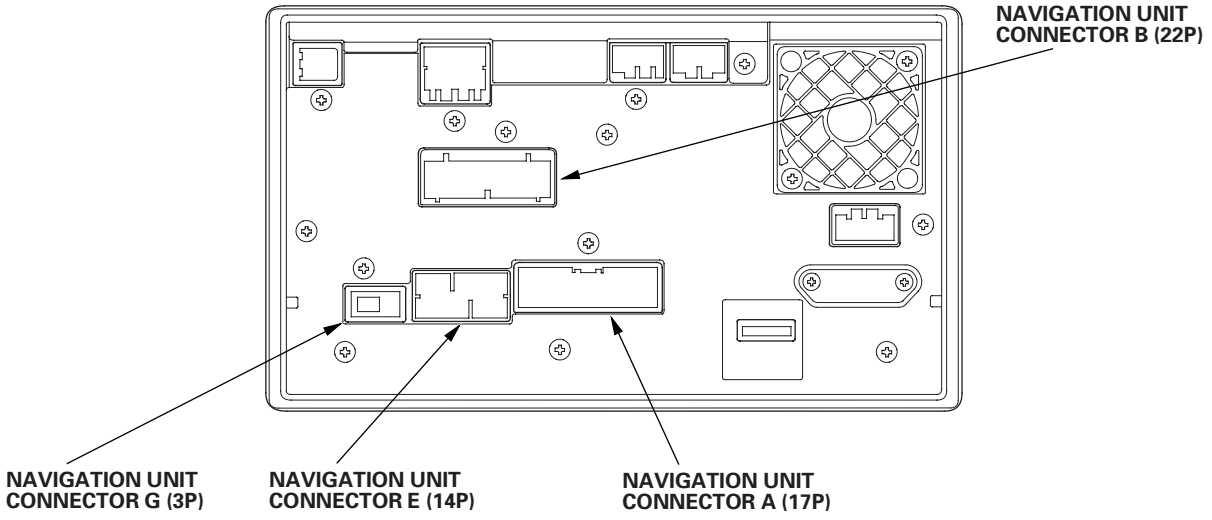
Audio Glossary

Item	Definition
Track	A sound recording on a CD, tape, or PC Card.
Treble	An adjustment to control the volume of the high frequency sounds.
Tuner	A component (or part of a component) that receives radio signals and selects one broadcast from many.
Tweeter	A speaker designed to reproduce the higher frequencies (treble) only.
USB	Universal Serial Bus. The USB is used for playing the compressed audio files (MP3, WMA, and AAC) on an external device through the audio unit.
Voice coil	A coil of wire wrapped around a tube and then attached to the speaker cone or diaphragm. When an audio signal is applied, the coil becomes an electromagnet and interacts with the permanent magnet causing the come or diaphragm to vibrate. We interpret this vibrations as sound.
Volume control	Allows you to control the loudness of the music.
WMA music file	Windows Media Audio File. This is an accepted format for music files to be played on either a CD-R, a CD-RW or a PC Card.
Woofer	A speaker that is designed to reproduce low (bass) frequencies only.
XM radio	Satellite based radio transmission, which also uses a ground based repeater network to ensure seamless reception. The channels originate from XM's broadcast center, in Washington, DC, and uplink to two satellites. These satellites transmit the signal across the entire continental United States.
XM receiver	The external component that receives and processes the XM signals from the XM satellites, and terrestrial (land) stations. The audio unit communicates to the XM receiver over the GA-Net bus.

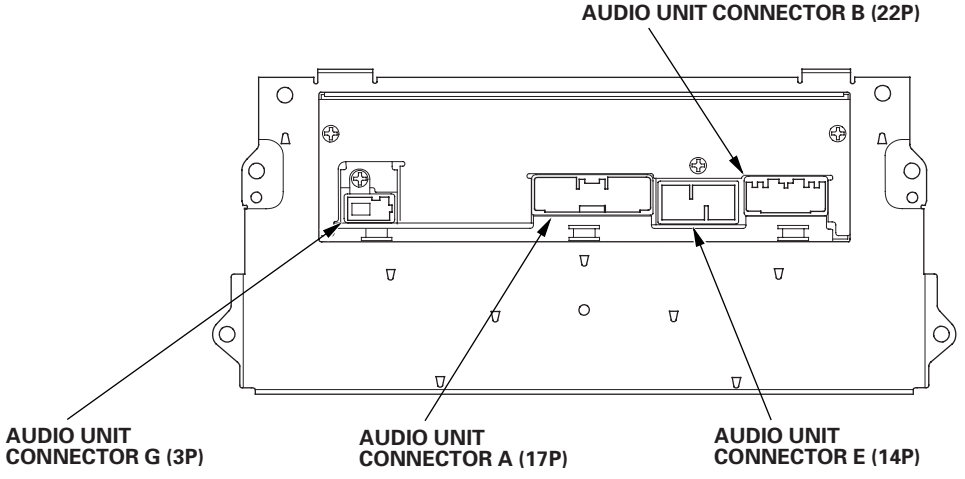
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Audio Unit Connector for Inputs and Outputs

With navigation (navigation unit)



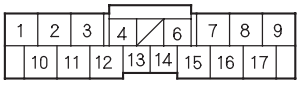
Without navigation



(cont'd)

System Description (cont'd)

NAVIGATION UNIT/AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Except Type S model

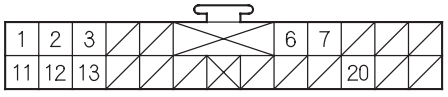
Cavity	Wire Color	Connect to
A1	RED	Dash lights brightness controller
A2	BRN	Left rear speaker (−)
A3	PNK	Driver's door speaker (−), Left tweeter (−)
A4	GRN	Multiplex integrated control unit (MICU) (SCTY RADIO)
A6	LT BLU	Multiplex integrated control unit (MICU) (K-LINE)
A7	BRN	Front passenger's door speaker (−), Right tweeter (−)
A8	ORN	Right rear speaker (−)
A9	BLK	Ground (G505)
A10	GRY	Lights-on signal
A11	YEL	Left rear speaker (+)
A12	LT GRN	Driver's door speaker (+), Left tweeter (+)
A13	BLU	ECM/PCM (VSP)
A14	PUR	Multiplex integrated control unit (MICU) (ACC RADIO)
A15	GRY	Front passenger's door speaker (+), Right tweeter (+)
A16	BLU	Right rear speaker (+)
A17	WHT	Multiplex integrated control unit (MICU) (+B BACK UP)

Type S model

Cavity	Wire Color	Connect to
A1	RED	Dash lights brightness controller
A2	WHT	Stereo amplifier (RL SIG−)
A3	ORN	Stereo amplifier (FL SIG−)
A4	GRN	Multiplex integrated control unit (MICU) (SCTY RADIO)
A6	LT BLU	Multiplex integrated control unit (MICU) (K-LINE)
A7	PNK	Stereo amplifier (FR SIG−)
A8	PUR	Stereo amplifier (RR SIG−)
A9	BLK	Ground (G505)
A10	GRY	Lights-on signal
A11	BLK	Stereo amplifier (RL SIG+)
A12	BLU	Stereo amplifier (FL SIG+)
A13	BLU	ECM/PCM (VSP)
A14	PUR	Multiplex integrated control unit (MICU) (ACC RADIO)
A15	BLU	Stereo amplifier (FR SIG+)
A16	LT GRN	Stereo amplifier (RR SIG+)
A17	WHT	Multiplex integrated control unit (MICU) (+B BACK UP)

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NAVIGATION UNIT CONNECTOR B (22P) (without navigation)



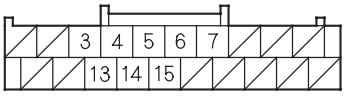
Wire side of female terminals

Cavity	Wire Color	Connect to
B1	BRN	Auxiliary jack assembly (AUX SGND)
B2	GRY*1	Shield for terminals No. 1, No. 3, No. 11, No. 12, and No. 13 (AUX SH GND)
B3	BLU	Auxiliary jack assembly (AUX GND)
B6	BRN	Radio remote switch (AUDIO REMOTE GND)
B7	PNK	Radio remote switch (AUDIO REMOTE SW)
B11	YEL	Auxiliary jack assembly (AUX L)
B12	GRN	Auxiliary jack assembly (AUX R)
B13	WHT	Auxiliary jack assembly (AUX DET)
B20*2	LT BLU	Stereo amplifier (AMP ON)

* 1: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

* 2: Type S model

AUDIO UNIT CONNECTOR B (20P) (with navigation)



Wire side of female terminals

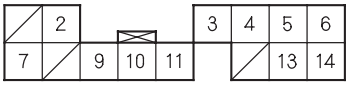
Cavity	Wire Color	Connect to
B3	BRN	Auxiliary jack assembly (AUX SGND)
B4	GRY*	Shield for terminals No. 3, No. 5, No. 13, No. 14, and No. 15 (AUX SH GND)
B5	BLU	Auxiliary jack assembly (AUX GND)
B6	BRN	Radio remote switch (AUDIO REMOTE GND)
B7	PNK	Radio remote switch (AUDIO REMOTE SW)
B13	YEL	Auxiliary jack assembly (AUX L)
B14	GRN	Auxiliary jack assembly (AUX R)
B15	WHT	Auxiliary jack assembly (AUX DET)

* : The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

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System Description (cont'd)

NAVIGATION UNIT CONNECTOR E (14P) (with navigation)

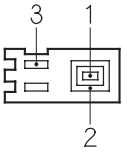


Wire side of female terminals

Cavity	Wire Color	Connect to
E2	LT BLU	XM receiver (SAT SYS ACC)
E3	BRN*	Shield for terminals No. 9 and No. 10 (BUS SH GND)
E4	GRY*	Shield for terminals No. 5, No. 6, No. 13, and No. 14 (SAT SH GND)
E5	WHT	XM receiver (SAT R+)
E6	RED	XM receiver (SAT L+)
E7	BLU	XM receiver (+B)
E9	BLU	XM receiver (SAT BUS+ (GA-NET))
E10	PNK	XM receiver (SAT BUS− (GA-NET))
E11	BLK	XM receiver (GND)
E13	BLK	XM receiver (SAT R−)
E14	GRN	XM receiver (SAT L−)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

NAVIGATION UNIT/AUDIO UNIT CONNECTOR G (3P)

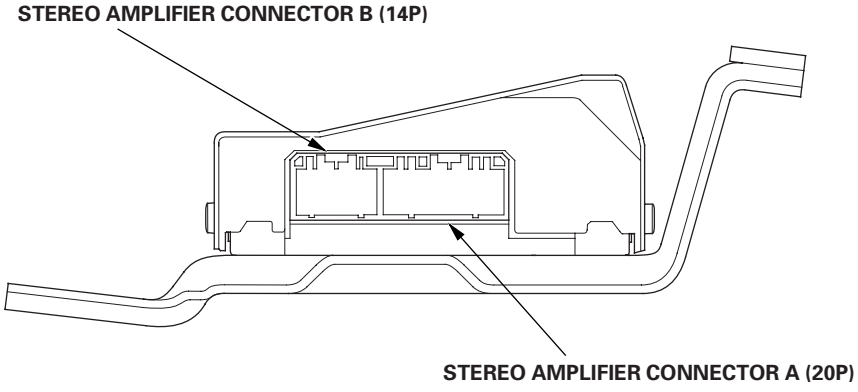


Terminal side of female terminals

Cavity	Wire Color	Connect to
G1	———	AM/FM antenna amplifier (RF IN)
G2	———	Shield for terminal No.1 (RF SH)
G3	———	AM/FM antenna amplifier (SWD +B)

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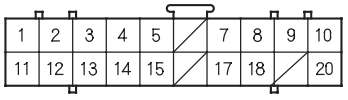
Stereo Amplifier Connector for Inputs and Outputs (Type S model)



(cont'd)

System Description (cont'd)

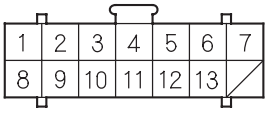
STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Cavity	Wire Color	Connect to
A1	PNK	Right tweeter (+)
A2	GRY	Front passenger's door speaker (+)
A3	LT GRN	Driver's door speaker (+)
A4	RED	Left tweeter (+)
A5	GRN	Subwoofer (+)
A7	BLU	Right rear speaker (+)
A8	GRY	Left rear speaker (+)
A9	PUR	Multiplex integrated control unit (MICU) (ACC RADIO)
A10	LT GRN	+B (Main stereo power supply)
A11	BLU	Right tweeter (−)
A12	BRN	Front passenger's door speaker (−)
A13	PNK	Driver's door speaker (−)
A14	GRN	Left tweeter (−)
A15	RED	Subwoofer (−)
A17	ORN	Right rear speaker (−)
A18	BRN	Left rear speaker (−)
A20	BLK	Ground (G505)

STEREO AMPLIFIER CONNECTOR B (14P)



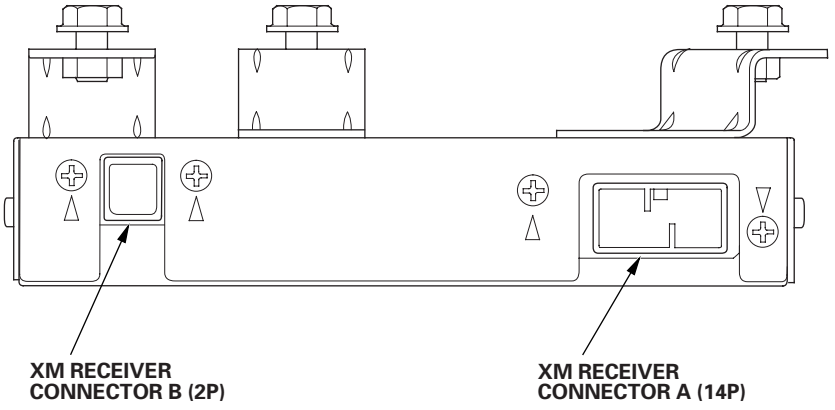
Wire side of female terminals

Cavity	Wire Color	Connect to
B1	BLU	Navigation unit (FL SIG+)
B2	BRN*	Shield for terminals No. 1 and No. 8 (FL SH GND)
B3	BLK	Navigation unit (RL SIG+)
B4	BLU	Navigation unit (FR SIG+)
B5	GRY*	Shield for terminals No. 4 and No. 11 (FR SH GND)
B6	LT GRN	Navigation unit (RR SIG+)
B7	LT BLU	Navigation unit (AMP ON)
B8	RED	Navigation unit (FL SIG−)
B9	GRN*	Shield for terminals No. 3 and No. 10 (RL SH GND)
B10	WHT	Navigation unit (RL SIG−)
B11	PNK	Navigation unit (FR SIG−)
B12	YEL*	Shield for terminals No. 6 and No. 13 (RR SH GND)
B13	PUR	Navigation unit (RR SIG−)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

DYNOMITE -2009-

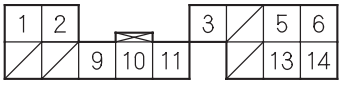
XM Receiver Connector for Inputs and Outputs ('08 model with navigation)



(cont'd)

System Description (cont'd)

XM RECEIVER CONNECTOR A (14P)

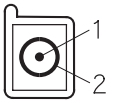


Wire side of female terminals

Cavity	Wire Color	Connect to
A1	BLU	Navigation unit (+B)
A2	LT BLU	Navigation unit (SYS ACC)
A3	BRN *	Shield for terminals No. 9 and No. 10 (GA-NET BUS SH)
A5	WHT	Navigation unit (SAT R+)
A6	RED	Navigation unit (SAT L+)
A9	BLU	Navigation unit (GA-NET BUS+)
A10	PNK	Navigation unit (GA-NET BUS−)
A11	BLK	Navigation unit (GND)
A13	BLK	Navigation unit (SAT R−)
A14	GRN	Navigation unit (SAT L−)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

XM RECEIVER CONNECTOR B (2P)

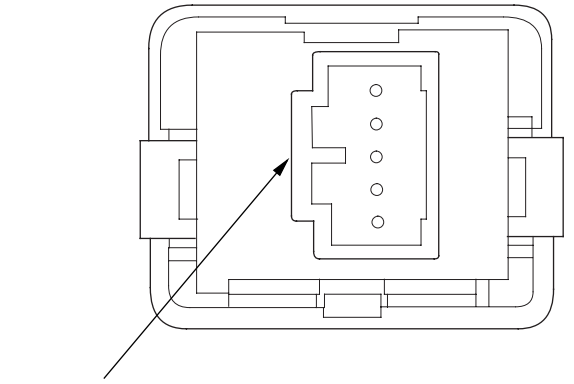


Terminal side of female terminals

Cavity	Wire Color	Connect to
B1	———	Satellite signal antenna (SAT/TER)
B2	———	Shield for terminal No. 1 (GND SH)

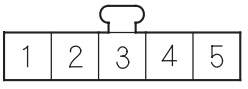
DYNOMITE -2009-

Auxiliary Jack Assembly Connector for Inputs and Outputs



AUXILIARY JACK ASSEMBLY 5P CONNECTOR

AUXILARY JACK ASSEMBLY 5P CONNECTOR



Wire side of female terminals

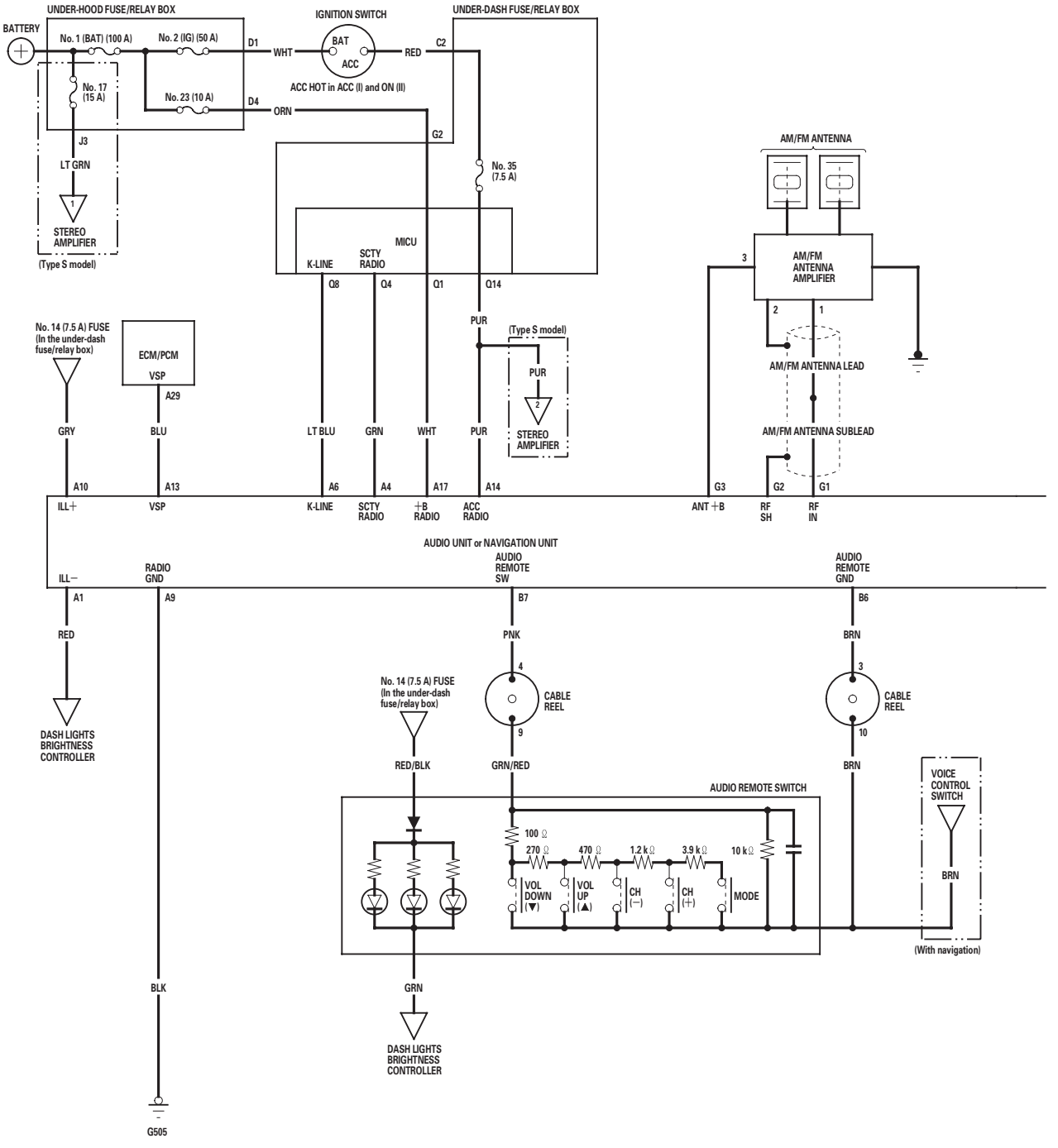
With navigation

Cavity	Wire Color	Connect to
1	WHT	Navigation unit (AUX DET)
2	BLU	Navigation unit (AUX GND)
3	BRN	Navigation unit (AUX S GND)
4	YEL	Navigation unit (AUX L)
5	GRN	Navigation unit (AUX R)

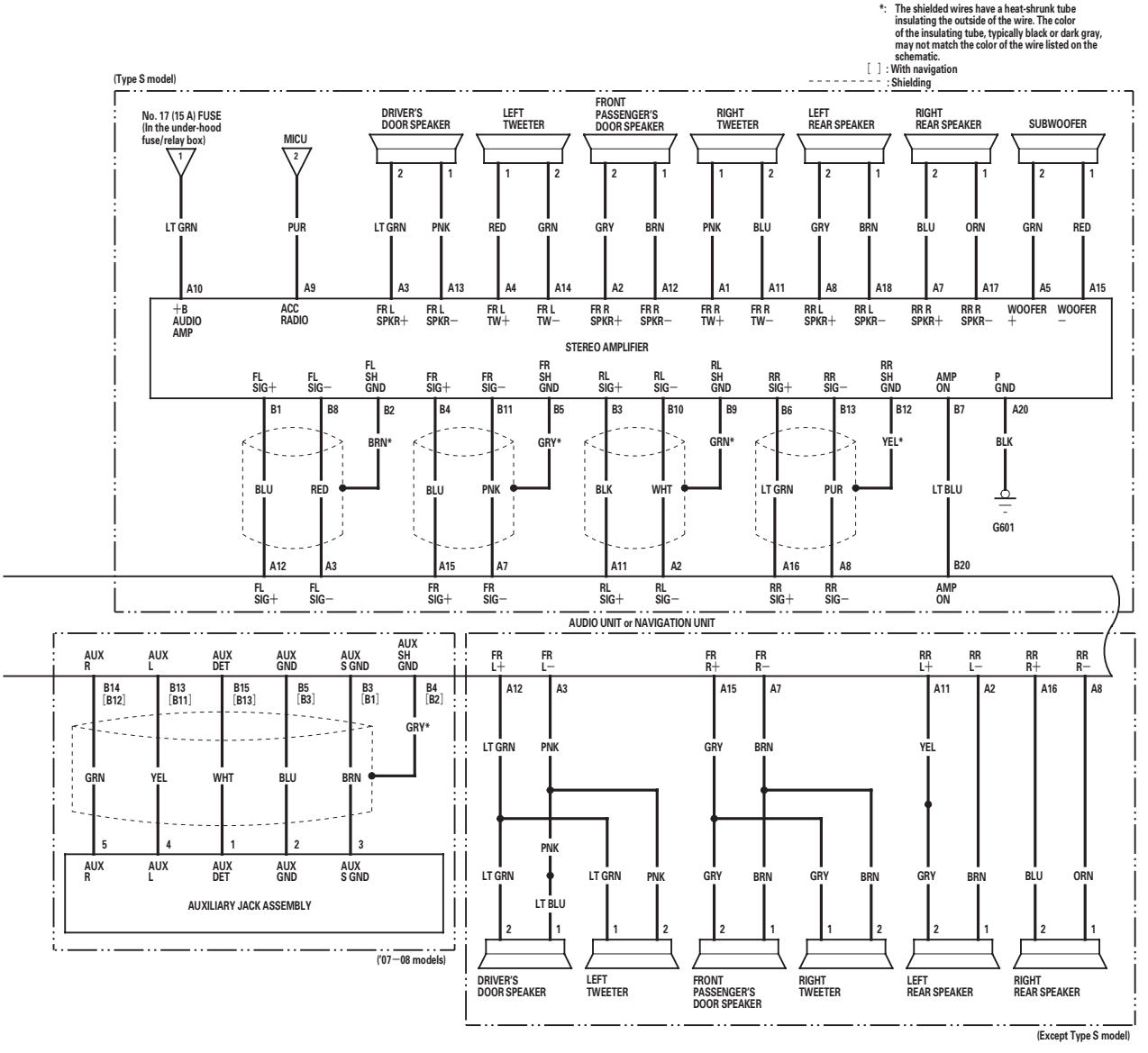
Without navigation

Cavity	Wire Color	Connect to
1	WHT	Audio Unit (AUX DET)
2	BLU	Audio Unit (AUX GND)
3	BRN	Audio Unit (AUX S GND)
4	YEL	Audio Unit (AUX L)
5	GRN	Audio Unit (AUX R)

Circuit Diagram



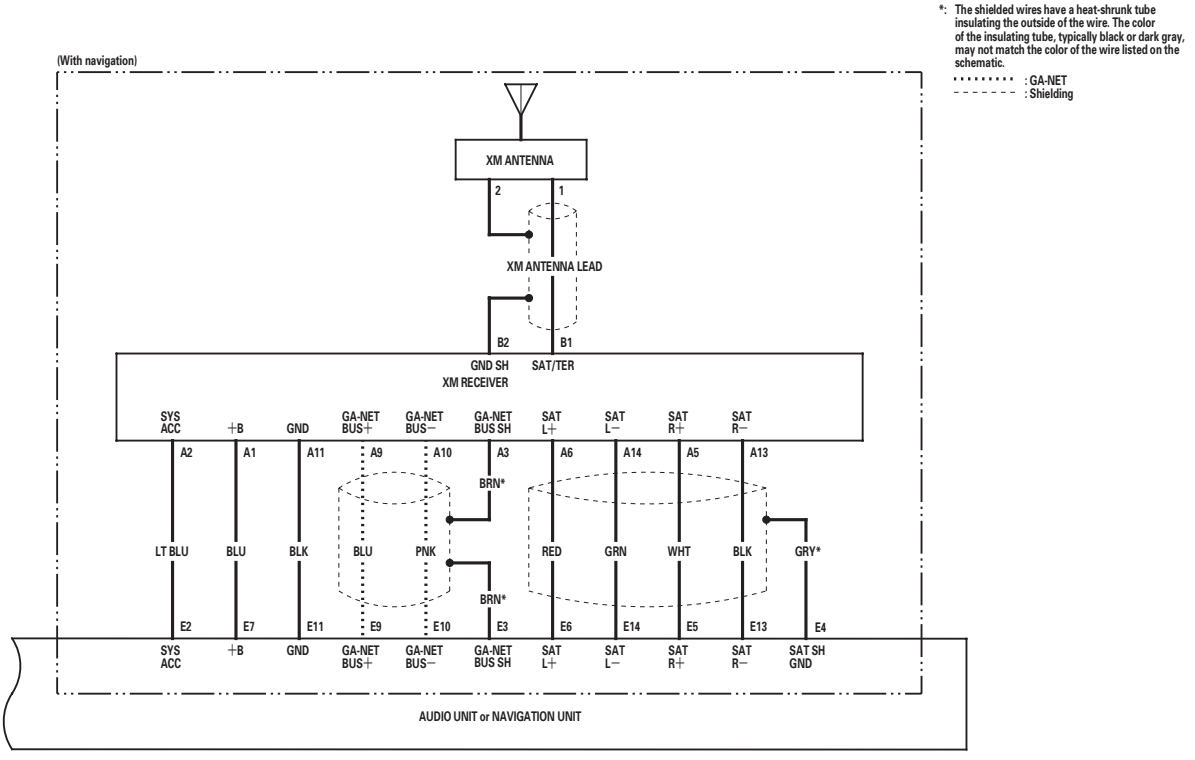
DYNOMITE -2009-



(cont'd)

DYNOMITE -2009-

Circuit Diagram (cont'd)



DYNOMITE -2009-

Self-diagnostic Function

Without Navigation

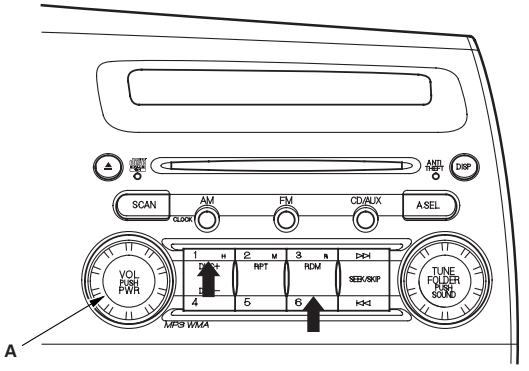
The audio system has a self-diagnostic function.

Serial Number Display Mode

To obtain the audio unit serial number on a vehicle, do the following:

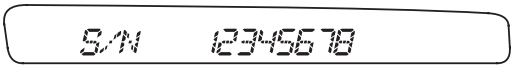
NOTE:
- This procedure can only be performed when the battery power is disconnected from the audio unit and the audio unit displays CODE.
- To obtain the navigation unit serial number, refer to Navi ECU in the navigation system diagnostic mode (see page 23-135).

1. Turn the ignition switch to ON (II).
2. Make sure the audio system is turned off.
3. Push and hold the preset No. 1 and No. 6 buttons.
4. While holding the buttons, push the VOL PUSH PWR knob (A) to ON.
5. Release the buttons and the self-diagnostic begins.



6. The display shows a 8 digit serial number.

   Eight digits of the serial number (example 12345678)



7. Use all 8 numbers as the serial number when using the Interactive Network (iN) to retrieve the 5 digit anti-theft code.
8. To end the self-diagnostic function, turn the audio unit off, or turn the ignition switch to LOCK (0).

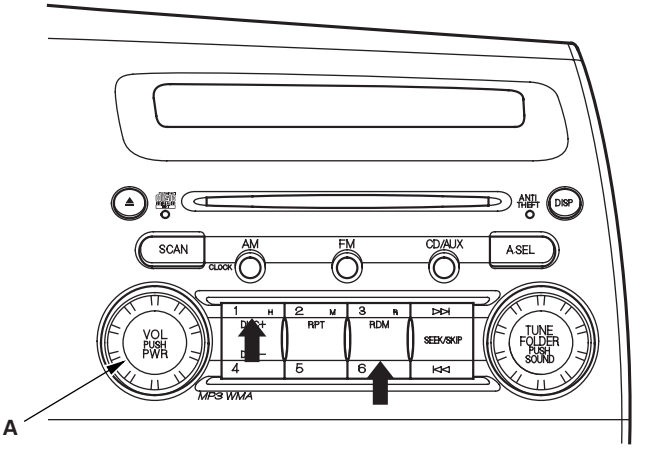
(cont'd)

Self-diagnostic Function (cont'd)

How to check for audio system condition

NOTE:
- The audio unit must be in the code enter screen before performing the self-diagnostic function.
- The self-diagnostic function does not find every problem with the audio system. Check any official Honda service website for more information about the audio system.

1. Turn the ignition switch to ON (II).
2. Make sure the audio system is turned off.
3. Push and hold the preset No. 1 and No. 6 buttons.
4. While holding the buttons, push the VOL PUSH PWR knob (A) to ON.
5. Release the buttons and the self-diagnostic begins.



6. When you are in the self-diagnostic mode, pressing a preset button starts the diagnostic mode that is assigned to that preset switch.

No. 3 button
Entire LCD lighting/light-out mode: Turns on/off the entire LCD to show the presence or absence of an LCD failure. The entire display must appear. If there are dead segments, replace the audio unit.

No. 4 button
Duty indication mode (for the Illumination dim): Indicates the duty for the Illumination dim when the dash lights are on.

No. 5 button
Vehicle speed pulse indication mode: Indicates the vehicle speed pulse.

FM button (Push and hold 5 sec.)
Reception level check mode: Indicates the reception level (dB). When entering the reception level check mode, the AM/FM button is used to change the main/sub antenna. See reception level indication for more information.

CD button (Push and hold 5 sec.)
DRAM residual quantity indication mode: Indicates the DRAM residual quantity.

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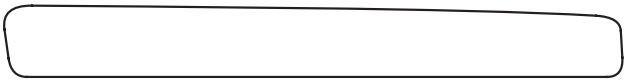
7. To end the self-diagnostic function, turn the audio unit off, or turn the ignition switch to LOCK (0).

Display Specifications

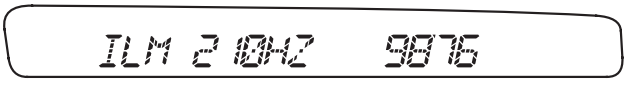
Entry LCD Lighting
No. 3 button



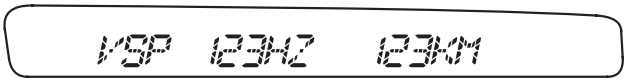
Entry LCD Lights-outs
No. 3 button



Duty (for the illumination) indication
No. 4 button



Vehicle speed pulse indication
No. 5 button



Reception level indication
FM button



DRAM residual quantity indication
CD button



Speaker check mode

8. Turn off the audio unit.

9. Push and hold the No. 1 and No. 3 buttons. While holding the buttons, push the VOL push PWR knob to ON. Release the buttons and the speaker check mode begins. A low-frequency hum should sound for about one minute. Change the test speaker by pushing the SKIP button. If you find a speaker(s) with no sound, check the speaker and harness connections. If the connections are good, replace the speaker, and retest.

10. To end the self-diagnostic function, turn the audio unit off, or turn the ignition switch to LOCK (0).

(cont'd)

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Self-diagnostic Function (cont'd)

Reception level indication mode

This diagnostic screen checks the audio unit's reception level. This level then can be used in the diagnosis of audio unit reception quality. The reception level is displayed in decibels (dB)

Preperation:
- Pank the vehicle outdoors in an appropriate location for good radio reception.
- Tune to a powerful local FM radio station then write down the radio station number.

1. Enter the reception level indication mode in the self-diagnostic function. The AM/FM antenna amplifier is on (A. SEL or TP is not displayed in the audio-HVAC display).
2. Tune to the FM radio station you wrote down preperation using the TUNING knob, and note the decibel level of that station when you release the button.
3. Press and release the A. SEL button to turn the AM/FM antenna amplifier off (A. SEL or TP is now displayed in the audio-HVAC display).
4. Tune to the FM radio station you wrote down in preperation using the TUNING knob, and note the decibel level of that station when you release the button.
5. Press and release the A. SEL button to turn the AM/FM antenna amplifier back on (A. SEL or TP is not displayed in the audio-HVAC display).
6. Turn the ignition switch to LOCK (0) or audio unit off to exit the test mode.
7. Compare your results to a known-good (make sure it is the same year and trim level) in the same location and direction, and under the same environmental conditions.

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Error Codes

The audio system displays error codes when a problem is detected with the disc changer, the disc, the XM radio, or the anti-theft code.
This is not a complete list of audio error codes. Refer to symptom troubleshooting, or go to any official Honda service website for more service information.

CD Error Codes ('06-07 models and '08 model with navigation)

Error Code Displayed	Possible Cause	Solution
DISC ERROR	The system cannot read the disc because an audio or video DVD is inserted into the unit. The CD may be inserted upside down.	Verify that the unit functions with a standard mass production CD.
MECH ERROR	There is a problem with the mechanism A CD label may be jammed in the mechanism.	Replace the navigation unit.

CD Error Codes ('08 model without navigation)

Error Code Displayed	Possible Cause	Solution
BAD DISC-PLEASE CHECK OWNERS MANUAL PUSH EJECT	• CD label jammed in the mechanism. • CD eject mechanism or motor is inoperative. • CD spindle motor won't spin up the CD. • The wrong type disc is inserted.	Press the EJECT button and hold it for 5 seconds. If the disc does not eject, try again. If the disc still won't eject, replace the unit.

CD Error Codes ('06-08 models)

Error Code Displayed	Possible Cause	Solution
HEAT ERROR	CD player is too hot. This can happen if the vehicle is parked in the sunlight all day.	The unit should function normally when it cools off.
FORMAT	Audio unit cannot read the files on the CD or CD-R.	Current track is skipped. The next supported track or file plays automatically. • Verify that CD, CD-R or CD-RW file names end in CD-A or WMA. • Verify that CD, CD-R or CD-RW with compressed music formats end in MP3 or WMA. • Other file formats like I-tunes or Ogg are not recognized. • WMA files may have (DRM) copy protection and cannot be read.

(cont'd)

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Error Codes (cont'd)

XM Error Codes

Error Code Displayed	Possible Cause	Solution
LOADING	XM radio is acquiring audio or program information.	Wait until the radio receives the information.
(XM) OFF AIR	XM channel not in service.	Try another XM channel.
(XM) NO SIGNAL	Loss of signal.	Both terrestrial and satellite antennas have lost signal. Park the vehicle outside with a clear view of the southern horizon.
(XM) UPDATING	XM radio is receiving information update from the network.	This message disappears once the update finishes.
(XM) CHECK ANTENNA (XM) ANTENNA ERROR	XM antenna error.	Repair open or short in the satellite antenna. Substitute the XM antenna with a known-good one, and recheck. If the error is gone, replace the original XM antenna. If the error is still present, replace the antenna lead.
———	No signal from XM.	Check a known-good vehicle with XM radio. If the known-good vehicle has the same symptoms, contact XM Satellite Radio at 800-852-9696.

Audio Unit Error Codes

Error Code Displayed	Possible Cause	Solution
CODE ERROR 1	Anti-theft code mismatch (1st try).	Enter the correct anti-theft code.
CODE ERROR E	Anti-theft code mismatch (10th try).	Remove the No. 23 (10 A) fuse in the under-hood fuse/relay box, then reinsert it. You will have 10 more tries to enter the correct anti-theft code.

NOTE: Do XM error codes checks with the vehicle parked outside with a clear view of the southern horizon.

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Poor AM or FM radio reception or interference (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check for aftermarket accessories plugged into the vehicle accessory power sockets (including cell phone).
- Check the connectors for poor connections or loose terminals.
- Check the radio reception in an open area. Compare it to a known-good vehicle whenever possible. Poor reception/interference can be caused by the following:
  – The radio station is far away.
  – Atmospheric conditions are unfavorable.
  – Tall buildings, mountains, or high-voltage power lines are nearby.
  – Aftermarket metallic wi ndow tint.

1. Turn the ignition switch to ON (II).

2. Do the seek stop test (see page 23-78).

   Is the test vehicle within 10 % of the known-good vehicle?

   YES—Multipath interference or weak station. Operation is normal. ■
   NO—Go to step 3.

3. Check if the radio reception/interference is the same in several locations.

   Is the reception/interference the same?

   YES—Go to step 4.
   NO—Multipath interference or weak station. Operation is normal. ■

4. Start the engine.

5. Check the reception/interference.

   Is there noise (static or whine) only with the engine running?

   YES—Check the antenna and radio grounds. If OK, check the charging system and the ignition system. ■
   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).

7. Remove the right side C-pillar trim (see page 20-75).

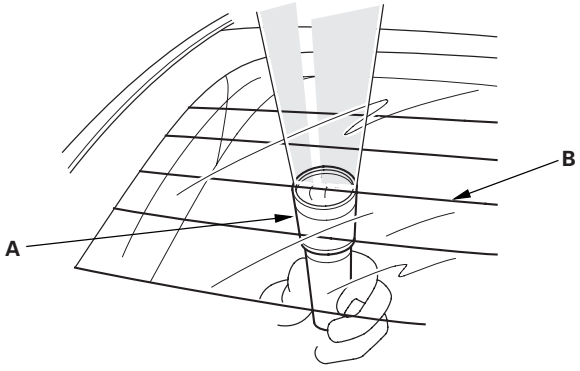
8. Check the connections from the AM/FM antenna amplifier to the window antenna.

   Are there any loose or damaged connections?

   YES—Repair the connections, or substitute a known-good AM/FM antenna amplifier and retest. If the symptom/condition goes away, replace the original AM/FM antenna amplifier (see page 23-87). ■

   NO—Go to step 9.

9. With the help of an assistant inside the vehicle, have the assistant shine a flashlight (A) along each antenna wire (B). Check from the outside of the vehicle for any breaks or openings in the antenna wires (the light shines through).



   Are there any breaks or cuts in the antenna?

   YES—Repair the window antenna. Go to AM/FM antenna repair (see page 23-87), or replace the rear window (see page 20-47). ■

   NO—Go to step 10.

(cont'd)

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Symptom Troubleshooting (cont'd)

10. Remove the navigation unit (see page 23-155). Check that the antenna lead is properly connected.

    Is it connected properly?

    YES—Go to step 11.

    NO—Reconnect the connector, and recheck the function. ■

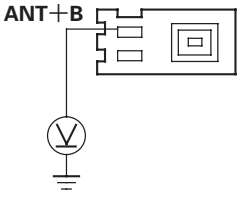
11. Disconnect the AM/FM antenna lead 3P connector from the AM/FM antenna amplifier (see page 23-87).

12. Turn the ignition switch to ON (II).

13. Turn on the navigation unit.

14. Measure the voltage between the AM/FM antenna lead connector terminal No. 3 at the AM/FM antenna amplifier and body ground.

AM/FM ANTENNA AMPLIFIER 3P CONNECTOR



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 19.

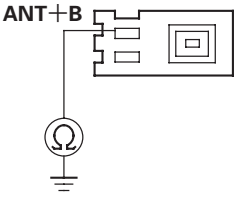
NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).

16. Disconnect navigation unit connector G (3P).

17. Check for continuity between the AM/FM antenna amplifier 3P connector terminal No. 3 and body ground.

AM/FM ANTENNA AMPLIFIER 3P CONNECTOR



Terminal side of female terminals

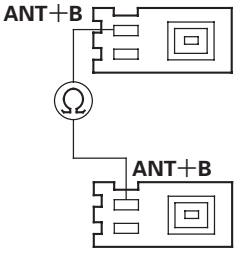
Is there continuity?

YES—Repair short to body ground in the wire between the navigation unit and the AM/FM antenna amplifier. ■

NO—Go to step 18.

18. Check for continuity between navigation unit connector G (3P) terminal No. 3 and the AM/FM antenna amplifier 3P connector terminal No. 3.

NAVIGATION UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

Is there continuity?

YES—Substitute a known-good navigation unit (see page 23-155), and recheck. ■

NO—Repair open in the wire between the navigation unit and the AM/FM antenna amplifier. ■

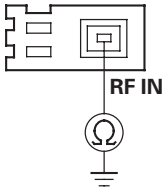
DYNOMITE -2009-

19. Turn the ignition switch to LOCK (0).

20. Disconnect navigation unit connector G (3P).

21. Check for continuity between navigation unit connector G (3P) terminal No. 1 and body ground.

NAVIGATION UNIT CONNECTOR G (3P)



Terminal side of female terminals

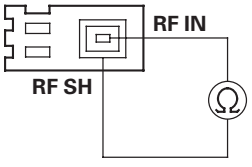
Is there continuity?

YES—Replace the AM/FM antenna lead and/or sublead. ■

NO—Go to step 22.

22. Check for continuity between navigation unit connector G (3P) terminals No. 1 and No. 2.

NAVIGATION UNIT CONNECTOR G (3P)



Terminal side of female terminals

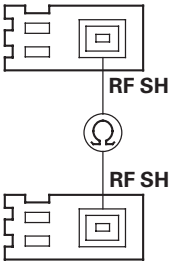
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 23.

23. Check for continuity between navigation unit connector G (3P) terminal No. 2 and the AM/FM antenna amplifier 3P connector terminal No. 2.

NAVIGATION UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

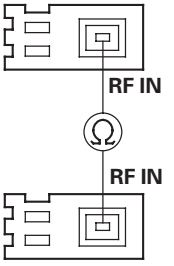
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 24.

24. Check for continuity between navigation unit connector G (3P) terminal No. 1 and the AM/FM antenna amplifier 3P connector terminal No. 1.

NAVIGATION UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

Is there continuity?

YES—Replace the AM/FM antenna amplifier (see page 23-87), and recheck. If the reception is still poor, replace the navigation unit (see page 23-155). ■

NO—Replace the AM/FM antenna lead and/or sublead. ■

Symptom Troubleshooting (cont'd)

Poor AM or FM radio reception or interference (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check for aftermarket accessories plugged into the vehicle accessory power sockets (including cell phone).
- Check the connectors for poor connections or loose terminals.
- Check the radio reception in an open area. Compare it to a known-good vehicle whenever possible. Poor reception/interference can be caused by the following:
  – The radio station is far away.
  – Atmospheric conditions are unfavorable.
  – Tall buildings, mountains, or high-voltage power lines are nearby.
  – Aftermarket metallic wi ndow tint.

1. Turn the ignition switch to ON (II).

2. Do the seek stop test (see page 23-78).

   Is the test vehicle within 10 % of the known-good vehicle?

   YES—Multipath interference or weak station. Operation is normal. ■
   NO—Go to step 3.

3. Check if the radio reception/interference is the same in several locations.

   Is the reception/interference the same?

   YES—Go to step 4.
   NO—Multipath interference or weak station. Operation is normal. ■

4. Start the engine.

5. Check the reception/interference.

   Is there noise (static or whine) only with the engine running?

   YES—Check the antenna and radio grounds. If OK, check the charging system and the ignition system. ■
   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).

7. Remove the right side C-pillar trim (see page 20-75).

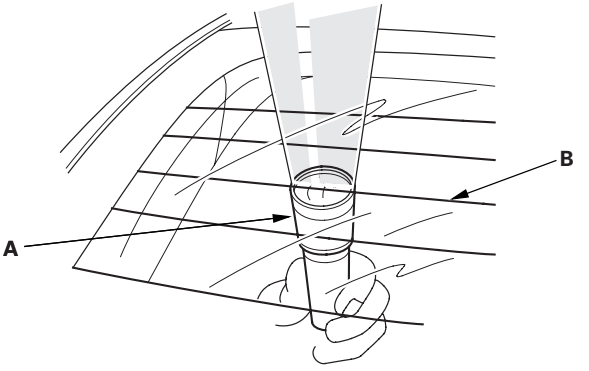
8. Check the connections from the AM/FM antenna amplifier to the window antenna.

   Are there any loose or damaged connections?

   YES—Repair the connections, or substitute a known-good AM/FM antenna amplifier and retest. If the symptom/condition goes away, replace the original AM/FM antenna amplifier (see page 23-87). ■

   NO—Go to step 9.

9. With the help of an assistant inside the vehicle, have the assistant shine a flashlight (A) along each antenna wire (B). Check from the outside of the vehicle for any breaks or openings in the antenna wires (the light shines through).



   Are there any breaks or cuts in the antenna?

   YES—Repair the window antenna. Go to AM/FM antenna repair (see page 23-87), or replace the rear window (see page 20-47). ■

   NO—Go to step 10.

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10. Remove the audio unit (see page 23-80). Check that the antenna lead is properly connected.

    Is it connected properly?

    YES—Go to step 10.

    NO—Reconnect the connector, and recheck the function. ■

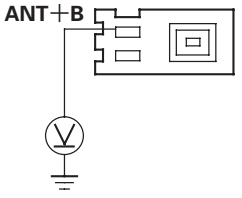
11. Disconnect the antenna cable 3P connector from the AM/FM antenna amplifier (see page 23-87).

12. Turn the ignition switch to ON (II).

13. Turn on the audio unit.

14. Measure the voltage between the AM/FM antenna lead connector terminal No. 3 at the AM/FM antenna amplifier and body ground.

AM/FM ANTENNA AMPLIFIER 3P CONNECTOR



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 19.

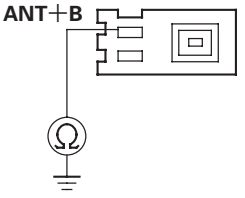
NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).

16. Disconnect audio unit connector G (3P).

17. Check for continuity between the AM/FM antenna amplifier connector (3P) terminal No. 3 and body ground.

AM/FM ANTENNA AMPLIFIER 3P CONNECTOR



Terminal side of female terminals

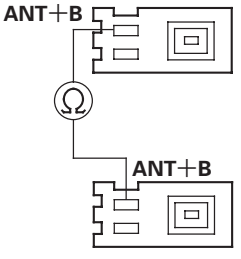
Is there continuity?

YES—Repair short to body ground in the wire between the audio unit and the AM/FM antenna amplifier. ■

NO—Go to step 18.

18. Check for continuity between audio unit connector G (3P) terminal No. 3 and the AM/FM antenna amplifier 3P connector terminal No. 3.

AUDIO UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

Is there continuity?

YES—Substitute a known-good audio unit (see page 23-80), and recheck. ■

NO—Repair open in the wire between the audio unit and the AM/FM antenna amplifier. ■

(cont'd)

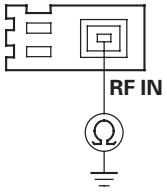
Symptom Troubleshooting (cont'd)

19. Turn the ignition switch to LOCK (0).

20. Disconnect audio connector G (3P).

21. Check for continuity between audio unit connector G (3P) terminal No. 1 and body ground.

AUDIO UNIT CONNECTOR G (3P)



Terminal side of female terminals

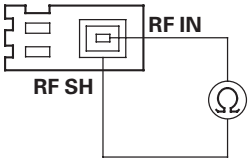
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 22.

22. Check for continuity between audio unit connector G (3P) terminals No. 1 and No. 2.

AUDIO UNIT CONNECTOR G (3P)



Terminal side of female terminals

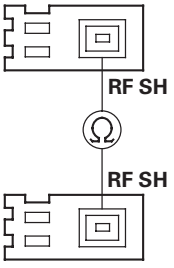
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 23.

23. Check for continuity between audio unit connector G (3P) terminal No. 2 and the AM/FM antenna amplifier 3P connector terminal No. 2.

AUDIO UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

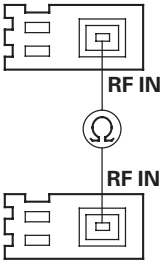
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 24.

24. Check for continuity between audio unit connector G (3P) terminal No. 1 and the AM/FM antenna amplifier 3P connector terminal No. 1.

AUDIO UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

Is there continuity?

YES—Replace the AM/FM antenna amplifier (see page 23-87), and recheck. If the reception is still poor, replace the audio unit (see page 23-80). ■

NO—Replace the antenna lead and/or sublead. ■

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Audio unit power switch will not turn on (No information display and no sound) (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Push the power switch ON to see if the navigation unit turns ON.

   Does the navigation unit display operate properly, and does the audio sound normal?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Go to step 3.
3. Turn the ignition switch to LOCK (0).
4. Check the No. 23 (10 A) fuse in the under-hood fuse/relay box and No. 35 (7.5 A) fuse in the under-dash fuse/relay box.

   Are the fuses OK?

   YES—Go to step 5.

   NO—Replace the fuse(s), and recheck. ■
5. Remove the navigation unit (see page 23-155). Check that the navigation unit is properly connected.

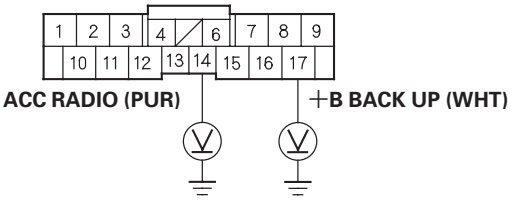
   NOTE:
   - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
   - Remove the PC card before removing the navigation unit.

   Is it connected properly?

   YES—Go to step 6.

   NO—Reconnect the connector, and recheck the function. ■
6. Disconnect navigation unit connector A (17P)
7. Turn the ignition switch to ON (II).
8. Measure the voltage between body ground and navigation unit connector A (17P) terminals No. 14 and No. 17 individually.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage on both terminals?

YES—Go to step 9.

NO—Repair open in the wire(s) between the No. 23 (10 A) fuse in the under-hood fuse/relay box and the No. 35 (7.5 A) in the under-dash fuse/relay box and the navigation unit. ■
9. Turn the ignition switch to LOCK (0).
10. Reconnect navigation unit connector A (17P).

(cont'd)

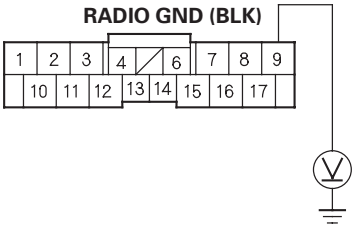
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Symptom Troubleshooting (cont'd)

11. Turn the ignition switch to ON (II).

12. Measure the voltage between navigation unit connector A (17P) terminal No. 9 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there less than 0.1 V on both terminals?

YES—Replace the navigation unit (see page 23-155). ■

NO—Repair open in the wire between navigation unit connector A (17P) terminal No. 19 and body ground (G505). ■

Audio unit power switch will not turn on (No information display and no sound) (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).

2. Push the power switch ON to see if audio unit turns ON.

   Does the audio unit operate properly, and does the audio sound normal?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Go to step 3.

3. Turn the ignition switch to LOCK (0).

4. Check the No. 23 (10 A) fuse in the under-hood fuse/relay box and the No. 35 (7.5 A) fuse in the under-dash fuse/relay box.

   Are the fuses OK?

   YES—Go to step 5.

   NO—Replace the fuse(s), and recheck. ■

5. Remove the audio unit (see page 23-80). Check that the audio unit is properly connected.

   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.

   Is it connected properly?

   YES—Go to step 6.

   NO—Reconnect the connector, and recheck the function. ■

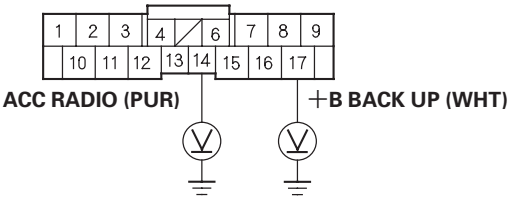
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6. Disconnect audio unit connector A (17P).

7. Turn the ignition switch to ON (II).

8. Measure the voltage between audio unit connector A (17P) terminal No. 14 and body ground, and between terminal No. 17 and body ground.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage on the both terminals?

YES—Go to step 9.

NO—Repair open in the wire(s) between the No. 23 (10 A) fuse in the under-hood fuse/relay box and the No. 35 (7.5 A) in the under-dash fuse/relay box and the audio unit. ■

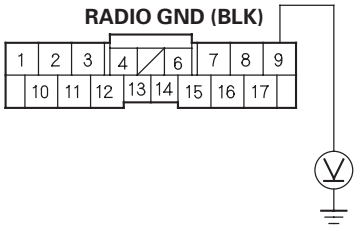
9. Turn the ignition swtich to LOCK (0).

10. Reconnect audio unit connector A (17P).

11. Turn the ignition switch to ON (II).

12. Measure the voltage between audio unit connector A (17P) terminal No. 9 and body ground.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there less than 0.1 V?

YES—Replace the audio unit (see page 23-80). ■

NO—Repair open in the wire between audio unit connector A (17P) terminal No. 9 and body ground (G505) (see page 22-32). ■

Symptom Troubleshooting (cont'd)

Audio unit power switch will not turn off (with navigation)

NOTE:
- Check for aftermarket accessories plugged into the vehicle's accessory power sockets.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Push the power switch OFF or turn the ignition switch to LOCK (0) to see if the navigation unit turns OFF.

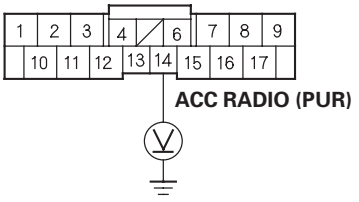
   Is the navigation unit OFF?

   YES—Operation is normal. ■

   NO—Go to step 2.
3. Turn the ignition switch to LOCK (0).
4. Remove the navigation unit (see page 23-155).
5. Disconnect navigation unit connector (17P).

   NOTE:
   - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
   - Remove the PC card before removing the navigation unit.
6. Measure the voltage between navigation unit connector A (17P) terminal No. 14 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage?

YES—Check for short to power on PUR wire. ■

NO—Replace the navigation unit (see page 23-155). ■

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Audio unit power switch will not turn off (without navigation)

NOTE:
- Check for aftermarket accessories plugged into the vehicle's accessory power sockets.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Push the power switch OFF or turn the ignition switch to LOCK(0) to see if the audio unit turns OFF.

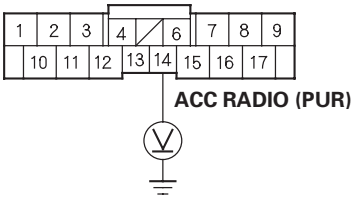
   Is the audio unit OFF?

   YES—Operation is normal. ■

   NO—Go to step 3.
3. Turn the ignition switch to LOCK (0).
4. Remove the audio unit (see page 23-80).
5. Disconnect audio unit connector A (17P).

   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.
6. Measure the voltage between audio unit connector A (17P) terminal No. 14 and body ground.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there voltage?

YES—Check for short to power on PUR wire. ■

NO—Replace the audio unit (see page 23-80). ■

No sound is heard from the speaker(s) (display is normal) (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Set the fader and balance positions to the center.
- Before performing symptom troubleshooting, do the power switch will not turn ON troubleshooting (see page 23-35).

1. Turn the ignition switch to ON (II).
2. Check for sound in each mode (AM, FM, XM, and CD).

   Is the sound OK in each mode?

   YES—Intermittent failure. The system is OK at this time. Check for loose connections at the navigation unit and speaker(s). ■

   NO—Go to step 3.
3. Check that the volume button is not set to the min level.

   Is it at the MIN level?

   YES—Raise the volume level, and recheck the function. ■

   NO—Go to step 4.
4. On the steering wheel, check the navigation talk command.

   Is the navigation talk command function set?

   YES—Cancel the navigation talk command by pressing the navigation BACK button, then recheck the function. ■

   NO—Go to step 5.

(cont'd)

Symptom Troubleshooting (cont'd)

5. Check to see if there is a specific speaker that has no sound.

   Do any or all of the speakers fail to sound?

   YES—Speaker(s) failed the test:

   - If at least one speaker is OK, go to step 6.
   - If all speakers fail to sound:
     – With premium audio system: Go to step 14.
     – Without premium audio system: Go to step 9.

   NO—Speakers all work, but sound quality is poor in step 1.

   - If sound is poor only with XM radio, or the XM radio does not function, go to poor or no sound with XM radio (see page 23-72). ■
   - If the sound is poor only with AM or FM, go to poor AM or FM radio reception or interference (see page 23-29). ■
   - If the sound is poor only with disc. ■
     – Try several known- good disc in the navigation unit.
     – If the sound quality is normal, the original disc is faulty.
     – If the sound quality is still poor, replace the navigation unit.
   - If the sound is poor in all modes, go to sound quality diagnosis (see page 23-74). ■

6. Turn the ignition switch to LOCK (0).

7. Remove the speaker(s) with no sound (see page 23-83), and disconnect its connector.

8. Check the speaker 2P connector for a loose or poor connection.

   Reconnect the speaker 2P connector, and recheck the symptom; does it still fail?

   YES—Go to step 9.

   NO—Operation is normal. ■

9. Make sure the ignition switch is in LOCK (0).

10. Measure the resistance between terminals No. 1 and No. 2 of the speaker connector.

    Is there about 4 Ω ?

    YES—
    - With premium audio system: Go to step 20.
    - Without premium audio system: Go to step 11.

    NO—Faulty speaker(s). ■

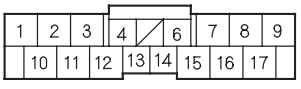
11. Remove the navigation unit (see page 23-155). Disconnect navigation unit connector A (17P).

    NOTE:
    - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
    - Remove the PC card before removing the navigation unit.

12. Measure the resistance between the following terminals of navigation unit connector A (17P) according to the table.

Speaker	Terminal	Wire color
Driver's door speaker, Left tweeter	A12 (+)	LT GRN
	A3 (−)	PNK
Front passenger's door speaker, Right tweeter	A15 (+)	GRY
	A7 (−)	BRN
Left rear speaker	A11 (+)	YEL
	A2 (−)	BRN
Right rear speaker	A16 (+)	BLU
	A8 (−)	ORN

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there about 4 Ω ?

YES—Go to step 13.

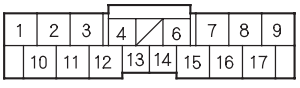
NO—Repair open or short in the wires between navigation unit and the speaker(s). ■

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13. Check for continuity between body ground and the following terminals of navigation unit connector A (17P).

Speaker	Terminal	Wire color
Driver's door speaker, Left tweeter	A12 (+)	LT GRN
	A3 (−)	PNK
Front passenger's door speaker, Right tweeter	A15 (+)	GRY
	A7 (−)	BRN
Left rear speaker	A11 (+)	YEL
	A2 (−)	BRN
Right rear speaker	A16 (+)	BLU
	A8 (−)	ORN

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

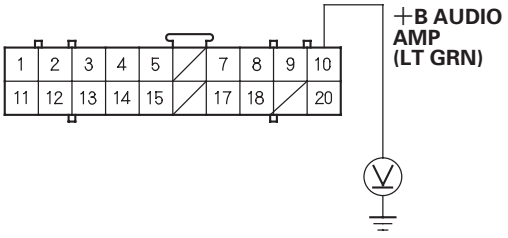
Is there continuity?

YES—Repair short to body ground in the wire(s) between the navigation unit and the speaker(s). ■

NO—Substitute a known-good navigation unit (see page 23-155), and recheck. If the symptom/indication goes away, replace the original navigation unit. ■

14. Measure the voltage between stereo amplifier connector A (20P) terminal No. 10 and body ground.

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 15.

NO—Repair open in the wire between the No. 17 (15 A) fuse in the under-hood fuse/relay box and stereo amplifier connector A (20P) terminal No. 10. ■

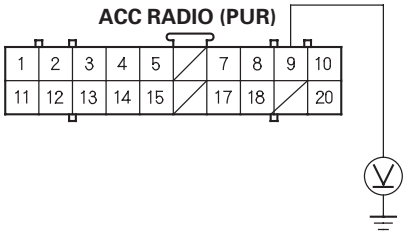
(cont'd)

Symptom Troubleshooting (cont'd)

15. Turn the ignition switch to ON (II).

16. Measure the voltage between stereo amplifier connector A (20P) terminal No. 9 and body ground.

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

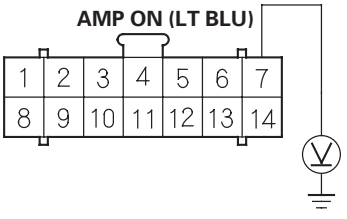
Is there battery voltage?

YES—Go to step 17.

NO—Repair open in the wire between the No. 35 (7.5 A) fuse in the under-dash fuse/relay box and stereo amplifier connector A (20P) terminal No. 9. ■

17. Measure the voltage between stereo amplifier connector B (14P) terminal No. 7 and body ground.

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

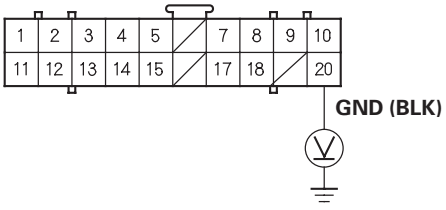
Is there battery voltage?

YES—Go to step 18.

NO—Repair open in the wire between the stereo amplifier connector B (14P) terminal No. 7 and navigation unit connector B (22P) terminal No. 20. ■

18. Measure the voltage between stereo amplifier connector A (20P) terminal No. 20 and body ground.

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Is there less than 0.1 V on both terminals?

YES—Go to step 19.

NO—Repair open in the wire between stereo amplifier connector A (20P) terminal No. 20 and body ground (G601). ■

19. Turn the ignition switch to LOCK (0).

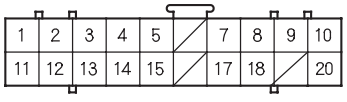
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20. Disconnect stereo amplifier connector A (20P).

21. Measure the resistance between the following terminals of stereo amplifier connector A (20P) according to the table.

Speaker	Terminal	Wire color
Driver's door speaker	A3 (+)	LT GRN
	A13 (−)	PNK
Left tweeter	A4 (+)	RED
	A14 (−)	GRN
Front passenger's door speaker	A2 (+)	GRY
	A12 (−)	BRN
Right tweeter	A1 (+)	PNK
	A11 (−)	BLU
Left rear speaker	A8 (+)	YEL
	A18 (−)	BRN
Right rear speaker	A7 (+)	BLU
	A17 (−)	ORN
Subwoofer	A5 (+)	GRN
	A15 (−)	RED

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Is there about 4 Ω ?

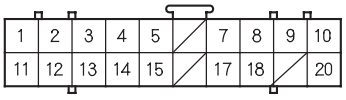
YES—Go to step 22.

NO—Repair open or short in the wires between the stereo amplifier and the speaker(s). ■

22. Check for continuity between body ground and the following terminals of stereo amplifier connector A (20P).

Speaker	Terminal	Wire color
Driver's door speaker	A3 (+)	LT GRN
	A13 (−)	PNK
Left tweeter	A4 (+)	RED
	A14 (−)	GRN
Front passenger's door speaker	A2 (+)	GRY
	A12 (−)	BRN
Right tweeter	A1 (+)	PNK
	A11 (−)	BLU
Left rear speaker	A8 (+)	YEL
	A18 (−)	BRN
Right rear speaker	A7 (+)	BLU
	A17 (−)	ORN
Subwoofer	A5 (+)	GRN
	A15 (−)	RED

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the stereo amplifier and the speaker(s). ■

NO—Go to step 23.

23. Disconnect stereo amplifier connector B (14P).

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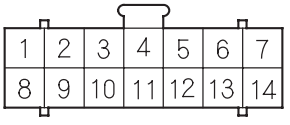
Symptom Troubleshooting (cont'd)

24. Disconnect navigation unit connector A (17P).

25. Check for continuity between stereo amplifier connector B (14P) and body ground according to the table. Then check for continuity between the same terminals listed in the table and stereo amplifier connector B (14P) terminal No. 2 (the harness shield).

Stereo amplifier connector	Wire color
B1	BLU
B8	RED

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

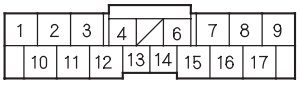
YES—Short in the wire between the stereo amplifier and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 26.

26. Check for continuity between navigation unit connector A (17P) and stereo amplifier connector B (14P) according to the table.

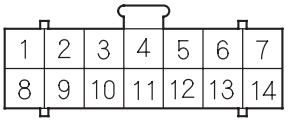
Navigation unit connector	Stereo amplifier connector	Wire color
A3	B8	RED
A12	B1	BLU

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 27.

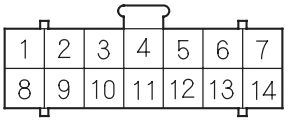
NO—Open in the wire between the navigation unit and the stereo amplifier. Replace the affected shielded harness. ■

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27. Check for continuity between stereo amplifier connector B (14P) and body ground according to the table. Then check for continuity between the same terminals listed in the table and stereo amplifier connector B (14P) terminal No. 5 (the harness shield).

Stereo amplifier connector	Wire color
B4	BLU
B11	PNK

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

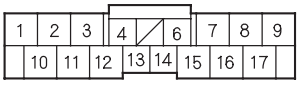
YES—Short in the wire between the stereo amplifier and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 28.

28. Check for continuity between navigation unit connector A (17P) and stereo amplifier connector B (14P) according to the table.

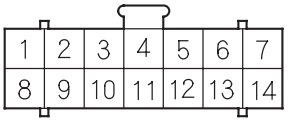
Navigation unit connector	Stereo amplifier connector	Wire color
A7	B11	PNK
A15	B4	BLU

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 29.

NO—Open in the wire between the navigation unit and the stereo amplifier. Replace the affected shielded harness. ■

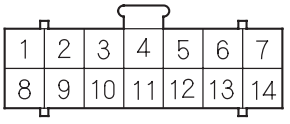
(cont'd)

Symptom Troubleshooting (cont'd)

29. Check for continuity between stereo amplifier connector B (14P) and body ground according to the table. Then check for continuity between the same terminals listed in the table and stereo amplifier connector B (14P) terminal No. 9 (the harness shield).

Stereo amplifier connector	Wire color
B3	BLK
B10	WHT

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

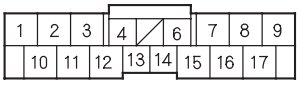
YES—Short in the wire between the stereo amplifier and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 30.

30. Check for continuity between navigation unit connector A (17P) and stereo amplifier connector B (14P) according to the table.

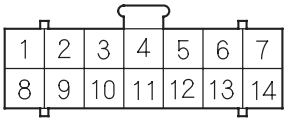
Navigation unit connector	Stereo amplifier connector	Wire color
A2	B10	WHT
A11	B3	BLK

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 31.

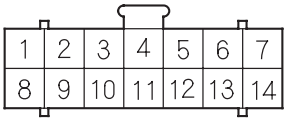
NO—Open in the wire between the navigation unit and the stereo amplifier. Replace the affected shielded harness. ■

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31. Check for continuity between stereo amplifier connector B (14P) and body ground according to the table. Then check for continuity between the same terminals listed in the table and stereo amplifier connector B (14P) terminal No. 12 (the harness shield).

Amplifier connector	Wire color
B6	LT GRN
B13	PUR

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

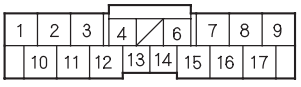
YES—Short in the wire between the stereo amplifier and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 32.

32. Check for continuity between navigation unit connector A (17P) and stereo amplifier connector B (14P) according to the table.

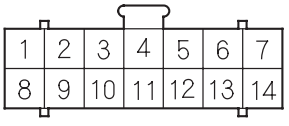
Navigation unit connector	Stereo amplifier connector	Wire color
A8	B13	PUR
A16	B6	LT GRN

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good navigation unit (see page 23-155), and recheck. If the symptom/indication goes away, replace the original navigation unit. If the symptom is still present, substitute a known-good stereo amplifier and recheck. If the symptom/indication goes away, replace the original stereo amplifier (see page 23-83). ■

NO—Open in the wire between the navigation unit and the stereo amplifier. Replace the affected shielded harness. ■

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Symptom Troubleshooting (cont'd)

No sound is heard from the speaker(s) (display is normal) (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Set the fader and balance positions to the center.
- Before performing symptom troubleshooting, do the power switch will not turn on troubleshooting (see page 23-36).
- For vehicles with factory installed audio, do the self-diagnostic function, speaker check (see page 23-25) to help isolate the speaker.

1. Turn the ignition switch to ON (II).

2. Check that the volume button is not set to the MIN level.

   Is it at MIN level?

   YES—Raise the volume level, and recheck the function. ■

   NO—Go to step 3.

3. Do the speaker check mode in the self-diagnostic function (see page 23-25).

   Do any or all of the speakers fail to sound?

   YES—Speaker(s) failed the test:

   - If at least one speaker is OK, go to step 4.
   - If all speakers fail to sound, go to step 7.

   NO—Speakers all work, but sound quality is poor:

   - If the sound is poor only with AM or FM, go to poor AM or FM radio reception or interference (see page 23-32). ■
   - If the sound is poor only with disc. ■
     – Try several known- good disc in the audio unit.
     – If the sound quality is normal, the original disc is faulty.
     – If the sound quality is still poor, replace the audio unit.
   - If the sound is poor in all modes, go to sound quality diagnosis (see page 23-74). ■

4. Turn the ignition switch to LOCK (0).

5. Remove the speaker(s) with no sound (see page 23-83), and disconnect its connector.

6. Check the speaker 2P connector for a loose or poor connection.

   Reconnect the speaker 2P connector, and recheck the symptom; does it still fail?

   YES—Go to step 7.

   NO—Operation is normal. ■

7. Make sure the ignition switch is in LOCK (0).

8. Remove the speaker(s) with no sound (see page 23-84), and disconnect its connector.

9. Measure the resistance between terminals No. 1 and No. 2 of the speaker connector.

   Is there about 4 Ω ?

   YES—Go to step 10.

   NO—Faulty speaker(s). ■

10. Remove the audio unit (see page 23-80). Disconnect audio unit connector A (17P).

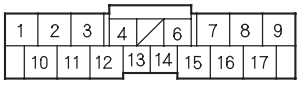
    NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.

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11. Measure the resistance between following terminals of audio unit connector A (17P).

Speaker	Terminal	Wire color
Driver's door speaker, Left tweeter	A12 (+)	LT GRN
	A3 (−)	PNK
Front passenger's door speaker, Right tweeter	A15 (+)	GRY
	A7 (−)	BRN
Left rear speaker	A11 (+)	YEL
	A2 (−)	BRN
Right rear speaker	A16 (+)	BLU
	A8 (−)	ORN

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there about 4 Ω ?

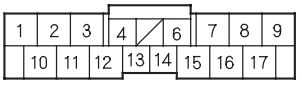
YES—Go to step 12.

NO—Repair open or short in the wires between the audio unit and the speaker(s).■

12. Check for continuity between body ground and the following terminals of audio unit connector A (17P).

Speaker	Terminal	Wire color
Driver's door speaker, Left tweeter	A12 (+)	LT GRN
	A3 (−)	PNK
Front passenger's door speaker, Right tweeter	A15 (+)	GRY
	A7 (−)	BRN
Left rear speaker	A11 (+)	YEL
	A2 (−)	BRN
Right rear speaker	A16 (+)	BLU
	A8 (−)	ORN

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the audio unit and the speaker(s).■

NO—Substitute a known-good audio unit (see page 23-80), and recheck. If the symptom/indication goes away, replace the original audio unit.■

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Symptom Troubleshooting (cont'd)

Auxiliary input sound is low or cannot be heard

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Use auxiliary stereo cables with 3.5 mm ends only.
- Auxiliary accessories may be played on the audio unit using the auxiliary input.

1. Turn the ignition switch to ON (II).

2. Turn on the audio unit or navigation unit and connect an auxiliary accessory to the auxiliary input jack.

3. Check the volume operation.

   Is the sound normal?

   YES—Operation is normal at this time. ■

   NO—Go to step 4.

4. Make sure the auxiliary accessory volume to max.

   Is the volume set to high?

   YES—Go to step 5.

   NO—Raise the auxiliary accessory volume is set to high. Make sure the audio unit volume is turned down before retesting. ■

5. Substitute a known-good auxiliary audio accessory and/or auxiliary stereo cable, and recheck.

   Does the auxiliary audio accessory operate properly?

   YES—Original auxiliary audio accessory or auxiliary stereo cable is faulty. ■

   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).

7. Remove the auxiliary jack assembly (see page 23-85), and check that the auxiliary jack assembly is properly connected.

   Is the auxiliary jack assembly connected properly?

   YES—
   - With navigation: go to step 8.
   - Without navigation: go to step 13.

   NO—Reconnect the connector, and recheck the function. ■

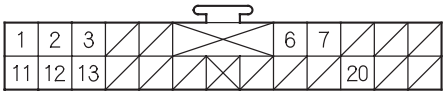
8. Disconnect auxiliary jack assembly 5P connector.

9. Disconnect navigation unit connector B (22P).

10. Check for continuity between body ground and navigation unit connector B (22P) according to the table.

Navigation unit connector	Wire color
B1	BRN
B3	BLU
B11	YEL
B12	GRN
B13	WHT

NAVIGAION UNIT CONNECTOR B (22P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire(s) between the navigation unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

NO—Go to step 11.

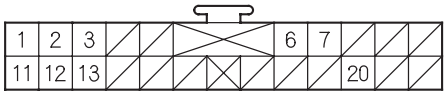
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11. Check for continuity between navigation unit connector B (22P) according to the table.

From terminal	To terminals
B1	B2*, B3, B11, B12, B13
B2*	B3, B11, B12, B13
B3	B11, B12, B13
B11	B12, B13
B12	B13

*: Shielded wire

NAVIGAION UNIT CONNECTOR B (22P)



Wire side of female terminals

Is there continuity?

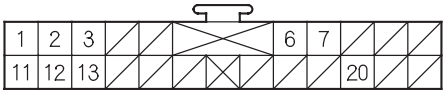
YES—Short in the wire(s) between the navigation unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

NO—Go to step 12.

12. Check for continuity between navigation unit connector B (22P) and auxiliary jack assembly 5P connector according to the table.

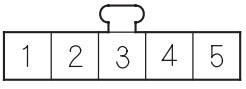
Navigation unit connector	Auxiliary jack assembly connector	Wire color
B1	3	BRN
B3	2	BLU
B11	4	YEL
B12	5	GRN
B13	1	WHT

NAVIGATION UNIT CONNECTOR B (22P)



Wire side of female terminals

AUXILIARY JACK ASSEMBLY 5P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good auxiliary jack assembly (see page 23-85), and recheck. If the symptom/indication goes away, replace the original auxiliary jack assembly. If the symptom/indication is still present, replace the navigation unit (see page 23-155). ■

NO—Open in the wire(s) between the navigation unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

(cont'd)

Symptom Troubleshooting (cont'd)

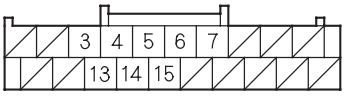
13. Disconnect the auxiliary jack assembly 5P connector.

14. Disconnect audio unit connector B (20P).

15. Check for continuity between body ground and audio unit connector B (20P) according to the table.

Audio unit connector	Wire color
B3	BRN
B5	BLU
B13	YEL
B14	GRN
B15	WHT

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire(s) between the audio unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

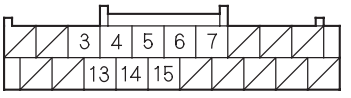
NO—Go to step 16.

16. Check for continuity between audio unit connector B (20P) according to the table.

From terminal	To terminals
B3	B4*, B5, B13, B14, B15
B4*	B5, B13, B14, B15
B5	B13, B14, B15
B13	B14, B15
B14	B15

*: Shielded wire

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

Is there continuity?

YES—Short in the wire(s) between the audio unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

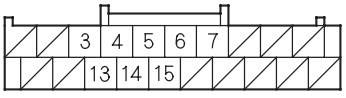
NO—Go to step 17.

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17. Check for continuity between audio unit connector B (20P) and auxiliary jack assembly 5P connector according to the table.

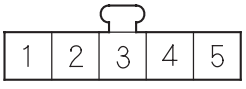
Audio unit connector	Auxiliary jack assembly connector	Wire color
B3	3	BRN
B5	2	BLU
B13	4	YEL
B14	5	GRN
B15	1	WHT

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

AUXILIARY JACK ASSEMBLY 5P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good auxiliary jack assembly (see page 23-85), and recheck. If the symptom/indication goes away, replace the original auxiliary jack assembly. If the symptom/indication is still present, replace the audio unit (see page 23-80). ■

NO—Open in the wire(s) between the audio unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

Audio system sound is weak or distorted (display is normal)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Check for sound in each mode (AM, FM, XM, and CD).

   Is there sound from the speakers, and is the sound quality normal in each mode?

   YES—Intermittent failure. The system is OK at this time. Check for loose connections at the navigation unit, audio unit, amplifier, and each speaker. ■

   NO—Speakers all work, sound quality is poor. ■

   - If the sound quality is poor only with the XM radio, or the XM radio does not function, go to poor or no sound with XM radio (see page 23-72).
   - If the sound quality is poor only with AM or FM radio, go to poor AM or FM radio reception or interference (see page 23-29).
   - If sound is poor in all modes, go to sound quality diagnosis (see page 23-74).

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Symptom Troubleshooting (cont'd)

Radio preset memory is lost

NOTE: If only the XM stations are lost, go to XM radio preset memory is lost (see page 23-71).

1. Set each of the radio station preset buttons.

   Do each of the buttons set properly?

   YES—Go to step 2.

   NO—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

2. Turn the ignition switch to LOCK (0) for 1 minute, then turn it back to ON (II).

3. Test the preset buttons for proper recall operation.

   Do the preset buttons recall the set radio stations?

   YES—System is normal at this time. Check the connections at the navigation unit or audio unit. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

Volume does not change

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Set the fader and balance positions to the center.

1. Listen for sound from the speakers.

   Is the sound normal?

   YES—Go to step 2.

   NO—Go to audio system sound is weak or distorted, or no sound is heard from speaker(s) (see page 23-39). ■

2. Operate the volume knob to see if the volume changes.

   Does the volume change?

   YES—Operation is normal. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

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Volume does not increase with speed (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Verify the SVC mode setting in the navigation unit sound set-up.

   Is the SVC set to off?

   YES—Change the setting to Mid and retest (see page 23-6). ■

   NO—Go to step 2.

2. Do the self-diagnostic function for the vehicle speed pulse indication (see page 23-23).

   Does the self-diagnostic function indicate a VSP signal?

   YES—Substitute a known-good navigation unit (see page 23-155), and retest. If the symptom/indication goes away, replace the original navigation unit. ■

   NO—Go to step 3.

3. Test-drive the vehicle at highway speeds, and monitor if the volume increases.

   Do the volume increase?

   YES—Intermittent failure, the system is OK at this time. ■

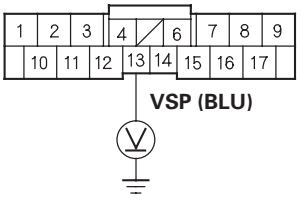
   NO—Go to step 4.

4. Remove the navigation unit (see page 23-155), and disconnect navigation unit connector A (17P).

   NOTE:
   - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
   - Remove the PC card before removing the navigation unit.

5. Drive the vehicle, and have an assistant measure voltage at navigation unit connector A (17P) terminal No. 13.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there a 0—5 V Pulse?

YES—Replace the navigation unit (see page 23-155). ■

NO—Repair open or shorts in the wire between navigation unit connector A (17P) terminal No. 13 and ECM/PCM connector A (44P) terminal No. 29. If no opens or shorts are found, Update the ECM/PCM (see page 11-227) if it does not have the latest software or substitute a known-good ECM/PCM (see page 11-228). ■

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Symptom Troubleshooting (cont'd)

Volume does not increase with speed (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Test-drive the vehicle at highway speeds, and monitor if the volume increases.

   Does the volume increase?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Go to step 2.

2. Verify the SVC mode setting in the audio unit sound set-up.

   Is the SVC set to off?

   YES—Change the setting to Mid, and retest (see page 23-6). ■

   NO—Go to step 3.

3. Do the self-diagnostic function for the vehicle speed pulse indication (see page 23-23).

   Does the self-diagnostic function indicate a VSP signal?

   YES—Substitute a known-good audio unit and retest. If the symptom/indication goes away, replace the original audio unit. ■

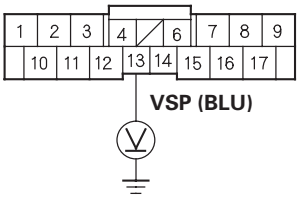
   NO—Go to step 4.

4. Remove the navigation unit (see page 23-80), and disconnect navigation unit connector A (17P).

   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.

5. Drive the vehicle, and have an assistant measure voltage at audio unit connector A (17P) terminal No. 13.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there a 0—5 V Pulse?

YES—Replace the audio unit (see page 23-80). ■

NO—Repair open or shorts in the wire between audio unit connector A (17P) terminal No. 13 and ECM/PCM connector A (44P) terminal No. 29. If no opens or shorts are found, Update the ECM/PCM (see page 11-227) if it does not have the latest software or substitute a known-good ECM/PCM (see page 11-228). ■

DYNOMITE -2009-

Volume is too high or too low when driving at freeway speeds

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Test-drive the vehicle at highway speeds, and monitor volume level.

   Is the volume level too high, or too low?

   YES—Go to step 2.

   NO—Intermittent failure, the system is OK at this time. ■

2. Change the SVC mode setting in sound set-up to Mid (see page 23-6).

   Is the volume level still too high, or too low?

   YES—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

   NO—Improper SVC setting for customers sound taste. ■

Radio tuner does not change stations

1. Check the audio information on the display panel.

   Does the audio information display properly?

   YES—Go to step 2.

   NO—Go to power switch will not turn on (see page 23-35). ■

2. Operate the tuning knob to see if the radio station changes.

   Does the radio station change?

   YES—Intermittent failure: the tuning knob is OK at this time. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

DYNOMITE -2009-

Symptom Troubleshooting (cont'd)

Navigation unit button illumination does not work (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Turn the combination lighting switch to the parking light position.
3. Check the illumination of the navigation unit buttons.

   Are the buttons illuminated?

   YES—Intermittent problem: the navigation unit is OK at this time. Check for loose or poor connections at navigation unit connector A (17P). ■

   NO—Go to step 4.
4. Check the illumination of several other buttons not related to the navigation system.

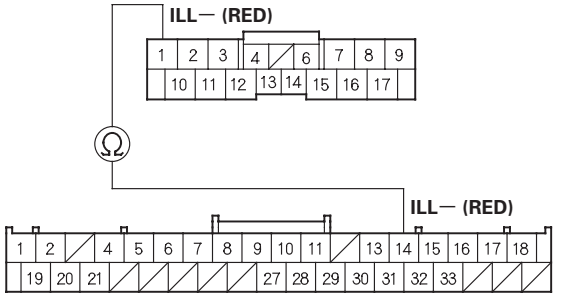
   Are the buttons illuminated?

   YES—Go to step 5.

   NO—Troubleshoot the interior lights. Start by checking the No. 14 (7.5 A) fuse in the under-dash fuse/relay box. If the fuse is OK, check for an open in the wire between the under-dash fuse/relay box and the navigation unit. ■
5. Turn the ignition switch to LOCK (0).
6. Disconnect navigation unit connector A (17P).

   NOTE:
   - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
   - Remove the PC card before removing the navigation unit.
7. Disconnect gauge control module (tach) 36P connector.
8. Check for continuity between navigation unit connector A (17P) terminal No. 1 and gauge control module (tach) 36P connector terminal No. 14.

NAVIGATION UNIT CONNECTOR A (17P)
Wire side of female terminals



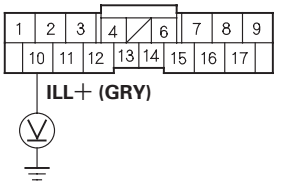
GAUGE CONTROL MODULE (TACH) 36P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire between the gauge control module and the navigation unit. ■
9. Turn the ignition switch to ON (II).
10. With the headlight switch still on, measure the voltage between navigation unit connector A (17P) terminal No. 10 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage?

YES—Check the connections at navigation unit connector A (17P). If all connections are OK, replace the navigation unit (see page 23-155). ■

NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

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Audio unit button illumination does not work (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Turn the combination lighting switch to the parking light position.
3. Check the illumination of the audio unit buttons.

   Are the buttons illuminated?

   YES—Intermittent problem: the audio unit is OK at this time. Check for loose or poor connections at the audio unit connector A (17P). ■

   NO—Go to step 4.
4. Check the illumination of several other buttons not related to the audio system.

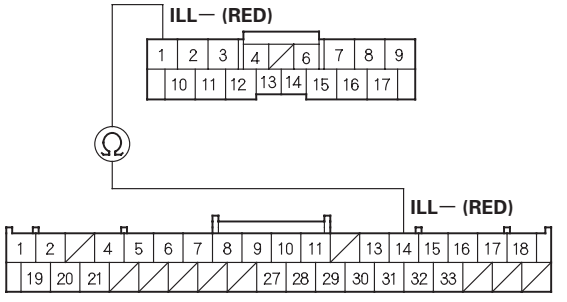
   Are the buttons illuminated?

   YES—Go to step 5.

   NO—Troubleshoot the interior lights. Start by checking the No. 14 (7.5 A) fuse in the under-dash fuse/relay box. If the fuse is OK, check for an open in the wire between the under-dash fuse/relay box and the audio unit. ■
5. Turn the ignition switch to LOCK (0).
6. Disconnect audio unit connector A (17P).

   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.
7. Disconnect gauge control module (tach) 36P connector.
8. Check for continuity between audio unit connector A (17P) terminal No. 1 and gauge control module (tach) 36P connector terminal No. 14.

AUDIO UNIT CONNECTOR A (17P)
Wire side of female terminals



GAUGE CONTROL MODULE (TACH) 36P CONNECTOR
Wire side of female terminals

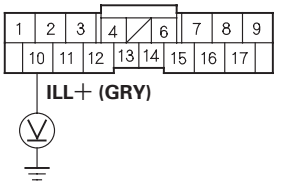
Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire between the gauge control module and the audio unit. ■

9. Turn the ignition switch to ON (II).
10. With the headlight switch still on, measure the voltage between audio unit connector A (17P) terminal No. 10 and body ground.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage?

YES—Check the connections at audio unit connector A (17P). If all the connections are OK, replace the audio unit (see page 23-80). ■

NO—Repair open in the wire between the under-dash fuse/relay box and the audio unit. ■

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Symptom Troubleshooting (cont'd)

Display does not dim or brighten with dimmer (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Turn the combination light switch ON and OFF to see if the symptom can be duplicated.

   Is it duplicated?

   YES—Go to step 3.

   NO—Operation is normal.
3. Turn the combination light switch to OFF.
4. Rotate the illumination control dial.

   Does the illumination dim and brighten normally as you rotate the dial?

   YES—Operation is normal.

   NO—Go to step 5.
5. Disconnect, and check audio unit connector A (17P) for a loose or a poor connection. ■

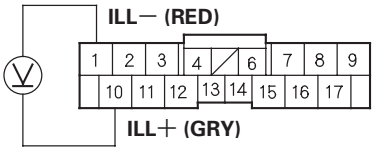
   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.

   Reconnect audio unit connector A (17P), and recheck the symptom; does it still appear?

   YES—Go to step 6.

   NO—Operation is normal. ■
6. Turn the ignition switch to LOCK (0).
7. Remove the audio unit (see page 23-80).
8. Turn the ignition switch to ON (II).
9. Measure the voltage between audio unit connector A (17P) terminals No. 1 and No. 10. Rotate the dash brightness controller buttons to see if the voltage changes.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Does the voltage change?

YES—Substitute a known-good audio unit (see page 23-80), and recheck. If the symptom/indication goes away, replace the original audio unit. If symptom is still present, substitute a known-good center panel display and recheck. If the symptom/indication goes away, replace the original center panel display (see page 23-80). ■

NO—Repair open in the wire between the under-dash fuse/relay box and the gauge control module. ■

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Audio disc does not load

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Disc labels should not be used in the navigation unit or audio unit. They may damage the player mechanism.
- Make sure the disc is compatible with the system (see the owner's manual for more information).

1. Insert a known-good disc to see if the symptom can be duplicated.

   Does the disc load?

   YES—Operation is normal. If the disc loads normally, but will not play, go to audio disc does not play (see page 23-62). ■

   NO—Go to step 2.

2. Insert another disc.

   Does the disc load?

   YES—The original disc is faulty. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

Audio disc does not eject

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Disc labels should not be used in the navigation unit or audio unit. They may damage the player mechanism.

1. Turn on the audio system.

   Does the system turn on?

   YES—Go to step 2.

   NO—Go to power switch will not turn ON (see page 23-35). ■

2. Check to see if the disc ejects correctly with no binding by pushing the EJECT button.

   Does the disc eject normally?

   YES—Operation is normal. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

Symptom Troubleshooting (cont'd)

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Audio disc does not play

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Try loading a known-good disc.

   Does the disc load?

   YES—Go to step 2.

   NO—Go to audio disc does not load (see page 23-61). ■

2. Insert the audio diagnostic CD (T/N: 07AAZ-SDBA100) in the navigation unit or audio unit.

   Does the disc play?

   YES—The original disc is faulty, or has an unreadable format. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

Special Tools Required
- Diagnostics CD 07AAZ-SDBA100
- Skip Test CD 07AAZ-SDBA200 (ABEX-TCD-725B)
- Skip Test CD 07AAZ-SDBA300 (ABEX-TCD-721)

Audio disc skips

1. Confirm the vehicles tires are properly inflated.

2. Check the clients CD for scratches, fingerprints, and marks.

   NOTE: Do this following test with audio unit bass and treble set to clients listening performance. When comparing to known-good vehicles, comparison should be performed on same model and trim level.

3. Test drive to identify when the CD skips. The diagnostics CD (T/N: 07AAZ-SDBA100) can be used if clients CD is not available. Use tracks 10 to 12.

   Does the CD skip?

   YES—Go to step 4.

   NO—Operation is normal. ■

4. Compare the clients CD that skips in a known-good vehicle under the same conditions.

   Does the CD skip in the known-good vehicle under the same conditions?

   YES—Operation is normal. ■

   NO—Go to step 5.

   NOTE: Do this following test with vehicle parked and engine running.

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5. Insert the skip test CD (T/N: 07AAZ-SDBA300) (ABEX-TCD-721). Play tracks 2 to 11 and note the track number(s) where the CD starts skipping. Do the same test on a known-good vehicle.

   Does the CD skip on the same track number(s) as the known-good vehicle?

   YES—Operation is normal. ■

   NO—Go to step 6.

6. Insert the skip test CD (T/N: 07AAZ-SDBA200) (ABEX-TCD-725B), and play tracks 7 to 11 and tracks 13 to 15 and note the track number(s) where the CD starts skipping. Perform the same test on a known-good vehicle.

   Does the CD skip on same track number(s) as the known-good vehicle?

   YES—Operation is normal. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-155). ■
   - Without navigation: Replace the audio unit (see page 23-80). ■

Audio remote switch does not work properly (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Check the audio unit operation.

   Is the audio unit operation OK?

   YES—Go to step 2.

   NO—Replace the navigation unit (see page 23-155). ■

2. Test the audio remote switch (see page 23-86).

   Is the audio remote switch OK?

   YES—Go to step 3.

   NO—Replace the audio remote switch (see page 23-86). ■

3. Remove the navigation unit (see page 23-155).

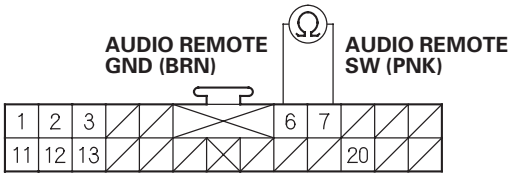
(cont'd)

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Symptom Troubleshooting (cont'd)

4. Measure the resistance between navigation unit connector B (22P) terminals No. 6 and No. 7 as specified in the table.

NAVIGAION UNIT CONNECTOR B (22P)



Wire side of female terminals

AUDIO REMOTE SWITCH TABLE

Button held down	VOL DOWN	VOL UP	CH (−)	CH (+)	MODE	No button pressed
Resistance	about 100 Ω	about 357 Ω	about 775 Ω	about 1.7 kΩ	about 3.7 kΩ	about 10 kΩ

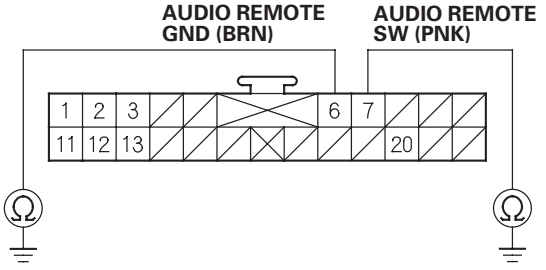
Is the resistance OK?

YES—Go to step 5.

NO—Repair open or high resistance in the circuit between the navigation unit and the audio remote switch. If the wires are OK, replace the cable reel (see page 24-200). ■

5. Check for continuity between navigation unit connector B (22P) terminals No. 6 and No. 7 and body ground individually.

NAVIGAION UNIT CONNECTOR B (22P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the circuit between the navigation unit and the audio remote switch. If the wires are OK, replace the cable reel (see page 24-200). ■

NO—Replace the navigation unit (see page 23-155). ■

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Audio remote switch does not work properly (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Check the audio unit operation.

   Is the audio unit operation OK?

   YES—Go to step 2.

   NO—Replace the audio unit (see page 23-80). ■

2. Test the audio remote switch (see page 23-86).

   Is the audio remote switch OK?

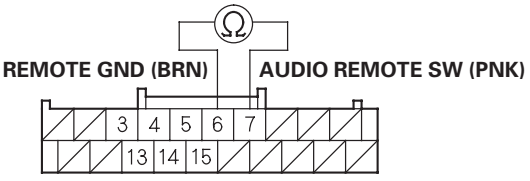
   YES—Go to step 3.

   NO—Replace the audio remote switch (see page 23-86). ■

3. Remove the audio unit (see page 23-80).

4. Measure the resistance between audio unit connector B (20P) terminals No. 6 and No. 7 as specified in the table.

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

AUDIO REMOTE SWITCH TABLE

Button held down	VOL DOWN	VOL UP	CH (−)	CH (+)	MODE	No button pressed
Resistance	about 100 Ω	about 357 Ω	about 775 Ω	about 1.7 kΩ	about 3.7 kΩ	about 10 kΩ

Is the resistance OK?

YES—Go to step 5.

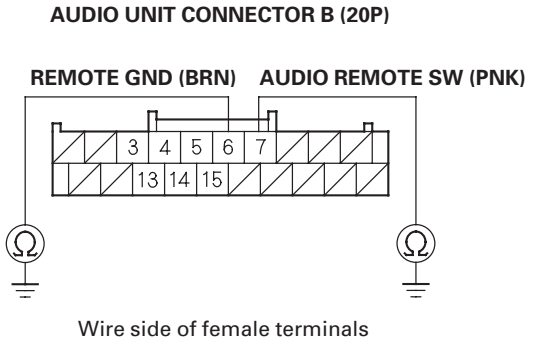
NO—Repair open or high resistance in the circuit between the audio unit and the audio remote switch. If the wires are OK, replace the cable reel (see page 24-200). ■

(cont'd)

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Symptom Troubleshooting (cont'd)

5. Check for continuity between audio unit connector B (20P) terminals No. 6 and No. 7 and body ground individually.



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the circuit between audio unit and the audio remote switch. If the wires are OK, replace the cable reel (see page 24-200). ■

NO—Replace the audio unit (see page 23-80). ■

Audio disc cannot be inserted and/or ejected (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Disc labels should not be used in the navigation unit or audio unit. They may damage the player mechanism.
- Make sure the disc is compatible with the system (see the owner's manual for more information).

1. Press the OPEN/CLOSE button to open the navigation display.

2. Try inserting an audio CD.

   Does the player accept the CD?

   YES—The system is OK at this time. ■

   NO—Go to step 3.

3. Press the CD eject button.

   Does the player eject the CD?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-155). ■

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PC card will not play/card icon on audio screen cannot be selected (with navigation)

Unfortunately there are no error messages, and no diagnostics for the PC card. There are many reasons why a card won't play audio files in the audio unit.

- The card may not be fully inserted into the slot. Eject the card, and inspect for warping or damage to the edge connector. Never use excessive force to insert a card. This can result in damage to the pins in the rear of the slot.
- The client's card may contain audio files that are not recognized by the system. Only MP3, and WMA music files are played.
- The flash card type may not be accepted by the system. Only Compact Flash and ATA cards have been tested.
- The card's PCMCIA adaptor may be preventing a known-good card from playing. New PCMCIA adaptors are constantly being released, and have not been tested.
- The card's capacity may exceed 1 GB. Only cards with capacities of up to 1 GB (1000 MB) have been tested.
- There may not be any files on the card. Some cards have write protection, make sure it is turned off before putting files on the card.
- Although flash memory chips are reliable, occasionally they develop bad sectors or other formatting errors that prevents them from playing. The customer should re-format the card using the FAT, or FAT32 format.
- The card may have been damaged by heat. Suggest that the client remove their card when exiting the vehicle.
- The client may have formatted the card using the format NTFS. Only the formats FAT, and FAT32 are accepted by the system.
- Hard Disc Drive (HDD) cards may not work properly in the system and can overheat and quit functioning, particularly in a hot vehicle. They are not recommended.
- The filing structure of the card may exceed the specification of 8 folder levels deep, 99 folders maximum, and 999 total tracks maximum. If any of these limitations is exceeded, the system may not properly display or play the tracks.

NOTE: A delay when first inserting a card is normal. The system is reading the File Tag information for album names, artist, and song titles and there is no hour glass, The delay length depends on the number of tracks, and the complexity of the folder structure. See the audio section glossary for an explanation of the terms used above.

Symptom Troubleshooting (cont'd)

Error code: XM NO SIGNAL or XM ANTENNA is displayed (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Check XM radio reception in an open area. Poor reception/interference can be caused by tall buildings, mountains, or high-voltage power lines.

1. Check that the XM receiver connectors properly connected.

   Is the connector connected?

   YES—Go to step 2.

   NO—Reconnect the connector. If the error message does not go away, go to step 2.

2. Check the connector at the XM antenna and XM antenna lead.

   Is the connector connected?

   YES—Go to step 3.

   NO—Reconnect the connector. If the error message does not go away, go to step 3.

3. Substitute known-good XM antenna (see page 23-88).

   Is the error message gone?

   YES—Replace the XM antenna (see page 23-88). ■

   NO—Go to step 4.

4. Substitute known-good XM receiver (see page 23-82).

   Is the error message gone?

   YES—Replace the XM receiver (see page 23-82). ■

   NO—Replace the XM antenna lead. ■

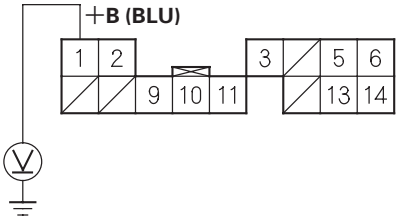
XM radio display is blank and no station information is displayed (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Disconnect XM receiver connector A (14P).

2. Measure the voltage between XM receiver connector A (14P) terminal No. 1 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 3.

NO—Repair open in the wire between the XM receiver and the navigation unit connector. ■

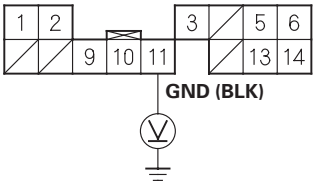
3. Reconnect XM receiver connector A (14P).

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4. Turn the ignition switch to ON (II).

5. Measure the voltage between XM receiver connector A (14P) terminal No. 11 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there less than 0.1 V?

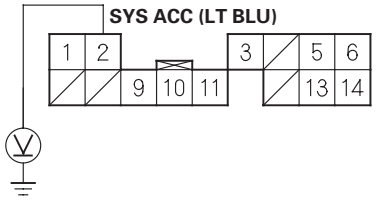
YES—Go to step 6.

NO—Repair open in the wire between the XM receiver and the navigation unit. ■

6. Turn the ignition switch to LOCK (0).

7. Measure the voltage between XM receiver connector A (14P) terminal No. 2 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there 10 V or more present?

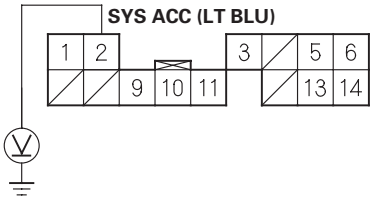
YES—Go to step 8.

NO—Substitute a known- good XM receiver (see page 23-82), and recheck. If 10 V or more are present, replace the original XM receiver. ■

8. Turn the ignition switch to ON (II).

9. Measure the voltage between XM receiver connector A (14P) terminal No. 2 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there less than 0.5 V?

YES—Go to step 10.

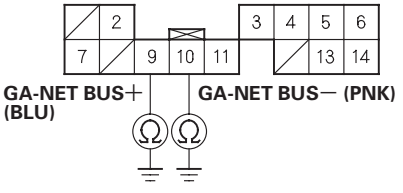
NO—Substitute a known- good navigation unit (see page 23-155), and recheck. If 0.5 V or less are present, replace the original navigation unit.

10. Turn the ignition switch to LOCK (0).

11. Disconnect navigation unit connector E (14P), and XM receiver connector A (14P).

12. Check for continuity between navigation unit connector E (14P) terminal No. 9 and No. 10 and body ground individually.

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 13.

NO—Short to body ground in the wire between the XM receiver and the navigation unit. Replace the affected shielded harness. ■

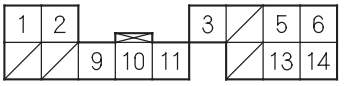
(cont'd)

Symptom Troubleshooting (cont'd)

13. Check for continuity between XM receiver connector A (14P) according to the table.

From terminal	To terminals
A9 (BRN)	A9 (BLU), A10 (PNK)
A9 (BLU)	A10 (PNK)

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity between any of the terminals?

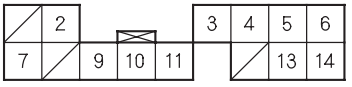
YES—Short in the wire(s) between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

NO—Go to step 14.

14. Check for continuity between navigation unit connector E (14P) and XM receiver connector A (14P) according to the table.

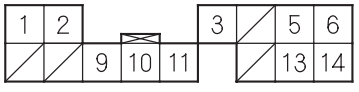
Navigation unit connector	XM receiver connector	Wire color
E9	A9	BLU
E10	A10	PNK

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good XM receiver (see page 23-82), then reconnect all connectors and recheck. If the symptom/indication goes away, replace the original XM receiver. If symptom/indication is still present, replace the navigation unit (see page 23-155). ■

NO—Open in the wire(s) between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

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XM radio preset memory is lost (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- If you can only tune to channel 000, 001, 174, and 247, make sure the navigation unit is set to channel mode (see owners manual), if it is set to channel mode, call XM Satellite Radio customer support, and check the account activation status.

1. Turn the ignition switch to ON (II).
2. Turn on the navigation unit, and set each of the XM radio channel preset buttons.

   Do each of the XM radio channel preset buttons set properly?

   YES—Go to step 3.

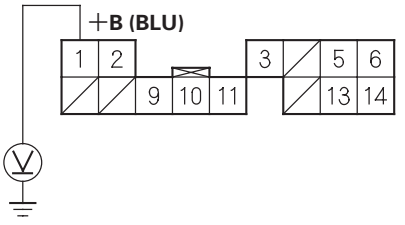
   NO—Go to step 7.
3. Turn the ignition switch to LOCK (0) for 1 minute, then turn it back to ON (II).
4. Test all of the XM radio channel preset buttons for proper recall operation.

   Do the preset buttons recall the set radio stations?

   YES—System is normal at this time. Check connections at the navigation unit. ■

   NO—Go to step 5.
5. Turn the ignition switch to LOCK (0).
6. Disconnect XM receiver connector A (14P).
7. Measure the voltage between XM receiver connector A (14P) terminal No. 1 and body ground.

XM RECEIVER CONNECTOR A (14P)



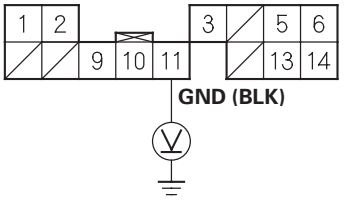
Wire side of female terminals

Is there battery voltage?

YES—Go to step 8. ■

NO—Repair open in the wire between the navigation unit and the XM receiver. ■
8. Reconnect XM receiver connector A (14P).
9. Measure the voltage between XM receiver connector A (14P) terminal No. 11 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there less than 0.1 V?

YES—Substitute a known-good navigation unit (see page 23-155), and recheck. If the symptom/indication goes away, replace the navigation unit. ■

NO—Repair open in the wire between the XM receiver connector and the navigation unit. ■

Symptom Troubleshooting (cont'd)

Poor or no sound with XM radio (Audio unit does display XM channels) (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the XM radio reception in an open area. Poor reception/interference can be caused by nearby tall buildings, mountains, or high-voltage power lines.
- Check the connectors for poor connections or loose terminals.
- If you can only tune to channel 000, 001, 174, and 247, make sure the navigation unit is set to channel mode (see owners manual), if it is set to channel mode, call XM Satellite Radio customer support, and check the account activation status.

1. Turn the ignition switch to ON (II).
2. Turn on the navigation unit and select XM radio.
3. Check for an error message on the display.

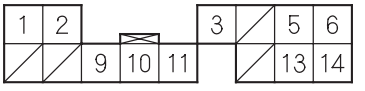
   Are there any messages displayed?

   YES—Go to error code list (see page 23-27). ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Disconnect navigation unit connector E (14P) and XM receiver connector A (14P).
6. Check for continuity between XM receiver connector A (14P) and body ground according to the table.

XM receiver connector	Wire color
A5	WHT
A6	RED
A13	BLK
A14	GRN

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire(s) between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

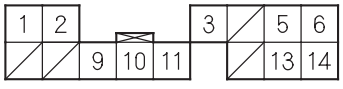
NO—Go to step 7.

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7. Check for continuity between terminals of XM receiver connector A (14P) according to the table.

From terminal	To terminals
A4 (GRY)	A5 (WHT), A6 (RED), A13 (BLK), A14 (GRN)
A5 (WHT)	A6 (RED), A13 (BLK), A14 (GRN)
A6 (RED)	A13 (BLK), A14 (GRN)
A13 (BLK)	A14 (GRN)

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity between any of the terminals?

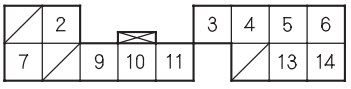
YES—Short in the wires between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

NO—Go to step 8.

8. Check for continuity between navigation unit connector E (14P) and XM receiver connector A (14P) according to the table.

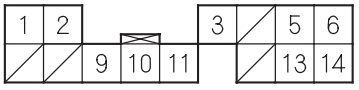
Navigation unit connector	XM receiver connector	Wire color
E5	A5	WHT
E6	A6	RED
E13	A13	BLK
E14	A14	GRN

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good XM receiver (see page 23-82), then reconnect all of the connectors, and recheck. If the symptom/indication goes away, replace the original XM receiver. If the symptom/indication is still present, replace the navigation unit (see page 23-155). ■

NO—Open in the wire(s) between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

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Sound Quality Diagnosis

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Use the following tests to check sound quality.

NOTE: Before beginning the following tests, write down the client's bass, treble, fader and balance settings, and then set them to their center positions for testing.

Left/Right Channel ID

Do this test to confirm proper channel routing.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Play track No. 1 (left, both, right channel ID) at a normal, or slightly higher than normal, volume level.
3. The voice should be audible only from the channel or channels when indicated.
   - If the channel ID is correct for each side, go to the phase test.
   - If the channel ID is not correct, check for;
     – Shorted speaker wire
     – Faulty amplifier (Type S model)
     – Faulty navigation unit
     – Faulty audio unit

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Phase Test

Do this test to confirm proper speaker phasing.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Play track No. 2 (phase) at a normal, or slightly higher than normal, volume level.
3. The voice should sound centered and focused when it is in-phase.
4. The voice should sound diffused, and have less bass when it is out of phase.
   - If the voice changes from in-phase to out of phase as indicated by the prompt, the phasing is correct. Go to electrical noise test.
   - If the voice always sounds out of phase, phasing is not correct. Check for;
     – Crossed speaker wires
     – Faulty amplifier (Type S model)
     – Faulty navigation unit
     – Faulty audio unit

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Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Electrical Noise Test

Do this test to check for electrical noise being induced into the audio system.

NOTE: Electrical noise may be caused by outside sources that cannot be handled by the audio system. Make sure you remove any cell phones and/or turn off any aftermarket device before beginning this test.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Play track No. 4 (digital zero) at a normal, or slightly higher than normal, volume level.
3. Operate any electrical device that may create electrical noise in the audio system, including starting the engine.
4. Play track No. 5 (near digital zero) at a normal, or slightly higher than normal, volume level.
5. Operate any electrical device that may create electrical noise in the audio system, including starting the engine.
6. Play track No. 6 (SNR) at a normal, or slightly higher than normal, volume level.
7. Operate any electrical device that may create electrical noise in the audio system, including starting the engine.

   - If no abnormal noise is heard, go to individual speaker test.
   - If the noise is present only during the SNR track, replace the navigation unit or audio unit.
   - If the noise is heard during the digital zero or near digital zero track, check for;
     – Poor ground for the audio unit, amplifier, engine or battery cable
     – Pinched or shorted speaker or amplifier wire
     – Faulty amplifier (Type S model)
     – Faulty navigation unit
     – Faulty audio unit
     – Other faulty components causing excessive electrical noise (ignition coils, alternator, door lock actuators, etc.). Disconnect any suspect components, and then replay the tracks that were originally noisy. If the noise is gone, check the component's circuit and the component.

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Sound Quality Diagnosis (cont'd)

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Individual Speaker Test

Do this test to identify a faulty speaker.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Play track No. 30 (steady 300 Hz tone) at a normal, or slightly higher than normal, volume level.
3. Listen to each speaker for poor sound compared to the other speakers. Use the audio unit's fader and balance settings to help isolate the channel with the problem.
   - If the sound quality produced by a specific speaker is poor, substitute it with a known-good speaker. If the poor sound quality continues, go to the sound balance test.
   - If the sound quality is OK, go to the sound balance test.

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Sound Balance Test

Perform this test to identify a faulty channel or speaker.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Confirm the bass and treble are set to the center positions.
3. Play track No. 3 (pink noise) at a normal, or slightly higher then normal, volume level.
4. A static type sound should be heard through all speakers.
5. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit of a known-good vehicle.
6. Set the bass and treble to the center position.
7. Play track No. 3 (pink noise) all the same level as was played in step 3.
8. Compare the sounds made by the two vehicles.
   - If the noise sounds made by the two vehicles are very similar, go to the Frequency Sweep Test (see page 23-77).
   - If the sound does not have as much bass, check the subwoofer and circuit.
   - If the sound does not have enough hiss, check the tweeters and their circuits.

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Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Frequency sweep

Do this test to find rattles or reverberation that may cause a perception of poor sound quality.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.

2. Play track No. 13 (sweep from 500 Hz to 35 Hz) at a normal, or slightly higher than normal, volume level.

3. Listen to each speaker for poor sound quality or reverberations caused by specific frequencies. Use the voice-over to estimate the frequency that causes the vibration. Use the audio unit's fader and balance settings to help isolate the channel with the problem.

   - If vibrations or poor sound quality are heard, go to step 4.
   - If no vibrations or poor sound quality are heard, go to sound judging.

4. Choose the appropriate track from No. 14 to 25 (small range frequency sweep) or 26 to 53 (single frequencies) to recreate the frequency that caused the poor sound quality or vibration located in step 3: this aids in diagnosis of the cause.

   NOTE: When you get to the track that recreates the problem, select the repeat function on the navigation unit or audio unit, this will help you isolate the cause.

5. Replace or insulate the source of the vibrations or, if the speaker is the source of the poor sound quality, replace it.

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Sound judging

- Do this test to compare overall sound quality, imaging, and dynamics between the customer's vehicle and a known-good vehicle. Only use a vehicle of the same model and trim level for this test.
- Make sure the vehicle is using only OEM speakers.

1. In the client's vehicle, set the bass, treble, fader, and balance settings to the client's normal settings that were written down before beginning testing.

2. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.

3. Play tracks No. 7 to 12 (sound quality, midland, dynamics, and imaging demonstration tracks) at a normal, or slightly higher than normal, volume level. Write down the volume setting being used.

4. Listen to areas of the track that stand out as being either very clear, or poorer than other areas of the track.

5. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit of a known-good vehicle.

6. Play the tracks at the same volume level and the same bass, treble, balance, and fader settings as used in step 3 in the client's vehicle.

7. Listen to the same area of the track that stood out as being either very clear or poorer than other areas of the track.

(cont'd)

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Sound Quality Diagnosis (cont'd)

8. Compare the client's vehicle's sound quality results to the known-good vehicle's results.

   - If the sound quality in the customer's vehicle is comparable to the sound quality in the known-good vehicle, then the client's vehicle is operating as designed.
   - If the sound quality is not comparable, check these items in order.
     – Loose or improperly installed speakers or other hardware that may become excited by the vibrations generated by the speakers
     – Poor power or ground to the stereo amplifier (Type S model)
     – Damaged speaker(s)
     – Faulty amplifier (Type S model)
     – Faulty navigation unit
     – Faulty audio unit

Seek Stop Test

Do this test to check the performance of the audio unit's AM and FM reception. Refer to symptom troubleshooting: audio sound weak or distorted, or no sound is heard from speakers (display is normal) (see page 23-39) before continuing with this test.

NOTE:
- Window tint, aftermarket theft-recovery devices and other aftermarket accessories may reduce radio reception.
- Changes in cloud cover and other atmosphere conditions will affect the ability of the navigation unit or audio unit to receive radio signals.

1. Park the client's vehicle in an open area away from buildings or other obstructions.
2. Park a known-good vehicle (same year, model, and trim level) next to the client's vehicle, facing the same direction.
3. Start the engine in the client's vehicle, and turn on the radio.
4. Set the FM receiver to 87.7 MHz.
5. Press the Seek + button and record the first station that the navigation unit or audio unit locks onto.
6. Press the Seek + button repeatedly, and write down each station that the navigation unit or audio unit locks onto until the station recorded in step 5 is reached again.
7. Set the AM receiver to 530 kHz.
8. Press the Seek + button, and record the first station that the navigation unit or audio unit locks on to.
9. Press the Seek + button repeatedly, and write down each station that the navigation unit or audio unit locks onto until the station recorded in step 8 is reached again.

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10. Turn the ignition switch to LOCK (0).

11. Start the engine in the known-good vehicle, and then perform steps 4 thru 10 on the known-good vehicle.

12. Compare the number of stations received in steps 6 and 9 in the client's vehicle with the number of stations received in the known-good vehicle.

    - If the number of stations received is the same, or within 10 %, the audio unit's tuner performance is OK. The problem may be atmospheric conditions, multi path interference, or other obstructions to the radio signal.
    - If the client's vehicle receives fewer stations by at least 10 %, go to step 2 of poor AM or FM radio reception of interference (see page 23-29).

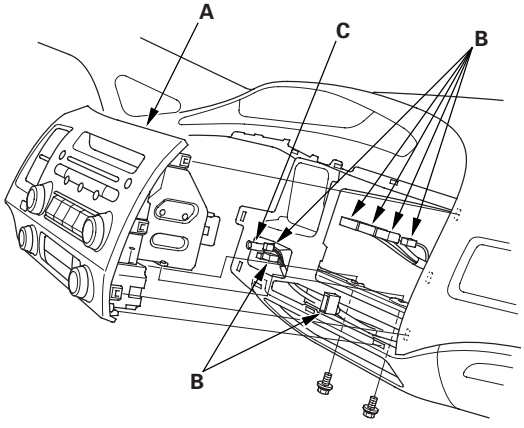
Audio Unit Removal/Installation

Without navigation 6 CD type

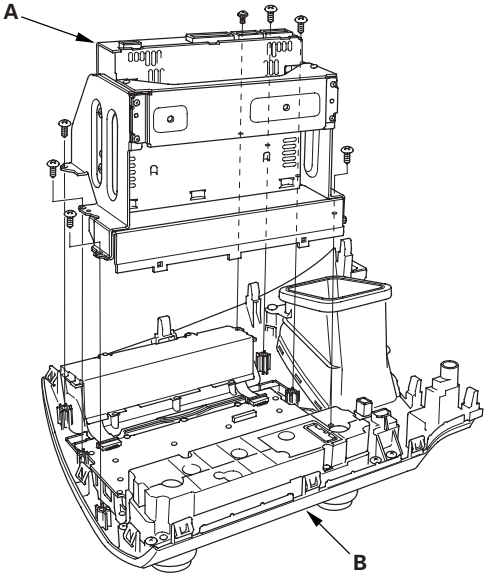
SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the dashboard and related parts.
- Lay a workshop towel under the parts when working on them to protect the face panel from scratches or other damage.
- Do not work in a dusty or dirty place.
- Discharge static electricity from your body before and during the work.
- Do not touch the circuit board(s) with your bare hands.
- Do not work with dirty hands.
- Be careful not to fold the flat plate cable.
- Do not touch the terminal connector of the flat plate cable with your bare hands. (If you have touched it, wipe it off thoroughly.)
- Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.
- If you are replacing the audio unit, write down the sudio presets (if possible), and enter them into the new audio unit.

1. Remove the meter inner visor (see page 20-100).
2. Remove the center pocket hole lid and the bolts, then pull out the center panel (A).

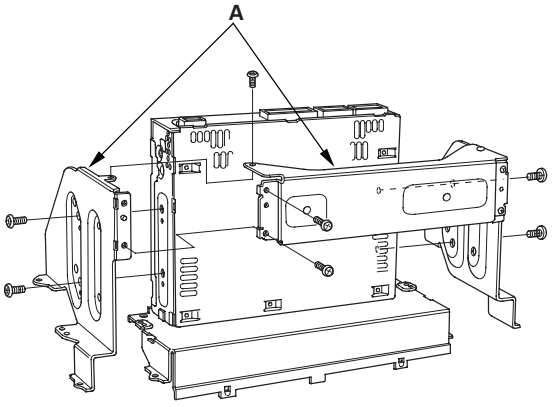


3. Disconnect the connectors (B), and the air hose (C) then remove the center panel.
4. Remove the screws, and the audio unit (A) from the center panel display (B).



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5. Remove the screws and the brackets (A).



6. Install the audio unit in the reverse order of removal, and make sure all connectors and antenna lead are secure.

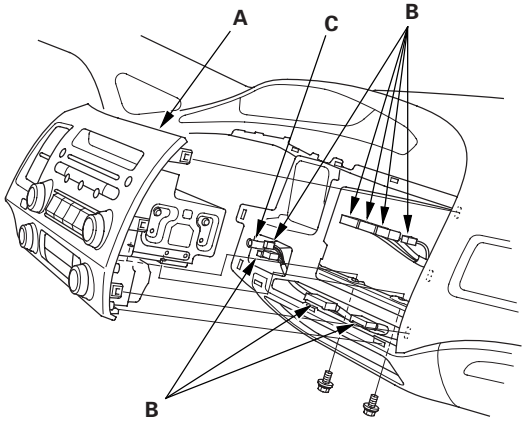
Without navigation 1 CD type

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the dashboard and related parts.
- Lay a workshop towel under the parts when working on them to protect the face panel from scratches or other damage.
- Do not work in a dusty or dirty place.
- Discharge static electricity from your body before and during the work.
- Do not touch the circuit board(s) with your bare hands.
- Do not work with dirty hands.
- Be careful not to fold the flat plate cable.
- Do not touch the terminal connector of the flat plate cable with your bare hands. (If you have touched it, wipe it off thoroughly.)
- Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.
- If you are replacing the audio unit, write down the sudio presets (if possible), and enter them into the new audio unit.

1. Remove the meter inner visor (see page 20-100).

2. Remove the center pocket hole lid and bolts, then pull out the center panel (A).

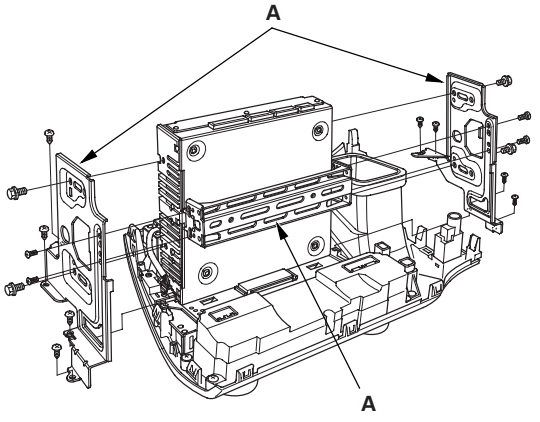


3. Disconnect the connectors (B) and the air hose (C), then remove the center panel.

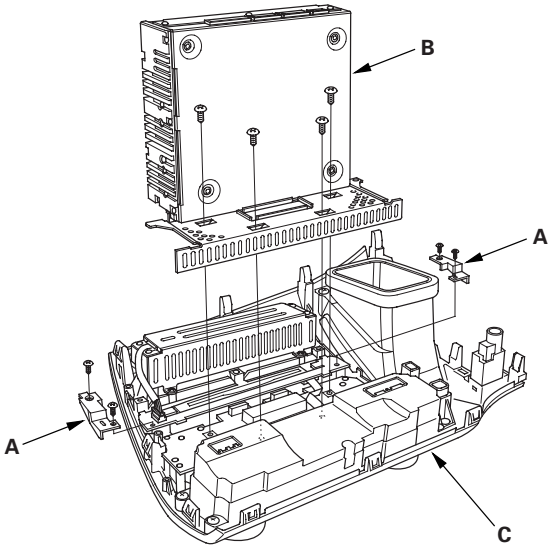
(cont'd)

Audio Unit Removal/Installation (cont'd)

4. Remove the bolts, screws and the brackets (A).



5. Remove the screws, rear covers (A) and the audio unit (B) from the center panel display (C).



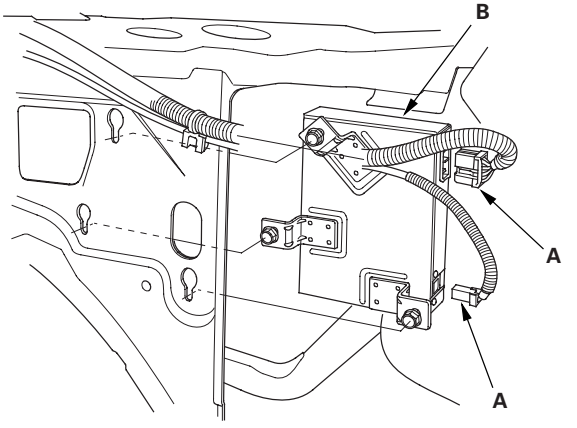
6. Install the audio unit in the reverse order of removal, and make sure all connectors and antenna lead are secure.

XM Receiver Removal/Installation

'08 model with navigation

1. Open the trunk lid and remove the right trunk side trim panel (see page 20-82).

2. Disconnect the connectors (A) from the XM receiver (B).



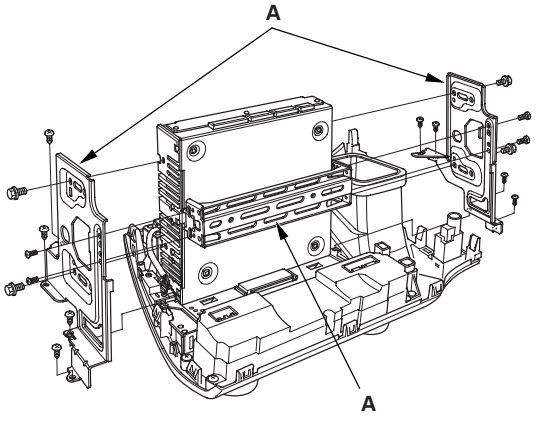
3. Loosen the three bolts, and remove the XM receiver.

4. Install the XM receiver in the reverse order of removal.

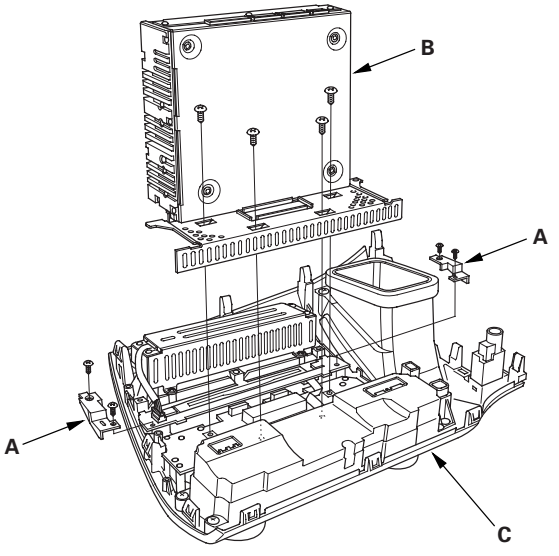
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Audio Unit Removal/Installation (cont'd)

4. Remove the bolts, screws and the brackets (A).



5. Remove the screws, rear covers (A) and the audio unit (B) from the center panel display (C).



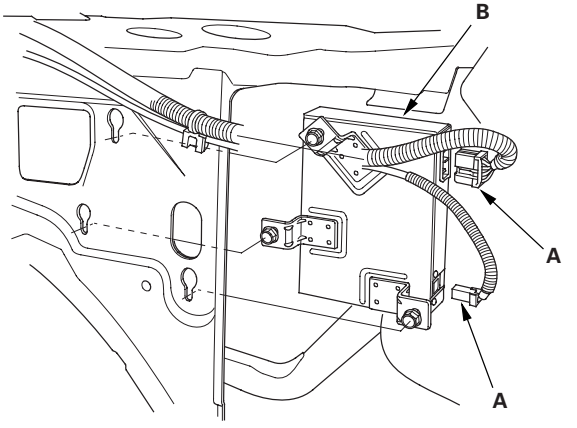
6. Install the audio unit in the reverse order of removal, and make sure all connectors and antenna lead are secure.

XM Receiver Removal/Installation

'08 model with navigation

1. Open the trunk lid and remove the right trunk side trim panel (see page 20-82).

2. Disconnect the connectors (A) from the XM receiver (B).



3. Loosen the three bolts, and remove the XM receiver.

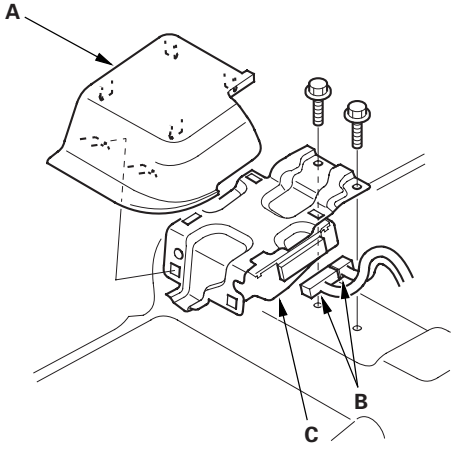
4. Install the XM receiver in the reverse order of removal.

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Stereo Amplifier Removal/ Installation

Type S model

1. Slide the driver's front seat forward fully.
2. Remove the amp cover (A), then disconnect the connectors (B).

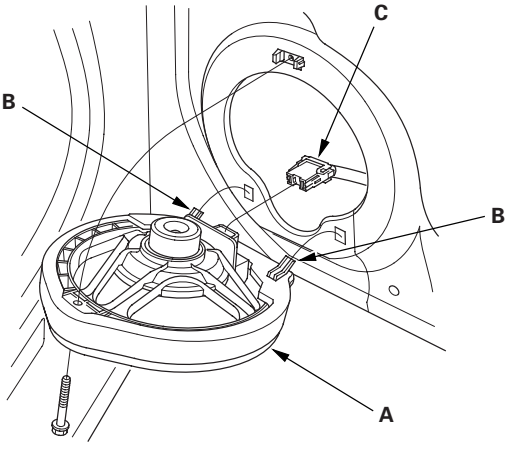


3. Remove the mounting bolts, then remove the stereo amplifier (C).
4. Install the stereo amplifier in the reverse order of removal.

Speaker Replacement

Front Door Speaker

1. Remove the front door panel (see page 20-7).
2. Remove the screw. Then lift the speaker (A) straight up to release the lower clips (B).



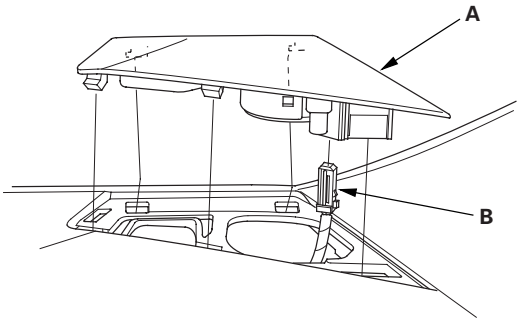
3. Disconnect the 2P connector (C), and remove the speaker.
4. Install the speaker in the reverse order of removal.

(cont'd)

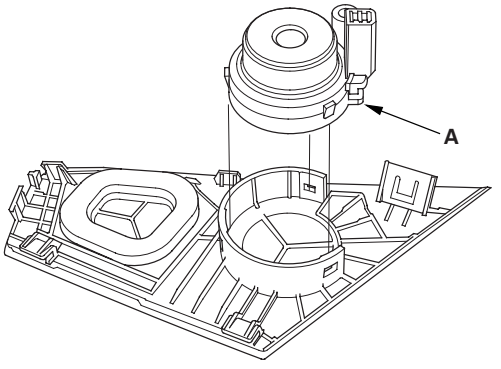
Speaker Replacement (cont'd)

Tweeter

1. Carefully pry the tweeter grille (A) out of the dashboard. Be careful not to damage the tweeter grille and the dashboard.



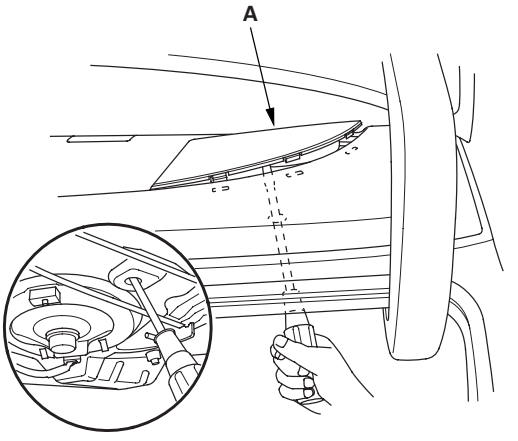
2. Disconnect the 2P connector (B) from the tweeter.
3. Remove the tweeter (A) from the speaker grille.



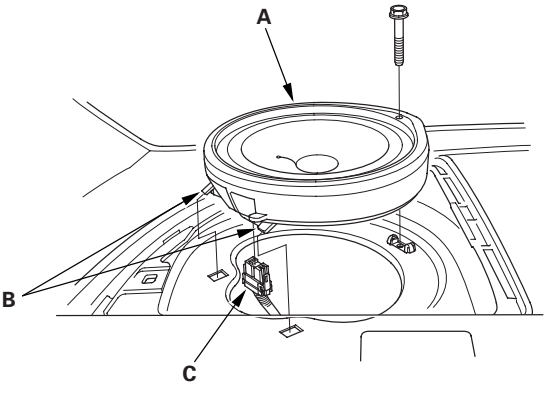
4. Install the tweeter in the reverse order of removal.

Rear Speaker

1. Remove the rear speaker grille (A).



2. Remove the screw. Then lift the speaker (A) straight up to release the clips (B).



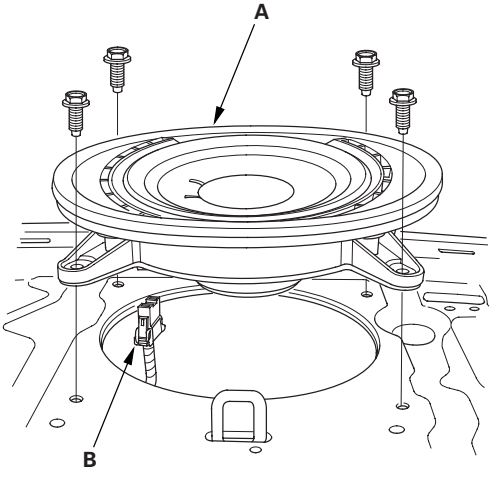
3. Disconnect the 2P connector (C), and remove the speaker.
4. Install the speaker in the reverse order of removal.

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Subwoofer (Type S model)

1. Remove the rear tray (see page 20-78).

2. Remove the four mounting bolts from the subwoofer (A).



3. Disconnect the 2P connector (B), and remove the subwoofer.

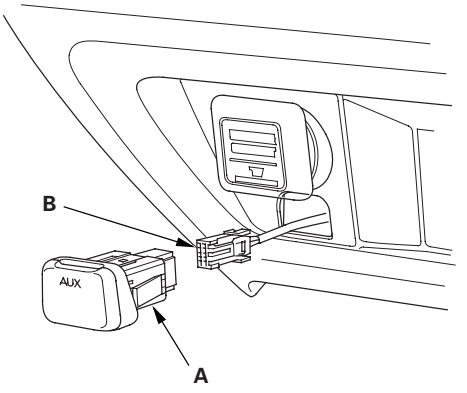
4. Install the subwoofer in the reverse order of removal.

Auxiliary Jack Assembly Replacement

'07-08 models

1. With navigation: Remove the navigation unit (see page 23-155).
   Without navigation: Remove the audio unit (see page 23-80).

2. Carefully pull out the auxiliary jack assembly (A), then disconnect the 5P connector (B).



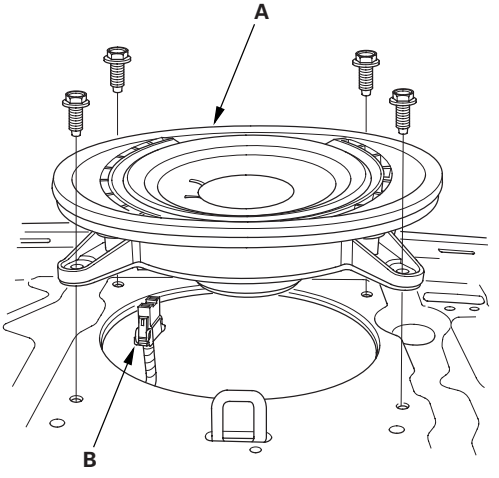
3. Install the auxiliary jack assembly in the reverse order of removal.

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Subwoofer (Type S model)

1. Remove the rear tray (see page 20-78).

2. Remove the four mounting bolts from the subwoofer (A).



3. Disconnect the 2P connector (B), and remove the subwoofer.

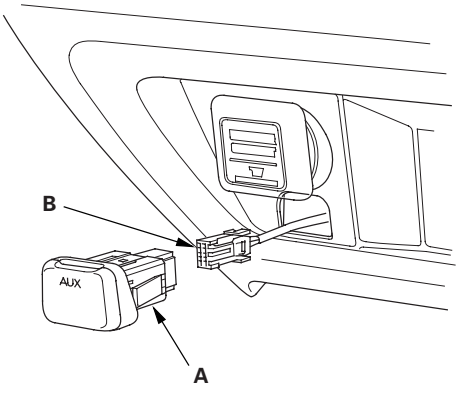
4. Install the subwoofer in the reverse order of removal.

Auxiliary Jack Assembly Replacement

'07-08 models

1. With navigation: Remove the navigation unit (see page 23-155).
   Without navigation: Remove the audio unit (see page 23-80).

2. Carefully pull out the auxiliary jack assembly (A), then disconnect the 5P connector (B).

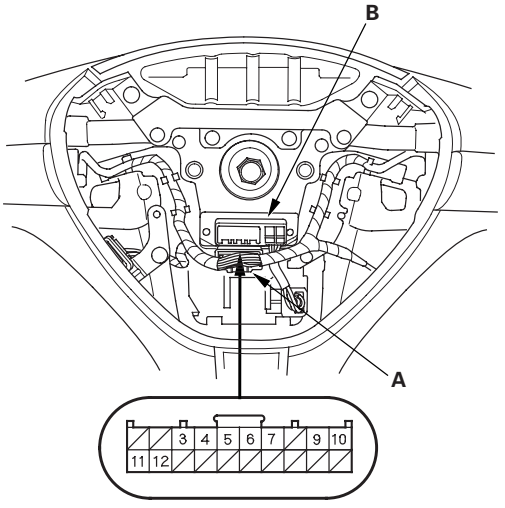


3. Install the auxiliary jack assembly in the reverse order of removal.

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Audio Remote Switch Test

1. Remove the driver's airbag assembly (see page 24-188).
2. Remove the 20P connector (A) from the cable reel (B).



3. Measure the resistance between terminals No. 9 and No. 10 in each switch position according to the table.

Position	Resistance
No button pressed	About 10 kΩ
MODE	About 3.7 kΩ
CH (+)	About 1.7 kΩ
CH (−)	About 775 Ω
▲ (VOL.UP)	About 357 Ω
▼ (VOL.DOWN)	About 100 Ω

4. If the resistance is not as specified, replace the audio remote switch (see page 23-86).

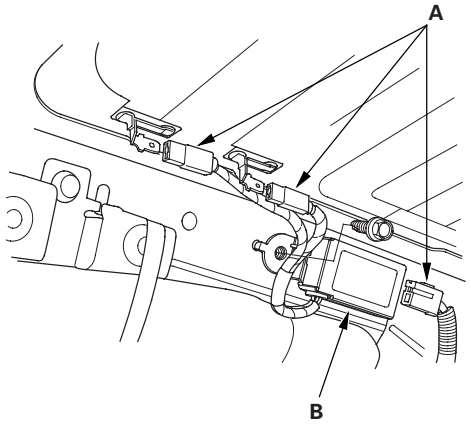
Audio Remote Switch Replacement

1. Remove the steering wheel (see page 17-6).
2. Remove the audio remote switch (see page 17-7).
3. Install the audio remote switch in the reverse order of removal.

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AM/FM Antenna Amplifier Replacement

1. Remove the right side C-pillar trim (see page 20-75).
2. Disconnect the connectors (A) from the AM/FM antenna amplifier (B).

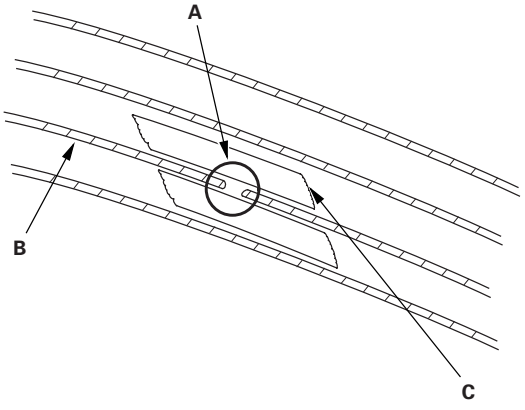


3. Remove the bolt and AM/FM antenna amplifier.
4. Install the AM/FM antenna amplifier in the reverse order of removal.

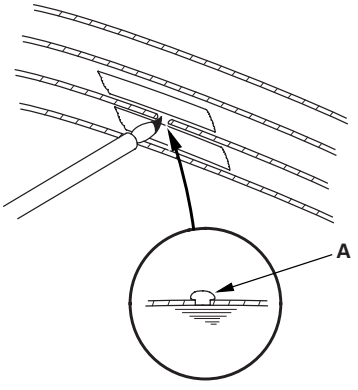
AM/FM Antenna Repair

NOTE: To make an effective repair, the broken section must not be longer than one inch.

1. Lightly rub the area around the broken section (A) with fine steel wool, then clean it with alcohol.



2. Carefully mask above and below the broken portion of the window antenna wire (B) with cellophane tape (C).
3. Mix the silver conductive paint thoroughly. Using a small brush, apply a heavy coat of paint (A) extending about 1/8'' on both sides of the break. Allow 30 minutes to dry.



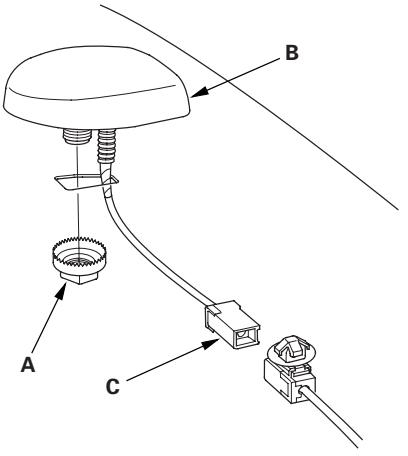
4. Check for continuity in the repaired wire.
5. Apply a second coat of paint in the same way. Let it dry 3 hours before removing the tape.

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XM Antenna Replacement

'08 model with navigation

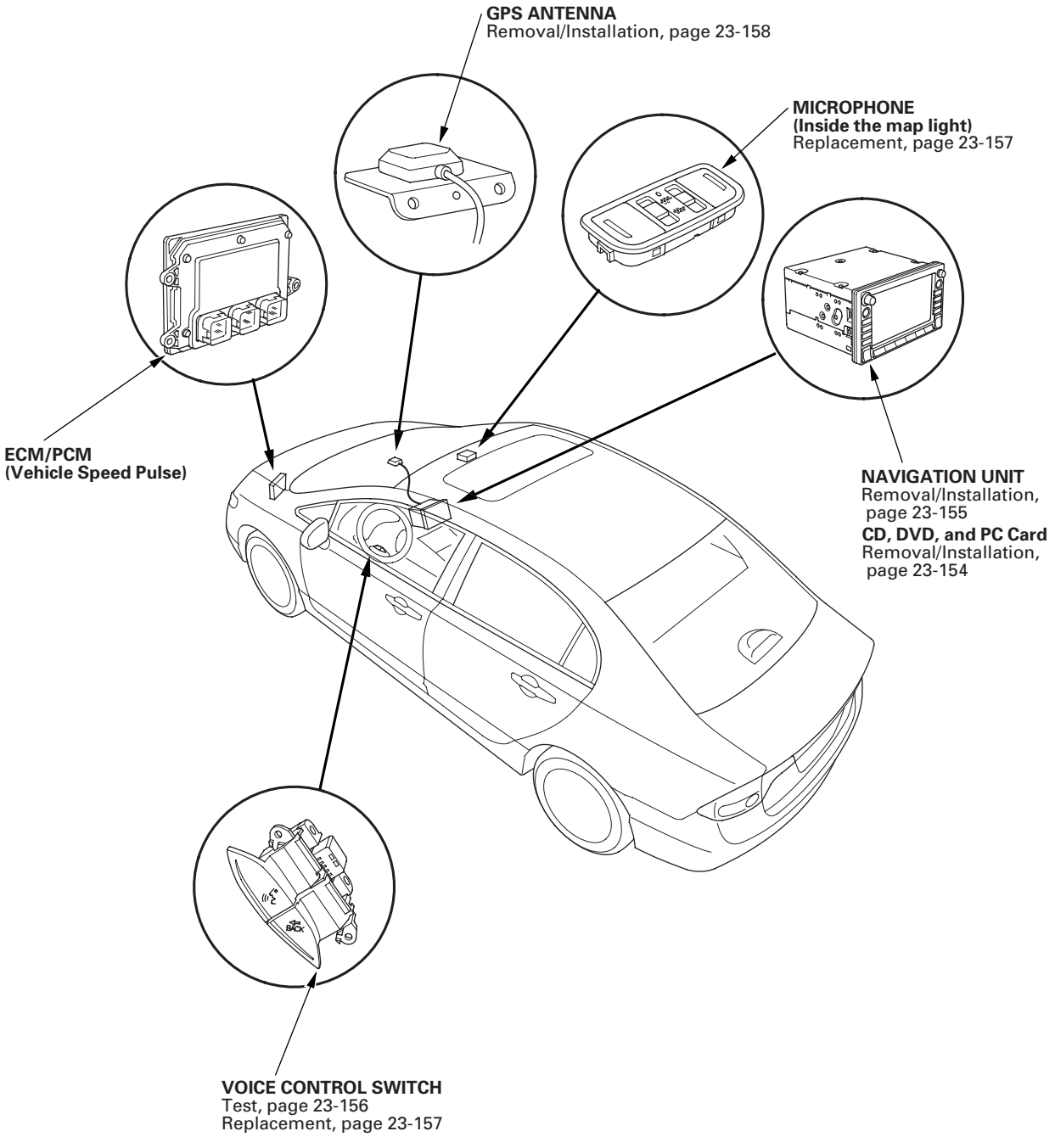
1. Remove the headliner (see page 20-84).
2. Remove the nut (A) from the XM antenna (B).



3. Disconnect the connector (C) and remove the XM antenna.
4. Install the antenna in the reverse order of removal.

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Component Location Index



General Troubleshooting Information

General Operation

Refer to the Navigation System manual for the navigation system operating procedures.

Anti-theft Feature

The navigation system has a coded theft protection circuit. Be sure you have the client's anti-theft security code before;

- Disconnecting the battery
- Disconnecting the navigation unit A (17P) and C (12P) connector
- Removing the No. 23 (10 A) fuse from the under-hood fuse/relay box

After service, reconnect power to the navigation unit, and turn the ignition switch ON (II). Enter the 4-digit anti-theft security codes, then select Done.

If the code cannot be found, use the interactive Network (iN) to look it up. You can view the serial number in one of the Navi ECU diagnostic screen (see page 23-139). Alternatively, you can find the serial number from the navigation unit in the dash.

When replacing the navigation unit, be sure to give the client the new anti-theft security code.

Symptom Diagnosis

Certain circumstances and system limitations can result in occasional vehicle positioning errors. Some clients may think this indicates a problem with the navigation system when, in fact, the system is normal. Keep the following items in mind when interviewing clients about symptoms of the navigation system.

Self-Inertial Navigation Limitations

The limitations of the self-inertial portion of the navigation system (the yaw rate sensor and the vehicle speed signal) can cause some discrepancies between the vehicle's actual position and the indicated vehicle position (GPS vehicle position).

The following circumstances may cause vehicle positioning errors:

- Moving the vehicle with the engine stopped and the vehicle stopped, such as by ferry or tow truck, or if the vehicle is spun on a turn table.
- Tire slippage, changes in tire rolling diameters, and some driving situations may cause discrepancies in travel distances. Examples of this include:
  - Continuous tire slippage on a slippery surface.
  - Driving with snow chains mounted.
  - Abnormal tire pressure.
  - Incorrect tire size.
  - Frequent lane changes across a wide highway.
  - Continuous driving on a straight or gently curving highway.
- Tolerances in the system and map inaccuracies will sometimes limit how precisely the vehicle position is indicated. Examples of this include:
  - Driving on roads not shown on the map (map matching is not possible).
  - Driving on a road that winds in one direction, such as a loop bridge, an interchange, or a spiral parking garage.
  - Driving on a road with a series of sharp hair-pin turns.
  - Driving near a gradual highway exit or transition.
  - Driving on one of two close parallel roads.
  - Making many 90 degree turns.
  - The direction to destination icon or the destination icon shown or the map may be up to several hundred feet away from the actual location.

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Global Positioning System (GPS) Limitations

The GPS cannot detect the vehicle's position during the following conditions:

- Metallic window tinting above the GPS antenna.
- When only three satellite signals are received (Four satellite signals are required for accurate positioning).
- When driving near high tension power lines.
- When the satellite signals are blocked by the operation of some electronic aftermarket accessories including, but not limited to non-OEM in-dash entertainment units (radio, CD players/changers, radar detectors and theft recovery systems) and cell phones placed near the navigation system.
- When the satellite control centers are experiencing problems.

The accuracy of the GPS is reduced during these instances:

- Metallic window tinting above the GPS antenna.
- When only three satellite signals are received (Four satellite signals are required for accurate positioning).
- When driving near high tension power lines.
- When the satellite signals are blocked by the operation of some electronic aftermarket accessories including, but not limited to non-OEM in-dash entertainment units (radio, CD players/changers, radar detectors and theft recovery systems) and cell phones placed near the navigation system.
- When the satellite control centers are experiencing problems.

Muting Logic

Whenever the navigation system is giving guidance, the front speakers are muted. When the voice control system is being used, all of the speakers are muted.

LCD Unit Limitations

- In cold temperatures, the display may stay dark for the first 2 or 3 minutes until it warms up.
- When the display is too hot because of direct summer sunlight, it will remain dark until the temperature drops.
- When the humidity is high and the interior temperature is low, the display may appear cloudy. The display will clear up after some use.
- Fingerprints on the touch panel may sometimes be noticeable because of the panel's low-reflection coating. Clean the screen with a soft damp cloth. You may use a mild cleaner intended for eye glasses or computer screens. To avoid scratching the panel, do not rub too hard, or use abrasive cleaners, or shop towels.
- The touch panel consists of a touch sensitive resistive membrane covering the display. Unlike previous systems, you must actually touch the display to activate it. Never use hard or sharp implements to operate the screen because you risk damaging the sensing membrane. If a touch switch does not function immediately, shift your finger slightly, and touch it again.

(cont'd)

General Troubleshooting Information (cont'd)

Symptom Duplication

- If you can duplicate the symptom, compare it to a known-good vehicle. Only use a vehicle of the same model, same year, same trim, and same software version. If you can duplicate the symptom in the known-good vehicle, then it is a characteristic of the system.
- When the symptom can be duplicated, follow the self-diagnostic procedures and the appropriate troubleshooting procedures.
- When the symptom does not reappear or only reappears intermittently, ask the client about the conditions when the symptom occurred.
  – Try to establish if outside interference may be the cause.
  – Try to duplicate the symptom under the same conditions the client experienced.
  – Vibration, temperature extremes, and moisture (dew, humidity) are factors that are difficult to duplicate.
  – Inspect the vehicle for aftermarket electronic devices (vehicle locators, radar detector amps, etc.) that may be hidden.

NOTICE

When troubleshooting navigation system problems, ensure that the known-good vehicle is the same software version year and model as the vehicle being serviced. Mixing incompatible navigation DVDs or other system components can delay the troubleshooting process by creating effects unrelated to the original problem.

Service Precautions

- If you need to replace the navigation unit, inform the customer that personal information in the navigation system may be lost. If possible, have the client record their personal information before the unit is replaced On '07-08 models you can back-up the navigation data and transfer it to a new navigation unit. See save users memory (see page 23-150).
- Before disconnecting the battery, make sure you have the anti-theft codes for the audio and the navigation system, and write down the audio presets. Also obtain any PGM-FI or transmission DTCs and freeze frame date (which are lost when the ECM/PCM loses power).
- When the battery is disconnected, the internal GPS clock is reset to 0:00. The clock will reset to the correct time after the system finishes GPS initialization.
- After reconnecting the battery, you have to wait to get the initial signal from the satellite. It will take from 10 to 45 minutes.
- Before returning the vehicle to the client, enter the audio and navigation anti-theft security code, then enter the audio presets.
- Adjust the setup clock settings (time zone and daylight savings) in the navigation system.

System Initialization

If the navigation system loses power (like the battery was disconnected), the navigation system requires initialization. Once completed, your system is ready to use.

This initialization requires the following:

- Entering the 4-digit anti-theft security code to unlock the system
- GPS initialization (may not be needed depending of the length of time the system was without power)
- Map matching to align the GPS to a location on the map

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Entering Security Code

Any time the navigation system loses power, you need to enter the 4-digit anti-theft code on the navigation system display. The 4-digit code is located on a small card that was given to the customer. Enter the 4-digit code, then select Done.

If the navigation system anti-theft code is missing, use the interactive Network (iN) to look it up. You will need the serial number for the navigation unit to do this. You can view the serial number by entering the diagnostic mode. Select Unit Check from the main menu, then the Navi ECU diagnostic screen. This gives you the serial number without removing the navigation unit.

The iN may display more than one code for a given serial number. This is because serial numbers are not unique. You may have to try more than one 4-digit code. If no code is shown, or if the code(s) given do not work in the navigation unit, contact the Automobile Warranty department. If the code 0000 works, replace the navigation unit.

When replacing the navigation unit, make sure you give the customer the new anti-theft security code.

GPS Initialization

NOTE: You must park the vehicle outside with a clear view of the southern sky.

Depending on the length of time the battery was disconnected, your system may require GPS initialization. If it does, the following screen appears:

*****Wait*****

The system is acquiring its GPS signal.
This could take up to 10 minutes.
• Engine must be running
• Vehicle must be parked outside, away from buildings
• Do not move the vehicle at this time

If this procedure is not necessary, the system proceeds directly to the Disclaimer screen. During initialization, the system searches for all available GPS satellites, and obtains their orbital information. During this procedure the vehicle should be out in the open with a clear view of the sky.

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General Troubleshooting Information (cont'd)

If the navigation system finds the satellites properly, this box clears, and changes to the Disclaimer screen. If within 10 minutes the system fails to locate a sufficient number of satellites to locate your position, the following screen appears.

Navigation system is unable acquire a proper GPS signal.

- **Move vehicle to another location**
- **Turn the ignition switch off**
- **Disconnect the battery for 30 minutes to clear the GPS receiver's memory**
- **Reconnect the battery and follow the screen prompts**

After 30 minutes with this screen displayed, turn off the engine, then restart the vehicle. If the Disclaimer screen appears, the GPS initialization is complete.

NOTE:
- The average acquiring time is less than 10 minutes, but it can take as long as 45 minutes.
- If the system is still unable to acquire a signal, follow the instructions on the screen. If this screen appears again, go to troubleshooting for the GPS icon is white or not shown (see page 23-122).
- To bypass the GPS acquire screens, press and hold the Menu, and Zoom out keys at the same time. Touch the Return button on the screen to exit the diagnostic mode. This allows you to continue troubleshooting while in the shop.

Map Matching

This part of the initialization matches the GPS coordinates with a road on the map screen. To do this part of the procedure, make sure that the navigation system displays a map, and drive the vehicle on a mapped road shown on the map screen. Do not enter a destination at this time. When the name of the current road you are driving on, appears at the bottom of the screen, the entire procedure is complete. Your system is now ready to use.

Obtaining a Navigation DVD

If the navigation DVD is lost or damaged, or you need a yearly updated DVD, you have 2 ways to purchase one. You can either call 888-291-4675, or order on-line at www.hondanavi.com.

Both methods require a credit card. The DVD cannot be ordered through the parts system. The following DVDs will not work in this navigation system:

- Earlier model navigation DVDs (black, orange, or older vesions with a white label)
- Map software programs manufactured by other companies
- DVD movies, or DVDs containing audio recordings
- Copies of an original Navigation DVD

Update DVDs are available for purchase usually in the fall of each year. They may contain the following:

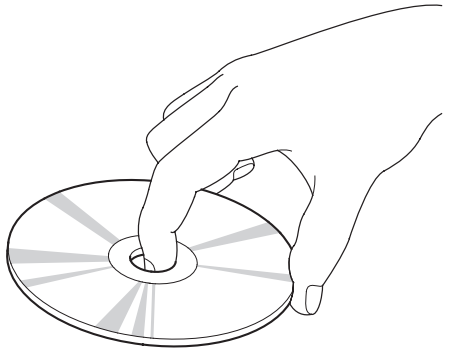
- Enhanced maps and points of interest (POI) coverage
- Fixes for minor software bugs
- Additional features

NOTE:
- Map matching must be done any time the DVD is removed or replaced.
- Always order navigation DVDs on an as-needed basis. During a typical model year, each color DVD may undergo a half a dozen software only version upgrades to fix minor issues on some or all models the DVD supports. This is normal. Usually only the letter at the end of the version number changes, while the database (maps and POIs) remain unchanged.
- Never promise your customers future free updates. There are no free programs for updating the navigation DVD. Update DVDs are generally available for purchase each fall. The on-time DVD order site provides information when an update for a particular color DVD is available, damaged discs are not warrantable.

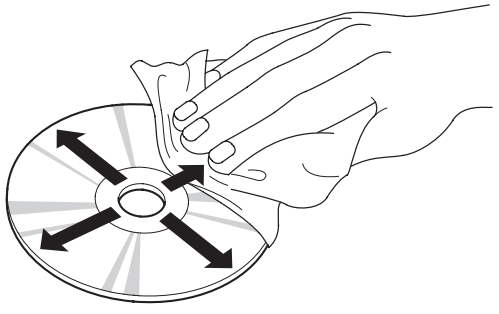
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DVD Handling and Cleaning

To avoid damaging or leaving fingerprints on the DVD, always handle it by the edges and place it in a jewel case whenever it is outside the navigation unit. Deep scratches or fingerprints on the back of the DVD can cause intermittent rebooting or other system errors.



Smudges and fingerprints can be carefully removed using a mild cleaner and tissues designed to clean eyeglasses. To clean a DVD, use a clean soft cloth. Very gently wipe across the DVD from the center to the outside edge, never in a circular motion.



Do not place stabilizer rings or labels on the DVD.

Earliest DVD Version Application for Each Model

Each navigation system DVD contains a map/POI (point of interest) database and the navigation system software for each model that it supports. Inserting an older DVD can cause problems since it lacks the software to provide the specific features needed for that model. Unfortunately, the navigation software does not detect or warn you that the version is outdated, and it may even appear to operate.

NOTE: Replacing a DVD just because the version number is higher is not always warranted. A higher software version does not necessarily mean it contains newer software for your model. The DVD contains software for all models that use the same color DVD, and a revised number may or may not have software fixes or upgrades for the model in question.

Typical warning symptoms that an outdated DVD is being used include:

- The Acura model navigation screen displayd a Honda logo while booting up.
- A newly introduced model future or accessory may not display properly, and Extension displays instead.

  NOTE: Extension may be displayed when using Music Link, but should never be displayed when XM is selected.

- The current street (the street being driven on) does not appear properly at the bottom of the map screen display when the vehicle is driven on a main road.

  NOTE: If necessary, compare the operation to the navigation system of the same model and year vehicle that has a current DVD.

(cont'd)

General Troubleshooting Information (cont'd)

How to Identify Navigation DVD Versions, and How to Inspect A DVD for Damage

To determine the navigation version on a particular model, start the engine, then locate the navigation unit. Open the DVD door, and push the eject button to eject the DVD. Hold the DVD by the edges, and check for these items:

- The DVD label color.
- Read the DVD version on the label, and note it on the repair order. The version number is near the bottom of the label text (for example, ver: 4.23A). You will need this version number:
  – To verify that the DVD version is appropriate for the vehicle. Check any official Honda service website for more service information.
  – Any time you call Tech Line regarding a navigation system issue.
  – To answer client inquires concerning update or coverage issue.

    NOTE: Clients may obtain DVDs from sources outside the normal ordering process. If you determine this is the case, recommend that your client purchase the appropriate DVD from the Honda Disc Fulfillment Center (see ORDERING A DVD).

  – Check the underside of the DVD for signs of mishandling. Deep scratches, or random scratches, light swirl marks, or fingerprints can cause random lock-ups, reboots, erratic voice response, erratic positioning errors, and DVD read or format errors.

    NOTE: A damaged DVD is not covered under warranty unless the disc is damaged by the navigation unit. Damage by the navigation unit typically appears as circular scratches caused by something rubbing against the DVD as it spins. The damage may appear as arcs or complete circles on the DVD reading surface.

  – Verify that the underside of the DVD is silver, and not a copy with a blue color. Copies will not work properly and can cause other symptoms that mimic hardware problems.

- Incorrectly colored DVDs being put into navigation vehicles. This causes the system to either display error messages, or causes system malfunctions that mimic a hardware problem. This results in the client leaving with a malfunctioning navigation system.
- The DVD version provided to the client is out-of date or incompatible with a particular model. This inconveniences your client by delaying the repair, or by causing additional (and unnecessary) returns to your dealership.
- The client experiences bugs or other issues that have already been resolved in later versions currently available at the fulfillment desk.

If the DVD is defective, or has any of the issues mentioned above, return the vehicle to your client and recommend that they order the proper DVD from the Honda Disc Fulfillment Center (see ORDERING A DVD).

NOTE: Navigation DVDs do not come with replacement navigation units. If you are replacing a navigation unit because it is defective (following appropriate service manual troubleshooting), and the DVD does not eject, order a DVD. See Obtaining a navigation DVD.

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How to Answer Client Questions About Navigation Coverage

Some clients may ask questions regarding a city, address or POI (point of interest) covered by the navigation system. It is better to verify a coverage question on an actual vehicle than to disappoint your client by promising coverage that may be incomplete or missing in their area. The following suggestions can be used to answer coverage inquiries from your client.

Is my address covered by the navigation system?

Using a current production vehicle (of the same model), enter the client's address (street first) to see if their area is covered. Always enter the street first, because sometimes their city may be included in a neighboring township, or under some lager metropolitan city name. If the address is shown in a later year vehicle, but not your client's vehicle, you might want to recommend that your client purchase an update.

Is my city covered by the navigation system?

For general questions about whether a city is covered, view the map coverage link on the DVD order site. On the site, you enter a year and model, and then click on the Coverage link. You then select a state or province, and the cities are listed. Of course, this does not guarantee that the client's road or address is in the system. Verifying on an actual production vehicle is always the best guarantee that your information is accurate.

The gas station on my corner is now a restaurant. Why is it still incorrect in the navigation system?

For POI-related client questions, explain that businesses are constantly moving, and there can be a considerable lag in updating the millions of POIs in the system. The database is updated annually, and the best way to the verify whether the POI is accurate is verify the inquiry on a current production vehicle.

Answers to these and other questions regarding coverage can be found in these locations:

- In the Frequently Asked Questions section of the navigation system manual.
- At the on-line DVD order site, by clicking on the **FAQs** link (see ORDERING A DVD).

Precaution on Client Sneak Previews

Your client might request a look (or sneak preview) at features in the latest navigation software. You should never preview a navigation DVD in a client vehicle. Inserting a newer DVD installs the latest software from the DVD into the memory of the client's navigation system. When the original DVD is reinstalled, the newer software remains in memory and is often incompatible with the client's original DVD Map and POI database, or software.

If wishes to see the latest navigation coverage or software features, demonstrate it on an in-stock vehicle that already has the latest DVD version.

If, by chance, a newer version is loaded accidentally, either by the dealer or the client, the only remedy is to enter the navigation diagnostic mode's Version screen and do a forced download. Check any official Honda service website for more information about what patches may need reinstalling.

Why are some features different or missing compared to my previous Honda vehicle?

Hardware and software continually go through updates and improvements. Features may change or disappear over time based on the navigation system development.

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Navigation system stays on the GPS initialization screen	Symptom Troubleshooting (see page 23-92)	• Navigation unit • GPS antenna/cable is disconnected or damaged • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
Vehicle position icon constantly leaves road, moves erratically, or is displayed very far from actual vehicle position	Symptom Troubleshooting (see page 23-126)	• Navigation unit • GPS antenna/cable • PCM (speed and fuel pulses) • Harness/fuses/switches
System always comes up in in-line diagnostic mode	Symptom Troubleshooting (see page 23-127)	
Navigation system will not accept security code	Symptom Troubleshooting (see page 23-134)	Wrong color DVD
Navigation frequently asks for anti-theft code and/or needs GPS initialization	Symptom Troubleshooting (see page 23-131)	• Loss of voltage or poor ground (G504, G505) • Navigation unit • Low battery voltage • Harness/fuses/switches
GPS icon is white or not shown	Symptom Troubleshooting (see page 23-122)	• Navigation unit • Aftermarket accessories connected to the system • The wrong color DVD is installed • The DVD is damaged or dirty • GPS antenna/cable • Harness/fuses/switches
Vehicle icon wanders across the map when driving (does not follow a displayed road) or map or vehicle ICON spins	Symptom Troubleshooting (see page 23-126)	• Navigation unit • GPS antenna/cable • ECM/PCM (speed signal)
No picture is displayed	Symptom Troubleshooting (see page 23-119)	• Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
Picture has lines/rolls/other issues or is an odd color	Symptom Troubleshooting (see page 23-120)	• Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Aftermarket accessories connected to the system • Harness/fuses/switches
Display day/night mode does not work or does not work properly	• If you use the display mode button, the auto day/night function is disabled until you turn the ignition switch to ON (II) • Symptom Troubleshooting (see page 23-128)	• Display brightness set to High in day or night mode • Gauge control module • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
System locks up or freezes constantly	Symptom Troubleshooting (see page 23-128)	• Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches

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Symptom	Diagnostic procedure	Also check for
Voice guidance cannot be heard, is broken up, or there is static	Symptom Troubleshooting (see page 23-122)	• Volume or voice feedback setting (see Owner's manual) • Navigation unit • Harness/fuses/switches
Voice control does not work/ respond	Symptom Troubleshooting (see page 23-123)	• Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Microphone harness/switches
Navigation cannot control HVAC by voice command	Symptom Troubleshooting (see page 23-130)	• Wrong color DVD is installed • Harness/fuses/switches • Wrong navigation unit (model code)
Navigation cannot control XM radio	Symptom Troubleshooting (see page 23-130)	Low or weak battery
Navigation cannot control audio system	Symptom Troubleshooting (see page 23-129)	Wrong color DVD
Navigation display buttons do not work or respond properly	Symptom Troubleshooting (see page 23-121)	• Navigation unit • Open/short between the XM receiver or the GA-Net bus • The wrong color DVD is installed • The DVD is damaged or dirty
Today's Destinations button is dim and not selectable in the Enter destination by screen (grayed-out)	The client has not entered a group of locations for Today's Destinations. This is normal. The button is only selectable if the client is using this function	See Owner's Manual
Some set-up and information functions of the navigation system are grayed-out and do not work	Client did not select OK from Disclaimer screen. Refer to System Function Diagram (see page 23-111)	
Previous Destinations button is dim and not selectable in the Enter destination by screen (grayed-out)	The vehicle may be new, or the client deleted the destination. Enter a destination, and allow the system to route to it. After the trip, the Previous Destinations button will be selectable	
Address cannot be found or system gives poor routing	• Verify proper operation and system limitations using the owner's manual • See Answering customer question Navigation coverage in general troubleshooting • Refer to Database limitation in the navigation system manual to report database errors	• Database limitations (address not in database) • Wrong color DVD installed
OPEN/CLOSE function of the display does not work	Symptom Troubleshooting (see page 23-132)	• Navigation unit • Harness
Navigation display will not close	Symptom Troubleshooting (see page 23-133)	• Navigation unit • Harness
Navigation display does not open or opens part way	Symptom Troubleshooting (see page 23-133)	• Navigation unit • Harness
PC card will not play/card icon on audio screen cannot be selected	Symptom Troubleshooting (see page 23-67)	Navigation unit

(cont'd)

Symptom Troubleshooting Index (cont'd)

Symptom	Diagnostic procedure	Also check for
Navigation display stays on with ignition switch in LOCK (0)	Symptom Troubleshooting (see page 23-129)	• Harness/fuses/switches • Aftermarket accessory connected to the system
DVD read error messages	Symptom Troubleshooting (see page 23-127)	• Navigation unit • Wrong color DVD installed • Damaged DVD
Navigation system will not go beyond the disclaimer screen and displays the OK button	See navigation display buttons do not work or respond properly	• Wrong color DVD installed • Scratched or damaged DVD • Navigation unit
The navigation anti-theft code card is lost or missing	See anti-theft feature (see page 23-90)	
The vehicle icon lags behind when the vehicle turns	See self-inertial navigation limitations (see page 23-90)	• Aftermarket accessories connected to the system • GPS antenna/cable
Navigation screen is darker than normal or takes time to brighten when it is cold	See LCD display unit limitations (see page 23-91)	
The navigation clock is off by 1 to 3 hours after replacing the navigation unit	See service precautions (see page 23-92)	• Perform map matching (see page 23-94) • GPS antenna/cable • Check and adjust the clock settings
A new navigation DVD is needed	See obtaining a navigation DVD (see page 23-94)	
Time is not correct	Reset Time Adjustment in set-up	The wrong colored DVD or version is installed
The DVD is scratched or dirty	See ''DVD Handling and Cleaning'' (see page 23-95)	Navigation unit
The wrong DVD was installed and now the system does not function properly	See Precaution customer Sneak Previews (see page 23-97)	• Install the correct version DVD • Check any official Honda service website for more service information about the navigation system
A specific city cannot be found	See How to answer client questions about navigation coverage (see page 23-97)	• The DVD is scratched or dirty • Refer to Database limitation in the navigation system manual to report database errors
The Honda Globe Screen (not the Acura Globe Screen) appears every time the vehicle is started	Symptom Troubleshooting (see page 23-135)	Also see the symptom The wrong DVD was installed and now the system does not function properly

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System Description

Overview

The navigation system is a highly sophisticated, hybrid locating system.

The navigation unit uses global positioning system (GPS) satellite signals, internal yaw and vehicle speed inputs, and a map database to show where the vehicle is and to help guide you to a desired destination.

The navigation unit's GPS receiver receives signals from the GPS, a network of 24 satellites in orbit around the earth. By receiving signals from several of these satellites, the navigation system can determine the latitude, longitude, and elevation of the vehicle.

Signals from the system's yaw rate sensor (inside the navigation unit) detects turns, and the ECM/PCM vehicle speed pulse (VSP) and reverse signal enable the system to keep track of the vehicle's speed and direction of travel. The advantage of this hybrid system is that the system can track your position if either the GPS signal or the vehicle speed signal is missing. For instance, when in a tunnel (no GPS), the speed signal is used to update your position on the map. Alternately, while the vehicle is being transported on a ferry, GPS signals can show the vehicle position on the map as it crosses the water.

The navigation system uses the location, direction, and speed information to display the appropriate map and calculate a route to the destination entered. As you drive to a destination, the system provides both visual and audio guidance. Audio guidance is sent to the audio unit, and an RGB graphics color signal is sent to the navigation display.

This navigation system also has voice recognition that allows voice control of most of the navigation, and audio functions. The voice control switches (navigation TALK and navigation BACK buttons on the steering wheel) activate the voice control system. The microphone on the ceiling receives your voice commands. For more information on this feature, consult the navigation owner's guide.

The illumination signal is used by the navigation unit to automatically switch the display mode between the Night and Day display modes. When the headlights are on, the dash brightness control setting full brightness overrides the Night display mode, and allows a daytime navigation display with the lights on.

When the navigation system is giving voice guidance commands, the front speakers are muted. When the voice control system is being used (navigation TALK button pressed), all of the speakers are muted.

The internal GA-Net II bus passes information back and forth between the navigation display, the navigation unit, and the audio system components. The information passed on this bus are touch button commands, audio muting signal, audio (radio and XM), and any open in these bus lines can affect the navigation system or other audio accessory operation.

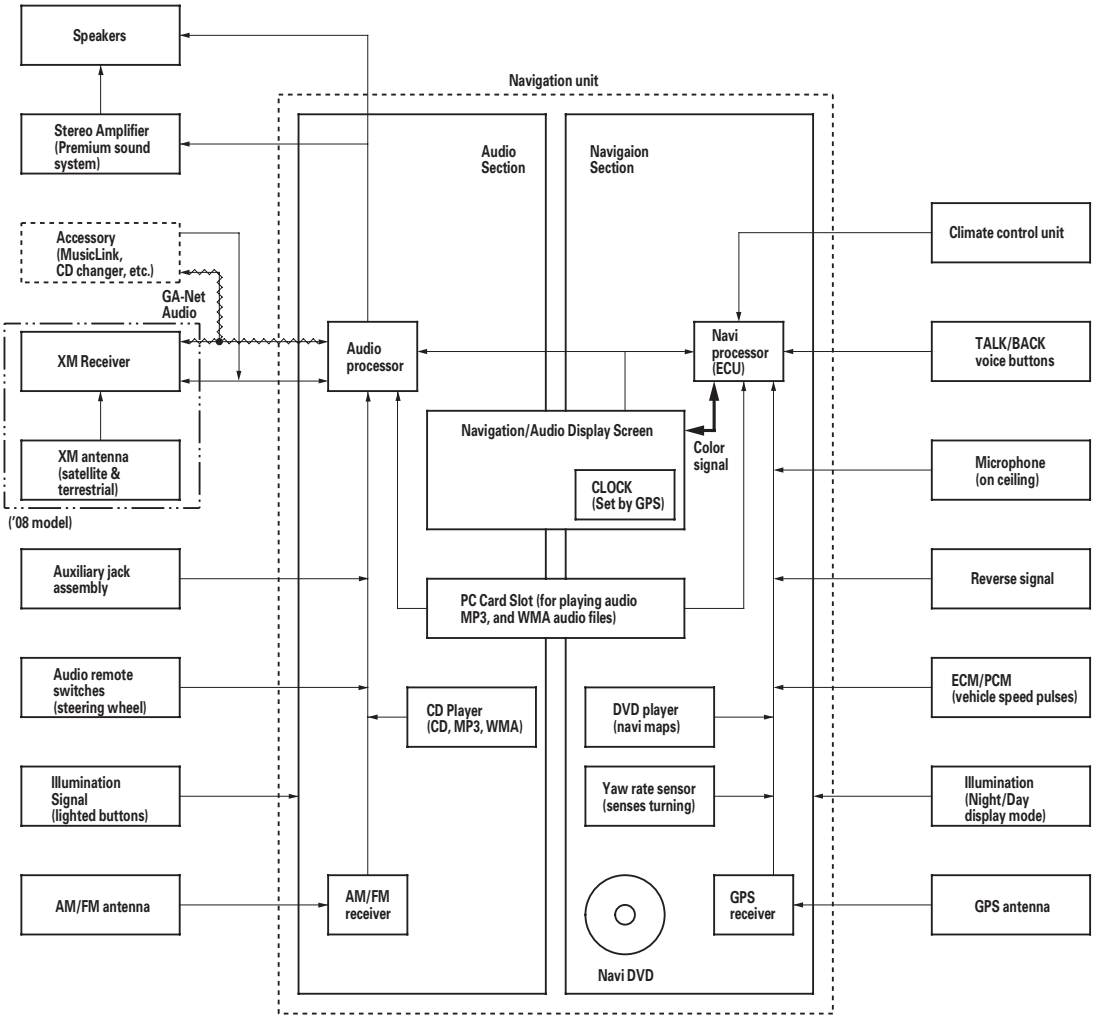
The clock on the navigation display is set and maintained by the navigation unit. The time is automatically adjusted for daylight savings, and time zone changes while driving. The time can be adjusted in setup.

Additional information is available about the navigation components following the System Diagram. A glossary of terms that are used throughout this section follows the detailed information.

The Navigation System Manual in the glove box covers all of the system functions and settings. Use this as a resource when evaluating a client concern.

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System Description (cont'd)

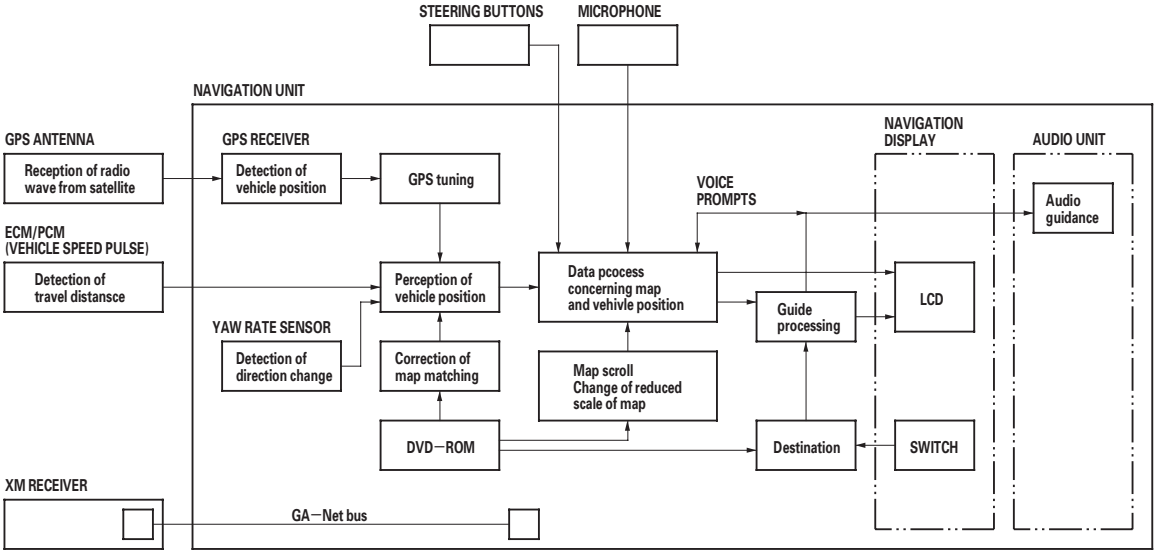


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Navigation Function

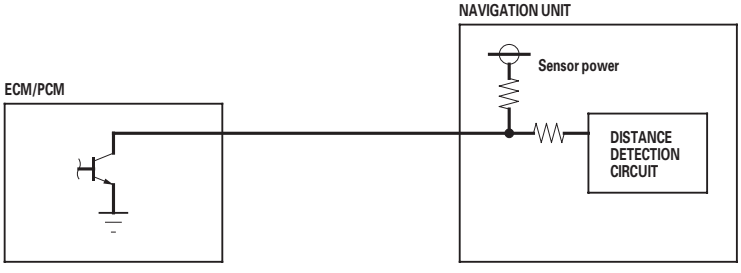
The navigation system is composed of the navigation unit, the ECM/PCM (vehicle speed signal), the GPS antenna, the microphone, the voice control switch, the XM receiver, and the climate control unit.
These units communicate with each other on the GA-Net bus.

Function Diagram



Vehicle Speed Pulse

The vehicle speed pulse is sent by the ECM/PCM. The ECM/PCM receives a signal from the countershaft speed sensor, then it processes the signal, and transmits it to the speedometer and other systems.

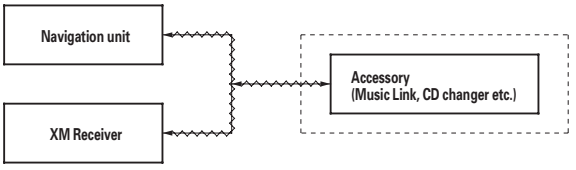


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System Description (cont'd)

GA-Net Bus Configuration

The GA-Net bus passes audio and navigation commands throughout the navigation and audio components. These commands include audio/XM selections by voice, and XM station and music title names. Because the entire bus is daisy chained between components (see diagram below), any open or short in the GA-Net bus harness will cause any or all of these functions to become inoperative. The addition of any factory audio accessory must maintain the continuity of the GA-Net bus by installing the Y cable included with the accessory kit.



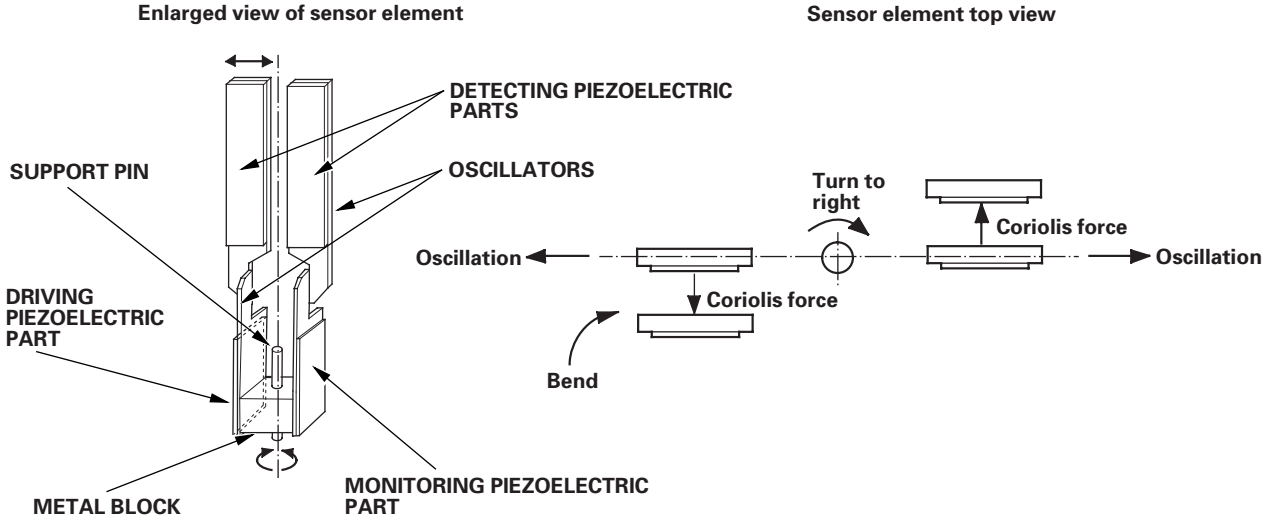
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Yaw Rate Sensor
The yaw rate sensor (located in the navigation unit) detects the direction change (angular speed) of the vehicle. The sensor is an oscillation gyro built into the navigation unit.

Sensor Element Structure
The sensor element is shaped like a tuning fork, and it consists of the piezoelectric parts, the metal block, and the support pin. There are four piezoelectric parts: one to drive the oscillators, one to monitor and maintain the oscillation at a regular frequency, and two to detect angular velocity. The two oscillators, which have a 90-degree twist in the center, are connected at the bottom by the metal block and supported by the support pin. A detection piezoelectric part is attached to the top of each oscillator. The driving piezoelectric part is attached to the bottom of one oscillator, and the monitoring piezoelectric part is attached to the bottom of the other oscillator.

Oscillation Gyro Principles
The piezoelectric parts have electric/mechanical transfer characteristics. They bend vertically when voltage is applied to both sides of the parts, and voltage is generated between both sides of the piezoelectric parts when they are bent by an external force. The oscillation gyro functions by utilizing this characteristic of the piezoelectric parts and Coriolis force. (Coriolis force deflects moving objects as a result of the earth's rotation.) In the oscillation gyro, this force moves the sensor element when angular velocity is applied.

Operation
1. The driving piezoelectric part oscillates the oscillator by repeatedly bending and returning when an AC voltage of 6 kHz is applied to the part, The monitoring-side oscillator resonates because it is connected to the driving-side oscillator by the metal block.
2. The monitoring piezoelectric part bends in proportion to the oscillation and outputs voltage (the monitor signal). The navigation unit control circuit controls the drive signal to stabilize the monitor signal.
3. When the vehicle is stopped, the detecting piezoelectric parts oscillate right and left with the oscillators, but no signal is output because the parts are not bent (no angular force).
4. When the vehicle turns to the right, the sensor element moves in a circular motion with the right oscillator bending forward and the left oscillator bending rearward. The amount of forward/rearward bend varies according to the angular velocity of the vehicle.
5. The detecting piezoelectric parts output voltage (the yaw rate signal) according to the amount of bend. The amount of vehicle direction change is determined by measuring this voltage.



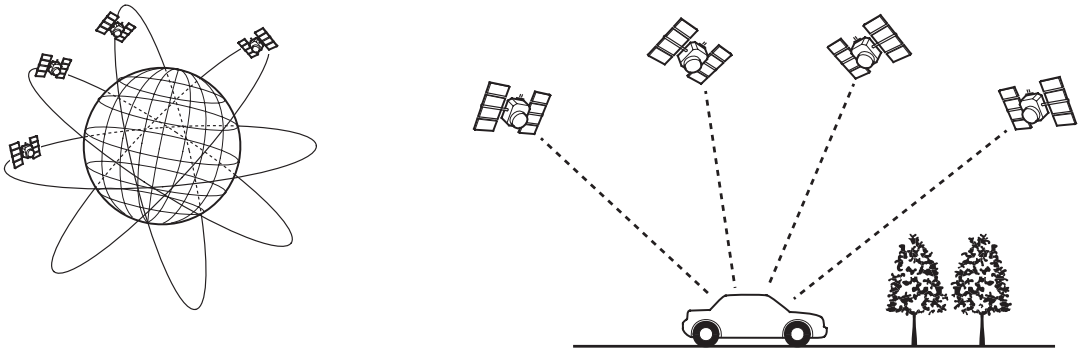
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System Description (cont'd)

Global Positioning System (GPS)
The global positioning system (GPS) enables the navigation system to determine the current position of the vehicle by using the signals transmitted from the satellites in orbit around the earth. The satellites transmit the satellite identification signal, orbit information, transmission time signal, and other information. When the GPS receiver receives a signal from four or more satellites simultaneously, it calculates the current position of the vehicle based on the distance to each satellite and the satellite's positions in its respective orbit.

Position Detection Image with GPS Satellite



Precision of GPS
The precision of the GPS varies according to the number of satellites from which signals are received and the view of the sky. The accuracy is indicated by the color and shape of the GPS icon shown on the display.

GPS ICON COLOR	NUMBER OF SATELLITES	CONDITION	DESCRIPTION
No GPS icon	None	Faulty reception	The GPS can't be utilized due to a faulty GPS receiver, open in the wire, or other fault or interference.
White GPS icon	2 or less	Impossible to detect vehicle position	GPS function is normal. The satellite signals received by the GPS are too few to detect the vehicle position.
Green GPS icon	3	Vehicle position detectable in 2 dimensions	The longitude and latitude of the vehicle position can be detected. (Less precise than detection in three dimensions)
	4 or more	Vehicle position detectable in 3 dimensions (elevation displayed)	The longitude, latitude and the altitude of the vehicle position can be detected. (More precise than detection in two dimensions)

GPS Antenna
The GPS antenna amplifies and transmits the signals received from the satellites to the GPS receiver.

GPS Receiver and Clock
The GPS receiver is built into the navigation unit. It calculates the vehicle position by receiving the signal from the GPS antenna. The current time vehicle position and signal reception condition is transmitted from the GPS receiver to the navigation unit to adjust vehicle position.

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Navigation Unit
The navigation unit calculates the vehicle position and guides you to the destination. The unit performs map matching correction, GPS correction, and distance tuning. It also controls the menu functions and the DVD-ROM drive, and interprets voice commands. With control of all these items, the navigation unit makes the navigation picture signal, then it transmits the signal to the navigation display and audio driving instructions to the audio unit.

Calculation of Vehicle Position
The navigation unit calculates the vehicle position (the driving direction and the current position) by receiving the directional change signals from the yaw rate sensor and the travel distance signals from the PCMs vehicle speed pulse (VSP) signal.

Map Matching Tuning
The map matching tuning is accomplished by indicating the vehicle position on the roads on the map. The map data transmitted from the DVD-ROM is checked against the vehicle position data, and the vehicle position is indicated on the nearest road. Map matching tuning does not occur when the vehicle travels on a road not shown on the map, or when the vehicle position is far away from a road on the map.

GPS Tuning
The GPS tuning is accomplished by indicating the vehicle position as the GPS's vehicle position. The navigation unit compares its calculated vehicle position data with the GPS vehicle position data. If there is large difference between the two, the indicated vehicle position is adjusted to the GPS vehicle position.

Distance Tuning
The distance tuning reduces the difference between the travel distance signal from the VSP and the distance data on the map. The navigation unit compares its calculated vehicle position data with the GPS vehicle position data. The navigation unit then decreases the tuning value when the vehicle position is always ahead of the GPS vehicle position, and it increases the tuning value when the vehicle position is always behind the GPS vehicle position.

Route Guidance
The navigation unit can calculate different routes to a selected destination. You have five options:

- Direct Route — Calculate a route that is the most direct.
- Easy Route — Calculate a route that minimizes the number of turns needed.
- Minimize Freeways — Calculate a route that avoids freeway travel. If that is not possible, keep the amount of freeway travel to a minimum.
- Minimize Toll Roads — Calculate a route that avoids, or minimizes travel on toll roads.
- Maximize Freeways — Calculate a route that uses freeways as much as possible.

Audio Guidance
The navigation unit transmits audio driving instructions before entering an intersection or passing a junction. The audio instructions come through the audio unit to the front speakers.

NOTE: The front speakers are muted whenever the navigation system is giving guidance commands, and all of the speakers are muted when the voice control system is being used.

DVD-ROM
The map data (including all scale rates) is stored in the DVD-ROM. The map data includes:

- Road distances, road widths, speed limits, traffic regulations, passing time at junction, distances to junctions, and the driving instructions for audio guidance.
- Latitude and longitude GPS.

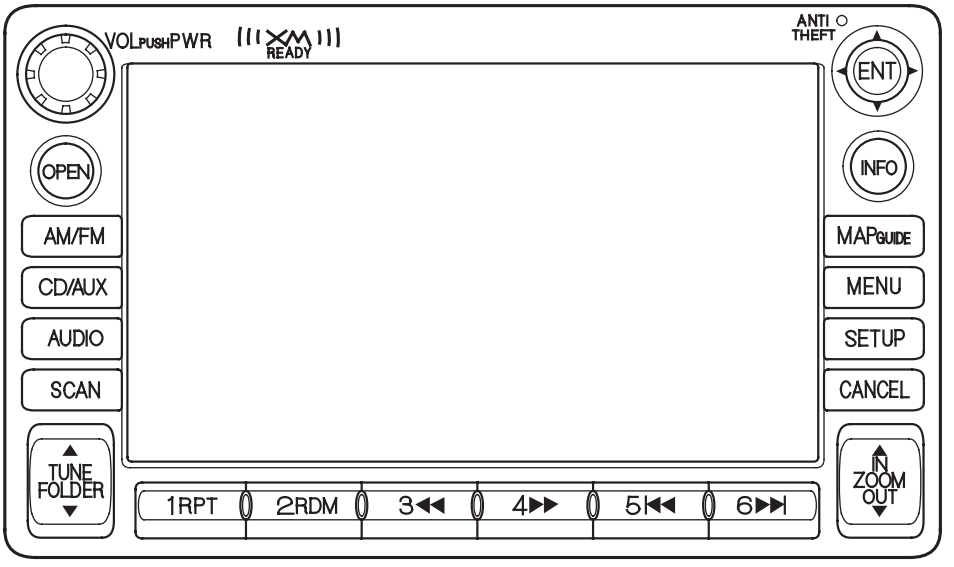
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System Description (cont'd)

Audio Unit (Built in the navigation unit)
The audio unit receives the audio driving instructions from the navigation unit, and transmits the instructions through the front speakers even when the audio system is in use.

Navigation Display
The navigation display uses liquid crystal display (LCD). The LCD is a 6.5-inch-diagonal, thin film transistor (TFT), stripe type with 65,536 color, The color film and fluorescent light are laid out on the back of the liquid crystal film. The touch sensor on the front of the LCD consists of a touch sensitive resistive membrane with an infinite number of possible touch locations.



Microphone
The microphone (on the ceiling, near the front map light) receives voice commands and transmits them to the navigation unit for interpretation.

Navigation TALK Button
Activates the voice control system in the navigation unit to accept voice commands.

Navigation BACK Button
Returns the display to the previous screen (similar function as the CANCEL button).

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Glossary
The following is a glossary of terms pertaining to the Voice Recognition Navigation System.

Item	Definition
Active noise cancellation (ANC)	The active noise cancellation system cancels some of the vehicle noise. This occurs in the 1,500—2,400 rpm range. Microphones detect the low frequency sound, and the system outputs a canceling sound from the audio speaker.
Address Book	The HFL system can import a copy of the phone book from and approved HFL compatible phone and display the imported phone book on the navigation screen as the address book. See the Owner's Manual for more information.
B-CAN	Body CAN Bus (see CAN)
Bread-crumbs (White dots)	Off road tracking dots that can be followed on the map to retrace your route back to a mapped (digitized) road. This function can be turned on/off in Setup screen 1.
CAN	Controller Area Network. This communication network allows processors in the vehicle to send/receive information. The fuel pulses used by the MID trip computer are received from the ECM/PCM using the F-CAN (Fast Controller Area Network) bus.
CPU	Central Processing Unit. The main device within the navigation unit that coordinates the rest of the electronic functions.
CSS	Countershaft (Output) Speed Sensor. This sensor reads the output shaft speed at the transmission and provides a speed pulse to the ECM/PCM.
Database	This consists of the Map data, and the POI (Points Of Interest) data stored on the DVD.
DBW	Drive By Wire. Allows electrical control of the throttle without the need of a mechanical linkage.
DCA	Detailed Coverage Area. Main metropolitan areas in the Lower 48 states, and Canada are mapped to this level. See the navigation system manual for a list of these areas.
DTC	DTC Diagnostic Trouble Codes. Use HDS tablet to obtain, and troubleshoot the cause of these codes.
Dead reckoning	The use of the speed signal, and yaw rate sensor to position the vehicle on the map even when tall buildings, or driving in a tunnel obscures the GPS signal.
Digitized road	A road that appears on the navigation screen. The road name appears at the bottom of the navigation screen. If the user drives off road, the navigation system displays not on a digitized road, and after 1/2 mile, the bread-crumbs appear.
Disclaimer screen	Screen containing cautionary information. It is meant to be read carefully and acknowledged by the customer when using the navigation system.
DVD or DVD-ROM	Digital Versatile Disk. The navigation program and database resides on this disk. See the Navigation Owner's Manual for information on how to order a replacement or an update DVD.
ECM	Engine Control Module. Typically referred to as the ECM.
FAQ	Frequently Asked Questions. See the navigation system manual for a list of the customer FAQs, and troubleshooting information.
F-CAN	Fast CAN Bus (see CAN)
GA-NET	The GA-NET allows the audio unit to communicate with all the audio and navigation components in a vehicle. If there is an open in the GA-NET, components or the entire audio and navigation system may appear inoperative.
GPS	Global Positioning System. A network of 24 satellites in orbit around the earth. The navigation system can simultaneously receive signals from up to 12 satellites to accurately position the vehicle on the map.
HDS	Honda Diagnostic System. A hand held tablet PC used for diagnosing vehicle problems. This device can be used to obtain DTC codes for diagnosis of the navigation system and CAN related problems.
HFL	HandsFreeLink uses Bluetooth technology as a wireless link between it and an approved Bluetooth compatible cell phone. See the vehicle Owner's manual or Quick Start Guide for more information.
HIP (AcuraLink)	Honda Information Platform (see AcuraLink)
H/U	Head Unit. The audio unit in the dash.
Initialization	This refers to the period needed to re-acquire the GPS satellite orbital information whenever the navigation system power has been disconnected. This can take from 10 to 45 minutes.
Interface Dial	This control device consists of a rotating knob and the buttons surrounding it. This device allows control of the navigation, audio, and climate functions displayed on the screen.
Jog Dial	See interface dial.

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System Description (cont'd)

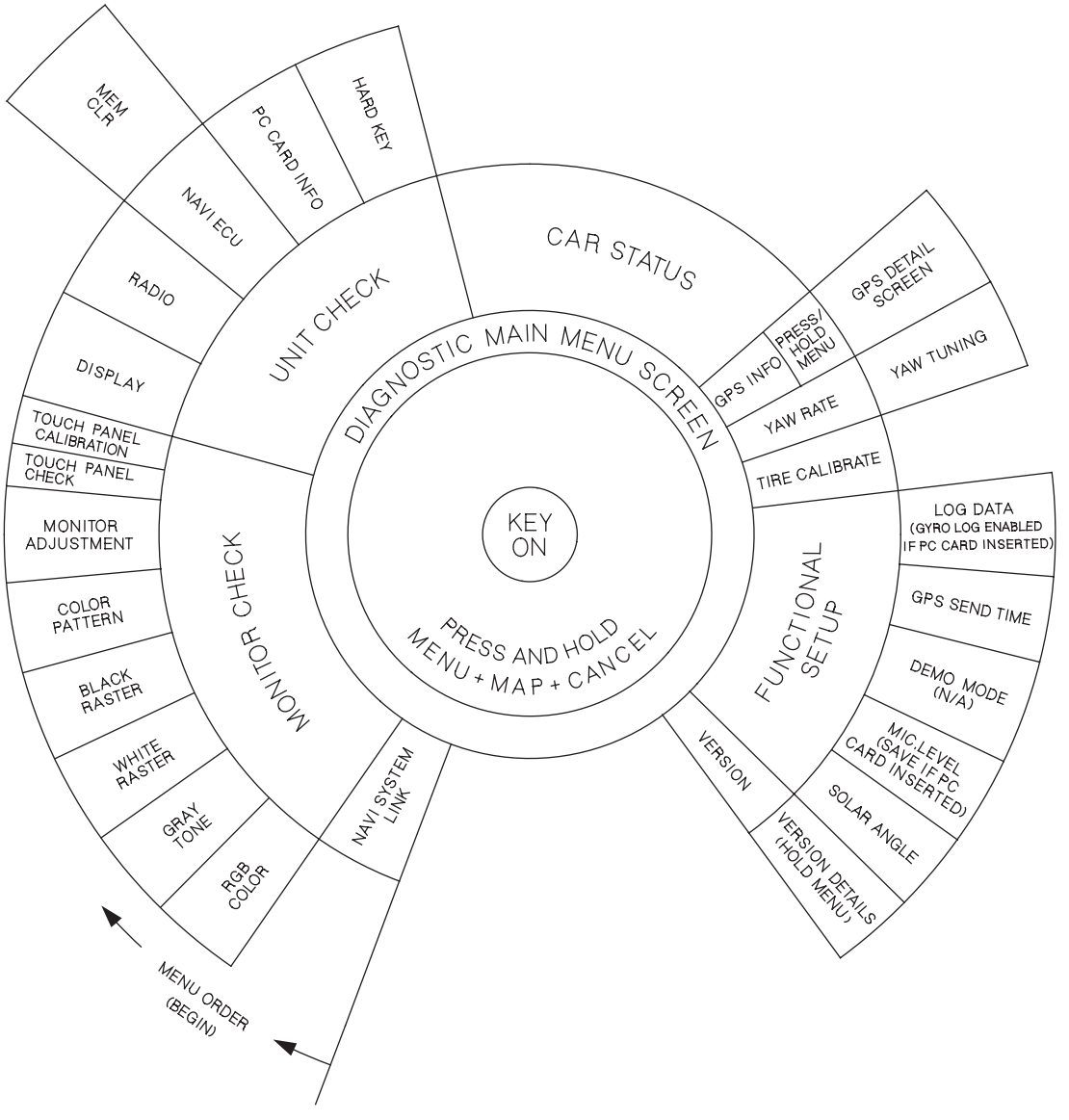
Item	Definition
LCD	Liquid Crystal Display (the navigation screen)
Map matching	The received GPS information allows the navigation system to position the vehicle on the map. Map matching has occurred if the map screen displays the current street name in the bottom-shaded area.
Mic	Abbreviation for the microphone used for receiving voice commands. It is located near the map light in the ceiling. The ANC circuit may also use it to check its tuning.
MID	Multi-Information Display
MW	Maneuver Window. While on-route to a destination, this window displays information about the next maneuver.
Navi	Abbreviation for the Navigation System.
Off-road tracking	See bread-crumbs.
Off route	Off route This occurs when the user leaves mapped roads. Off road tracking dots (bread-crumbs) are displayed if the option is enabled in the setup menu. The user can use them to return to a mapped road. The bottom of the navigation screen displays Not on a digitized road.
Outlying areas	These are rural areas that typically have only their main roads mapped. All other roads are shown in light brown for reference only, since they have not been verified.
Paired	Linking your cell phone to the HFL.
PC Card slot	PC Card Slot The PC Card (PCMCIA, type II) slot is for factory use only. Make sure that the sliding door is closed at all times, if opened, an error message is displayed on the screen.
PCM	Powertrain Control Module. This unit supplies the navigation system speed signal, also refered to as PCM.
PCMCIA	A computer industry defined term referring to the PC Card slot standard.
PIN	Personal Identification Number, a random 4 digit number created by the customer to protect personal information.
POI	Point Of Interest. These are the businesses, schools, etc. found under the places option on the main menu.
Polygon	Colored areas on the map screen denoting parks, schools, etc. See the Navigation System Manual Driving to Your Destination for a list of the assigned colors.
QWERTY	Keyboard layout resembling the typewriter keys. The keyboard layout can be changed to an alphabetical layout in the Setup mode.
SCS connector	The service check signal 2-pin connector used to put the navigation system into the diagnostic mode.
Security code	Code needed to activate the navigation system. You can get the security code from the iN by entering the navigation unit serial number. You can find the serial number on the diagnostic screens (unit check, Navi ECU), or on the underside of the navigation unit.
Tuning	A continual update of internal navigation system scaling factors. See the individual sensor tuning discussions under either System Description, or System Diagnosis Mode (see page 23-135).
Unverified Streets	These streets have not been verified for turn restrictions, one-way, etc. They appear light brown on the map. You can enter address destinations in these areas, but depending on your Unverified Routing choice in setup, voice guidance may end at the last verified street closest to your destination.
USB	Universal Serial Bus. the USB is used for playing the compressed audio files (MP3, WMA, and AAC) on the external device through the audio unit.
Verified streets	These streets consist of the detailed metropolitan coverage areas, and all other inter-town connection roads. These roads are shown in black or red on the map. (interstates are red)
VP	Vehicle Position. When in map mode, this circular icon shows the vehicle position on the map.
VR	Voice Recognition. This allows voice control of many of the navigation functions. The hardware consists of the microphone, voice control switch (navigation TALK/BACK buttons), and the center speaker. See the overview for more information.
VSP	Vehicle Speed Pulse. This pulse signal coming from the PCM (via the CSS) is used to update the Vehicle position on the map. These pulses do not indicate direction (forward or backward). When in reverse, the navigation receives a signal and directs the VP to move backwards on the map.
XM	This device receives information from the XM satellites and passes XM audio information to the audio unit. In addition, traffic information is sent to the navigation unit.
Yaw Sensor	This device is located in the navigation system control unit and senses the side-to-side twisting force generated when the vehicle turns. See a detailed description of how this sensor works in system description.

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Diagnostic System Diagram

This diagram below shows and over view of the navigation diagnostic features starting at the center and working outward in layers. The diagram starts with Key on. From any of the navigation Map or Menu screens, press and simultaneously hold the keys Menu, MAP/GUIDE, and Cancel.

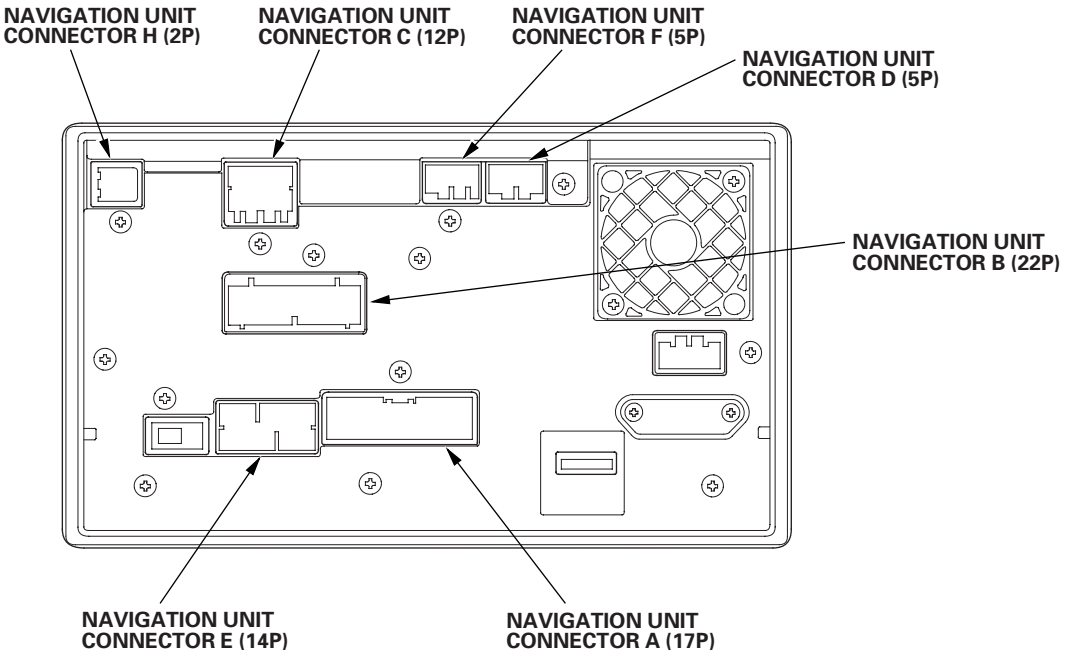
Finally, the diagram shows the available diagnostic menu choices, starting at the bottom left, and moving clockwise. In most cases, do not clear or change settings in any diagnostic screen unless instructed to do so in the explanation, or by the factory. If the factory asks you to insert a PCMCIA memory card into the PC card Slot, then the features specified on the diagram with PC card are available.



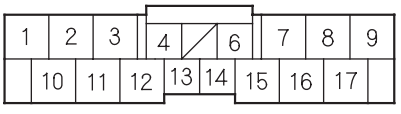
(cont'd)

System Description (cont'd)

Navigation System Connector Location

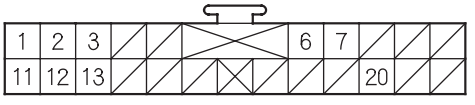


NAVIGATION UNIT CONNECTOR A (17P)



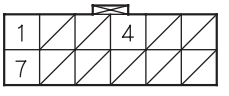
Wire side of female terminals

NAVIGATION UNIT CONNECTOR B (22P)



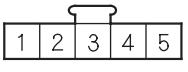
Wire side of female terminals

NAVIGATION UNIT CONNECTOR C (12P)



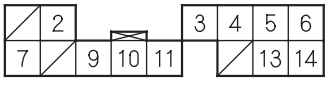
Wire side of female terminals

NAVIGATION UNIT CONNECTOR D (5P)



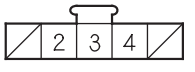
Wire side of female terminals

NAVIGATION UNIT CONNECTOR E (14P)



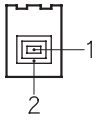
Wire side of female terminals

NAVIGATION UNIT CONNECTOR F (5P)



Wire side of female terminals

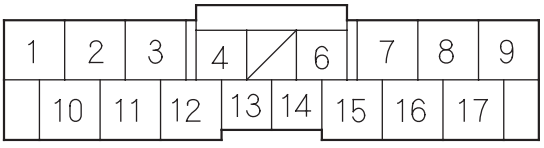
NAVIGATION UNIT CONNECTOR H (2P)



Terminal side of female terminals

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Navigation Unit Inputs and Outputs for Connector A (17P)



Wire side of female terminals

Navigation Unit Connector A (17P)

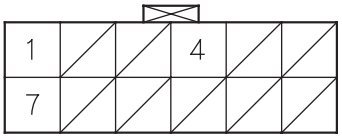
Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	RED	ILL (−)	Ground for illumination light	With full dash lights brightness, 0 V	If open: When brightness = Auto, night mode for the display is inoperative when lights on. If short to ground: No change to display.
9	BLK	RADIO GND (Ground)	Ground for display unit	0 V	If open: No change to display. If short to ground: No change to display.
10	GRY	ILL (+) (Illumination positive)	Parking light on signal from dash and console lights	Light on = battery voltage, Lights off = 0 V	If open: When brightness = Auto, night mode for the display is inoperative when lights on. If short to ground: Blows fuse No. 14 (7.5 A) in under-dash fuse/relay box.
13	BLU	VSP (Vehicle speed pulse)	Vehicle speed pulse signal from ECM/PCM	Pulses 0—5 V: Average 2.5 V, when moving	If open: No vehicle speed pulses. Diagnostic screen Car Status, VSP Navi = 0. If short to ground: No vehicle speed pulses. Diagnostic screen Car Status, VSP Navi = 0.
17	WHT	+B (+B power source)	Continuous power source	Battery voltage	If open: Screen completely off (no backlight visible). If short to ground: Blows fuse No. 23 (10 A) in the under-hood fuse/relay box.

(cont'd)

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System Description (cont'd)

Navigation Unit Inputs and Outputs for Connector C (12P)



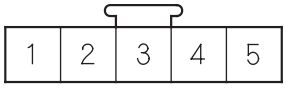
Wire side of female terminals

Navigation Unit Connector C (12P)

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	+B BACK UP	Continuous power source	Battery voltage	If open: Display picture goes out (display back light still on). NOTE: System will reboot to enter code screen. If short to ground: Blows fuse No. 23 (10 A) in the under-dash fuse/relay box.
4	BLK	GND	Ground for navigation unit	0 V	If open: No effect on system. If short to ground: No effect on system.
7	BRN	BACK LT—	Reverse signal of select laver from Multiplex integrated Control unit (A/T) or backup light switch (M/T)	In reverse, battery voltage: Otherwise 0 V	If open: Navigation never sees the reverse signal and back-up camera does not come on when in reverse. Diagnostic screen Car Status, Back = 0. If short to ground: Blows fuse No. 10 (7.5 A) in the under-dash fuse/relay box.

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Navigation Unit Inputs and Outputs for Connector D (5P)



Wire side of female terminals

Navigation Unit Connector D (5P)

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	BRN	MIC GND	Ground for microphone signal	0 V	If open: No microphone signal shown in diagnostics: Navi System Link and Functional Set up Mic Level. If short to ground: No effect on voice recognition.
2	YEL	MIC SIG+	Microphone output signal positive	4—5 V (with navigation TALK button pressed)	If open: No microphone signal shown in diagnostic screens: Navi System Link and Functional Setup Mic Level. If short to ground: No microphone signal shown in diagnostic screens: Navi System Link and Functional Setup Mic Level.
3	GRY*	MIC SH	Shield for terminal No. 1, 2, 5	0 V	If open: No effect on voice recognition. If short to ground: No effect on voice recognition.
4	GRN	NAVI GUIDE	Steering wheel switch output	4—5 V (navigation TALK button pressed) 2.5—3 V (navigation BACK button pressed)	If open: Steering wheel navigation TALK, and navigation BACK buttons do not work. If short to ground: Steering wheel navigation TALK, and navigation BACK buttons do not work.
5	ORN	MIC ADPT	Control signal for microphone	0 V	If open: No effect on voice recognition. If short to ground: No effect on voice recognition.

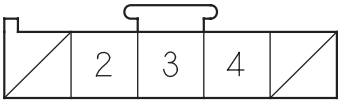
*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

(cont'd)

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System Description (cont'd)

Navigation Unit Inputs and Outputs for Connector F (5P)



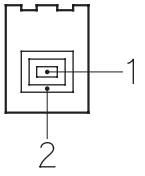
Wire side of female terminals

Navigation Unit Connector F (5P)

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
2	BLU	AC CK	Time set sync signal	0-battery voltage pulses	If open: A/C voice control does not work. If short to ground: A/C voice control does not work.
3	YEL	AC SI	A/C input signal	0-battery voltage pulses	If open: voice control does not work. If short to ground: Voice control does not work.
4	RED	AC SO	A/C output signal	0-battery voltage pulses	If open: A/C voice control does not work. If short to ground: A/C voice control does not work.

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Navigation Unit Inputs and Outputs for Connector H (2P)

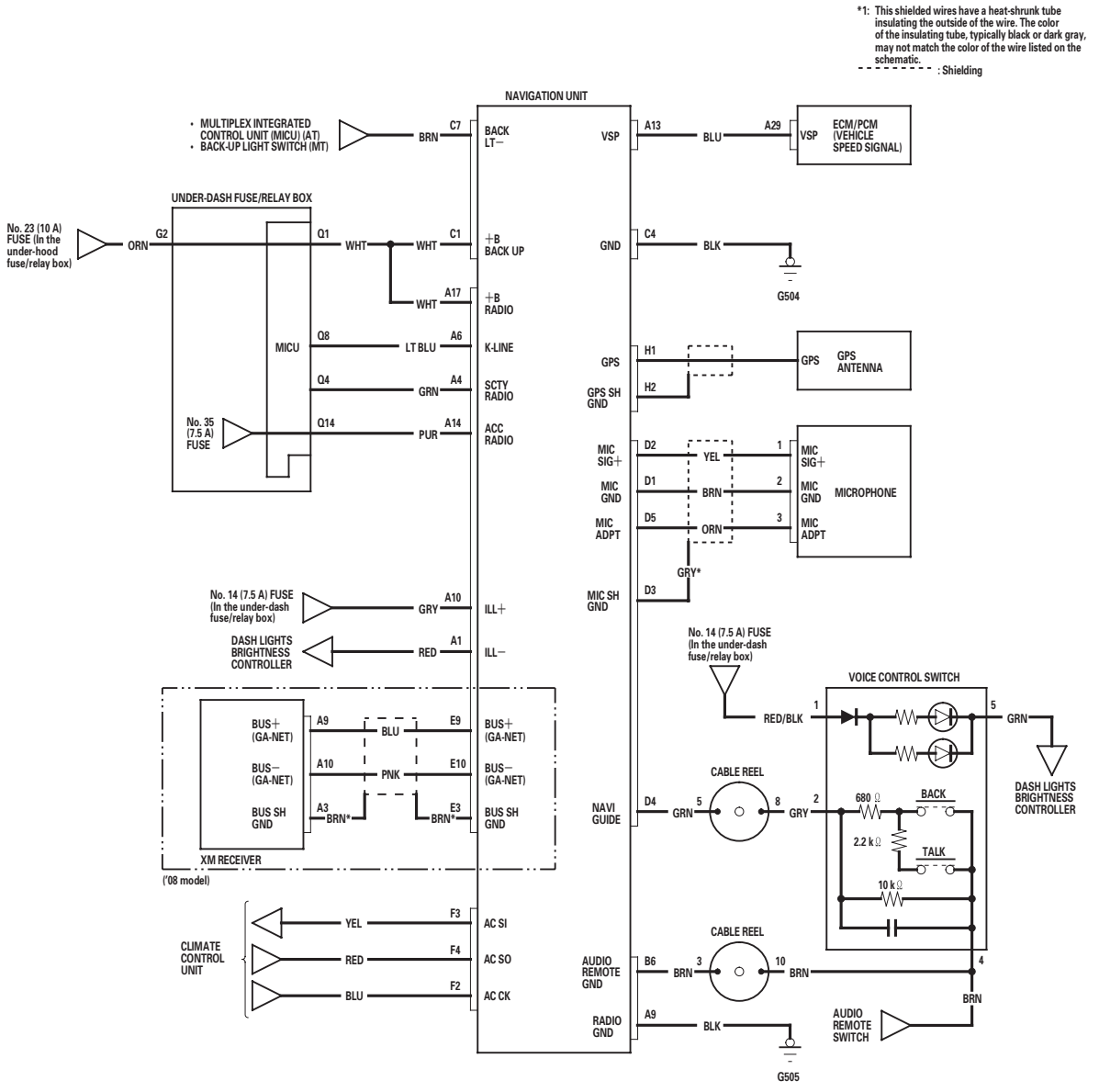


Terminal side of female terminals

Navigation Unit Connector H (2P)

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	———	GPS	GPS signal (5 V in, GPS signal out)	5 V	If open: GPS icon on screen is white, system links screen ANT shows NG. If short to ground: GPS icon on screen is white, system links screen ANT shows NG.
2	———	GPS SH	Shield for terminal No. 1	0 V	If open: GPS icon on screen is white, system links screen ANT shows NG. If short to ground: No effect on system.

Circuit Diagram



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Symptom Troubleshooting

No picture is displayed

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the navigation system anti-theft code.

1. Check the No. 23 (10 A) fuse in the under-hood fuse/relay box and No. 35 (7.5 A) fuse in the under-dash fuse/relay box, and reinstall the fuse if it is OK.

   Is the fuse OK?

   YES—Go to step 2.

   NO—Replace the fuse and recheck. ■

2. Turn the ignition switch to ON (II).

3. Operate the radio and listen to the audio.

   Can you hear the audio?

   YES—Go to step 4.

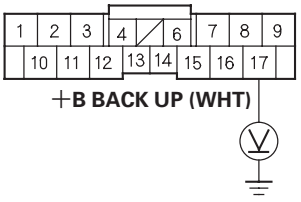
   NO—Refer to audio system troubleshooting. ■

4. Turn the ignition switch to LOCK (0).

5. Remove the navigation unit (see page 23-155).

6. Measure the voltage between navigation unit connector A (17P) terminal No. 17 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage?

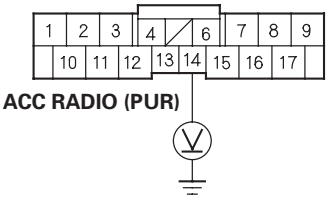
YES—Go to step 7.

NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

7. Turn the ignition switch to ON (II).

8. Measure the voltage between navigation unit connector A (17P) terminal No. 14 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 9.

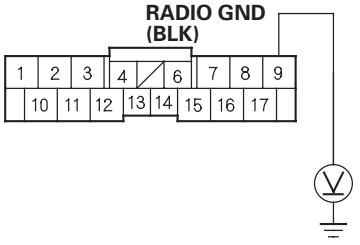
NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

(cont'd)

Symptom Troubleshooting (cont'd)

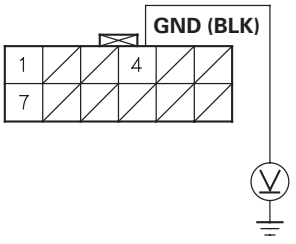
9. Measure the voltage between navigation unit connector A (17P) terminal No. 9 and body ground, and between navigation unit connector C (12P) terminal No. 4 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

NAVIGATION UNIT CONNECTOR C (12P)



Wire side of female terminals

Is there less than 0.1 V?

YES—Replace the navigation unit (see page 23-155). ■

NO—Repair open in the wire between the navigation unit and body ground (G504) (see page 22-30), (G505) (see page 22-32). ■

Picture has lines/rolls/other issues or is an odd color

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check the navigation screen settings for brightness, contrast, black level and the color screen for map color and menu color.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the navigation and audio system anti-theft codes.

1. Check for electronic aftermarket accessories (possibly hidden) mounted near the navigation unit.

   Are there any electronic accessories?

   YES—Disable the accessories, and recheck. ■

   NO—Go to step 2.

2. Turn the ignition switch to ON (II).

3. Start up the navigation picture.

   Is the picture scrolling horizontally (left to right or right to left)?

   YES—Go to step 5.

   NO—Go to step 4.

4. Go into the Diagnostic mode and use RGB Color diagnostic under Monitor Check (see page 23-137).

   Are the red, green, and blue colored circle shown?

   YES—Go to step 5.

   NO—Replace the navigation unit (see page 23-155). ■

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5. Turn the ignition switch to LOCK (0), then turn to ON (II) and observe the navigation picture.

   Did the image improve?

   YES—Check for sources of electrical noise, such as poor battery connection, alternator, defective battery, aftermarket accessories or cell phone, and poor pin fits at the navigation unit. ■

   NO—Replace the navigation unit (see page 23-155). ■

Navigation display buttons do not work or respond properly

NOTE:
- Check the vehicle battery condition first.
- Always make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Always check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the navigation and audio system anti-theft codes.

1. Turn the ignition switch to ON (II).

   Does the navigation display turn on?

   YES—Replace the navigation unit (see page 23-155). ■

   NO—Refer to troubleshooting for no picture is displayed (see page 23-119). ■

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Symptom Troubleshooting (cont'd)

GPS icon is white or not shown

NOTE:
- Check the vehicle battery condition first.
- Make sure the vehicle is parked outside and away from buildings.
- Refer to GPS Information (see page 23-142) for realtime satellite reception display.
- Check for window tinting above the GPS antenna and any non-OEM accessories mounted near the navigation unit or GPS antenna.

1. Check for metallic window tint on the windshield and electronic aftermarket accessories (possibly hidden) mounted near the GPS antenna or the navigation unit.

   Is there metallic window tint or electronic accessories?

   YES—Remove tint or the accessories, and recheck. ■

   NO—Go to step 2.

2. Go into the Diagnostic Menu, and use the Navi System Link test (see page 23-136) to check the GPS antenna.

   Is the GPS Ant icon red?

   YES—Use the Navi ECU test under Unit Check (see page 23-139) to check for a kinked, crushed, or disconnected GPS antenna wire. If necessary, try a known-good GPS antenna. If icon is still red, replace the navigation unit (see page 23-155). ■

   NO—Check that nothing is blocking the GPS antenna located behind the gauge assembly, and recheck. Substitute a known-good navigation unit, and recheck. ■

Voice guidance cannot be heard, is broken up, or there is static

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check that the volume setting and voice feedback are turned ON.
- Check the connectors for poor connection or loose terminals.
- Before troubleshooting, make sure you have the navigation system 4-digit anti-theft code.
- After troubleshooting, enter the navigation system anti-theft code.

1. Press the display unit SET-UP button.

2. Check the volume setting for the navigation system.

   Is it set to OFF?

   YES—Set the volume to an audible level. ■
   NO—Go to step 3.

3. Check the radio operation.

   Can you hear the radio?

   YES—Go to step 4.
   NO—Troubleshoot the audio system. ■

4. Go into the Diagnostic Menu, and use the Navi System Link test (see page 23-136) to check the radio.

   Is the Radio icon red?

   YES—Troubleshoot the audio system. ■
   NO—Go to step 5.

5. Test the voice control switch (see page 23-156).

   Is voice control switch OK?

   YES—Replace the navigation unit (see page 23-155). ■
   NO—Replace the voice control switch (see page 23-157). ■

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Voice control does not work/respond

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check the connector for poor connection or loose terminals.
- Before troubleshooting, make sure you have the navigation system 4-digit anti-theft code.
- After troubleshooting, enter the navigation system anti-theft code.

Before assuming that a voice complaint is hardware related, ensure that the voice control system is being operated correctly.

- Make sure you are on the correct screen when trying to issue a voice command. For instance, the command ''Find the nearest Italian Restaurant'' only works on a Map screen (See the Navigation System Manual for a complete list of allowed voice commands for the information being displayed.).
- Close the windows, moonroof, and doors.
- Set the fan speed to low (1 or 2).
- Adjust the air flow from the air conditioning vents so that they do not blow against the microphone on the ceiling.
- Pause after pressing the navigation TALK button, then give a voice command clearly in a natural speaking voice. If the system cannot recognize your command, speak louder.
- If the microphone picks up voices other than yours, the system may not interpret your voice commands correctly.
- If you speak a command with something in your mouth, or your voice is too husky, the system may misunderstand your command.
- Compare the system operation with a known-good vehicle. Have more than one person test the system operation. If the known-good vehicle performs the same, it is a characteristic of the system.

1. Turn the ignition switch to ON (II).

2. Go into the Diagnostic Menu and use the Mic Level test under Functional Setup (see page 23-147) to check the operation of the navigation TALK and navigation BACK buttons.

   Are the navigation TALK and navigation BACK buttons operational?

   YES—Go to step 10.

   NO—Go to step 3.

3. Turn the ignition switch to LOCK (0).

4. Do the voice control switch test (see page 23-156).

   Is the voice control switch OK?

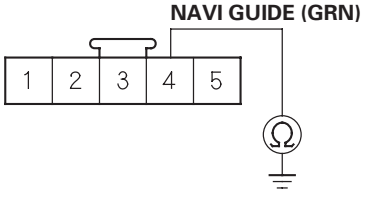
   YES—Go to step 5.

   NO—Replace the voice control switch.

5. Disconnect the cable reel 20P connector and navigation unit connector D (5P).

6. Check for continuity between body ground and navigation unit connector D (5P) terminal No. 4.

NAVIGATION UNIT CONNECTOR D (5P)



Wire side of female terminals

Is there continuity?

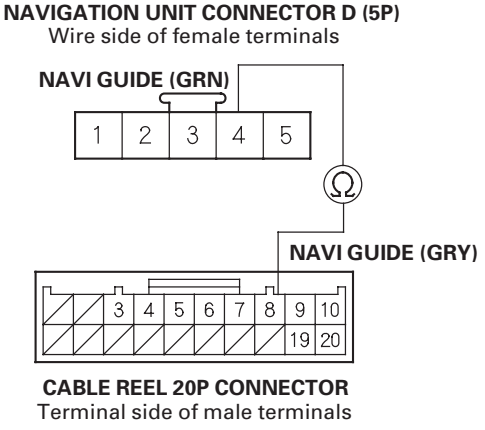
YES—Repair short to body ground in the wire between the navigation unit and the voice control switch, or replace the cable reel. ■

NO—Go to step 7.

(cont'd)

Symptom Troubleshooting (cont'd)

7. Check for continuity between navigation unit connector D (5P) terminal No. 4 and cable reel 20P connector terminal No. 8.



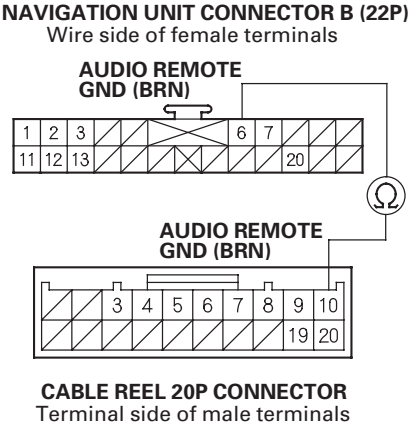
Is there continuity?

YES—Go to step 8.

NO—Repair open in the wire between the navigation unit and the voice control switch, or replace the cable reel. ■

8. Disconnect navigation unit connector B (22P).

9. Check for continuity between navigation unit connector B (22P) terminal No. 6 and cable reel 20P connector terminal No. 10.



Is there continuity?

YES—Replace the navigation unit. ■

NO—Repair open in the wire between the navigation unit and the voice control switch, or replace the cable reel. ■

10. Use the Mic Level diagnostic under Functional Setup (see page 23-147) to check the operation of the microphone.

Is the microphone operational?

YES—Check the operation of the voice control system (see the Navigation System Manual). ■

NO—Go to step 11.

11. Turn the ignition switch to LOCK (0).

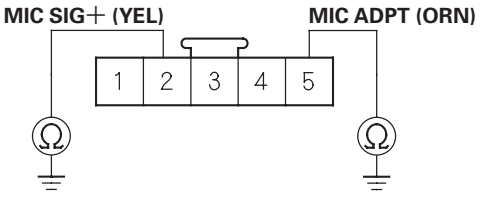
12. Disconnect the microphone 3P connector (see page 23-157).

13. Disconnect navigation unit connector D (5P).

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14. Check for continuity between body ground and navigation unit connector D (5P) terminal No. 2 and No. 5 individually.

NAVIGATION UNIT CONNECTOR D (5P)



Wire side of female terminals

Is there continuity?

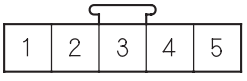
YES—Repair short to body ground in the wire(s) between navigation unit and the microphone. ■

NO—Go to step 15.

15. Check for continuity between navigation unit connector D (5P) according to the table.

From terminal	To terminals
D2	D3, D5
D3	D5

NAVIGATION UNIT CONNECTOR D (5P)



Wire side of female terminals

Is there continuity between any of the terminals?

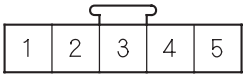
YES—Short in the wire(s) between the navigation unit and the microphone. Replace the affected shielded harness. ■

NO—Go to step 16.

16. Check for continuity between navigation unit connector D (5P) and microphone 3P connector according to the table.

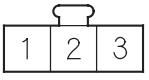
Navigation unit connector	Microphone connector	Wire color
D1	2	BRN
D2	1	YEL
D5	3	ORN

NAVIGATION UNIT CONNECTOR D (5P)



Wire side of female terminals

MICROPHONE 3P CONNECTOR



Wire side of male terminals

Is there continuity?

YES—Substitute a known-good microphone (see page 23-157), then reconnect all of the connectors, and recheck. If the symptom/indication goes away, replace the original microphone. If the symptom/indication is still present, replace the navigation unit (see page 23-155). ■

NO—Repair open in the wire(s) between the navigation unit and the microphone. Replace the affected shielded harness. ■

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Symptom Troubleshooting (cont'd)

Vehicle position icon constantly leaves road, moves erratically, or is displayed very far from actual position

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check for aftermarket accessories.

1. Check the GPS icon on the navigation picture.

   Is the GPS icon on the map screen?

   YES—Do the troubleshooting for GPS icon is white or not shown (see page 23-122). ■

   NO—Go to step 2.

2. Go into the Diagnostic Menu, and use the Yaw Rate test (see page 23-144) to check the yaw rate sensor.

3. Go into the Diagnostic Menu and use the Car Status test (see page 23-141) to check the vehicle speed pulse.

   Are the yaw rate sensor and vehicle speed pulse OK?

   YES—The problem may be a normal characteristic. Check to see if the problem occurs in the same place. If it does, the problem could be in the database. Compare to a known-good vehicle under the same conditions. If you can duplicate the problem, report it. Refer to the client Assistance section of the Navigation User's Guide, ''Reporting Errors''. ■

   NO—If the problem is the yaw rate sensor, replace the navigation unit (see page 23-155). If the problem is the vehicle speed pulse, troubleshoot the vehicle speed signal circuit. ■

Vehicle icon wanders across the map when driving (does not follow a displayed road) or map or vehicle ICON spins

NOTE:
- Check the vehicle battery condition first.
- This symptom is usually caused by a defective yaw rate sensor. Perform this diagnostic when the vehicle is cold and warm.
- Also refer to symptom troubleshooting for GPS icon is white or not shown (see page 23-122).

1. Go into the Diagnostic Menu, and use the Yaw Rate test (see page 23-144).

   Are the values correct?

   YES—The system is OK. ■

   NO—Replace the navigation unit (see page 23-155). ■

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DVD read error messages

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check the Navigation System Manual for a list of common DVD screen error messages and the probable cause.
- Go into the Diagnostic Menu, and use the Car Status test (see page 23-141) to check the status of the display.

1. Check the DVD-ROM reading surface for scratches.

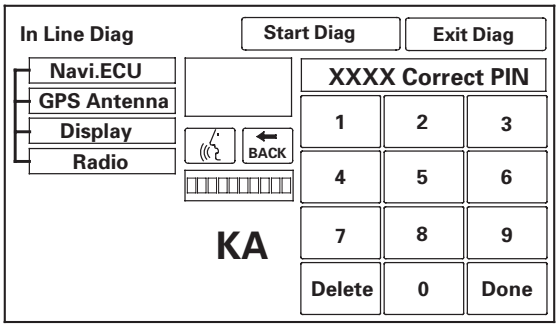
   Are there scratches?

   YES—Replace the DVD-ROM. ■

   NO—If the problem occurs occasionally when the system is cold, this is normal. If the problem occurs frequently when driving, replace the navigation unit (see page 23-155). ■

System always comes up in in-line diagnostic mode

1. When a navigation unit is powered up for the first time at the factory, the factory diagnosis screen (In Line Diag) appears. Normally the factory performs the steps necessary to verify proper operation and terminate the factory diagnostic. Until the proper confirmation sequence is performed, the screen will appear every time the vehicle is started.



2. Follow the steps to prevent the screen from showing up in the future:

   - Hold down the buttons (Menu, Map/Guide, and Cancel) for about 5 seconds (the Select Diagnosis Items screen appears).
   - Hold down the Map/Guide button for 5—10 seconds (A screen with a Complete button appears).
   - Touch Complete, and then the Return button (the system may re-boot).
   - Restart the vehicle, and confirm normal operation by completing the PDI of the navigation system Service Bulletin.

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Symptom Troubleshooting (cont'd)

Display day/night mode does not work or does not work properly

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connection or loose terminals.
- Before troubleshooting, get the navigation system anti-theft code.
- After troubleshooting, enter the navigation system anti-theft code.
- Full brightness on the instrument panel brightness control with the head lights turned on causes the system to stay in the day mode, even when the lights are on.

1. Make sure the instrument panel brightness control is not on full brightness. Turn the headlights on and adjust the dash brightness to the middle range.

2. Change the day/night mode under Set-up to AUTO, and recheck.

   Does the display change to day and night modes when turning the headlights on and off?

   YES—The system is OK at this time. ■

   NO—Go to step 3.

3. Go into the Diagnostic Menu and use the Car Status test to check for an ILL signal (see page 23-141).

   Is the ILL signal OK?

   YES—Replace the navigation unit (see page 23-155). ■

   NO—Check the ILL+ circuit between the navigation unit and the No. 14 (7.5 A) fuse in the under-dash fuse/relay box. ■

System locks up or freezes constantly

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.

1. Start the engine and turn the ignition switch to LOCK (0), then turn the ignition switch to ON (II).

   Does the system reboot?

   YES—The system is OK at this time. ■

   NO—Check the DVD for scratches or damage, and the navigation unit for water damage. If OK, go into the Diagnostic Menu and do all of the Unit Check tests (see page 23-139). Also check for low battery charge or poor charging system performance. ■

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Navigation display stays on with ignition switch in LOCK (0)

NOTE:
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, get the navigation system anti-theft code, then write down the audio presets.
- After troubleshooting, re-enter the anti-theft code, and re-initialize the navigation system, then enter the audio presets.
- Check for aftermarket accessories that use the same power circuit. A feedback can cause this problem.

1. Remove the key from the ignition.

   Does the navigation screen stay on?

   YES—Go to step 2.

   NO—The system is OK at this time. ■

2. The vehicle may have been used as a demonstration vehicle at an event like an auto show. In these events, power is often jumpered to the navigation system so that the ignition key is not needed in the vehicle. At the end of the show, the jumper wire may not have been removed. Check the navigation unit connector A (17P) for a non-factory jumper wire in series with the factory cable.

   Is there a jumper wire?

   YES—Remove the jumper wire, and re-test. Return the jumper wire to Tech Line. ■

   NO—Go to step 3.

3. Check if the audio unit works.

   Does the audio unit work with the ignition switch off?

   YES—Troubleshoot the ACC circuit for a short to power with another circuit. ■

   NO—Replace the navigation unit (see page 23-155). ■

Navigation cannot control audio system

NOTE:
- Check the vehicle battery condition first.
- Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode and use Version (see page 23-149).
- Check for connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have anti-theft codes for the navigation system.
- After troubleshooting, enter the anti-theft codes for the navigation system.
- Make sure that the correct navigation DVD color and version are installed.
- Inspect the navigation DVD for dirt or damage.
- Check any official Honda service website for more service information about the navigation system.

1. Make sure the anti-theft code for the navigation system is entered.

2. Go into the Diagnostic Menu and use the Navi System Link test (see page 23-136).

   Is the Radio icon red?

   YES—Do the troubleshooting for the voice guidance cannot be heard (see page 23-122). ■

   NO—Go to step 3.

3. Substitute a known-good navigation unit (see page 23-155), and recheck.

   Can the navigation control audio?

   YES—Replace the navigation unit (see page 23-155). ■

   NO—Do the audio system troubleshooting. ■

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Symptom Troubleshooting (cont'd)

Navigation cannot control HVAC by voice command

NOTE:
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, get the navigation system anti-theft code.
- After troubleshooting, enter the navigation system anti-theft code.
- Verify that the correct navigation unit is installed for this model. Go into the Diagnostic Menu and use Version (see page 23-149).

1. Go into the Diagnostic Menu and use the Navi System Link test (see page 23-136).

   Is the Air-con icon red?

   YES—Do the climate control system troubleshooting.■

   NO—Replace the navigation unit (see page 23-155). ■

Navigation cannot control XM radio

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.

1. Substitute a known-good navigation unit (see page 23-155), and recheck.

   Can the navigation control the XM radio?

   YES—Replace the navigation unit (see page 23-155). ■

   NO—Do the audio system troubleshooting. ■

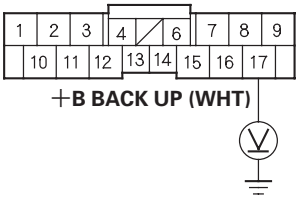
DYNOMITE -2009-

Navigation frequently asks for anti-theft code and/or needs GPS initialization

NOTE:
- This is often caused by a loss of battery power, a low or poor battery condition, or a poor ground.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about navigation system.

1. Measure the voltage between navigation unit connector A (17P) terminal No. 17 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage?

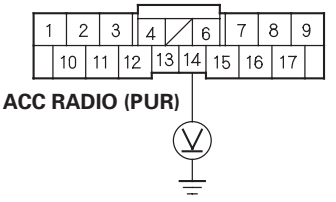
YES—Go to step 2.

NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

2. Turn the ignition switch to ON (II).

3. Measure the voltage between navigation unit connector A (17P) terminal No. 14 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 4.

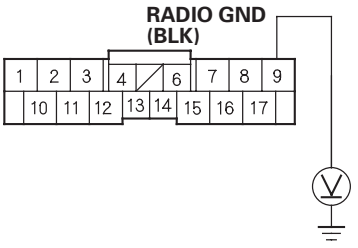
NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

(cont'd)

Symptom Troubleshooting (cont'd)

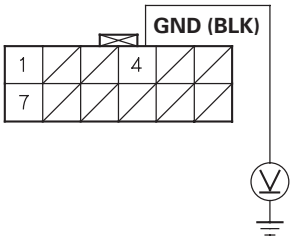
4. Measure the voltage between navigation unit connector A (17P) terminal No. 9 and body ground, and between navigation unit connector C (12P) terminal No. 4 and body ground.

NAVIGATION UNIT CONNECTOR A (17P)



Wire side of female terminals

NAVIGATION UNIT CONNECTOR C (12P)



Wire side of female terminals

Is there less than 0.1 V?

YES—Replace the navigation unit (see page 23-155). ■

NO—Repair open in the wire between the navigation unit and body ground (G504, G505). ■

OPEN/CLOSE function of the display does not work

NOTE:
- Check the vehicle battery condition first.
- If the display's Open/Close button does not work, you must manually open the display to obtain the client's navigation DVD, audio CD, and PC card (see page 23-154).

1. Press the OPEN/CLOSE button.

   Does the display open and/or close normally?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-155). ■

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Navigation display will not close

NOTE: Check the vehicle battery condition first.

1. Check the CD slot. Look for foreign objects, a stuck CD, a broken or sticking slot.

   Is the CD slot OK?

   YES—Go to step 2.

   NO—Replace the navigation unit (see page 23-155). ■

2. Check the PC card.

   Is the PC card fully seated?

   YES—Go to step 3.

   NO—Reseat the card or remove it. If it still won't close, replace the navigation unit (see page 23-155). ■

3. Press the OPEN/CLOSE button.

   Does the display open and/or close normally?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-155). ■

Navigation display does not open or opens part way

NOTE: Check the vehicle battery condition first.

1. Press the OPEN/CLOSE button.

   Does the unit beep?

   YES—Go to step 2.

   NO—Replace the navigation unit (see page 23-155). ■

2. Press the OPEN/CLOSE button.

   Does the display open normally?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-155). ■

Symptom Troubleshooting (cont'd)

Navigation system will not accept security code

NOTE:
- Check the vehicle battery condition first.
- The system will not operate without the 4-digit security (anti-theft) code. Follow the this procedure. (After 10 consecutive tries, you must cycle the key to continue trying)
- The Navigation System Diagnosis and Core Return Form is available online, under Job aids, and can be printed out for recording this information. This information will help the reman facility determine what caused the failure.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the anti-theft codes for the navigation system.
- Verity that the correct navigation unit is installed for this model. Go into the Diagnostic mode, and use Version (see page 23-149).
- Make sure that the correct navigation DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.

1. Go into the System diagnosis menu (see page 23-135), select Unit check, and then Navi ECU. A brief diagnostic runs for 20 seconds, and the serial number is displayed.

   Is the serial number displayed?

   YES—Go to step 4.

   NO—Go to step 2.

2. Remove the navigation unit (see page 23-155).

3. Check the serial number on the label on the underside of the navigation unit.

   Is the serial number confirmed on the underside of the navigation unit?

   YES—Go to step 4.

   NO—Replace the navigation unit (see page 23-155). ■

4. Using the serial number, look up the navigation security code in the Interactive Network. (click: Service, Vehicle Information, Anti-Theft code Inquiry, and then select Navigation from the Product drop down box). Enter the serial number.

   Is a 4-digit code displayed on the screen?

   YES—Go to step 5.

   NO—Call the Warranty Department to obtain the code (the telephone number is in the PDI service bulletin). Then go to step 5.

5. Check that the obtained code works to bypass the code screen in the navigation system.

   Does the code work?

   YES—The system is OK at this time. Return the vehicle to the client, and give them the anti-theft code. ■

   NO—Go to step 6.

6. Try entering four zeros (0000) in place for the code.

   Do the four zeros work to bypass the code screen?

   YES—Replace the navigation unit (see page 23-155), and enter Security code is 0000 in the problem description field of the core return form. ■

   NO—Replace the navigation unit (see page 23-155), and enter in Won't take security code (as proof, enclose the sticker that contains the Serial number and the Code) in the problem description field of the core return form. ■

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System Diagnostic Mode

The Honda Globe Screen (not the Acura Globe Screen) appears every time the vehicle is started

NOTE: The navigation DVD and the navigation unit are correct for the vehicle, but earlier and possibly later versions of the navigation software may have been installed. When this happens, the software may not be recognized by the navigation unit, and could cause the navigation unit to revert to an Acura model profile.

1. Remove the navigation unit (see page 23-155) and verify that the part number printed on the navigation unit label is the correct one for the year/model vehicle you are working on.

   Is the correct navigation unit installed based on the part number?

   YES—Go to step 2.
   NO—Replace the navigation unit with the correct unit for the year/model vehicle you are working on.■

2. Reinstall the navigation unit.

3. Remove the navigation DVD (see page 23-155).

4. Note the software version marked on the navigation DVD label and verify if it is the correct version for the vehicle year/model you are working on by checking any official Honda service website for more service information about the navigation system and navigation software.

   Is the software version marked on the navigation DVD label the correct one for the vehicle year/model you are working on?

   YES—Replace the navigation unit (see page 23-155). ■
   NO—Go to step 5.

5. Obtain the correct version DVD (see page 23-94), and install it.

   Does the navigation system boot-up with the Acura Globe Screen?

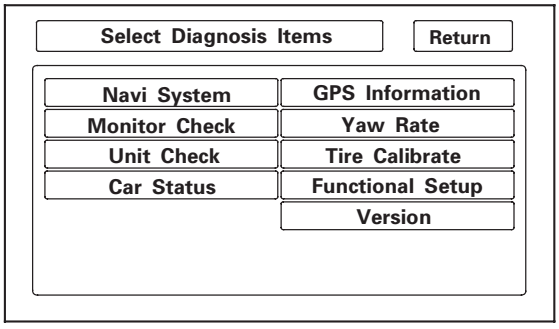
   YES—The problem is resolved, troubleshooting is complete.■
   NO—The system still shows an Honda Globe Screen. Replace the navigation unit (see page 23-155).■

Start-up procedure and Diagnosis Menu

1. Turn the ignition switch to ON (II).

   Press and hold the Menu, the Map/Guide, and the Cancel buttons, for about 3 seconds. The display screen then goes directly to the Diagnostic Menu.

DIAGNOSTIC MENU SCREEN



2. After the display changes to the Diagnostic Menu, select the item you want to check, and the test begins. To return to the previous screen, select Return.

   - Navi System (Link)
   - Monitor Check
   - Unit Check
   - Car Status
   - GPS Information
   - Yaw Rate
   - Tire Calibrate
   - Functional Setup
   - Version

(cont'd)

DYNOMITE -2009-

System Diagnostic Mode

The Honda Globe Screen (not the Acura Globe Screen) appears every time the vehicle is started

NOTE: The navigation DVD and the navigation unit are correct for the vehicle, but earlier and possibly later versions of the navigation software may have been installed. When this happens, the software may not be recognized by the navigation unit, and could cause the navigation unit to revert to an Acura model profile.

1. Remove the navigation unit (see page 23-155) and verify that the part number printed on the navigation unit label is the correct one for the year/model vehicle you are working on.

   Is the correct navigation unit installed based on the part number?

   YES—Go to step 2.
   NO—Replace the navigation unit with the correct unit for the year/model vehicle you are working on.■

2. Reinstall the navigation unit.

3. Remove the navigation DVD (see page 23-155).

4. Note the software version marked on the navigation DVD label and verify if it is the correct version for the vehicle year/model you are working on by checking any official Honda service website for more service information about the navigation system and navigation software.

   Is the software version marked on the navigation DVD label the correct one for the vehicle year/model you are working on?

   YES—Replace the navigation unit (see page 23-155). ■
   NO—Go to step 5.

5. Obtain the correct version DVD (see page 23-94), and install it.

   Does the navigation system boot-up with the Acura Globe Screen?

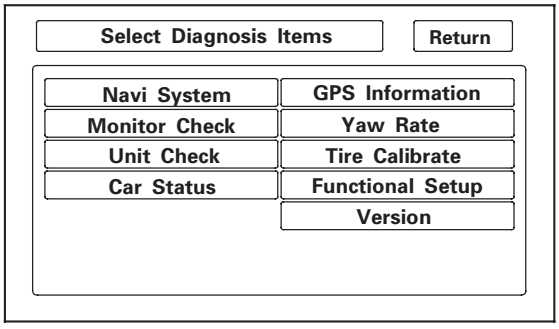
   YES—The problem is resolved, troubleshooting is complete.■
   NO—The system still shows an Honda Globe Screen. Replace the navigation unit (see page 23-155).■

Start-up procedure and Diagnosis Menu

1. Turn the ignition switch to ON (II).

   Press and hold the Menu, the Map/Guide, and the Cancel buttons, for about 3 seconds. The display screen then goes directly to the Diagnostic Menu.

DIAGNOSTIC MENU SCREEN



2. After the display changes to the Diagnostic Menu, select the item you want to check, and the test begins. To return to the previous screen, select Return.

   - Navi System (Link)
   - Monitor Check
   - Unit Check
   - Car Status
   - GPS Information
   - Yaw Rate
   - Tire Calibrate
   - Functional Setup
   - Version

(cont'd)

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System Diagnostic Mode (cont'd)

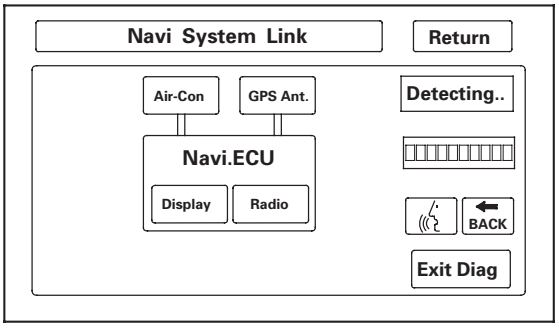
Navi System Link

- This diagnostic step tests the cables connecting the navigation components. Ensure that the ignition switch is in the ON (II) position. When the diagnosis begins, you hear a bong sound. The system is in a Detecting mode, and is waiting for all the items in white to be tested. This includes the voice control switch (navigation TALK/BACK buttons), and the microphone. Press the navigation TALK button on the steering wheel, and in a normal voice, say ''testing''. The Talk indicator on the screen should turn green, and the voice level indicator should move to at least the 6th bar to pass. Next, press the navigation BACK button. The Cancel indicator should turn green.
- If all of the communication lines connecting the system components, and the navigation TALK/BACK buttons/microphone check out OK (all block diagram items green), then the OK indicator turns green.
- If there is a problem with the system, the faulty system component item turns red, and the screen shows NG in red. Use the troubleshooting index, and other diagnostic screens to help locate the problem.
- The indicator on the screen may not change until you cycle the ignition switch. After repairing the affected cable or system, repeat this diagnostic.

  NOTE: Green boxes and green OK indicate that the communications lines (cables) are intact. This diagnostic does not necessarily imply that the individual components are functioning properly. For instance, the GPS antenna wire may be crushed, but still show as green. A road test, or other diagnostic may be necessary to find the problem.

- Select Return to return to the Diagnostic Menu, or the Exit Diag button to exit.

NOTE: The Mic Level indicator must reach the 6th bar or greater to pass the test.



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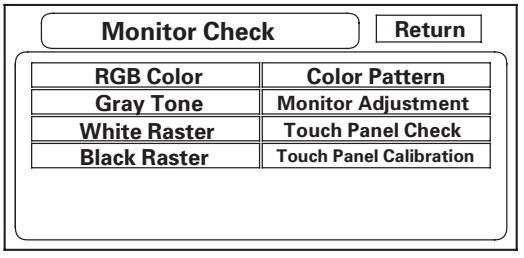
Monitor Check

Overview of navigation display:

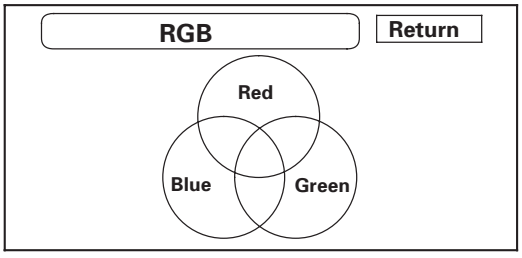
The illumination input from the gauge brightness control provides back lighting for the buttons surrounding the screen.

These screens help you troubleshoot the navigation display. Select the item you want to troubleshoot, and follow the diagnostic instructions.

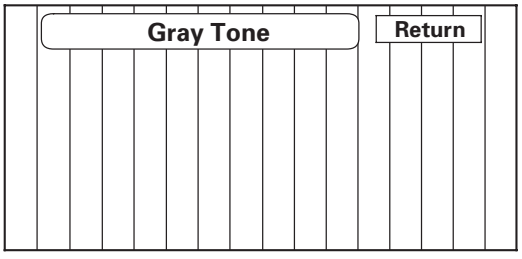
- RGB Color
- Gray Tone
- White Raster
- Black Raster
- Color Pattern
- Monitor Adjustment
- Touch Panel Check
- Touch Panel Calibration



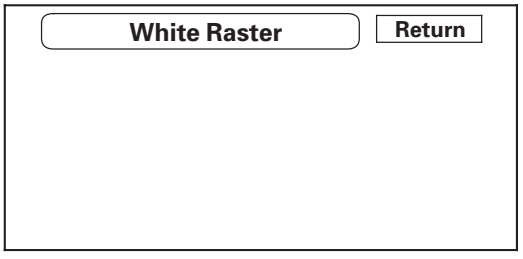
RGB Color
This screen verifies that the navigation display is receiving the video (R, G, B and Composite sync) signals properly. The three primary colors should all appear without distortion. The combination of all three should produce a central white section. If the picture has lines in it, or scrolls horizontally or vertically, and any of the colors are missing, troubleshoot for a Composite sync and color signal problem (see page 23-120).



Gray Tone
This screen help diagnoses problems with contrast. You should be able to see the changes from bar to bar across the scale. If you can't see changes from bar to bar, substitute a known-good navigation unit and retest.



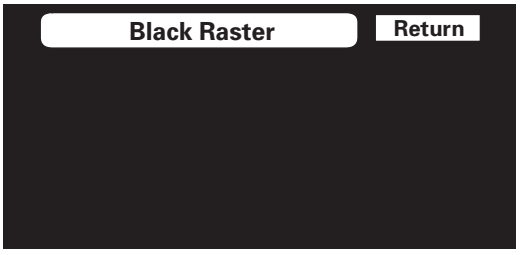
White Raster
This diagnostic screen checks for pixels that may be dead (off). The entire display must be white. If pixels are dead, replace the navigation unit.



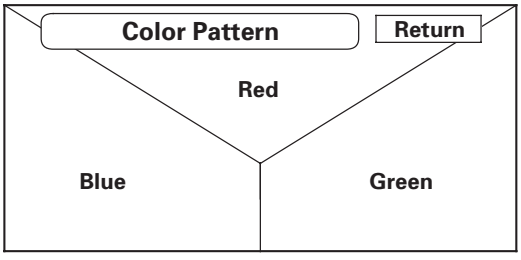
(cont'd)

System Diagnostic Mode (cont'd)

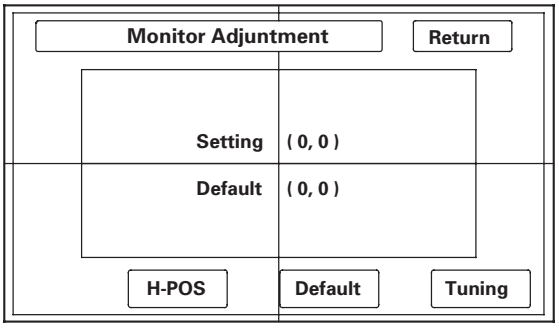
Black Raster
The entire display must be black. This diagnostic screen checks for pixels that may be stuck (on). If pixels are stuck on, replace the navigation unit.



Color Pattern
The chart below shows the colors being used for the various screens. This is for factory use only. To check the color signal use the RGB test.

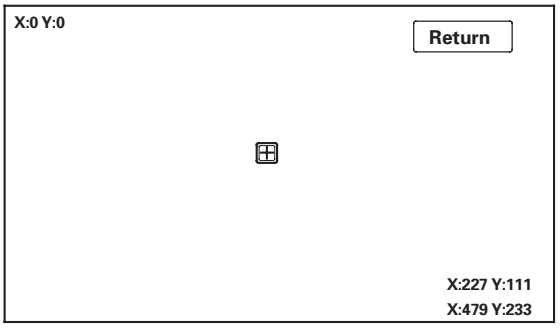


Monitor Adjustment
It is unlikely that you will ever need to adjust the monitor position. This is for factory use only. The Default button will reset the display position to factory specifications. The factory default is 0, 0. The H-POS button is for factory use only.



Touch Panel Check
The panel touch sensing system consists of a touch sensitive resistive membrane covering the display. Contrary to other systems using infrared beams, the screen has to be physically touched to make it work. The display has the capability of 479 touch locations (left to right), and 233 touch locations (top to bottom). The upper left hand corner is position (0, 0) and the lower right hand corner is (479, 233) as displayed. Touching anywhere on the screen displays the coordinate of the location, and a + icon appears where you touched the screen. If any area of the screen either doesn't respond, or responds at some other location when touched, then replace the navigation unit.

NOTE: Unlike earlier screens that used infrared sensors, direct sunlight will not affect this test.

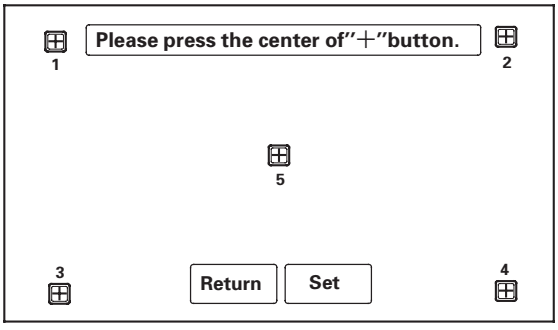


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Touch Panel Calibration
The display screen uses a touch sensitive membrane. This means that every location of the entire surface of the display is touch sensitive. This diagnostic allows alignment of these touch locations with the location of the buttons images on the screen.

Normally this should never need adjustment, and is used only to adjust the touch locations for parallax (the touch locations appear different when viewed at an angle). However, if an adjustment is necessary, follow this procedure:

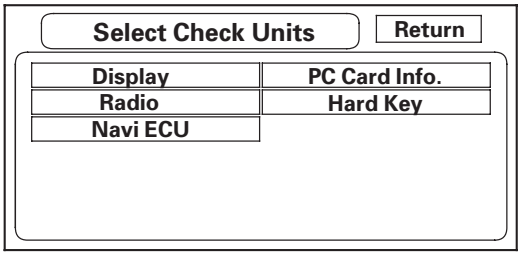
- The screen consists of the + button icons. Touch the center of the five + buttons on order 1—5.
- To store any change you make, touch the Set button.
- Use the Return key to exit the diagnostic.



Unit Check

Select the item you want to check, and the test starts.

- Display
- Radio
- Navi ECU
- PC Card Info
- Hard Key

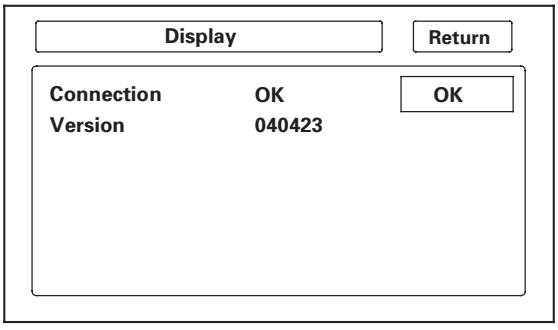


(cont'd)

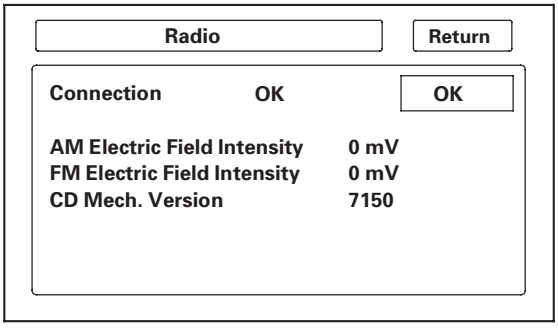
System Diagnostic Mode (cont'd)

Display
This performs additional checks on the communication bus between navigation CPU and the display. In addition, the test checks the internal electronic functions.

If the connection is NG, replace the navigation unit.
- Connection verifies internal communications.
- Version represents the software version for the display.

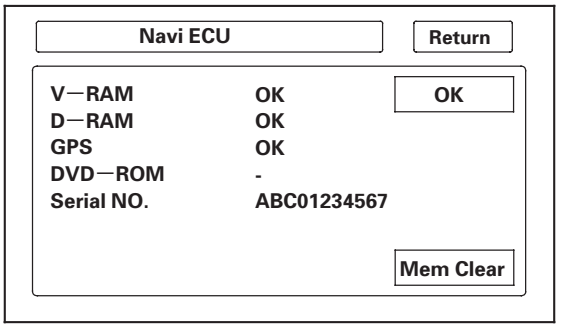


Radio
This diagnostic screen checks the internals of the radio (AM and FM) and CD player. If NG, replace the navigation unit.



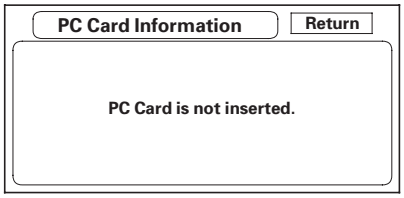
Navi ECU
This screen looks for problems with the navigation unit. When you initiate this diagnostic, the navigation unit may freeze of delay up to a minute while the diagnostic runs.

- If V-RAM or D-RAM is NG, then replace the navigation unit.
- If GPS indicates NG (ANT), check the entire GPS antenna wire from the navigation unit to the antenna. If the wire is crushed or damaged, try a known-good antenna. If this diagnostic reads OK, then order a new GPS antenna. If the diagnostic still reads NG (ANT), replace the navigation unit.
- DVD ROM represents the database version on the DVD. You can also find this information in setup by selecting System Information.
- Serial No. should be the same as the serial number found on the underside of the navigation unit. You need this number to obtain the security code from the Interactive Network system.
- Mem Clear is for factory use, and should never be used unless instructed by the factory. Accidental selection will erase the client's personal data, PINS, and settings. If selected, a popup box appears asking if you want to clear the memory. If so, select Yes.

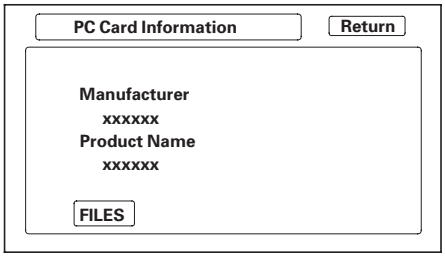


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PC Card info
There is no PC card in the PC slot, and the screen should display, PC card is not inserted.

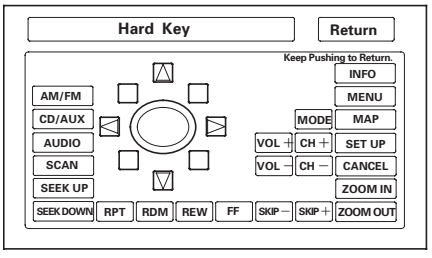


If the factory provides a PC card and instructs you to insert it, the screen displays the Manufacturer, and Product Name as shown in the following screen. Touch the FILES button to see the contents of the card.



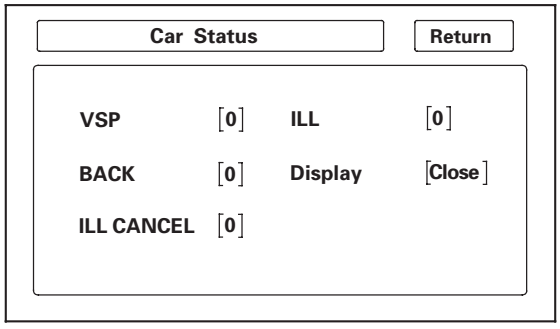
Hard Key
This diagnostic screen checks the status of each of the hard buttons surrounding the navigation display. When you press each hard button, the corresponding item on the screen should flash blue. Touch the return key, or press and hold the joystick to exit.

NOTE: It is normal for the VOL (+, −) CH (+, −) and MODE button to be inactive.



Car Status

Use this screen to confirm that navigation unit is properly receiving input signals. Signals equal to (0) are OFF, and signals equal to (1) are ON. If the value on the display does not match the actual vehicle status, then check the wire carrying the signal.



- VSP-Vehicle Speed Pulse from ECM/PCM connector A (Navigation unit connector A (17P) terminal No. 13)
  a) OFF (0) when vehicle is not moving
  b) ON (1) when vehicle is moving

The VSP comes from the ECM/PCM as a dedicated signal. Internally, the navigation unit compares the actual VP on the map against street data to adjust the pulse to speed scaling factor.

- BACK-Reverse indication from taillight relay (Navigation unit connector C (12P) terminal No. 7)
  a) OFF (0) when shift lever is in any position other than reverse
  b) ON (1) when shift lever is in reverse

The Back signal is used by the navigation unit to allow the map screen to show the VP moving backwards when in reverse and to trigger the optional rear view camera. This signal is needed because the Speed Pulse does not provide any directional information to the system.

- ILL CANCEL
  a) OFF (0) when the dash lights brightness control button is less than 90 % brightness with the headlights turned on.
  b) ON (1) when the dash lights brightness control button is more than 90 % brightness with the headlights turned on.

(cont'd)

System Diagnostic Mode (cont'd)

- ILL-Illumination Indication
  (Navigation unit connector A (17P) terminal No. 10)
  a) OFF (0) when parking lights, or headlights are off
  b) ON (1) when parking lights, or headlights are on

The navigation unit uses the signal to determine whether to put the navigation screen into the Day or Night brightness mode. (Setup screen 1)

- Display-this displays the current position of the display
  a) (Close) when the display is closed
  b) (Open) when the display is open

The navigation unit has a micro switch to detect this. If open is indicated when the display is closed, replace the navigation unit.

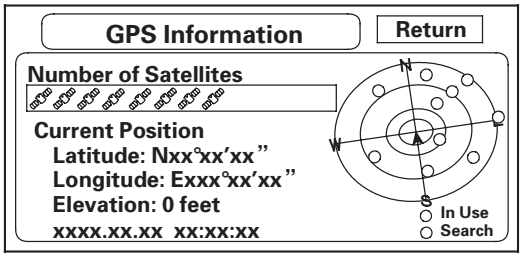
GPS Information

This screen shows the current status of GPS reception. The circular diagram shows the current location of the GPS satellites (yellow balls) as they would appear in the sky. The outer circle represents the horizon (0 degrees elevation). The middle and inner circles represents 30 and 60 degrees respectively. The very center of the diagram (90 degrees elevation) is directly overhead. Nearby obstructions, like tall buildings, will block satellites in that direction. That is why it is necessary to be in an open area to effectively troubleshoot GPS reception issues. The satellites shown on the diagram correspond to the PRN number in the GPS Details screen. There are always 24 active GPS satellites in orbit. Because satellites fail, and have to be removed from service, spares are always parked in orbit, ready to be activated. This is why the PRN (satellite ID number) can be greater than 24.

NOTE:

- When you use this screen for troubleshooting, park the vehicle outside, away from buildings, tall trees, and high-tension wires for at least 10 minutes with the engine running.
- Metallic window tinting on the front or side window or after-market electronic accessories mounted near the navigation unit, GPS antenna, or navigation display can interfere with GPS acquisition.
- The Number of Satellites box shows the number of acquired satellites (maximum of 12). It should contain 4 or more icons. If not, troubleshoot for GPS icon is white or not shown (see page 23-122).
- The Current Position shows latitude, longitude, and elevation (in meters). If there are less than 4 satellites, the elevation can be grossly inaccurate.
- The Date/Time field shows the current date, and also a time that includes daylight savings and other offsets entered by the client in Setup function Adjust Time Zone/Clock.

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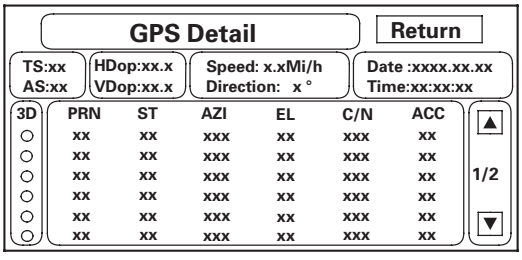


NOTE:
Push and hold the Map/Guide button, and the dots on the diagram are replaced with the PRN # (satellite numbers). These numbers correspond to the numbers in the PRN column on the GPS details screen.

GPS Detail

By pressing and holding the MENU button for 10 seconds, a GPS Detail screen appears. This screen displays real time incoming satellite positional data. Most of the information shown on this screen is for factory use, however some of the data can indicate partial GPS signal interference.

NOTE: The data shown is an example only.



- The box TS/AS and HDop/VDop is for factory use.
- The Speed and Direction information is updated in real time when driving, and can be used to detect intermittent speed sensor problems.
- The Date/Time Information is the same as in Setup screen 2 Adjust Time Zone/Clock.
- If the 3D icon is shown above the yellow dots, this implies that at least 4 satellites are available for map positioning, and the GPS indicator on the map screen will be green. See the Global Positioning System detailed explanation in the System Description (see page 23-106).
- If the row of data in the table below begins with a yellow dot, the AZI and EL fields can be used to locate each satellite PRN # on the circular GPS diagram (see prior screen).

(cont'd)

System Diagnostic Mode (cont'd)

The table of values shown define the terms at the top of the columns in the GPS detail screen.

Column	Description	Problem indication
3D	Active satellites (Yellow Dot)	If 3D is missing follow GPS icon is white or not shown (see page 23-122).
PRN	The satellite ID number	
ST	The status: 0 = cannot view or searching, 2 = acquiring	If all 0, then, follow GPS icon is white or not shown troubleshooting (see page 23-122).
AZI	Azimuth, the angle (0—360) clockwise from north	
EL	Elevation from the horizon (90 deg is overhead)	
C/N	N/A	Healthy signal is 49—52, no signal: 27—33
ACC	N/A	

Yaw Rate

This diagnostic checks the yaw rate sensor in the control unit. This device detects when the vehicle turns, and repositions the vehicle position icon on the map screen. For more detailed information, see the yaw rate sensor theory of operation under System Description (see page 23-105).

- Sensor indicates the voltage output from the yaw rate sensor. It should indicate about 2.500 V when the vehicle is stopped.
- Offset is the reference voltage or standard within the yaw rate sensor. It also should indicate about 2.500 V when the vehicle is stopped.
- A sensor output voltage LOWER than the Offset voltage indicates that the vehicle is turning to the right.
  A sensor output voltage HIGHER than the Offset voltage indicates that the vehicle is turning to the left.
- The yaw rate offset and sensor should both indicate about 2.500 V when the vehicle is stopped. If either reads zero or 5.000 V, replace the navigation unit.

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- The yaw rate offset and sensor should be within +/— 0.01 V of each other when the vehicle is stopped. The sensor value should change relative to the offset as the vehicle turns while driving. If not, replace the navigation unit.

Example: Vehicle stopped

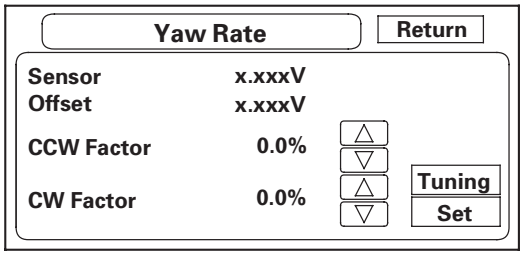
Normal		**Abnormal**	
Offset	2.526 V	Offset	2.526 V
Sensor	2.516—2.536 V	Sensor	2.623 V

Example: Vehicle turning

Normal		**Abnormal**	
Offset	2.526 V	Offset	2.526 V
Sensor	2.678 V (right turn) 2.478 V (left turn)	Sensor	2.623 V (no change on turns)

The settings CCW Cal Factor, CW Cal Factor, and Set are for factory use only. THIS SHOULD NEVER BE USED.

NOTE: Do not try to adjust the yaw rate sensor without instructions from the factory. See next paragraph for tuning.



Yaw Rate Tuning

This diagnostic allows you to graphically display problems with the yaw rate sensor.

- The ANG-Disp value accumulates any differences between the offset and sensor voltages (see Yaw Rate diagnostic). When the sensor functions properly, the random changes in these two voltages generally cancels out, so the value is 0. However if one voltage is consistently higher than the other, then the ANG-Disp value accumulates the constant change.
- The Reset button temporarily clears the angular accumulation (ANG-Disp), and clears the display dots.
- Do not touch the CCW or CW, or Set buttons. These are used for factory setup only.

For serious problems with the sensor, the stationary test usually confirms whether the sensor is defective. For yaw rate issues related to driving, perform the road test described.

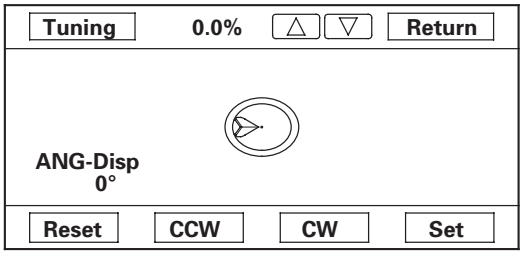
(cont'd)

System Diagnostic Mode (cont'd)

1. Stationary test: If the VP icon spins in place and the ANG-Disp value slowly increases or decreases in value, the yaw rate sensor is defective. Replace the navigation unit.

2. Road test: Drive the vehicle on a very straight road. Enter the diagnostic mode, select Yaw rate, and touch the Tuning button. While driving down a straight road, the white dots should trace a straight line across the screen. However, if you are driving on a straight road, and you notice the dots constantly dropping down or heading up as you drive, the navigation unit's yaw sensor is defective. You can touch Reset to clear ANG-Disp, and dotted line.

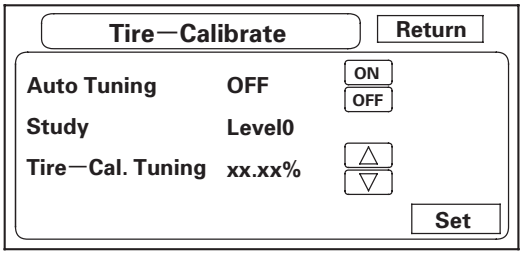
3. If either test fails, please enter ''Yaw rate sensor defective'' for the problem description, on the ''Navigation core return form''.



Tire Calibration

As the vehicle moves, the navigation system receives speed pulses from the ECM/PCM. These pulses are converted using a conversion factor to a mph speed that moves the vehicle position (VP) on the map. The navigation system has an internal tuning function that generates and refines this factor based on actual driving. The Level indicates the status of the tuning. At navigation initialization, it begins at 0, and increases to 10 as the navigation system is used.

- The Auto Tuning is factory set to ON, and should remain on.
- The Study indicates the tuning status. If it is less than 10, the unit is still calibrating.
- The Tire-Cal. Tuning and Set should not be used. It is for factory use only.



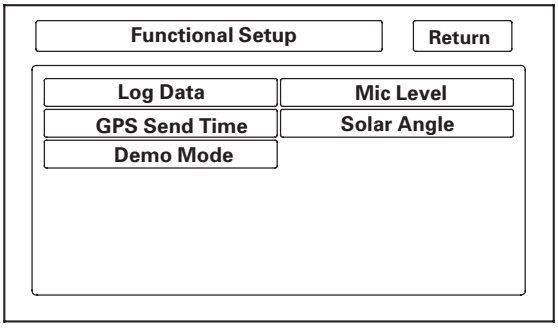
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Functional Setup

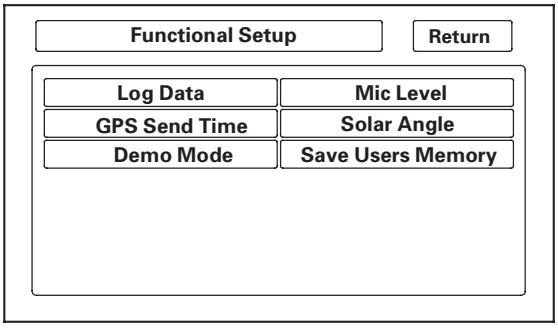
Select the item you want to check.

- Log Data
- GPS Send Time
- Demo Mode
- Mic Level
- Solar Angle
- Save Users Memory ('07-08 models)

'06 model

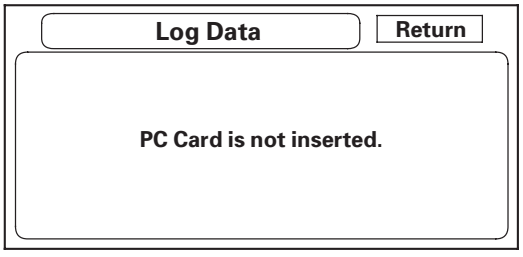


'07-08 models

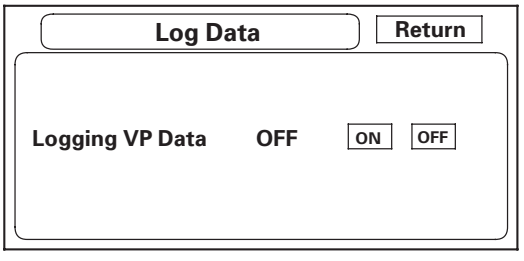


Log Data
This screen allows the factory to collect log data to troubleshoot navigation system issues.

- There is no card in the PC card Slot, the screen appears as:



- However, if the factory provides a PC card, insert it into the card slot (label side up). Follow the factory logging VP data procedure for gathering test data and properly ending the test.

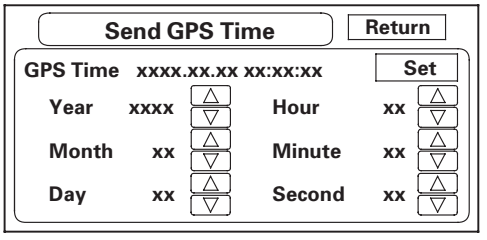


(cont'd)

System Diagnostic Mode (cont'd)

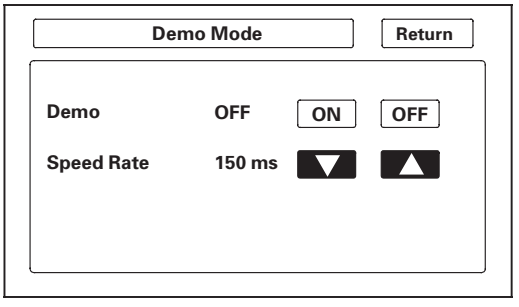
GPS Send Time
This screen is for factory use only. It allows adjustment of the GPS time. This display updates in real time.

- GPS Time is the time as received from the GPS satellites. It is in Greenwich Mean Time (GMT).
- Date, Hour, Minute, and Set should not be used.



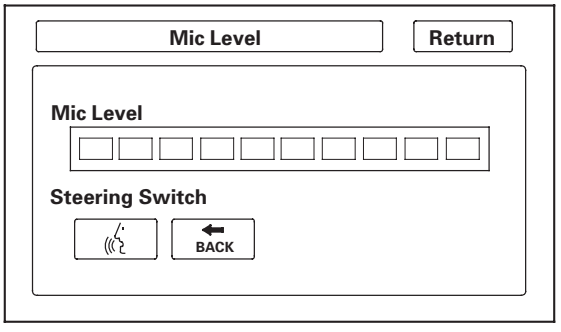
Demo Mode
This screen allows the navigation system to drive a route, when the vehicle is stationary. Typical applications include auto shows, and other events. This feature allows a visitor to enter a destination, and see the system drive to the destination. No speed signal is needed.

- To initiate the mode, select ON.
- Changing the speed rate in ms (milliseconds) is optional, and represents the time between updates of the VP (vehicle position) movement.
  - When you increase the rate, the VP slows down because it is updated (moved) at a slower rate.
  - When you decrease the rate, VP is faster because it is updated (moved) more frequently.
  - 1500 ms is VP at its slowest in demo mode.
  - 150 ms is VP at its fastest in demo mode (Default).
- At key off, the setting automatically returns to the default of Off.



Mic Level
This diagnostic screen allows you to independently test the microphone and the navigation TALK and BACK buttons. They are used to activate the voice control system. The microphone is located near the map light in the ceiling. It is directional, and works best if the voice is coming from the drivers seat.

- Press the navigation TALK button on the steering wheel, wait unit you hear a beep, and in a normal voice say ''testing''. The TALK indicator on the screen should momentarily turn green, and the text ''Now Recording...'' should appear in yellow. If the talk indicator on the screen does not briefly turn green, then check the wiring from the navigation TALK button to the navigation unit.
- If there is no Mic Level movement when you speak, then you should check the wire running from the microphone to the navigation unit.
- If the mic level bar is full or almost full without you speaking or other back ground noise, replace the microphone and recheck.
- Press the navigation BACK button on the steering wheel. The Cancel indicator on the screen should momentarily turn green. If it does not briefly turn green, then check the wiring from the steering wheel navigation BACK button to the navigation unit.



NOTE: The mic level should reach the 6th bar.

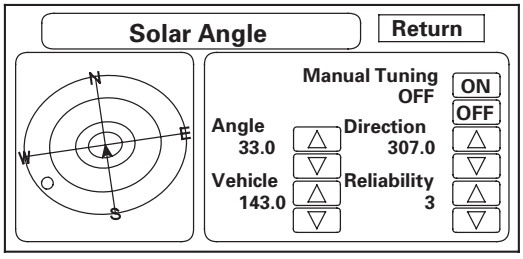
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Solar angle

This screen graphically displays the sun's position as determined by GPS.

This screen is for factory use only, and allows simulation of this feature for development purposes.

- The manual tuning button should always be OFF
- The Angle is the angle that the sun (shown with the red dot) is above the horizon.
- The vehicle value represents the angle, clockwise from North, to the direction that the vehicle position (VP) icon is pointing (always points straight up).
- The direction value is the angle, measured clockwise from the VP (straight up) to the suns position.
- The reliability ranges from 1 to 3, and represents the accuracy of the Vehicle Position relative to the sun.



Version

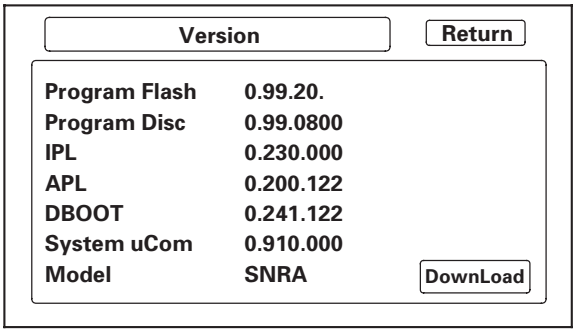
This screen displays the current version of the program, and allows the loading of a new version of the program either from a CD/DVD or from a PC card.

The Program Flash version should always be greater than or equal to the Program Disc version. IPL, APL, DBOOT, and system ucomare for factory use only.

The Model code is SNR and is for factory use only. This code is stored on a chip in the navigation unit. Therefore, every model has a unique part number for the navigation unit.

NOTE: If any model number other than SNR is displayed, replace the navigation unit with the correct part. The model code tells the navigation unit what software to load off the DVD.

Do not use Download, unless instructed to do so by the factory.

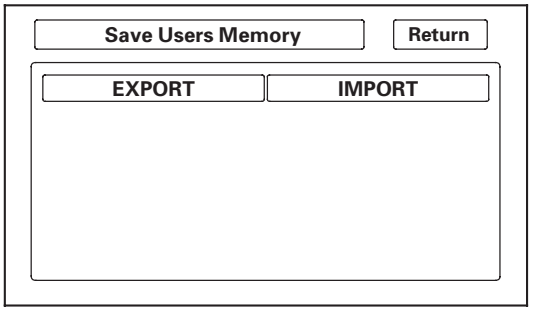


(cont'd)

System Diagnostic Mode (cont'd)

Save Users Memory

When replacing the navigation unit, this function allows the dealer to transfer the client's personal data to the new navigation unit. The transferred information includes their Setup settings, and personal addresses. The dealer inserts a PC card to the navigation unit, and then selects the Save Users Memory function. The two functions in this diagnostic screen are EXPORT and IMPORT. EXPORT saves the client's data to the PC card, and IMPORT moves the PC card files to the new navigation unit.



Before starting this function, see the PC Card FAQs for information regarding PC cards, how to use this function.

1. Select EXPORT button to move the client's data from the original navigation unit to the PC card. Select YES on the Export User Data Confirmation screen. The process takes only a couple of seconds. The system stores two files on the card.

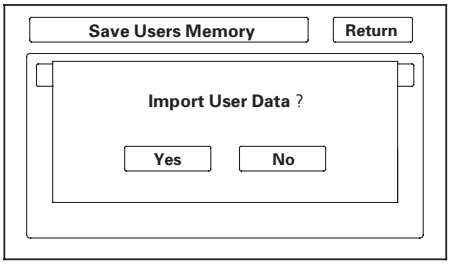
   NOTE: If the EXPORT button is grayed out, check the PC card's edge connector, and the pins inside the navigation unit (with a flashlight) for damage.



2. After installing the client's original DVD in the new navigation unit, allow the system to boot up. Insert the PC card in the new navigation unit and enter the Save Users Memory in the navigation system diagnostic mode.

3. Select IMPORT button to move the two files stored by the Export process from the PC card to the new navigation unit. Select YES on the Import User Data Confirmation screen. When the transfer is finished (a few seconds) the system automatically reboots. After the system reboots, remove the PC card from the PC card slot.

   NOTE: If the IMPORT button is grayed out, check if the Model and the Program Flash shown on the Version screen are the same for the two navigation units.



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PC Card FAQs

Question	Answer
Where do we buy the flash memory or adaptors, and what do we ask for?	You need a PCMCIA type II adaptor and a flash memory chip. You can purchase them at a computer, or office supply store. The card is the same size and shape as the PC card in the HDS. Adaptors that accept multiple flash types are not recommended.
What memory flash chips will work with what adaptors?	The flash memory devices that have been tested include Compact Flash (CF), and ATA style (like the card in the HDS). Other card types and flash memory chips may work, but have not been tested.
What capacity card do I need for this function?	A memory chip with capacity of 64 MB to 2 GB will work. The two files moved to the PC card during export are less than a Megabyte in size.
Should the dealer have a dedicated PC card for the Export and Import navigation function?	Yes, treat the PC card as a dedicated special tool that you can use any time you need to transfer the navigation personal files to a new navigation unit on '07 and later vehicles.
What device can I use to maintain the PC card, and delete files?	Any computer store sells USB style card readers that accept the PC card, and allow you to do file maintenance on your PC card. Most laptops also accept the PC card.
Can we move the client's data to different models?	No, the files are model specific and will only load into a navigation unit with the same part number.
Can we move the client's data to the same vehicle with a different software version (like moving from version 4.41 to version 4.51)?	The client's files can only be transferred to a new navigation unit if the Model and the Program Flash shown on the Version screen are the same. Files cannot be transferred to the different model and different versions.
Will other files on the PC card like images or music files prevent the Export/Import function from working?	No, the system simply adds two small files that are recognized by the new navigation unit when performing the import function. However, it the PC card is full, the Export function won't work correctly.
Do I have to delete the files on the PC card after each transfer of the personal data?	After the transfer of personal data to the new navigation unit, the files remain on the PC card. Since this is confidential information, Acura recommends deleting these files after the transfer. Please note that each time you export navigation files of the same model and version, the files are overwritten. Over time the PC card accumulates two files for each version of the 8 or so Acura navigation models.
If the memory card needs formatting, what format should I use?	It is unlikely that the PC card will ever need formatting, however, if it does, use the FAT (file allocation table) file system.
I can't enter the navigation diagnostic mode to do the Export/Import function. How can I transfer the personal data?	Some internal navigation unit ECU failures may make it impossible to use the Export/Import function.

(cont'd)

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System Diagnostic Mode (cont'd)

Question	Answer
Why wont the Export or Import functions work or are grayed out? What do I check as part of troubleshooting?	• The card may not be fully inserted into the slot. Eject the PC card, and inspect for warping or damage to the edge connector. Never use excessive force to insert a PC card. This can result in damage to the pins in the rear of the slot. • The PC card may not contain files that are recognized by the new navigation unit. Navigation data can only be transferred between navigation units with the same Model code, and with the same navi Program flash version. • The flash memory chip type may not be accepted by the system. Only Compact Flash and ATA cards have been tested. • The card's PCMCIA adaptor may prevent a known-good card from being recognized Avoid multi-slot type PCMCIA adaptors that accept several different flash memory types. • The card may be full and as a result the files are stored, but without any data. Export and import appear to function, but move nothing. Delete unused files from the PC card. • There may not be any files on the PC card. If the PC card has a write protection switch, make sure it is turned off before using the Export function. • Although flash memory chips are reliable, occasionally they develop bad sectors or other formatting errors that prevents them from accepting files. The PC card should be reformatted using the FAT format. • The PC card may have been formatted using the format NTFS. Only the FAT format is accepted by the system. • Hard Disc Drive (HDD) cards may not work properly in the system and can overheat or quit functioning, particularly in a hot vehicle. They are not recommended. • Before performing the Import function, ensure that the original navigation DVD is loaded into the new navigation unit and working properly.

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Error Message Table

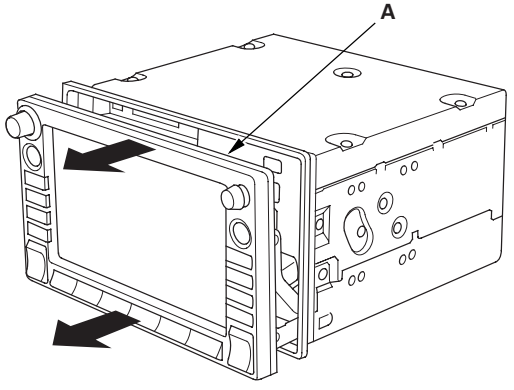
Screen Error Message	Solution
Navigation system is unable to acquire a proper GPS signal.	Make sure there is nothing on the dashboard blocking the GPS antenna. If not, move the vehicle to an open space away from tall buildings, trees, etc. Aftermarket metallic window tinting and other aftermarket devices can affect the GPS reception.
Navigation is open or No DVD disc installed. Please check system.	Make sure the correct white-labeled navigation DVD is installed with the label side up and the navigation display is closed.
DVD reading error (incorrect DVD disc) place consult your dealer.	Verify correct color (white) DVD installed.
Display temp is too high. System will shut down until display cools down.	This message appears briefly when the display temperature is too high, and the display turns off until the temperature cools down. The system turns back on when the display cools down.
Outside temperature is low, system will take a while to start up.	The temperature is below —30 ℃ and the navigation ECU has difficulties reading the navigation DVD. The system will start up when the temperature warms up.
DVD disc reading error (unformatted), please consult your dealer.	Check the navigation DVD source for deep scratches or other damage. Make sure you are using an official Honda navigation DVD (white in color). The system cannot read other mapping databases or video DVDs. Check online for any service publications to update the navigation system.
Route has not been completed. Please try again from a different location.	Routing to or from a place (new area) that is not in the database. Try planning a different route to or from a different location.
No alternate route found. Original route will be guided.	No alternate route method was found. The original route will be used.
This destination cannot be found in database.	The destination was not found in the database. Try another destination nearby, or select the destination with the joystick.

CD, DVD, and PC Card Removal/Installation

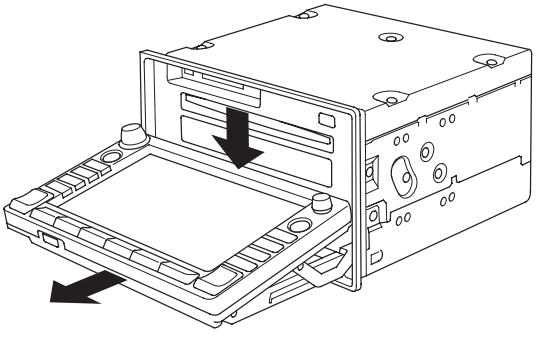
If the displays Open/Close button does not work, you must manually open the display to obtain the client's Navigation DVD, CD and possibly their PC card. Follow the step below:

1. Remove the navigation unit from the vehicle (see page 23-155).

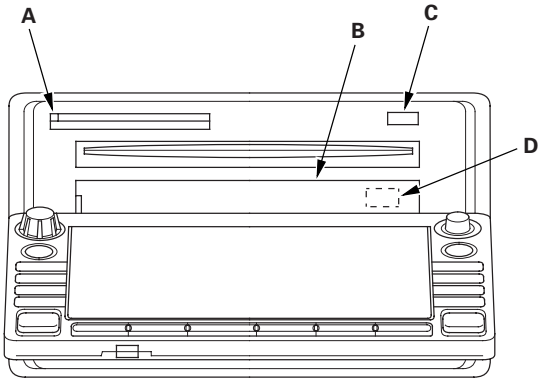
2. On the bench, carefully pull the display (A) straight out (about 1/2 inch).



3. Fold down the display as shown in the diagram below.



4. Push the PC card eject button (A) to eject the client's PC card (if installed). Power is not required for this function.



5. Remove the plastic cover (B) the navigation DVD slot.

6. With the display open, temporarily reconnect the unit in the dash (to power it up).

7. Push the CD eject button (C), and navigation DVD eject button (D) (the button is behind the plastic cover and works only when the unit is powered) and remove the discs (holding the discs by their edges to avoid fingerprints). To avoid scratches, place the navigation DVD, and client's CD in a jewel case if available.

8. Re-attach the plastic cover that hides the navigation DVD slot.

9. Close the display by first returning the display to the upward position, and then pushing the entire display straight back into the unit.

10. After installing the new navigation unit, re-insert the navigation DVD, the client's CD, and PC card.

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Navigation Unit Removal/Installation

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

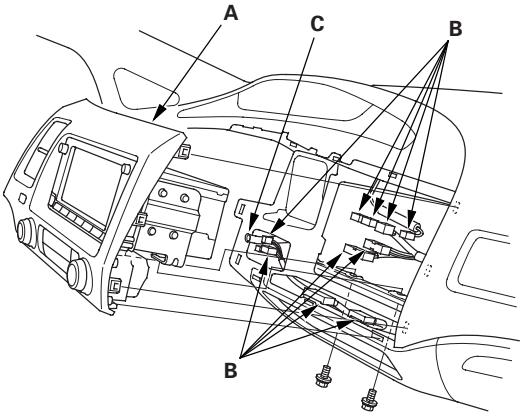
NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the dashboard and related parts.
- Lay a workshop towel under the parts when working on them to protect the face panel from scratches or other damage.
- Do not work in a dusty or dirty place.
- Discharge static electricity from your body before and during the work.
- Do not touch the circuit board(s) with your bare hands.
- Do not work with dirty hands.
- Be careful not to fold the flat plate cable.
- Do not touch the terminal connector of the flat plate cable with your bare hands. (If you have touched it, wipe it off thoroughly.)
- Before replacing the navigation unit, make sure to remove the client's navigation DVD, and their audio CD, or PC card. Remanufactured navigation units do not come with a navigation DVD. Re-install the client's navigation DVD, audio CD, and audio PC card into the new Remanufactured unit. If the navigation display won't open, manually remove the navigation DVD, audio CD, and PC card (see page 23-154).
- If you are replacing the navigation unit, write down the audio presets (if possible), then enter then into the new navigation unit.

1. Make sure you have the 4-digit anti-theft code for the navigation system.

2. Eject the DVD from the original navigation unit. To avoid scratching or damaging the DVD, temporarily place the DVD in a jewel case.

3. Remove the meter inner visor (see page 20-100).

4. Remove the center pocket hole lid and bolts, then pull out the center panel (A).

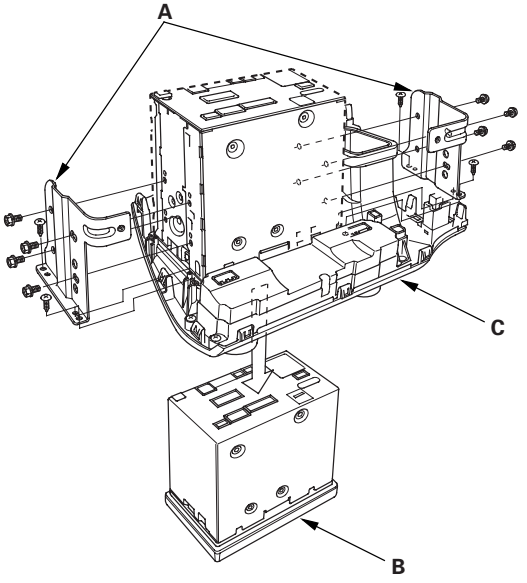


5. Disconnect the connectors (B) and the air hose (C), then remove the center panel.

(cont'd)

Navigation Unit Removal/ Installation (cont'd)

6. Remove the screws, brackets (A), and the navigation unit (B) from the center panel (C).



7. Install the navigation unit in the reverse order of removal, and make sure all connectors are secure.

8. Turn the ignition switch to ON (II), then reinstall the client's original DVD, verifying that the DVD is free of scratches or smudges.

9. Check any official Honda service website for more service information about the navigation system.

   NOTE: Simply transferring the DVD from the original navigation unit to the new navigation unit does not assure the correct software for the vehicle will be loaded into the new navigation unit. Doing the DVD transfer without doing software patches may cause the new navigation unit to appear to be malfunctioning.

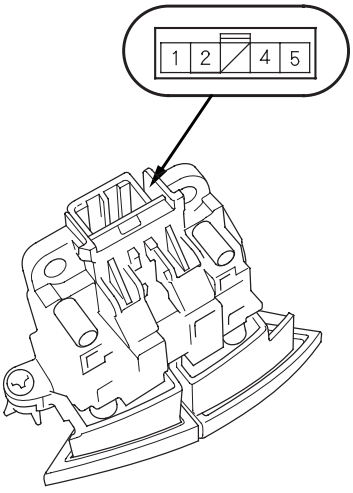
10. Enter the new navigation anti-theft code.

11. Park the vehicle outside, and do the GPS initialization (see page 23-93).

12. Give the new navigation anti-theft code to the client.

Voice Control Switch Test

1. Remove the voice control switch (see page 23-157).



2. Measure the resistance between terminals No. 2 and No. 4 in each switch position according to the table.

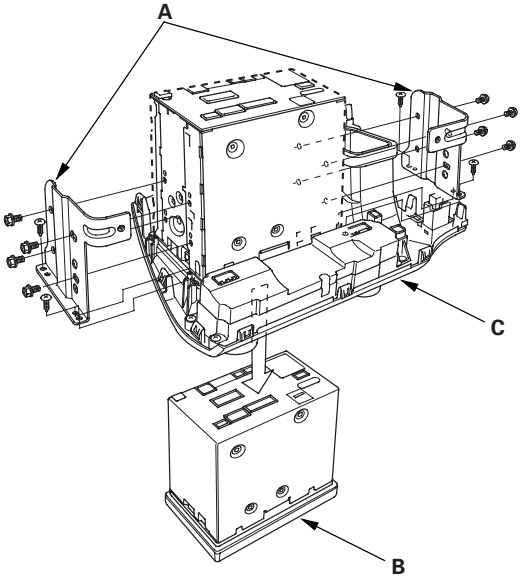
Position	Resistance
No button pressed	About 10 kΩ
TALK	About 2.9 kΩ
BACK	About 680 Ω

3. If the resistance is not as specified, replace the voice control switch (see page 23-157).

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Navigation Unit Removal/ Installation (cont'd)

6. Remove the screws, brackets (A), and the navigation unit (B) from the center panel (C).



7. Install the navigation unit in the reverse order of removal, and make sure all connectors are secure.

8. Turn the ignition switch to ON (II), then reinstall the client's original DVD, verifying that the DVD is free of scratches or smudges.

9. Check any official Honda service website for more service information about the navigation system.

   NOTE: Simply transferring the DVD from the original navigation unit to the new navigation unit does not assure the correct software for the vehicle will be loaded into the new navigation unit. Doing the DVD transfer without doing software patches may cause the new navigation unit to appear to be malfunctioning.

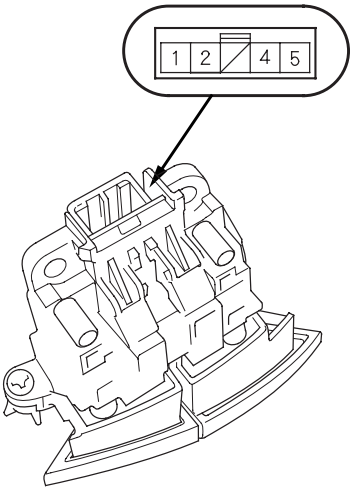
10. Enter the new navigation anti-theft code.

11. Park the vehicle outside, and do the GPS initialization (see page 23-93).

12. Give the new navigation anti-theft code to the client.

Voice Control Switch Test

1. Remove the voice control switch (see page 23-157).



2. Measure the resistance between terminals No. 2 and No. 4 in each switch position according to the table.

Position	Resistance
No button pressed	About 10 kΩ
TALK	About 2.9 kΩ
BACK	About 680 Ω

3. If the resistance is not as specified, replace the voice control switch (see page 23-157).

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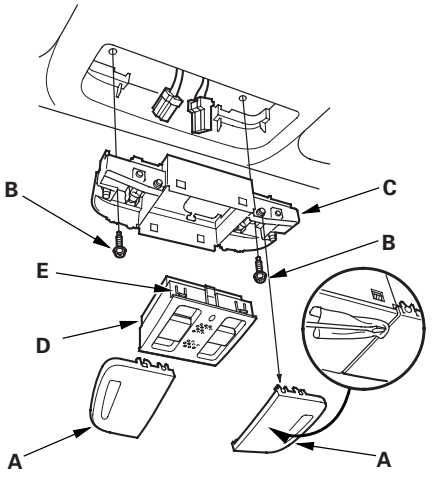
Voice Control Switch Replacement

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

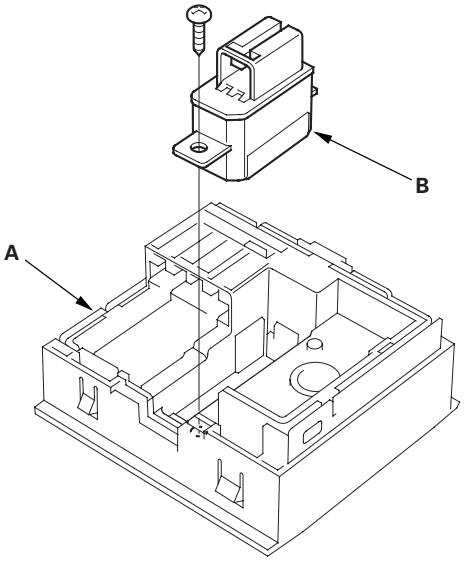
1. Remove the steering wheel (see page 17-6).
2. Remove the voice control switch (see page 17-7).
3. Install the audio remote switch in the reverse order of removal.

Microphone Replacement

1. Remove the front individual map light lens (A).



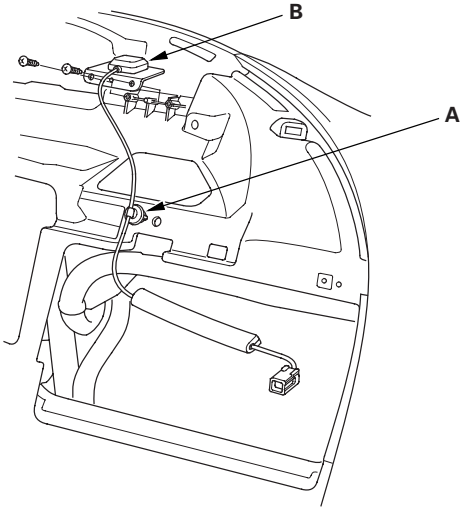
2. Remove the bolts (B), then disconnect the connectors, and remove the map lights housing (C).
3. Carefully pry off the moonroof switch (D) from the map light housing while pressing in on the retaining tabs (E).
4. From the moonroof switch (A), remove the screw and microphone (B).



5. Install the microphone in the reverse order of removal.

GPS Antenna Removal/Installation

1. Remove the navigation unit (see page 23-155).
2. Remove the instrument panel (see page 20-98).
3. Remove the wire harness clip (A), screws, and GPS antenna (B).



4. Install the antenna in the reverse order of removal.

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Audio, Navigation, and Telematics ('09 model)

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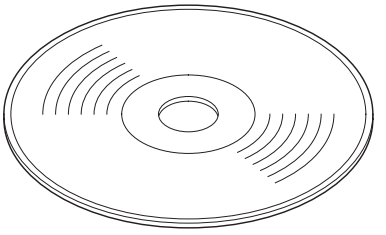
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Special Tools

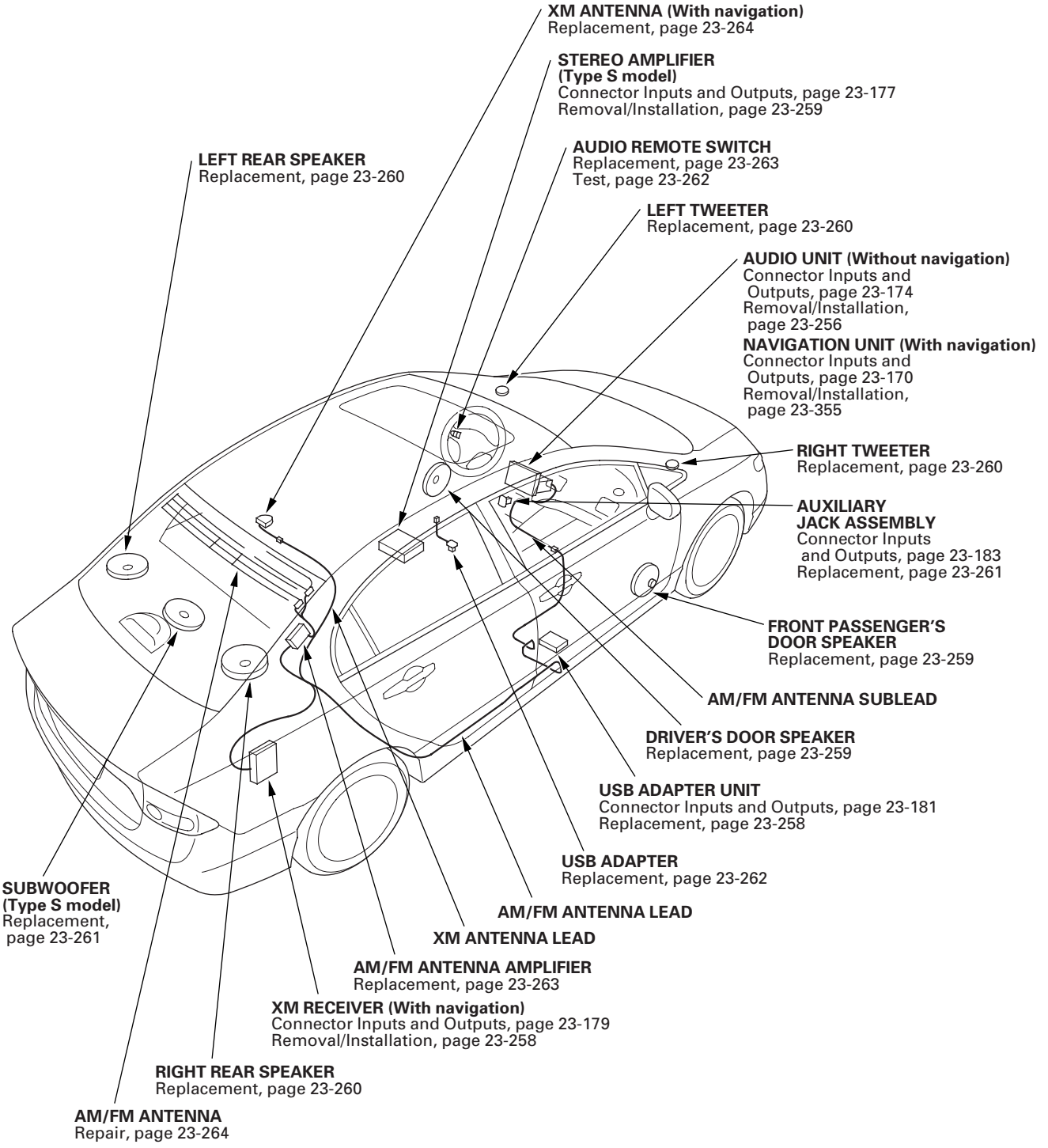
Ref. No.	Tool Number	Description	Qty
①	07AAZ-SDBA100	Diagnostics CD	1
②	07AAZ-SDBA200 (ABEX-TCD-725B)	Skip Test CD	1
③	07AAZ-SDBA300 (ABEX-TCD-721)	Skip Test CD	1



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Component Location Index



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Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Poor AM or FM radio reception or interference (with navigation)	Symptom Troubleshooting (see page 23-196)	AM/FM antenna lead and/or sublead short or open in the wire
Poor AM or FM radio reception or interference (without navigation)	Symptom Troubleshooting (see page 23-199)	AM/FM antenna lead and/or sublead short or open in the wire
Audio unit power switch will not turn on (No information display and no sound) (with navigation)	Symptom Troubleshooting (see page 23-202)	
Audio unit power switch will not turn on (No information display and no sound) (without navigation)	Symptom Troubleshooting (see page 23-203)	
Audio unit power switch will not turn off (with navigation)	Symptom Troubleshooting (see page 23-205)	
Audio unit power switch will not turn off (without navigation)	Symptom Troubleshooting (see page 23-206)	
No sound is heard from the speaker(s) (display is normal) (with navigation)	Symptom Troubleshooting (see page 23-206)	
No sound is heard from the speaker(s) (display is normal) (without navigation)	Symptom Troubleshooting (see page 23-215)	
Auxiliary input sound is low or cannot be heard	Symptom Troubleshooting (see page 23-217)	
Audio system sound is weak or distorted (display is normal)	Symptom Troubleshooting (see page 23-220)	
Radio preset memory is lost	Symptom Troubleshooting (see page 23-221)	Internal error
Volume does not change	Symptom Troubleshooting (see page 23-221)	
Volume does not increase with speed (with navigation)	Symptom Troubleshooting (see page 23-222)	
Volume does not increase with speed (without navigation)	Symptom Troubleshooting (see page 23-223)	
Volume is too high or too low when driving at freeway speeds	Symptom Troubleshooting (see page 23-224)	
Radio tuner does not change stations	Symptom Troubleshooting (see page 23-224)	

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Symptom	Diagnostic procedure	Also check for
Navigation unit button illumination does not work (with navigation)	Symptom Troubleshooting (see page 23-225)	
Audio unit button illumination does not work (without navigation)	Symptom Troubleshooting (see page 23-226)	
Display does not dim or brighten with dimmer (without navigation)	Symptom Troubleshooting (see page 23-227)	
Audio disc does not load	Symptom Troubleshooting (see page 23-228)	
Audio disc does not eject	Symptom Troubleshooting (see page 23-228)	
Audio disc does not play	Symptom Troubleshooting (see page 23-229)	
Audio disc skips	Symptom Troubleshooting (see page 23-229)	
Audio remote switch does not work properly (with navigation)	Symptom Troubleshooting (see page 23-230)	
Audio remote switch does not work properly (without navigation)	Symptom Troubleshooting (see page 23-232)	
Audio disc cannot be inserted and/or ejected (with navigation)	Symptom Troubleshooting (see page 23-233)	
Display can be opened and/or closed even when an audio disc is being inserted or ejected	Replace the navigation unit (see page 23-355)	
PC card will not play/card icon on audio screen cannot be selected (with navigation)	Symptom Troubleshooting (see page 23-234)	
USB input sound is low or cannot be heard (with navigation)	Symptom Troubleshooting (see page 23-235)	Requirement of the USB devices (see Owner's Manual)
USB input sound is low or cannot be heard (without navigation)	Symptom Troubleshooting (see page 23-236)	Requirement of the USB devices (see Owner's Manual)
USB device does not function (with navigation)	Symptom Troubleshooting (see page 23-238)	Requirement of the USB devices (see Owner's Manual)
USB device does not function (without navigation)	Symptom Troubleshooting (see page 23-241)	Requirement of the USB devices (see Owner's Manual)
Error code: XM NO SIGNAL or XM ANTENNA is displayed (with navigation)	Symptom Troubleshooting (see page 23-245)	
XM radio display is blank and no station information is displayed (with navigation)	Symptom Troubleshooting (see page 23-245)	
XM radio preset memory is lost (with navigation)	Symptom Troubleshooting (see page 23-248)	
Poor or no sound with XM radio (Audio unit does display XM channels) (with navigation)	Symptom Troubleshooting (see page 23-249)	

System Description

Overview

The audio unit acts as the processor for all audio functions. Select audio functions from the audio unit, the audio remote (on the steering wheel), or by using the navigation voice control system. The audio display provides the current audio status. For vehicles with navigation, additional audio information is available by touching the audio button on the navigation audio screen (See the owner's manual and the navigation system manual for more details.).

The XM receiver passes its signal to the audio unit. In addition, it communicates with the audio unit via the GA-Net bus. Any open connections in the GA-Net bus circuit causes audio and navigation functions to appear inoperative.

For vehicles with navigation, pressing the open/close switch on the navigation display panel allows access to the CD slot and PC card.

A security signal is daisy-chained between the audio and vehicle components for integration into the vehicle's security system.

Speed-sensitive volume compensation (SVC)
Some audio systems are equipped with speed-sensitive volume compensation (SVC). The navigation or audio unit receives the vehicle speed pulse (VSP) from the ECM/PCM. The system processes the speed input and increases the navigation or audio system volume level as the vehicle speed increases to compensate for the various interior noises that occur at higher speeds. When the vehicle slows down, the volume returns to its normal level. The SVC has four settings: SVC OFF, LOW, MID and HIGH that can be adjusted using the navigation or audio unit. The SVC comes from the factory with the MID setting as the default.

To change the audio unit SVC setting, press the tune folder sound knob repeatedly until the SVC is displayed, rotate the knob to adjust the SVC to the desired setting (SVC OFF, LOW, MID, or HIGH).

To change the navigation unit SVC setting, press the AUDIO button, and then select the SOUND icon on the navigation display. Press the navigation display to select the desired setting (OFF, LOW, MID, HI).

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The navigation system allows voice control of the audio, XM, PC card, and CD player. Voice control commands are communicated on the GA-Net (audio unit). When using the navigation TALK/BACK button, the audio is muted on all speakers and you get navigation sound on the front channels. When using the navigation or route guidance (RG), the front speakers give the navigation sound and the rear speakers continue to play. For more information, see the navigation section. The outline of the interruption function is shown in this table.

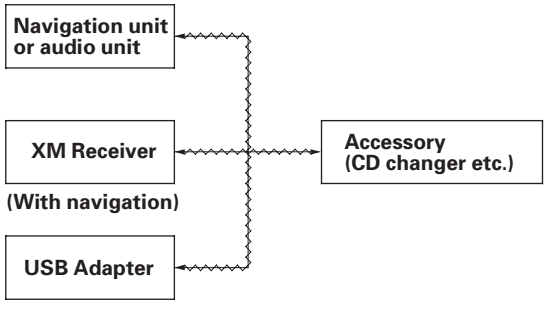
Contents	Audio output				
	Left front CH	Right front CH	Right rear CH	Left rear CH	Subwoofer CH
Navigation TALK /BACK Buttons	Navigation voice output	Navigation voice output	Muted	Muted	Muted
Route guidance	Navigation voice output	Navigation voice output	Audio	Audio	Audio

USB Adapter

The audio unit can play digital music from portable audio players, USB drive, etc. When the device is plugged into the USB adapter. The audio unit uses the GA-NET to allow you to control the device from the audio unit when searching and playing the files. Not all players and player functions work with the USB adapter. Please see the owner's manual for more information.

GA-Net Bus Configuration

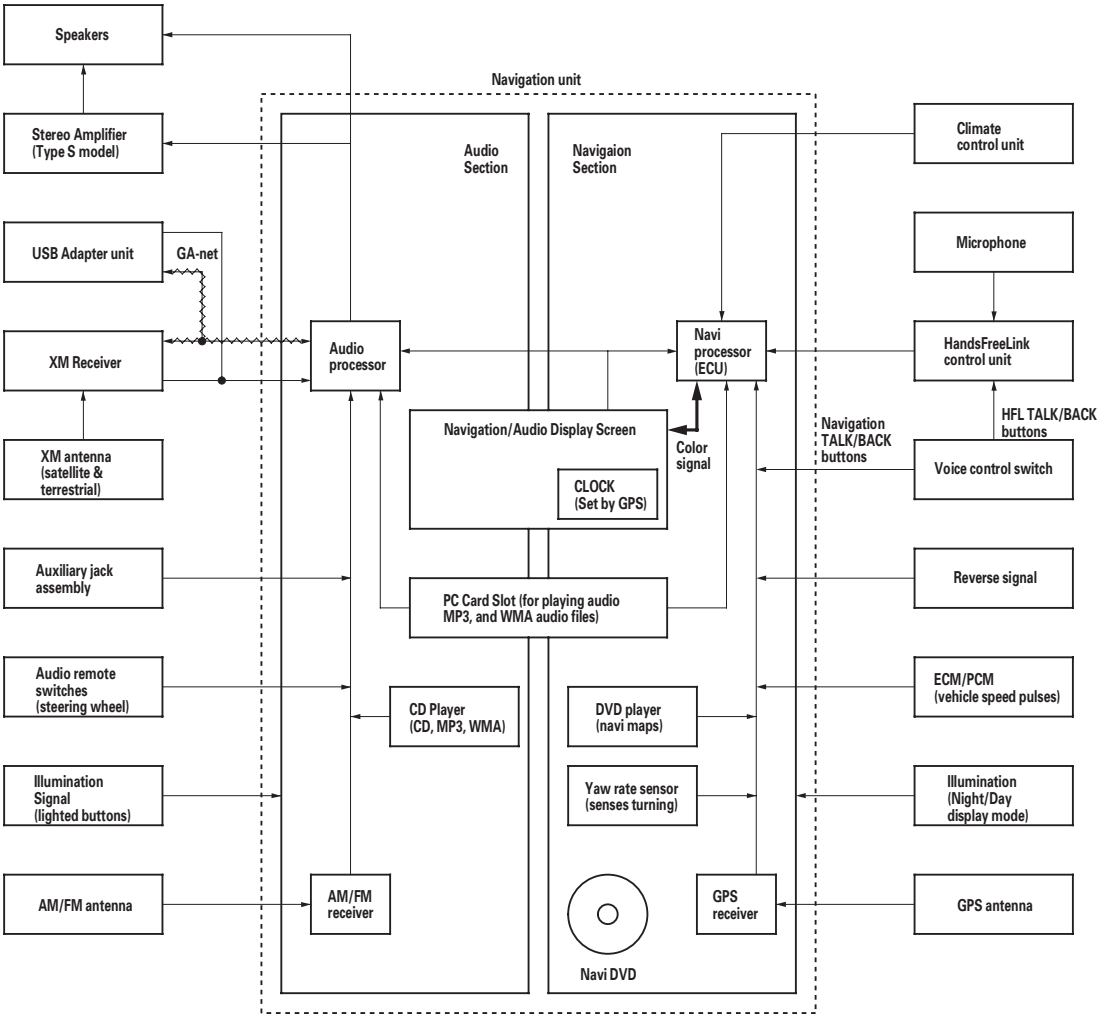
The GA-Net bus passes audio and navigation commands throughout the navigation and audio components. These commands include navigation touch screen and hard button signals, audio/XM selections by voice, and XM station and music title names. Because the entire bus is daisy chained between components (see diagram), any open or short in the GA-Net bus harness will cause any or all of these functions to become inoperative. Naturally the addition of any audio accessory must maintain the continuity of the GA-Net bus by installing the Y cable included with the accessory kit.



(cont'd)

System Description (cont'd)

With navigation



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NOTE: All items may not apply to this vehicle. See the owner's manual for more information.

Audio Glossary

Item	Definition
Active noise cancellation	The active noise cancellation system cancels some of the vehicle noise. This occurs in the 1,500—2,400 rpm range. Microphones detect the low frequency sound, and the system outputs a canceling sound from the audio speaker.
AM (Amplitude Modulation)	The type of transmission used in the standard radio broadcast band from 530 to 1710 kHz.
Amplifier	A device that increases the level of a signal by increasing the current or voltage.
Antenna	A device used to send or receive electromagnetic waves through the air.
ATA (PC Card)	A type of card that has been tested for use in playing WMA, and MP3 music files in the PC Card slot. Sizes of up to 1 GB have been tested.
Audio remote switch	The switches on the steering wheel that control the audio system.
Auxiliary jack	Allows the customer to use a portable audio device to input audio recordings.
Balance	A control that changes the relative volume of the left and right channels.
Band	A range of frequencies between two definite limits. Bands are assigned by the Federal Communications Commission for specific uses.
Bass	An adjustment for the low frequency sounds of around 160 Hz and below.
Byte	A unit of storage for computer files and memory. A CD holds approximately 700 million bytes.
Cassette	Audio or video magnetic tape container having two reels. Customers can insert it for play back
Compact flash	A standard for small-size (3 x 4 cm), memory cards used in mobile computers, PDAs, digital cameras. Compact flash memory cards are available in size of 32 MB up to 4 GB or more and can be played in the audio PC slot. Sizes above 1 GB have not been tested.
CD (Compact Disc)	A 4.5-inch plastic disc containing digital audio recording that is played optically on a laser equipped player. Never use discs with a paper label. In a hot vehicle, labels can curl up and jam the unit.
CD (audio disc) changer	CD player that can store and play more than one CD. Two types are available. Some units accept CDs fed into the changer one at a time, and others accept a magazine (with CDs stacked in a container).
CD player	A component designed to play compact disc recordings using a laser optical pickup. The signal from a CD player usually requires amplification.
Decibels (db)	A method of measuring sound or radio signal strength received by the audio unit antenna.
Distortion	Inexact reproduction of an audio signal caused by playing music at levels the audio system cannot handle.
Dolby (noise reduction)	A processing system developed by Dolby Laboratories that reduces the background noise on recording media. The result is a cleaner playback from the audio system.
DUET	A serial data communication line used for sub display.
DVD (Digital Versatile Disc)	A 4.5-inch CD-like format used for storing movies with digital audio and video features. The DVD-A format is a DVD format designed for DVD audio systems. Some vehicles can play DVD and DVD-A formats.
Equalizer	A device that changes the relative volume of individual frequency bands to suit personal tastes of the listener.
Fader	The control that adjusts the relative volume levels of front and rear speakers in a four-speaker system.
Format	To prepare a PC Card to receive files this function is done on a PC. Always choose either FAT or FAT32, as the NTFS format is not accepted by the system. Pick the default sectors for the format method selected.
FM (Frequency Modulation)	The form of modulation used for radio and television sound transmission in most of the world. Less prone to interference than AM. The FM broadcast band in North America covers roughly 87.7 to 107.9 MHz.

(cont'd)

System Description (cont'd)

Audio Glossary

Item	Definition
GA-Net	The GA-Net allows the audio unit to communicate with all the audio and navigation components in a vehicle. If there is an open in the GA-Net, or components, components or the entire audio and navigation system may appear inoperative.
GB (Gigabyte)	A unit of memory or disk storage equal to billion bytes (1000 million bytes).
HDD	Abbreviation for hard disc drive. They are sensitive to heat and it is not recommended that they be used in the PC card slot for playing audio files.
Hertz (Hz)	The unit of frequency equal to one cycle per second (cps). One kilohertz (kHz) equals 1,000 cps; one megahertz (MHz) equals 1 million cps.
Integrated amplifier	A component that combines a pre amp and a power amp into a single unit. A receiver combines an integrated amp and a tuner into a single unit.
Jewel case	The hard plastic case that contains a compact disc or DVD. Always use a jewel case to prevent scratches on the underside of a CD or DVD.
LCD (Liquid Crystal Display)	A type of digital display that changes reflectance or transmittance when an electrical field is applied to it.
Memory	Circuitry or devices that hold information in electrical or magnetic form, such as the AM/FM radio presets.
MB (Megabyte)	One million bytes. Written as 1 MB. Megabytes are used as a measure of digital storage space. For example, a CD can hold 650 MB.
Mic	An abbreviation for microphone. For vehicles with navigation, the microphone accepts navigation voice commands to control audio and navigation functions.
MP3 music files	MP3 is an audio coding format. MP3 is a popular audio compression format on the Internet and computers. CDs and PC Cards with these files can be played on some vehicle's audio system.
Mute	When the navigation gives guidance, the front speakers are muted (no music). When you use the voice control system, all of the speakers are muted.
Noise	Unwanted random sounds like buzzing, hiss, pops, static, whine, etc.
PC card	The slot used for playing MP3 and WMA music files. The PC Card is usually a combination of a small flash card in a PCMCIA adaptor that slides into the slot. The ATA, SD, and compact flash types of cards have been tested up to 1 GB.
PCMCIA	A computer standard for the slot that the PC card slides into. Another term for the PC card slot.
Processor	The part of an audio device that performs tasks/calculations. In the audio unit the processor handles muting to allow the navi to speak voice commands, and the decoding/playback of the sound files etc.
Radio	A head unit that combines a tuner, a preamplifier, and often a power-amplifier.
Route guidance (RG)	Spoken voice used for turn-by-turn navigation from the audio speakers.
SCF (Cold Start Fix) screens	These screens are displayed if the system requires a GPS initialization. The vehicle should be moved outside into an open area away from buildings/power lines.
Stereo	A recording of at least two channels where you can hear sound or music from the left or right side.
SD (Secure Digital) card	This compact type of memory card allows for fast data transfer and has built-in security functions. SD cards have a small write-protection switch on the side.
Shield	A metallic foil or braided wire layer surrounding conductors which are designed to prevent electrostatic or electromagnetic interference (noise) from external sources such as buzzing, or popping sounds heard on the speakers.
Speaker (Loudspeaker)	A device that converts electrical energy into acoustical energy (sound).
Speed-sensitive volume compensation (SVC)	The SVC increases the audio volume to compensate for increased interior noise when the vehicle drivers at freeway speeds.
Subwoofer	A loudspeaker made to reproduce the lowest audio frequencies, about 25 Hz to 125 Hz.

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Audio Glossary

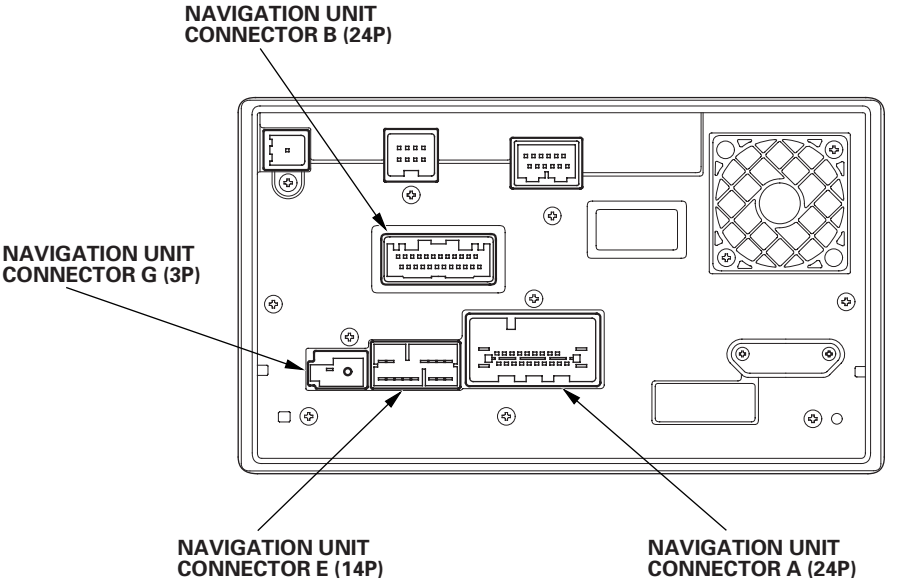
Item	Definition
Track	A sound recording on a CD, tape, or PC Card.
Treble	An adjustment to control the volume of the high frequency sounds.
Tuner	A component (or part of a component) that receives radio signals and selects one broadcast from many.
Tweeter	A speaker designed to reproduce the higher frequencies (treble) only.
USB	Universal Serial Bus. The USB is used for playing the compressed audio files (MP3, WMA, and AAC) on the external device through the audio unit.
Voice coil	A coil of wire wrapped around a tube and then attached to the speaker cone or diaphragm. When an audio signal is applied, the coil becomes an electromagnet and interacts with the permanent magnet causing the come or diaphragm to vibrate. We interpret this vibrations as sound.
Volume control	Allows you to control the loudness of the music.
WMA music file	Windows Media Audio File. This is an accepted format for music files to be played on either a CD-R, a CD-RW or a PC Card.
Woofer	A speaker that is designed to reproduce low (bass) frequencies only.
XM radio	Satellite based radio transmission, which also uses a ground based repeater network to ensure seamless reception. The channels originate from XM's broadcast center, in Washington, DC, and uplink to two satellites. These satellites transmit the signal across the entire continental United States.
XM receiver	The external component that receives and processes the XM signals from the XM satellites, and terrestrial (land) stations. The audio unit communicates to the XM receiver over the GA-Net bus.

(cont'd)

System Description (cont'd)

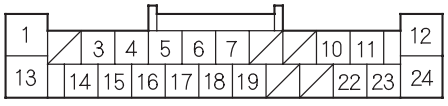
Audio Unit Connector for Inputs and Outputs

With navigation (Navigation unit)



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NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Type S model

Cavity	Wire Color	Connect to
A1	RED	Dash lights brightness controller (ILL−)
A3	LT BLU	Data link connector (DLC) (K-LINE)
A4	GRN	Multiplex integrated control unit (MICU) (SCTY RADIO)
A5	BRN	Audio remote switch (AUDIO REMOTE GND)
A6	PUR	Stereo amplifier (RR SIG−)
A7	LT GRN	Stereo amplifier (RR SIG+)
A10	WHT	Stereo amplifier (RL SIG−)
A11	BLK	Stereo amplifier (RL SIG+)
A12	BLK	Body ground to G505 (GND)
A13	GRY	No. 14 (7.5 A) fuse in the under-dash fuse/relay box (ILL+)
A14	PUR	No. 35 (7.5 A) fuse in the under-dash fuse/relay box (ACC RADIO)
A15	BLU	ECM/PCM (VSP)
A16	PNK	Audio remote switch (AUDIO REMOTE SW)
A17	LT BLU	Stereo amplifier (SWD +B)
A18	PNK	Stereo amplifier (FR SIG−)
A19	BLU	Stereo amplifier (FR SIG+)
A22	RED	Stereo amplifier (FL SIG−)
A23	BLU	Stereo amplifier (FL SIG+)
A24	WHT	No. 23 (10 A) fuse in the under-hood fuse/relay box (+B BACK UP)

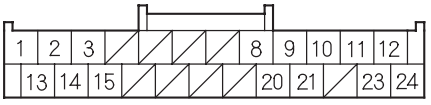
Except Type S model

Cavity	Wire Color	Connect to
A1	RED	Dash lights brightness controller (ILL−)
A3	LT BLU	Data link connector (DLC) (K-LINE)
A4	GRN	Multiplex integrated control unit (MICU) (SCTY RADIO)
A5	BRN	Audio remote switch (AUDIO REMOTE GND)
A6	ORN	Right rear speaker (RR R−)
A7	BLU	Right rear speaker (RR R+)
A10	BRN	Left rear speaker (RR L−)
A11	YEL	Left rear speaker (RR L+)
A12	BLK	Body ground to G505 (GND)
A13	GRY	No. 14 (7.5 A) fuse in the under-dash fuse/relay box (ILL+)
A14	PUR	No. 35 (10 A) fuse in the under-dash fuse/relay box (ACC RADIO)
A15	BLU	ECM/PCM (VSP)
A16	PNK	Audio remote switch (AUDIO REMOTE SW)
A18	BRN	Front passenger's door speaker, right tweeter (FR R−)
A19	GRY	Front passenger's door speaker, right tweeter (FR R+)
A22	PNK	Driver's door speaker, left tweeter (FR L−)
A23	LT GRN	Driver's door speaker, left tweeter (FR L+)
A24	WHT	No. 23 (10 A) fuse in the under-hood fuse/relay box (+B BACK UP)

(cont'd)

System Description (cont'd)

NAVIGATION UNIT CONNECTOR B (24P)



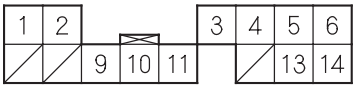
Wire side of female terminals

Cavity	Wire Color	Connect to
B1	BRN	Auxiliary jack assembly (AUX S GND)
B2	GRY*	Shield for terminals No. 1, No. 3, No. 11, No. 12, and No. 13 (AUX SH GND)
B3	BLU	Auxiliary jack assembly (AUX GND)
B8	LT BLU	HandsFreeLink control unit (HFL MUTE)
B9	PNK	HandsFreeLink control unit (TELM SIG−)
B10	GRY*	Shield for terminals No. 11, No. 12, No. 23, and No. 24 (HFL/NAV COMM SH)
B11	GRN	HandsFreeLink control unit (HFL/NAV COMM2)
B12	WHT	HandsFreeLink control unit (HFL/NAV COMM4)
B13	YEL	Auxiliary jack assembly (AUX L)
B14	GRN	Auxiliary jack assembly (AUX R)
B15	WHT	Auxiliary jack assembly (AUX DET)
B20	LT GRN	HandsFreeLink control unit (HFL ICON)
B21	BLU	HandsFreeLink control unit (TELM SIG+)
B23	BLK	HandsFreeLink control unit (HFL/NAV COMM1)
B24	RED	HandsFreeLink control unit (HFL/NAV COMM3)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

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NAVIGATION UNIT CONNECTOR E (14P)

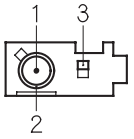


Wire side of female terminals

Cavity	Wire Color	Connect to
E1	BLU	XM receiver, USB adapter unit (+B)
E2	LT BLU	XM receiver, USB adapter unit (SYS ACC)
E3	BRN*	Shield for terminals No. 9 and No. 10 (GA-NET BUS SH)
E4	GRY*	Shield for terminals No. 5, No. 6, No. 13, and No. 14 (SAT SH GND)
E5	WHT	XM receiver, USB adapter unit (AUDIO R+)
E6	RED	XM receiver, USB adapter unit (AUDIO L+)
E9	BLU	XM receiver, USB adapter unit (GA-NET BUS+)
E10	PNK	XM receiver, USB adapter unit (GA-NET BUS−)
E11	BLK	XM receiver, USB adapter unit (GA-NET GND)
E13	BLK	XM receiver, USB adapter unit (AUDIO R−)
E14	GRN	XM receiver, USB adapter unit (AUDIO L−)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

NAVIGATION UNIT CONNECTOR G (3P)



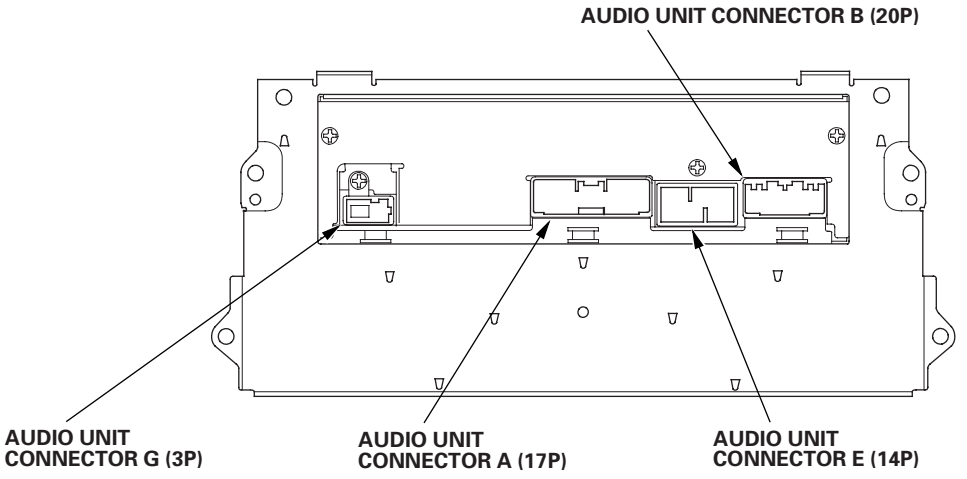
Terminal side of female terminals

Cavity	Wire Color	Connect to
G1	———	AM/FM/XM antenna (RF IN)
G2	———	Shield for terminal No. 1 (RF SH)
G3	———	AM/FM/XM antenna (ANT +B)

(cont'd)

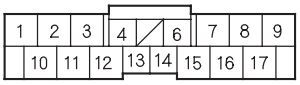
System Description (cont'd)

Without navigation



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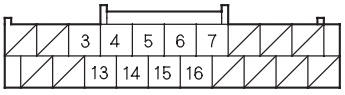
AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Cavity	Wire Color	Connect to
A1	RED	Dash lights brightness controller
A2	BRN	Left rear speaker (−)
A3	PNK	Driver's door speaker (−), Left tweeter (−)
A4	GRN	Multiplex integrated control unit (MICU) (SCTY RADIO)
A6	LT BLU	Multiplex integrated control unit (MICU) (K-LINE)
A7	BRN	Front passenger's door speaker (−), Right tweeter (−)
A8	ORN	Right rear speaker (−)
A9	BLK	Body ground to G505 (GND)
A10	GRY	No. 14 (7.5 A) fuse in the under-dash fuse/relay box (ILL+)
A11	YEL	Left rear speaker (+)
A12	LT GRN	Driver's door speaker (+)
A13	BLU	ECM/PCM (VSP)
A14	PUR	No. 35 (7.5 A) fuse in the under-dash fuse/relay box (ACC RADIO)
A15	GRY	Front passenger's door speaker (+), Right tweeter (+)
A16	BLU	Right rear speaker (+)
A17	WHT	No. 23 (10 A) fuse in the under-hood fuse/relay box (+B BACK UP)

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

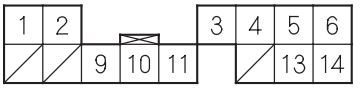
Cavity	Wire Color	Connect to
B3	BRN	Auxiliary jack assembly (AUX S GND)
B4	GRY*	Shield for terminals No. 3, No. 5, No. 13, No. 14, and No.15 (AUX SH GND)
B5	BLU	Auxiliary jack assembly (AUX GND)
B6	BRN	Audio remote switch (AUDIO REMOTE GND)
B7	PNK	Audio remote switch (AUDIO REMOTE SW)
B13	YEL	Auxiliary jack assembly (AUX L)
B14	GRN	Auxiliary jack assembly (AUX R)
B15	WHT	Auxiliary jack assembly (AUX DET)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

(cont'd)

System Description (cont'd)

AUDIO UNIT CONNECTOR E (14P)

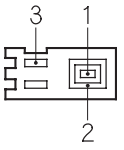


Wire side of female terminals

Cavity	Wire Color	Connect to
E1	BLU	USB adapter unit (+B)
E2	LT BLU	USB adapter unit (SYS ACC)
E3	BRN*	Shield for terminals No. 9 and No. 10 (BUS SH GND)
E4	GRY*	Shield for terminals No. 5, No. 6, No. 13, and No. 14 (SAT SH GND)
E5	WHT	USB adapter unit (SAT R+)
E6	RED	USB adapter unit (SAT L+)
E9	BLU	USB adapter unit (GA-NET BUS+)
E10	PNK	USB adapter unit (GA-NET BUS−)
E11	BLK	USB adapter unit (GND)
E13	BLK	USB adapter unit (SAT R−)
E14	GRN	USB adapter unit (SAT L−)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

AUDIO UNIT CONNECTOR G (3P)

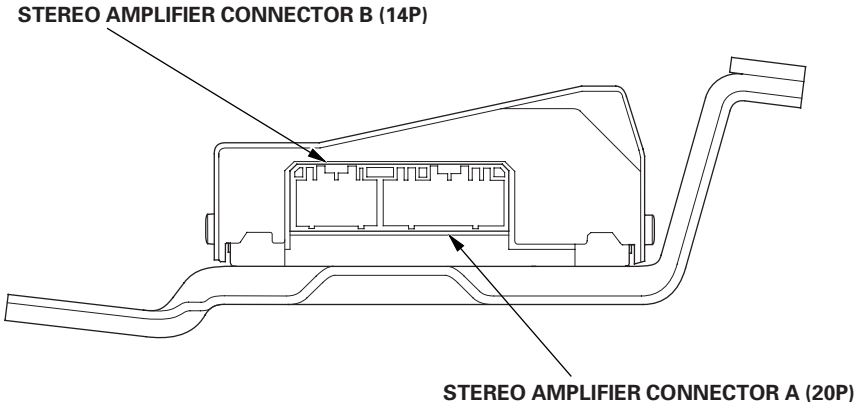


Terminal side of female terminals

Cavity	Wire Color	Connect to
G1	———	AM/FM antenna (RF IN)
G2	———	Shield for terminal No. 1 (RF SH)
G3	———	AM/FM antenna (ANT +B)

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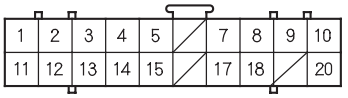
Stereo Amplifier Connector for Inputs and Outputs (Type S model)



(cont'd)

System Description (cont'd)

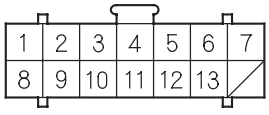
STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Cavity	Wire Color	Connects to
A1	PNK	Right tweeter (+)
A2	GRY	Front passenger's door speaker (+)
A3		Driver's door speaker (+)
A4	RED	Left tweeter (+)
A5	GRN	Subwoofer (+)
A7	BLU	Right rear speaker (+)
A8	GRY	Left rear speaker (+)
A9	PUR	Multiplex integrated control unit (MICU) (ACC RADIO)
A10	LT GRN	+B (Main stereo power supply)
A11	BLU	Right tweeter (−)
A12	BRN	Front passenger's door speaker (−)
A13	PNK	Driver's door speaker (−)
A14	GRN	Left tweeter (−)
A15	RED	Subwoofer (−)
A17	ORN	Right rear speaker (−)
A18	BRN	Left rear speaker (−)
A20	BLK	Ground (G601)

STEREO AMPLIFIER CONNECTOR B (14P)



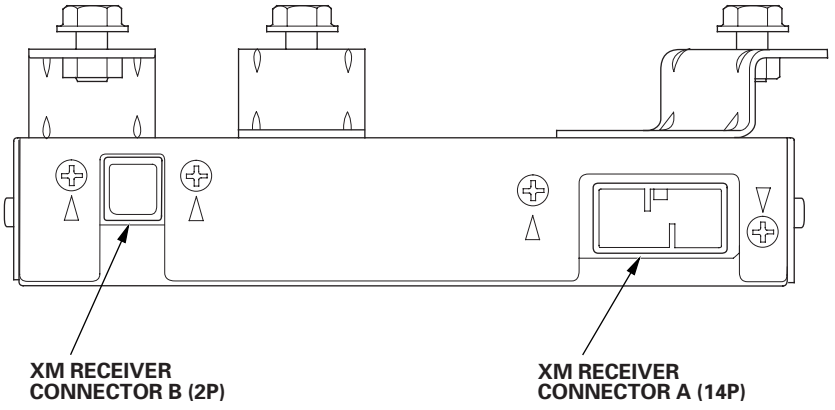
Wire side of female terminals

Cavity	Wire Color	Connects to
B1	BLU	Navigation unit (FL SIG+)
B2	BRN*	Shield for terminals No. 1 and No. 8 (FL SH GND)
B3	BLK	Navigation unit (RL SIG+)
B4	BLU	Navigation unit (FR SIG+)
B5	GRY*	Shield for terminals No. 4 and No. 11 (FR SH GND)
B6	LT GRN	Navigation unit (RR SIG+)
B7	LT BLU	Navigation unit (AMP ON)
B8	RED	Navigation unit (FL SIG−)
B9	GRN*	Shield for terminals No. 3 and No. 10 (RL SH GND)
B10	WHT	Navigation unit (RL SIG−)
B11	PNK	Navigation unit (FR SIG−)
B12	YEL*	Shield for terminals No. 6 and No. 13 (RR SH GND)
B13	PUR	Navigation unit (RR SIG−)

*: The shielded wires have a heat-shrink tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

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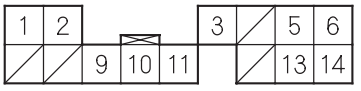
XM Receiver Connector for Inputs and Outputs (With navigation)



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System Description (cont'd)

XM RECEIVER CONNECTOR A (14P)

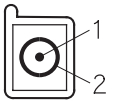


Wire side of female terminals

Cavity	Wire Color	Connect to
A1	BLU	Navigation unit, USB adapter unit (+B)
A2	LT BLU	Navigation unit, USB adapter unit (SYS ACC)
A3	BRN*	Shield for terminals No. 9 and No. 10 (GA-NET SH GND)
A5	WHT	Navigation unit, USB adapter unit (SAT R+)
A6	RED	Navigation unit, USB adapter unit (SAT L+)
A9	BLU	Navigation unit, USB adapter unit (GA-NET BUS+)
A10	PNK	Navigation unit, USB adapter unit (GA-NET BUS−)
A11	BLK	Navigation unit, USB adapter unit (GND)
A13	BLK	Navigation unit, USB adapter unit (SAT R−)
A14	GRN	Navigation unit, USB adapter unit (SAT L−)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

XM RECEIVER CONNECTOR B (2P)

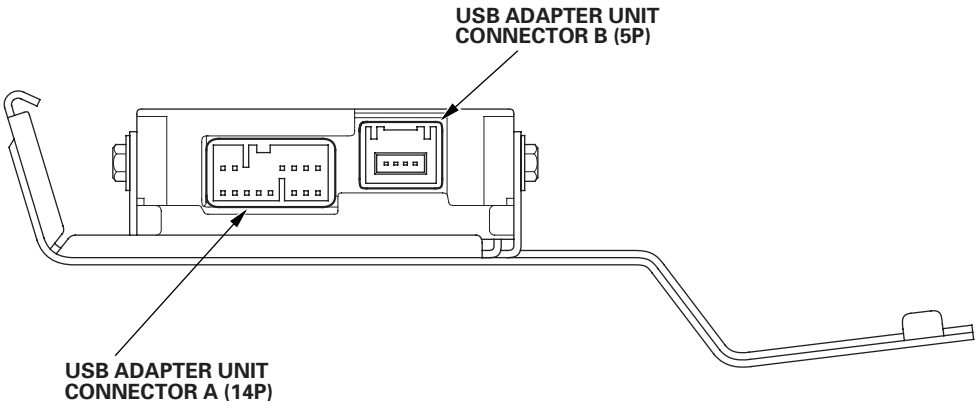


Terminal side of female terminals

Cavity	Wire Color	Connect to
B1	———	Satellite signal antenna (SAT/TER)
B2	———	Shield for terminal No. 1 (GND SH)

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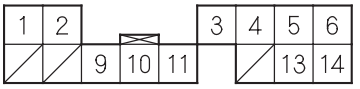
USB Adapter Unit Connector for Inputs and Outputs



(cont'd)

System Description (cont'd)

USB ADAPTER UNIT CONNECTOR A (14P)

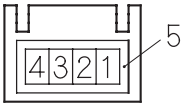


Wire side of female terminals

Cavity	Wire Color	Connect to
A1	BLU	Navigation unit*2, audio unit*3, XM receiver (+B)
A2	LT BLU	Navigation unit*2, audio unit*3, XM receiver (SYS ACC)
A3	BRN*1	Shield for terminals No. 9 and No. 10 (GA-NET BUS SH)
A4	GRY*1	Shield for terminals No. 5, No. 6, No. 13, and No. 14 (AUDIO SH)
A5	WHT	Navigation unit*2, audio unit*3, XM receiver (AUDIO R+)
A6	RED	Navigation unit*2, audio unit*3, XM receiver (AUDIO L+)
A9	BLU	Navigation unit*2, audio unit*3, XM receiver (GA-NET BUS+)
A10	PNK	Navigation unit*2, audio unit*3, XM receiver (GA-NET BUS−)
A11	BLK	Navigation unit*2, audio unit*3, XM receiver (GND)
A13	BLK	Navigation unit*2, audio unit*3, XM receiver (AUDIO R−)
A14	GRN	Navigation unit, XM receiver (AUDIO L−)

* 1: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.
* 2: With navigation
* 3: Without navigation

USB ADAPTER UNIT CONNECTOR B (5P)

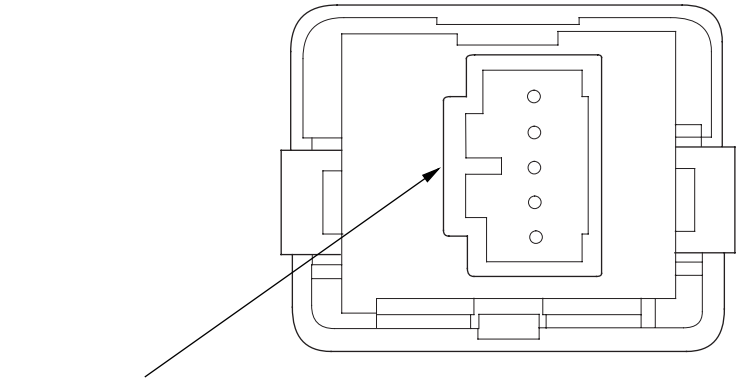


Terminal side of female terminals

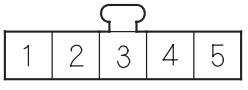
Cavity	Wire Color	Connect to
B1	———	USB adapter (USB VBUS)
B2	———	USB adapter (USB DATA−)
B3	———	USB adapter (USB DATA+)
B4	———	USB adapter (USB GND)
B5	———	Shield for terminals No. 1, No. 2, No. 3, and No. 4 (USB SH)

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Auxiliary Jack Assembly Connector for Inputs and Outputs



AUXILIARY JACK ASSEMBLY 5P CONNECTOR



Wire side of female terminals

With navigation

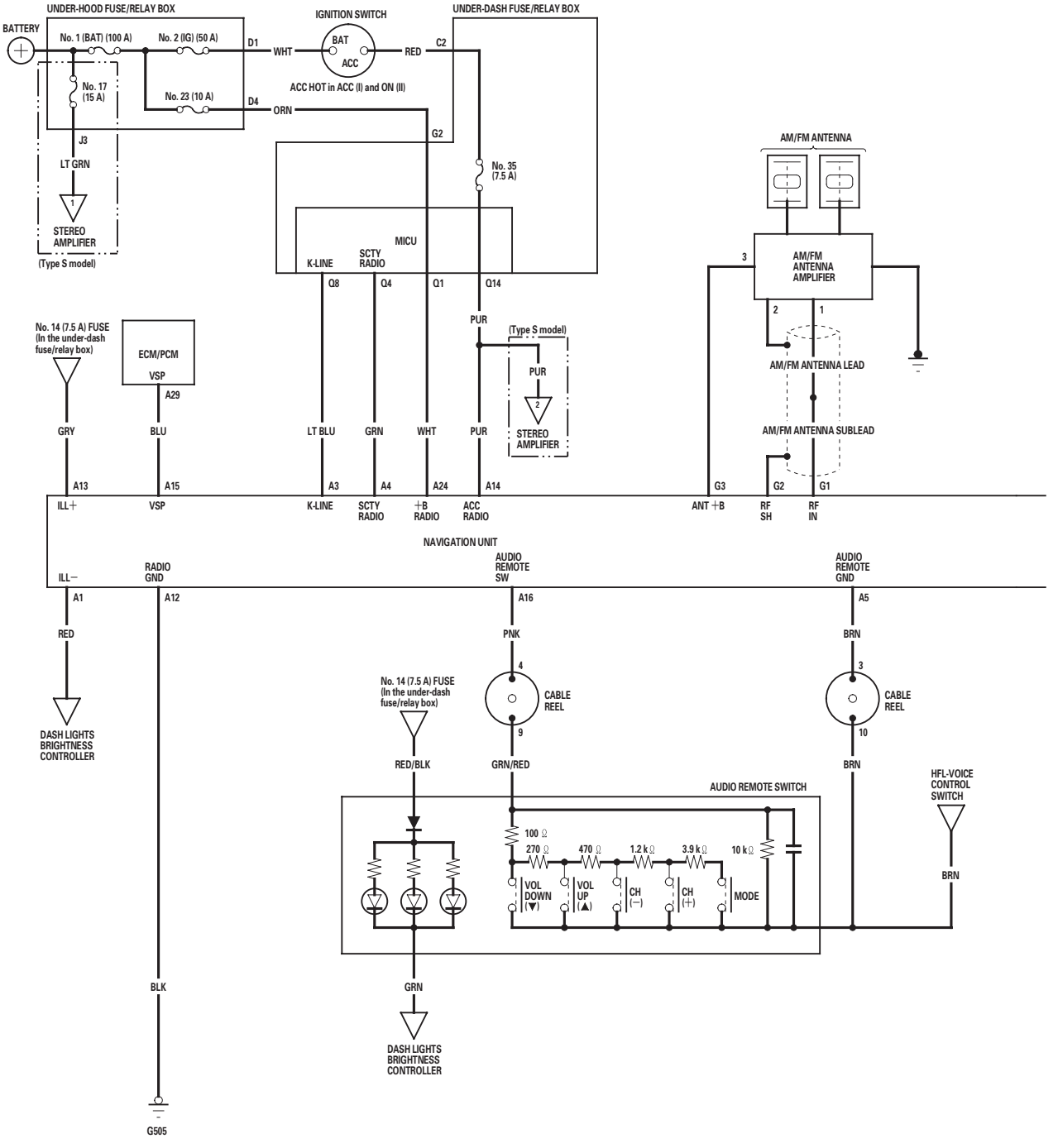
Cavity	Wire Color	Connect to
1	WHT	Navigation unit (AUX DET)
2	BLU	Navigation unit (AUX GND)
3	BRN	Navigation unit (AUX S GND)
4	YEL	Navigation unit (AUX L)
5	GRN	Navigation unit (AUX R)

Without navigation

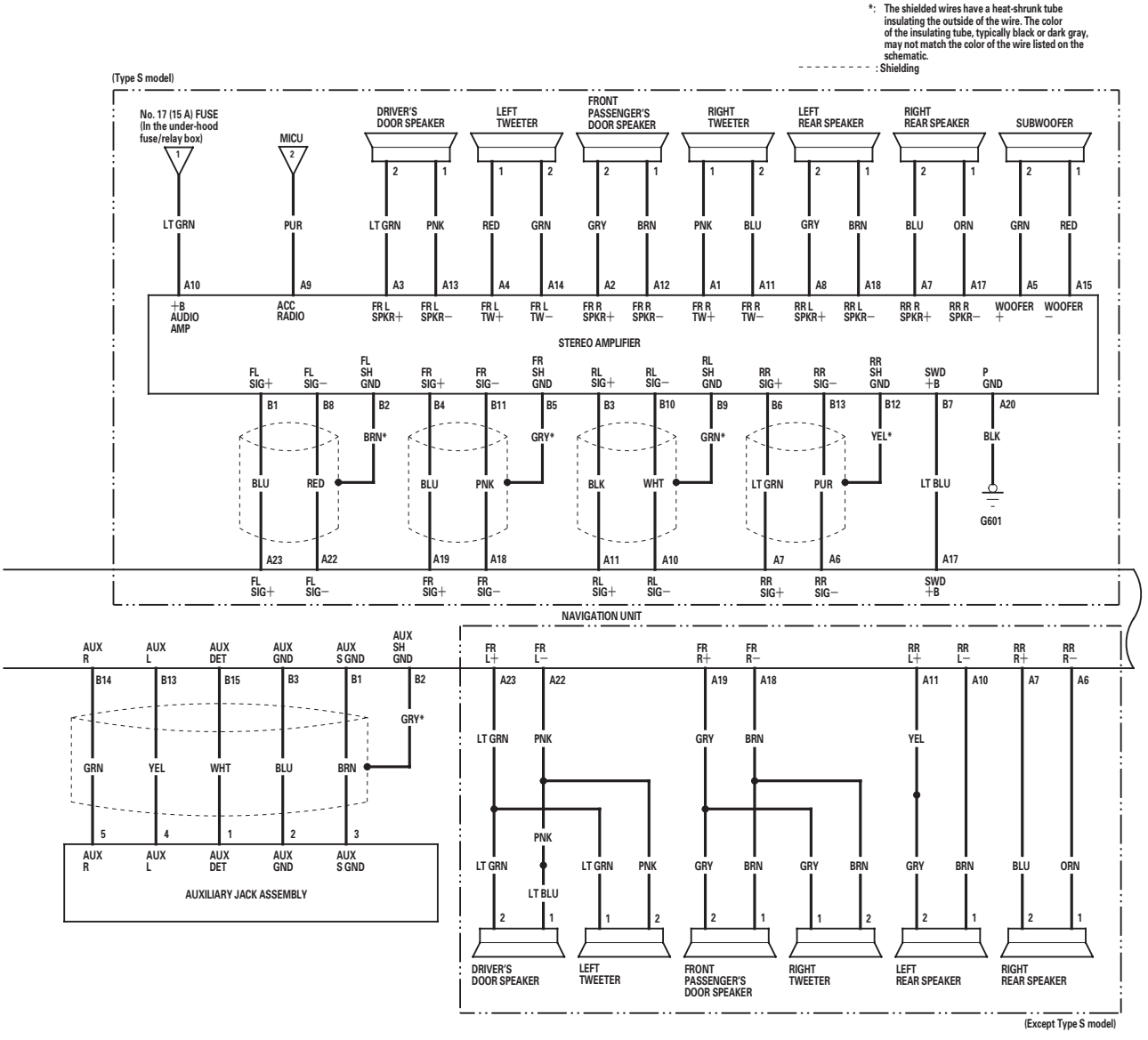
Cavity	Wire Color	Connect to
1	WHT	Audio Unit (AUX DET)
2	BLU	Audio Unit (AUX GND)
3	BRN	Audio Unit (AUX S GND)
4	YEL	Audio Unit (AUX L)
5	GRN	Audio Unit (AUX R)

Circuit Diagram

With Navigation



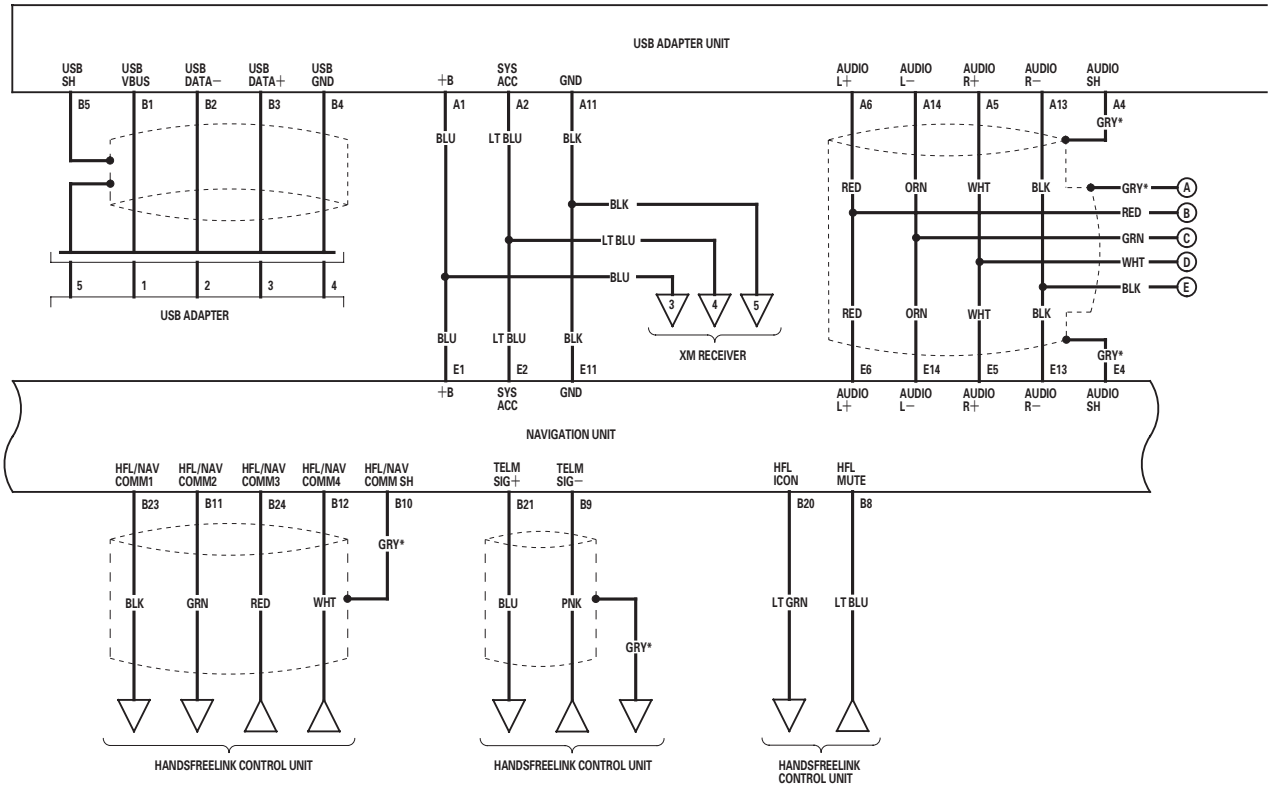
DYNOMITE -2009-



(cont'd)

DYNOMITE -2009-

Circuit Diagram (cont'd)

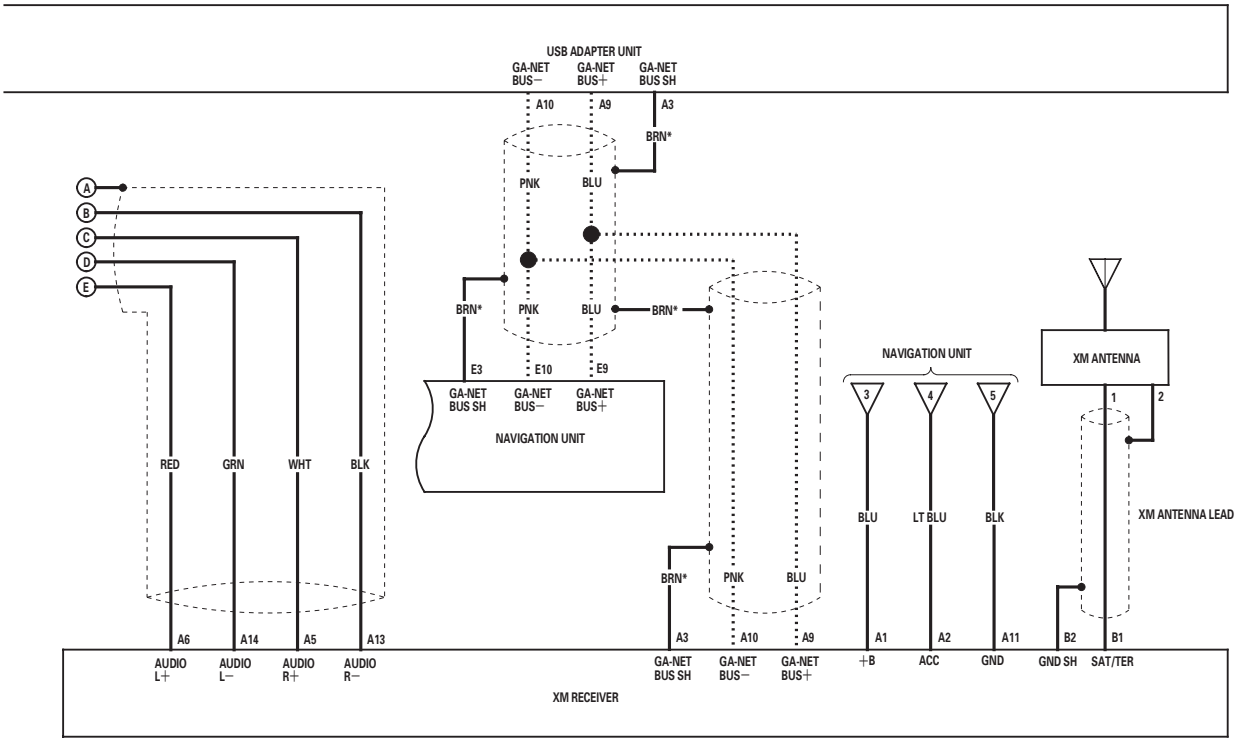


DYNOMITE -2009-

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

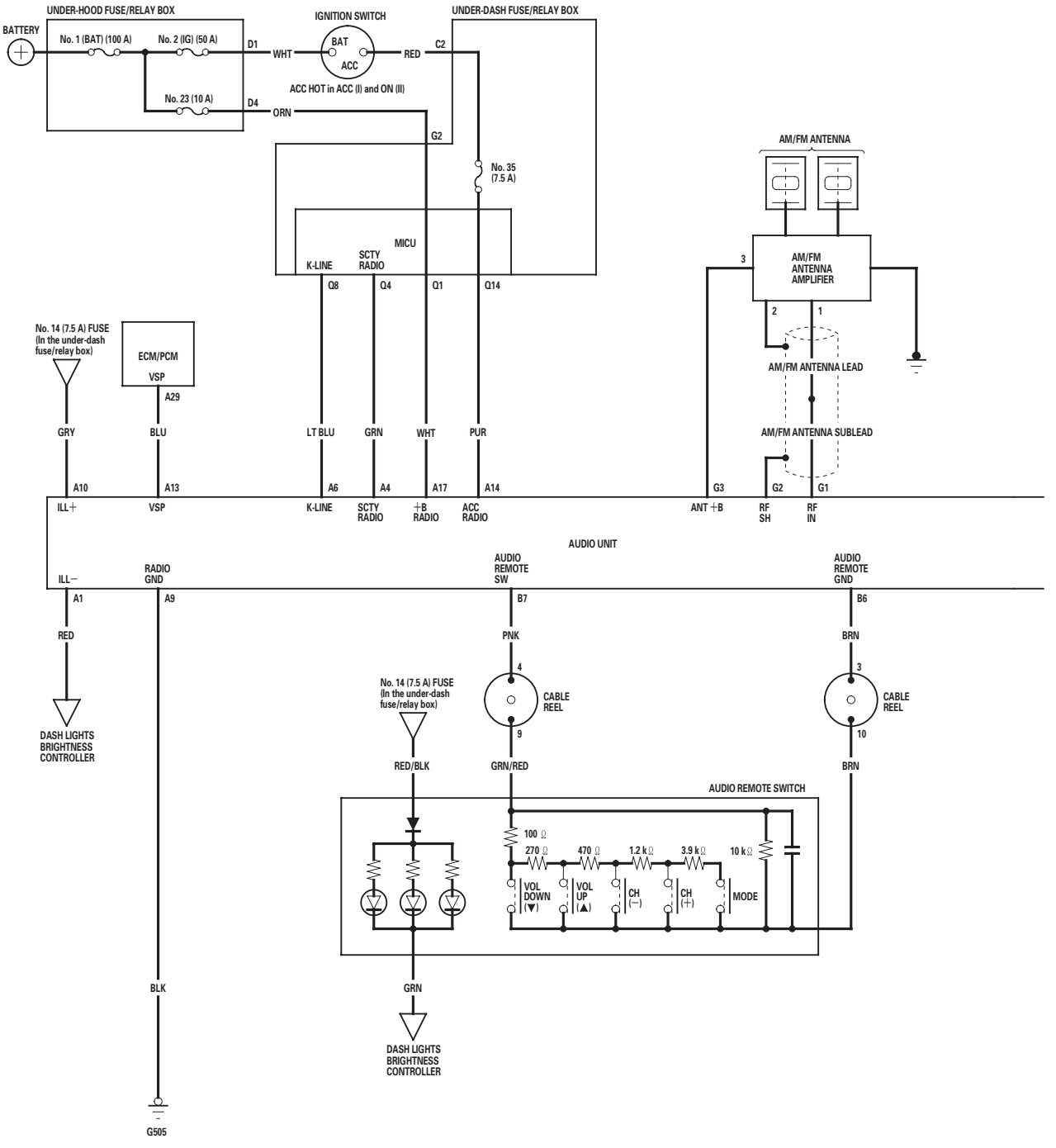
: GA-NET

: Shielding



Circuit Diagram (cont'd)

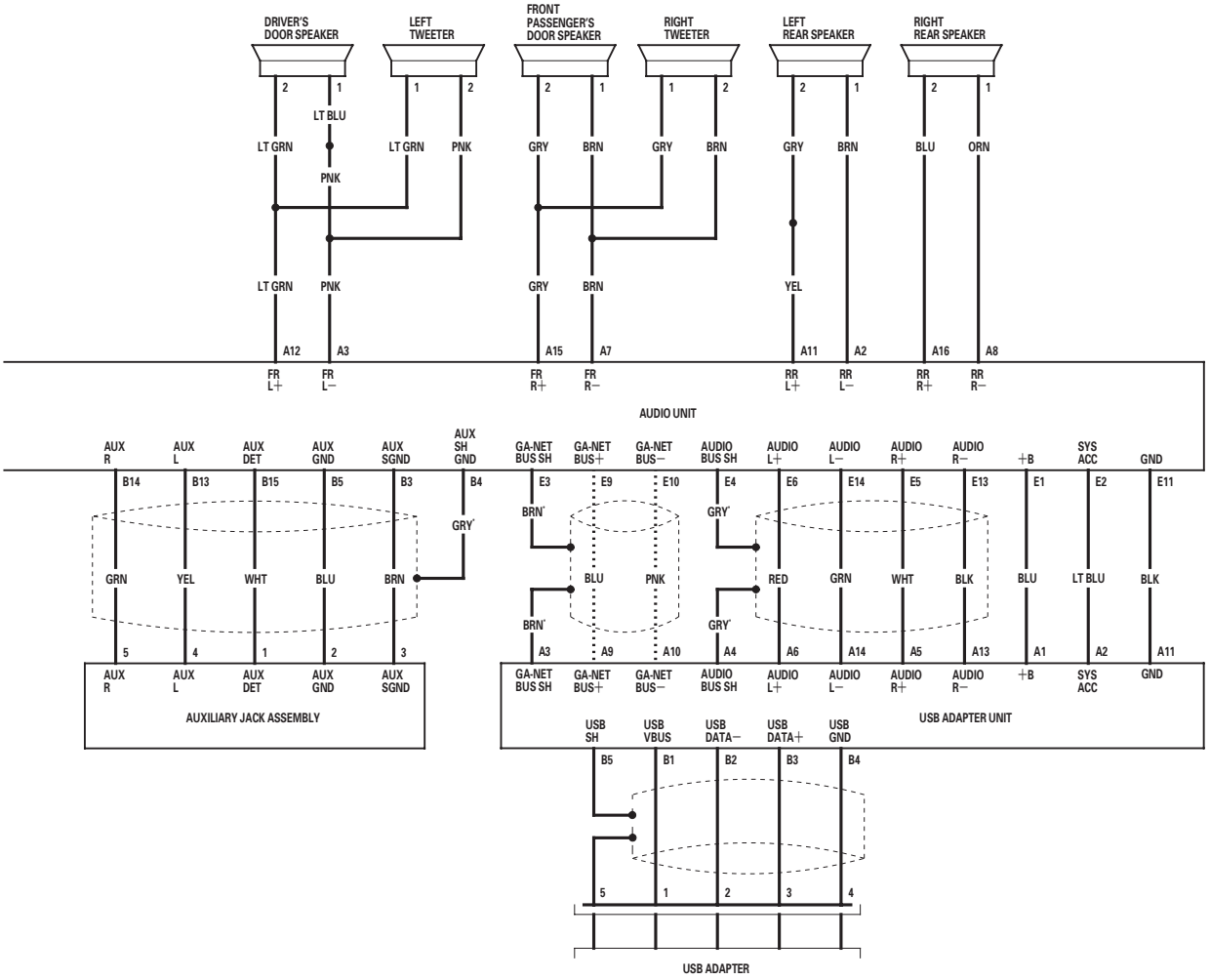
Without Navigation



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*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

: GA-NET
: Shielding



Self-diagnostic Function

Without Navigation

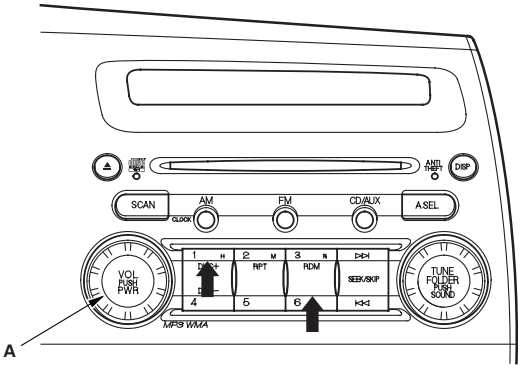
The audio system has a self-diagnostic function.

Serial Number Display Mode

To obtain the audio unit serial number on a vehicle, do the following:

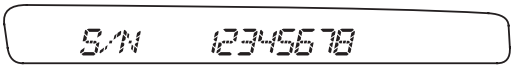
NOTE:
- This procedure can only be performed when the battery power is disconnected from the audio unit and the audio unit displays CODE.
- To obtain the navigation unit serial number, refer to ECU Info. in the navigation system diagnostic mode (see page 23-305).

1. Turn the ignition switch to ON (II).
2. Make sure the audio system is turned off.
3. Push and hold the preset No. 1 and No. 6 buttons.
4. While holding the buttons, push the VOL PUSH PWR knob (A) to ON.
5. Release the buttons and the self-diagnostic begins.



6. The display shows a 8 digit serial number.

   Eight digits of the serial number (example 12345678)



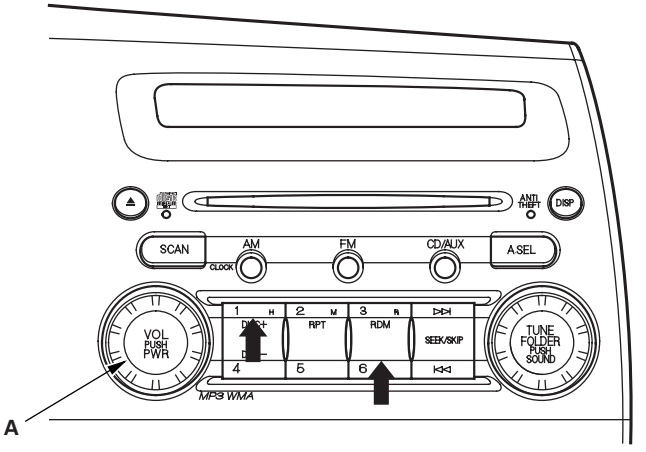
7. Use all 8 numbers as the serial number when using the Interactive Network (iN) to retrieve the 5 digit anti-theft code.
8. To end the self-diagnostic function, turn the audio unit off, or turn the ignition switch to LOCK (0).

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How to check for audio system condition

NOTE:
- The audio unit must be in the code enter screen before performing the self-diagnostic function.
- The self diagnostic function does not find every problem with the audio system. Check any official Honda service website for more information about the audio system.

1. Turn the ignition switch to ON (II).
2. Make sure the audio system is turned off.
3. Push and hold the preset No. 1 and No. 6 buttons.
4. While holding the buttons, push the VOL PUSH PWR knob (A) to ON.
5. Release the buttons and the self-diagnostic begins.



6. When you are in the self-diagnostic mode, pressing a preset button starts.

No. 3 button
Entire LCD lighting/light-out mode: Turns on/off the entire LCD to show the presence or absence of an LCD failure. The entire display must appear. If there are dead segments, replace the audio unit.

No. 4 button
Duty indication mode (for the Illumination dim): Indicates the duty for the Illumination dim when the dash lights are on.

No. 5 button
Vehicle speed pulse indication mode: Indicates the vehicle speed pulse.

FM button (Push and hold 5 sec.)
Reception level check mode: Indicates the reception level (dB). When entering the reception level check mode, the AM/FM button is used to change the main/sub antenna. See Reception level indication for more information.

CD button (Push and hold 5 sec.)
DRAM residual quantity indication mode: Indicates the DRAM residual quantity.

(cont'd)

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Self-diagnostic Function (cont'd)

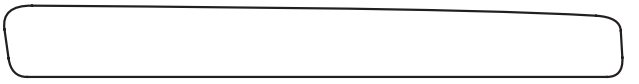
7. The end the self-diagnostic function, turn the audio unit off, or turn the ignition switch to LOCK (0).

Display Specifications

Entry LCD Lighting
No. 3 button



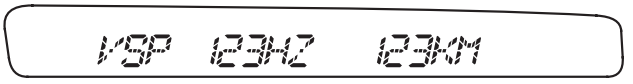
Entry LCD Lights-outs
No. 3 button



Duty (for the illumination) indication
No. 4 button



Vehicle speed pulse indication
No. 5 button



Reception level indication
FM button



DRAM residual quantity indication
CD button



Speaker check mode

8. Turn off the audio unit.
9. Push and hold the No. 1 and No. 3 buttons. While holding the buttons, push the VOL push PWR knob to ON. Release the buttons and the speaker check mode begins. A low-frequency hum should sound for about one minute. Change the test speaker by pushing the SKIP button. If you find a speaker(s) with no sound, check the speaker and harness connections. If the connections are good, replace the speaker, and retest.
10. To end the self-diagnostic function, turn the audio unit off, or turn the ignition switch to LOCK (0).

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Reception level indication mode

This diagnostic screen checks the audio unit's reception level. This level then can be used in the diagnosis of audio unit reception quality. The reception level is displayed in decibels (dB)

Preperation:
- Pank the vehicle putdoors in an appropriate location for good radio reception.
- Tune to a powerful local FM radio station then write down the radio station number.

1. Enter the reception level indication mode in the self-diagnostic function. The AM/FM antenna amplifier is on (A. SEL or TP is not displayed in the audio-HVAC display).

2. Tune to the FM radio station you wrote down preperation using the TUNING knob, and note the decibel level of that station when you release the button.

3. Press and release the A. SEL button to turn the AM/FM antenna amplifier off (A. SEL or TP is now displayed in the audio-HVAC display).

4. Tune to the FM radio station you wrote down in preperation using the TUNING knob, and note the decibel level of that station when you release the button.

5. Press and release the A. SEL button to turn the AM/FM antenna amplifier back on (A. SEL or TP is not displayed in the audio-HVAC display.

6. Turn the ignition switch to LOCK (0) or audio unit off to exit the test mode.

7. Compare your results to a known-good, (make sure it is the same year and trim level) in the same location and direction, and under the same environmental conditions.

Error Codes

The audio system displays error codes when a problem is detected with the disc changer, the disc, the tape player, the XM radio, or the anti-theft code.

This is not a complete list of audio error codes. Refer to symptom troubleshooting, or go to any official Honda service website for more service information.

CD Error Codes (with navigation)

Error Code Displayed	Possible Cause	Solution
DISC ERROR	The system cannot read the disc because an audio or video DVD is inserted into the unit. The CD may be inserted upside down.	Verify that the unit functions with a standard mass production CD.
MECH ERROR	There is a problem with the mechanism A CD label may be jammed in the mechanism.	Replace the navigation unit.

CD Error Codes (without navigation)

Error Code Displayed	Possible Cause	Solution
BAD DISC-PLEASE CHECK OWNERS MANUAL PUSH EJECT	• CD label jammed in the mechanism. • CD eject mechanism or motor is inoperative. • CD spindle motor won't spin up the CD. • The wrong type disc is inserted.	Press the EJECT button and hold it for 5 seconds. If the disc does not eject, try again. If the disc still won't eject, replace the unit.

CD Error Codes

Error Code Displayed	Possible Cause	Solution
HEAT ERROR	CD player is too hot. This can happen if the vehicle is parked in the sunlight all day.	The unit should function normally when it cools off.
FORMAT	Audio unit cannot read the files on the CD or CD-R.	Current track is skipped. The next supported track or file plays automatically. • Verify that CD, CD-R or CD-RW file names end in CD-A or WMA. • Verify that CD, CD-R or CD-RW with compressed music formats end in MP3 or WMA. • Other file formats like I-tunes or Ogg are not recognized. • WMA files may have (DRM) copy protection and cannot be read.

USB Error Codes

Error Code Displayed	Possible Cause	Solution
FILE ERROR	The audio unit cannot read the file(s).	Check the files in the USB device. There is a possibility that the files have been damaged.
MEDIA ERROR	Unsupported USB device is connected.	Connect the applicable USB device. (see Owner's Manual)
USB NO DATA	USB device is not connected.	If the code appears when the USB devices is connected, go to USB device does not function: • With navigation (see page 23-238) • Without navigation (see page 23-241)

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XM Error Codes

Error Code Displayed	Possible Cause	Solution
LOADING	XM radio is acquiring audio or program information.	Wait until the radio receives the information.
(XM) OFF AIR	XM channel not in service.	Try another XM channel.
(XM) NO SIGNAL	Loss of signal.	Both terrestrial and satellite antennas have lost signal. Park the vehicle outside with a clear view of the southern horizon.
(XM) UPDATING	XM radio is receiving information update from the network.	This message disappears once the update finishes.
(XM) CHECK ANTENNA (XM) ANTENNA ERROR	XM antenna error.	Repair open or short in the satellite antenna. Substitute the XM antenna with a known-good one, and recheck. If the error is gone, replace the original XM antenna. If the error is still present, replace the antenna lead.
———	No signal from XM.	Check a known-good vehicle with XM radio. If the known-good vehicle has the same symptoms, contact XM Satellite Radio at 800-852-9696.

Audio Unit Error Codes

Error Code Displayed	Possible Cause	Solution
CODE ERROR 1	Anti-theft code mismatch (1st try).	Enter the correct anti-theft code.
CODE ERROR E	Anti-theft code mismatch (10th try).	Remove the No. 23 (10 A) fuse in the under-hood fuse/relay box, then reinsert it. You will have 10 more tries to enter the correct anti-theft code.

NOTE: Do XM error codes checks with the vehicle parked outside with a clear view of the southern horizon.

Symptom Troubleshooting

Poor AM or FM radio reception or interference (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check for aftermarket accessories plugged into the vehicle accessory power sockets (including cell phones).
- Check the connectors for poor connections or loose terminals.
- Check the radio reception in an open area. Compare it to a known-good vehicle whenever possible. Poor reception/interference can be caused by the following:
  – The radio station is far away.
  – Atmospheric conditions are unfavorable.
  – Tall buildings, mountains, or high-voltage power lines are nearby.
  – Aftermarket metallic wi ndow tint.

1. Turn the ignition switch to ON (II).

2. Do the seek stop test (see page 23-255).

   Is the test vehicle within 10 % of the known-good vehicle?

   YES—Multipath interference or weak station. Operation is normal. ■
   NO—Go to step 3.

3. Check if the radio reception/interference is the same in several locations.

   Is the reception/interference the same?

   YES—Go to step 4.
   NO—Multipath interference or weak station. Operation is normal. ■

4. Start the engine.

5. Check the reception/interference.

   Is there noise (static or whine) only with the engine running?

   YES—Check the antenna and radio grounds. If OK, check the charging system and the ignition system. ■
   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).

7. Remove the right side C-pillar trim (see page 20-75).

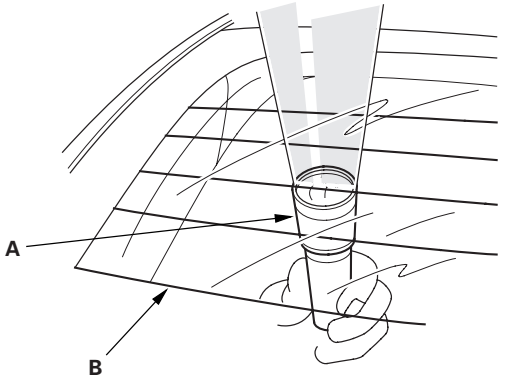
8. Check the connections from the AM/FM antenna amplifier to the window antenna.

   Are there any loose or damaged connections?

   YES—Repair the connections, or substitute a known-good AM/FM antenna amplifier and retest. If the symptom/condition goes away, replace the original AM/FM antenna amplifier (see page 23-263). ■

   NO—Go to step 9.

9. With the help of an assistant inside the vehicle, have the assistant shine a flashlight (A) along each antenna wire (B). Check from the outside of the vehicle for any breaks or openings in the antenna wires (the light shines through).



   Are there any breaks or cuts in the antenna?

   YES—Repair the window antenna. Go to AM/FM antenna repair (see page 23-264), or replace the rear window (see page 20-47) if the damaged section is too long. ■

   NO—Go to step 10.

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10. Remove the navigation unit (see page 23-355). Check that the antenna lead is properly connected.

    Is it connected properly?

    YES—Go to step 11.

    NO—Reconnect the connector, and recheck the function. ■

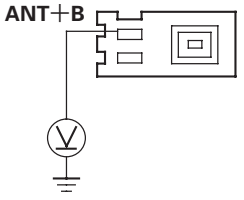
11. Disconnect the AM/FM antenna lead 3P connector from the AM/FM antenna amplifier (see page 23-263).

12. Turn the ignition switch to ON (II).

13. Turn on the navigation unit.

14. Measure the voltage between the AM/FM antenna lead connector terminal No. 3 at the AM/FM antenna amplifier and body ground.

AM/FM ANTENNA AMPLIFIER 3P CONNECTOR



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 19.

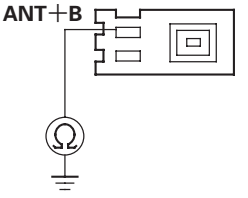
NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).

16. Disconnect navigation unit connector G (3P).

17. Check for continuity between the AM/FM antenna amplifier 3P connector terminal No. 3 and body ground.

AM/FM ANTENNA AMPLIFIER 3P CONNECTOR



Terminal side of female terminals

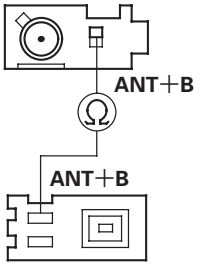
Is there continuity?

YES—Repair short to body ground in the wire between the navigation unit and the AM/FM antenna amplifier. ■

NO—Go to step 18.

18. Check for continuity between navigation unit connector G (3P) terminal No. 3 and the AM/FM antenna amplifier 3P connector terminal No. 3.

NAVIGATION UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

Is there continuity?

YES—Substitute a known-good navigation unit (see page 23-355), and recheck. ■

NO—Repair open in the wire between the navigation unit and the AM/FM antenna amplifier. ■

(cont'd)

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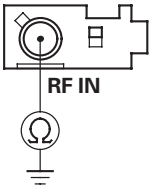
Symptom Troubleshooting (cont'd)

19. Turn the ignition switch to LOCK (0).

20. Disconnect navigation unit connector G (3P).

21. Check for continuity between navigation unit connector G (3P) terminal No. 1 and body ground.

NAVIGATION UNIT CONNECTOR G (3P)



Terminal side of female terminals

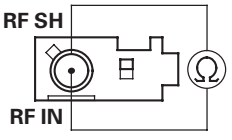
Is there continuity?

YES—Replace the AM/FM antenna lead and/or sublead. ■

NO—Go to step 22.

22. Check for continuity between navigation unit connector G (3P) terminals No. 1 and No. 2.

NAVIGATION UNIT CONNECTOR G (3P)



Terminal side of female terminals

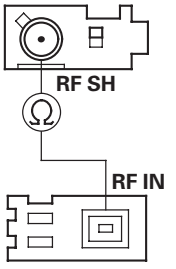
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 23.

23. Check for continuity between navigation unit connector G (3P) terminal No. 2 and the AM/FM antenna amplifier 3P connector terminal No. 2.

NAVIGATION UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

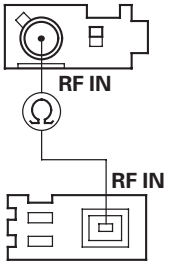
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 24.

24. Check for continuity between navigation unit connector G (3P) terminal No. 1 and AM/FM antenna amplifier 3P connector terminal No. 1.

NAVIGATION UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

Is there continuity?

YES—Replace the AM/FM antenna amplifier (see page 23-263), and recheck. If the reception is still poor, replace the navigation unit (see page 23-355). ■

NO—Replace the AM/FM antenna lead and/or sublead. ■

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Poor AM or FM radio reception or interference (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check for aftermarket accessories plugged into the vehicle accessory power sockets (including cell phones).
- Check the connectors for poor connections or loose terminals.
- Check the radio reception in an open area. Compare it to a known-good vehicle whenever possible. Poor reception/interference can be caused by the following:
  – The radio station is far away.
  – Atmospheric conditions are unfavorable.
  – Tall buildings, mountains, or high-voltage power lines are nearby.
  – Aftermarket metallic wi ndow tint.

1. Turn the ignition switch to ON (II).

2. Do the seek stop test (see page 23-255).

   Is the test vehicle within 10 % of the known-good vehicle?

   YES—Multipath interference or weak station. Operation is normal. ■
   NO—Go to step 3.

3. Check if the radio reception/interference is the same in several locations.

   Is the reception/interference the same?

   YES—Go to step 4.
   NO—Multipath interference or weak station. Operation is normal. ■

4. Start the engine.

5. Check the reception/interference.

   Is there noise (static or whine) only with the engine running?

   YES—Check the antenna and radio grounds. If OK, check the charging system and the ignition system. ■
   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).

7. Remove the right side C-pillar trim (see page 20-75).

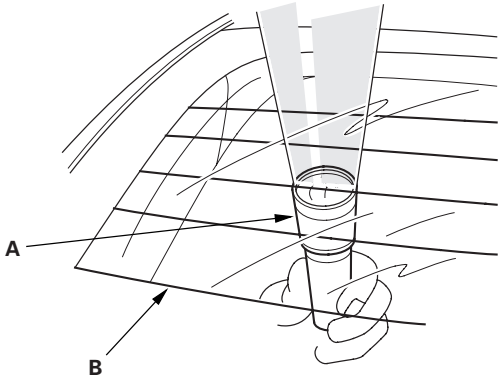
8. Check the connections from the AM/FM antenna amplifier to the window antenna.

   Are there any loose or damaged connections?

   YES—Repair the connections, or substitute a known-good AM/FM antenna amplifier and retest. If the symptom/condition goes away, replace the original AM/FM antenna amplifier (see page 23-263). ■

   NO—Go to step 9.

9. With the help of an assistant inside the vehicle, have the assistant shine a flashlight (A) along each antenna wire (B). Check from the outside of the vehicle for any breaks or openings in the antenna wires (the light shines through).



   Are there any breaks or cuts in the antenna?

   YES—Repair the window antenna. Go to AM/FM antenna repair (see page 23-264), or replace the rear window (see page 20-47) if the damaged section is too long. ■

   NO—Go to step 10.

(cont'd)

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Symptom Troubleshooting (cont'd)

10. Remove the audio unit (see page 23-256). Check that the antenna lead is properly connected.

    Is it connected properly?

    YES—Go to step 11.

    NO—Reconnect the connector, and recheck the function. ■

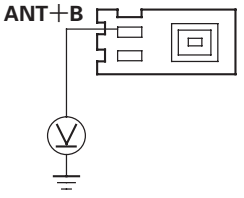
11. Disconnect the antenna cable 3P connector from the AM/FM antenna amplifier (see page 23-263).

12. Turn the ignition switch to ON (II).

13. Turn on the audio unit.

14. Measure the voltage between the AM/FM antenna lead connector terminal No. 3 at the AM/FM antenna amplifier and body ground.

AM/FM ANTENNA AMPLIFIER 3P CONNECTOR



Terminal side of female terminals

Is there battery voltage?

YES—Go to step 19.

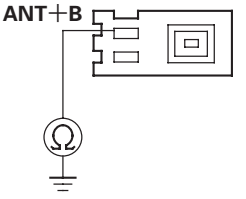
NO—Go to step 15.

15. Turn the ignition switch to LOCK (0).

16. Disconnect audio unit connector G (3P).

17. Check for continuity between the AM/FM antenna amplifier 3P connector terminal No. 3 and body ground.

AM/FM ANTENNA AMPLIFIER 3P CONNECTOR



Terminal side of female terminals

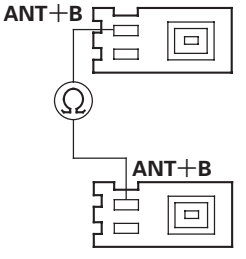
Is there continuity?

YES—Repair short to body ground in the wire between the audio unit and the AM/FM antenna amplifier. ■

NO—Go to step 18.

18. Check for continuity between audio unit connector G (3P) terminal No. 3 and the AM/FM antenna amplifier 3P connector terminal No. 3.

AUDIO UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

Is there continuity?

YES—Substitute a known-good audio unit (see page 23-256), and recheck. ■

NO—Repair open in the wire between the audio unit and the AM/FM antenna amplifier. ■

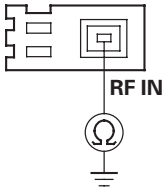
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19. Turn the ignition switch to LOCK (0).

20. Disconnect audio connector G (3P).

21. Check for continuity between audio unit connector G (3P) terminal No. 1 and body ground.

AUDIO UNIT CONNECTOR G (3P)



Terminal side of female terminals

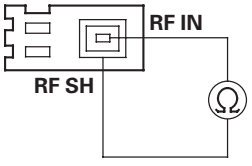
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 22.

22. Check for continuity between audio unit connector G (3P) terminals No. 1 and No. 2.

AUDIO UNIT CONNECTOR G (3P)



Terminal side of female terminals

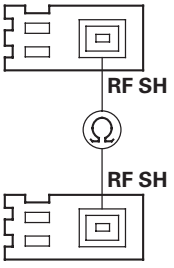
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 23.

23. Check for continuity between audio unit connector G (3P) terminal No. 2 and the AM/FM antenna amplifier 3P connector terminal No. 2.

AUDIO UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

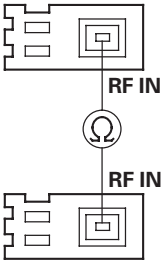
Is there continuity?

YES—Replace the antenna lead and/or sublead. ■

NO—Go to step 24.

24. Check for continuity between audio unit connector G (3P) terminal No. 1 and the AM/FM antenna amplifier 3P connector terminal No. 1.

AUDIO UNIT CONNECTOR G (3P)
Terminal side of female terminals



AM/FM ANTENNA AMPLIFIER 3P CONNECTOR
Terminal side of female terminals

Is there continuity?

YES—Replace the AM/FM antenna amplifier (see page 23-263), and recheck. If the reception is still poor, replace the audio unit (see page 23-256). ■

NO—Replace the antenna lead and/or sublead. ■

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Symptom Troubleshooting (cont'd)

Audio unit power switch will not turn on (No information display and no sound) (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Push the power switch ON to see if the navigation unit turns ON.

   Does the navigation unit display operate properly, and does the audio sound normal?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Go to step 3.
3. Turn the ignition switch to LOCK (0).
4. Check the No. 23 (10 A) fuse in the under-hood fuse/relay box and No. 35 (7.5 A) fuse in the under-dash fuse/relay box.

   Are the fuses OK?

   YES—Go to step 5.

   NO—Replace the fuse(s), and recheck. ■
5. Remove the navigation unit (see page 23-355). Check that the navigation unit is properly connected.

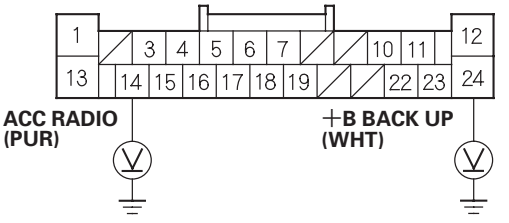
   NOTE:
   - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
   - Remove the PC card before removing the navigation unit.

   Is it connected properly?

   YES—Go to step 6.

   NO—Reconnect the connector, and recheck the function. ■
6. Disconnect navigation unit connector A (24P)
7. Turn the ignition switch to ON (II).
8. Measure the voltage between body ground and navigation unit connector A (24P) terminals No. 14 and No. 24 individually.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there battery voltage on both terminals?

YES—Go to step 9.

NO—Repair open in the wire(s) between the No. 23 (10 A) fuse in the under-hood fuse/relay box and the No. 35 (7.5 A) in the under-dash fuse/relay box and the navigation unit. ■

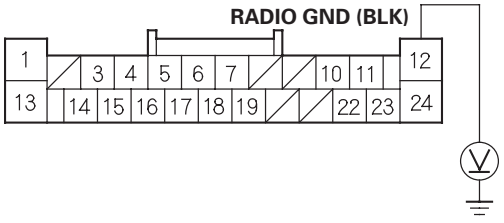
9. Turn the ignition switch to LOCK (0).
10. Reconnect navigation unit connector A (24P).

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11. Turn the ignition switch to ON (II).

12. Measure the voltage between navigation unit connector A (24P) terminal No. 12 and body ground.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there less than 0.1 V on both terminals?

YES—Replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between navigation unit connector A (24P) terminal No. 12 and body ground (G505) (see page 22-32). ■

Audio unit power switch will not turn on (No information display and no sound) (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).

2. Push the power switch ON to see if audio unit turns ON.

   Does the audio unit operate properly, and does the audio sound normal?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Go to step 3.

3. Turn the ignition switch to LOCK (0).

4. Check the No. 23 (10 A) fuse in the under-hood fuse/relay box and the No. 35 (7.5 A) fuse in the under-dash fuse/relay box.

   Are the fuses OK?

   YES—Go to step 5.

   NO—Replace the fuse(s), and recheck. ■

5. Remove the audio unit (see page 23-256). Check that the audio unit is properly connected.

   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.

   Is it connected properly?

   YES—Go to step 6.

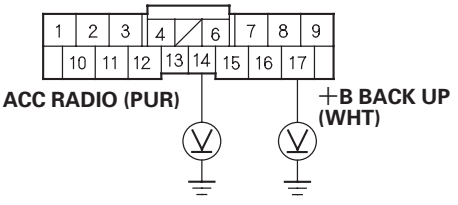
   NO—Reconnect the connector, and recheck the function. ■

(cont'd)

Symptom Troubleshooting (cont'd)

6. Disconnect audio unit connector A (17P).
7. Turn the ignition switch to ON (II).
8. Measure the voltage between audio unit connector A (17P) terminal No. 14 and body ground, and between terminal No. 17 and body ground.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

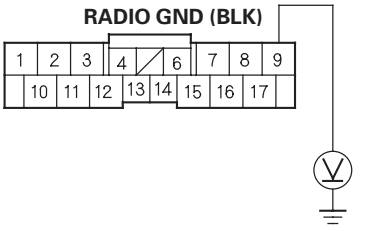
Is there battery voltage on the both terminals?

YES—Go to step 9.

NO—Repair open in the wire(s) between the No. 23 (10 A) fuse in the under-hood fuse/relay box and No. 35 (7.5 A) in the under-dash fuse/relay box and the audio unit. ■

9. Turn the ignition switch to LOCK (0).
10. Reconnect audio unit connector A (17P).
11. Turn the ignition switch to ON (II).
12. Measure the voltage between audio unit connector A (17P) terminal No. 9 and body ground.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there less than 0.1 V?

YES—Replace the audio unit (see page 23-256). ■

NO—Repair open in the wire between audio unit connector A (17P) terminal No. 9 and body ground (G505) (see page 22-38). ■

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Audio unit power switch will not turn off (with navigation)

NOTE:
- Check for aftermarket accessories plugged into the vehicle's accessory power sockets.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Push the power switch OFF or turn the ignition switch to LOCK (0) to see if the navigation unit turns OFF.

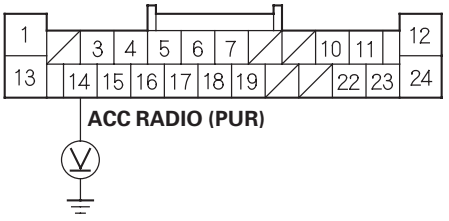
   Is the navigation unit OFF?

   YES—Operation is normal. ■

   NO—Go to step 3.
3. Turn the ignition switch to LOCK (0).
4. Remove the navigation unit (see page 23-355).
5. Disconnect navigation unit connector A (24P).

   NOTE:
   - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
   - Remove the PC card before removing the navigation unit.
6. Measure the voltage between navigation unit connector A (24P) terminal No. 14 and body ground.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there battery voltage?

YES—Check for short to power on PUR wire. ■

NO—Replace the navigation unit (see page 23-355). ■

DYNOMITE -2009-

Symptom Troubleshooting (cont'd)

Audio unit power switch will not turn off (without navigation)

NOTE:
- Check for aftermarket accessories plugged into the vehicle's accessory power sockets.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Push the power switch OFF or turn the ignition switch to LOCK (0) to see if the audio unit turns OFF.

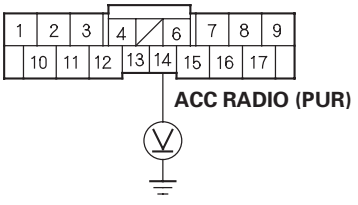
   Is the audio unit OFF?

   YES—Operation is normal. ■

   NO—Go to step 3.
3. Turn the ignition switch to LOCK (0).
4. Remove the audio unit (see page 23-256).
5. Disconnect audio unit connector A (17P).

   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.
6. Measure the voltage between audio unit connector A (17P) terminal No. 14 and body ground.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there voltage?

YES—Check for short to power on PUR wire. ■

NO—Replace the audio unit (see page 23-256). ■

No sound is heard from the speaker(s) (display is normal) (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Set the fader and balance positions to the center.
- Before performing symptom troubleshooting, do the power switch will not turn on troubleshooting (see page 23-202).

1. Turn the ignition switch to ON (II).
2. Check for sound in each mode (AM, FM, XM, and CD).

   Is the sound OK in each mode?

   YES—Intermittent failure. The system is OK at this time. Check for loose connections at the navigation unit and speaker(s). ■

   NO—Go to step 3.
3. Check that the volume button is not set to the min level.

   Is it at the MIN level?

   YES—Raise the volume level, and recheck the function. ■

   NO—Go to step 4.
4. On the steering wheel, check the navigation talk command.

   Is the navigation talk command function set?

   YES—Cancel the navigation talk command by pressing the navigation BACK button, then recheck the function. ■

   NO—Go to step 5.

DYNOMITE -2009-

5. Check to see if there is a specific speaker that has no sound.

   Do any or all of the speakers fail to sound?

   YES—Speaker(s) failed the test:

   - If at least one speaker is OK, go to step 6.
   - If all speakers fail to sound:
     – Type S model: Go to step 14.
     – Except Type S model: Go to step 9.

   NO—Speakers all work, but sound quality is poor in step 1.

   - If sound is poor only with XM radio, or the XM radio does not function, go to poor or no sound with XM radio (see page 23-249). ■
   - If the sound is poor only with AM or FM, go to poor AM or FM radio reception or interference (see page 23-196). ■
   - If the sound is poor only with disc. ■
     – Try several known- good disc in the navigation unit.
     – If the sound quality is normal, the original disc is faulty.
     – If the sound quality is still poor, replace the navigation unit.
   - If the sound is poor in all modes, go to sound quality diagnosis (see page 23-251). ■

6. Turn the ignition switch to LOCK (0).

7. Remove the speaker(s) with no sound (see page 23-259), and disconnect its connector.

8. Check the speaker 2P connector for a loose or poor connection.

   Reconnect the speaker 2P connector, and recheck the symptom; does it still fail?

   YES—Go to step 9.

   NO—Operation is normal. ■

9. Make sure the ignition switch is in LOCK (0).

10. Measure the resistance between terminals No. 1 and No. 2 of the speaker connector.

    Is there about 4 Ω ?

    YES—
    - Type S model: Go to step 20.
    - Except Type S model: Go to step 11.

    NO—Faulty speaker(s). ■

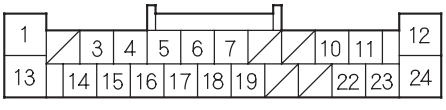
11. Remove the navigation unit (see page 23-355). Disconnect navigation unit connector A (24P).

    NOTE:
    - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
    - Remove the PC card before removing the navigation unit.

12. Measure the resistance between the following terminals of navigation unit connector A (24P) according to the table.

Speaker	Terminal	Wire color
Driver's door speaker, Left tweeter	A23 (+)	LT GRN
	A22 (−)	PNK
Front passenger's door speaker, Right tweeter	A19 (+)	GRY
	A18 (−)	BRN
Left rear speaker	A11 (+)	YEL
	A10 (−)	BRN
Right rear speaker	A7 (+)	BLU
	A6 (−)	ORN

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there about 4 Ω ?

YES—Go to step 13.

NO—Repair open or short in the wires between navigation unit and the speaker(s). ■

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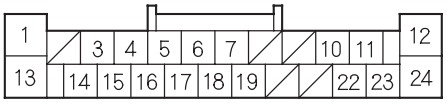
DYNOMITE -2009-

Symptom Troubleshooting (cont'd)

13. Check for continuity between body ground and the following terminals of navigation unit connector A (24P).

Speaker	Terminal	Wire color
Driver's door speaker, Left tweeter	A23 (+)	LT GRN
	A22 (−)	PNK
Front passenger's door speaker, Right tweeter	A19 (+)	GRY
	A18 (−)	BRN
Left rear speaker	A11 (+)	YEL
	A10 (−)	BRN
Right rear speaker	A7 (+)	BLU
	A6 (−)	ORN

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

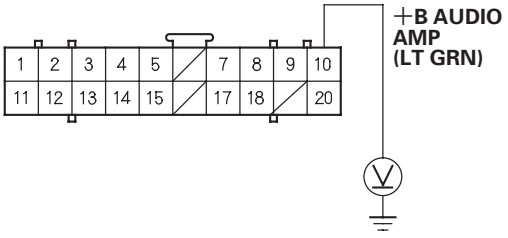
Is there continuity?

YES—Repair short to body ground in the wire(s) between the navigation unit and the speaker(s). ■

NO—Substitute a known-good navigation unit (see page 23-355), and recheck. If the symptom/indication goes away, replace the original navigation unit. ■

14. Measure the voltage between stereo amplifier connector A (20P) terminal No. 10 and body ground.

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 15.

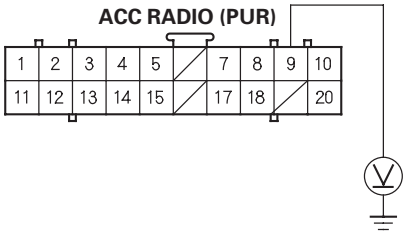
NO—Repair open in the wire between the No. 17 (15 A) fuse in the under-hood fuse/relay box and stereo amplifier connector A (20P) terminal No. 10. ■

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15. Turn the ignition switch to ON (II).

16. Measure the voltage between stereo amplifier connector A (20P) terminal No. 9 and body ground.

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

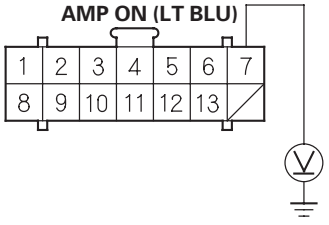
Is there battery voltage?

YES—Go to step 17.

NO—Repair open in the wire between the No. 35 (7.5 A) fuse in the under-dash fuse/relay box and stereo amplifier connector A (20P) terminal No. 9. ■

17. Measure the voltage between stereo amplifier connector B (14P) terminal No. 7 and body ground.

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

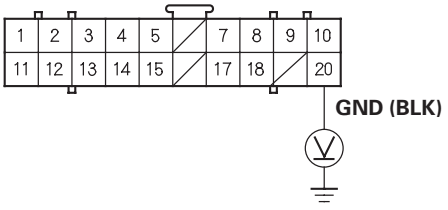
Is there battery voltage?

YES—Go to step 18.

NO—Repair open in the wire between the stereo amplifier connector B (14P) terminal No. 7 and navigation unit connector A (24P) terminal No. 17. ■

18. Measure the voltage between stereo amplifier connector A (20P) terminal No. 20 and body ground.

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Is there less than 0.1 V on both terminals?

YES—Go to step 19.

NO—Repair open in the wire between stereo amplifier connector A (20P) terminal No. 20 and body ground (G601). ■

19. Turn the ignition switch to LOCK (0).

(cont'd)

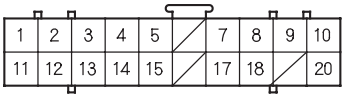
Symptom Troubleshooting (cont'd)

20. Disconnect stereo amplifier connector A (20P).

21. Measure the resistance between the following terminals of stereo amplifier connector A (20P) according to the table.

Speaker	Terminal	Wire color
Driver's door speaker	A3 (+)	LT GRN
	A13 (−)	PNK
Left tweeter	A4 (+)	RED
	A14 (−)	GRN
Front passenger's door speaker	A2 (+)	GRY
	A12 (−)	BRN
Right tweeter	A1 (+)	PNK
	A11 (−)	BLU
Left rear speaker	A8 (+)	YEL
	A18 (−)	BRN
Right rear speaker	A7 (+)	BLU
	A17 (−)	ORN
Subwoofer	A5 (+)	GRN
	A15 (−)	RED

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Is there about 4 Ω ?

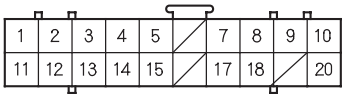
YES—Go to step 22.

NO—Repair open or short in the wires between the stereo amplifier and speaker(s). ■

22. Check for continuity between body ground and the following terminals of stereo amplifier connector A (20P).

Speaker	Terminal	Wire color
Driver's door speaker	A3 (+)	LT GRN
	A13 (−)	PNK
Left tweeter	A4 (+)	RED
	A14 (−)	GRN
Front passenger's door speaker	A2 (+)	GRY
	A12 (−)	BRN
Right tweeter	A1 (+)	PNK
	A11 (−)	BLU
Left rear speaker	A8 (+)	YEL
	A18 (−)	BRN
Right rear speaker	A7 (+)	BLU
	A17 (−)	ORN
Subwoofer	A5 (+)	GRN
	A15 (−)	RED

STEREO AMPLIFIER CONNECTOR A (20P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the stereo amplifier and the speaker(s). ■

NO—Go to step 23.

23. Disconnect stereo amplifier connector B (14P).

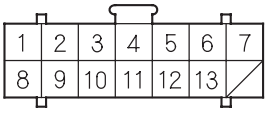
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24. Disconnect navigation unit connector A (24P).

25. Check for continuity between stereo amplifier connector B (14P) and body ground according to the table. Then check for continuity between the same terminals listed in the table and stereo amplifier connector B (14P) terminal No. 2 (the harness shield).

Stereo amplifier connector	Wire color
B1	BLU
B8	RED

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

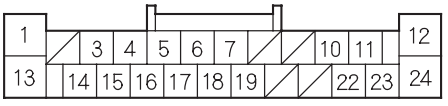
YES—Short in the wire between the stereo amplifier and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 26.

26. Check for continuity between navigation unit connector A (24P) and stereo amplifier connector B (14P) according to the table.

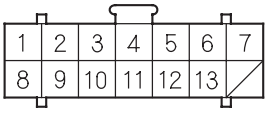
Navigation unit connector	Stereo amplifier connector	Wire color
A22	B8	RED
A23	B1	BLU

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 27.

NO—Open in the wire between the navigation unit and the stereo amplifier. Replace the affected shielded harness. ■

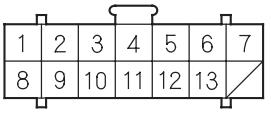
(cont'd)

Symptom Troubleshooting (cont'd)

27. Check for continuity between stereo amplifier connector B (14P) and body ground according to the table. Then check for continuity between the same terminals listed in the table and stereo amplifier connector B (14P) terminal No. 5 (the harness shield).

Stereo amplifier connector	Wire color
B4	BLU
B11	PNK

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

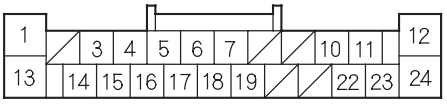
YES—Short in the wire between the stereo amplifier and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 28.

28. Check for continuity between navigation unit connector A (24P) and stereo amplifier connector B (14P) according to the table.

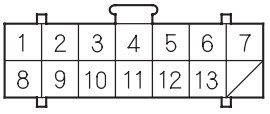
Navigation unit connector	Stereo amplifier connector	Wire color
A16	B11	PNK
A19	B4	BLU

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 29.

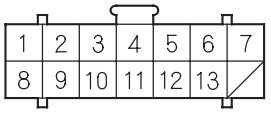
NO—Open in the wire between the navigation unit and the stereo amplifier. Replace the affected shielded harness. ■

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29. Check for continuity between stereo amplifier connector B (14P) and body ground according to the table. Then check for continuity between the same terminals listed in the table and stereo amplifier connector B (14P) terminal No. 9 (the harness shield).

Stereo amplifier connector	Wire color
B3	BLK
B10	WHT

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

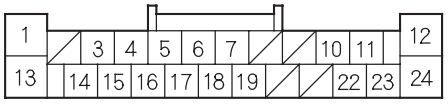
YES—Short in the wire between the stereo amplifier and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 30.

30. Check for continuity between navigation unit connector A (24P) and stereo amplifier connector B (14P) according to the table.

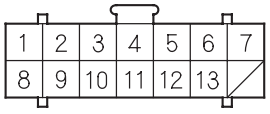
Navigation unit connector	Stereo amplifier connector	Wire color
A10	B10	WHT
A11	B3	BLK

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 31.

NO—Open in the wire between the navigation unit and the stereo amplifier. Replace the affected shielded harness. ■

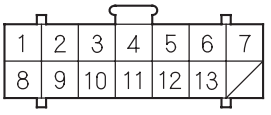
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Symptom Troubleshooting (cont'd)

31. Check for continuity between stereo amplifier connector B (14P) and body ground according to the table. Then check for continuity between the same terminals listed in the table and stereo amplifier connector B (14P) terminal No. 12 (the harness shield).

Stereo amplifier connector	Wire color
B6	LT GRN
B13	PUR

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

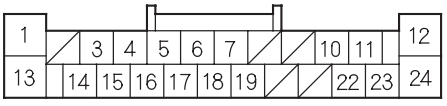
YES—Short in the wire between the stereo amplifier and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 32.

32. Check for continuity between navigation unit connector A (24P) and stereo amplifier connector B (14P) according to the table.

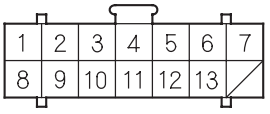
Navigation unit connector	Stereo amplifier connector	Wire color
A6	B13	PUR
A7	B6	LT GRN

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

STEREO AMPLIFIER CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good navigation unit (see page 23-355), and recheck. If the symptom/indication goes away, replace the original navigation unit. If the symptom is still present, substitute a known-good stereo amplifier, and recheck. If the symptom/indication goes away, replace the original stereo amplifier (see page 23-259). ■

NO—Open in the wire between the navigation unit and the stereo amplifier. Replace the affected shielded harness. ■

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No sound is heard from the speaker(s) (display is normal) (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Set the fader and balance positions to the center.
- Before performing symptom troubleshooting, do the power switch will not turn on troubleshooting (see page 23-203).
- For vehicles with factory installed audio, do the self-diagnostic function, speaker check (see page 23-192) to help isolate the speaker.

1. Turn the ignition switch to ON (II).

2. Check that the volume button is not set to the MIN level.

   Is it at MIN level?

   YES—Raise the volume level, and recheck the function. ■

   NO—Go to step 3.

3. Do the speaker check mode in the self-diagnostic function (see page 23-192).

   Do any or all of the speakers fail to sound?

   YES—Speaker(s) failed the test:

   - If at least one speaker is OK, go to step 4.
   - If all speakers fail to sound, go to step 7.

   NO—Speakers all work, but sound quality is poor:

   - If the sound is poor only with AM or FM, go to poor AM or FM radio reception or interference (see page 23-199). ■
   - If the sound is poor only with disc. ■
     – Try several known- good disc in the audio unit.
     – If the sound quality is normal, the original disc is faulty.
     – If the sound quality is still poor, replace the audio unit.
   - If the sound is poor in all modes, go to sound quality diagnosis (see page 23-251). ■

4. Turn the ignition switch to LOCK (0).

5. Remove the speaker(s) with no sound (see page 23-259), and disconnect its connector.

6. Check the speaker 2P connector for a loose or poor connection.

   Reconnect the speaker 2P connector and recheck the symptom; does it still fail?

   YES—Go to step 7.

   NO—Operation is normal. ■

7. Make sure the ignition switch is in LOCK (0).

8. Remove the speaker(s) with no sound (see page 23-259), and disconnect its connector.

9. Measure the resistance between terminals No. 1 and No. 2 of the speaker connector.

   Is there about 4 Ω ?

   YES—Go to step 10.

   NO—Faulty speaker(s). ■

10. Remove the audio unit (see page 23-256). Disconnect audio unit connector A (17P).

    NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.

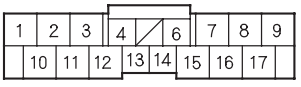
(cont'd)

Symptom Troubleshooting (cont'd)

11. Measure the resistance between following terminals of audio unit connector A (17P).

Speaker	Terminal	Wire color
Driver's door speaker, Left tweeter	A12 (+)	LT GRN
	A3 (−)	PNK
Front passenger's door speaker, Right tweeter	A15 (+)	GRY
	A7 (−)	BRN
Left rear speaker	A11 (+)	YEL
	A2 (−)	BRN
Right rear speaker	A16 (+)	BLU
	A8 (−)	ORN

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there about 4 Ω ?

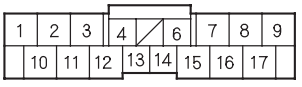
YES—Go to step 12.

NO—Repair open or short in the wires between the audio unit and the speaker(s). ■

12. Check for continuity between body ground and the following terminals of audio unit connector A (17P).

Speaker	Terminal	Wire color
Driver's door speaker, Left tweeter	A12 (+)	LT GRN
	A3 (−)	PNK
Front passenger's door speaker, Right tweeter	A15 (+)	GRY
	A7 (−)	BRN
Left rear speaker	A11 (+)	YEL
	A2 (−)	BRN
Right rear speaker	A16 (+)	BLU
	A8 (−)	ORN

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire(s) between the audio unit and the speaker(s). ■

NO—Substitute a known-good audio unit (see page 23-256), and recheck. If the symptom/indication goes away, replace the original audio unit. ■

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Auxiliary input sound is low or cannot be heard

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Use auxiliary stereo cables with 3.5 mm ends only.
- Auxiliary accessories may be played on the audio unit using the auxiliary input.

1. Turn the ignition switch to ON (II).

2. Turn on the audio unit or navigation unit and connect an auxiliary accessory to the auxiliary input jack.

3. Check the volume operation.

   Is the sound normal?

   YES—Operation is normal at this time. ■

   NO—Go to step 4.

4. Make sure the auxiliary accessory volume to max.

   Is the volume set to high?

   YES—Go to step 5.

   NO—Raise the auxiliary accessory volume is set to high. Make sure the audio unit volume is turned down before retesting. ■

5. Substitute a known-good auxiliary audio accessory and/or auxiliary stereo cable, and recheck.

   Does the auxiliary audio accessory operate properly?

   YES—Original auxiliary audio accessory or auxiliary stereo cable is faulty. ■

   NO—Go to step 6.

6. Turn the ignition switch to LOCK (0).

7. Remove the auxiliary jack assembly (see page 23-261), and check that the auxiliary jack assembly is properly connected.

   Is the auxiliary jack assembly connected properly?

   YES—
   - With navigation: go to step 8.
   - Without navigation: go to step 13.

   NO—Reconnect the connector, and recheck the function. ■

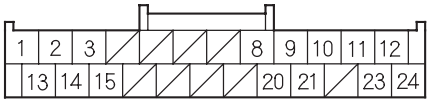
8. Disconnect auxiliary jack assembly 5P connector.

9. Disconnect navigation unit connector B (24P).

10. Check for continuity between body ground and navigation unit connector B (24P) according to the table.

Navigation unit connector	Wire color
B1	BRN
B3	BLU
B13	YEL
B14	GRN
B15	WHT

NAVIGATION UNIT CONNECTOR B (24P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire(s) between the navigation unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

NO—Go to step 11.

(cont'd)

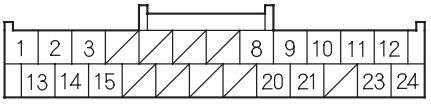
Symptom Troubleshooting (cont'd)

11. Check for continuity between navigation unit connector B (24P) according to the table.

From terminal	To terminals
B1	B2*, B3, B13, B14, B15
B2*	B3, B13, B14, B15
B3	B13, B14, B15
B13	B14, B15
B14	B15

*: Shielded wire

NAVIGATION UNIT CONNECTOR B (24P)



Wire side of female terminals

Is there continuity?

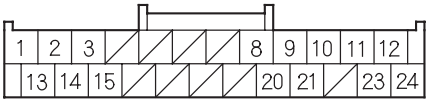
YES—Short in the wire(s) between the navigation unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

NO—Go to step 12.

12. Check for continuity between navigation unit connector B (24P) and auxiliary jack assembly 5P connector according to the table.

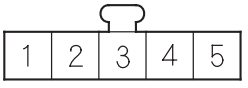
Navigation unit connector	Auxiliary jack assembly connector	Wire color
B1	3	BRN
B3	2	BLU
B13	4	YEL
B14	5	GRN
B15	1	WHT

NAVIGATION UNIT CONNECTOR B (24P)



Wire side of female terminals

AUXILIARY JACK ASSEMBLY 5P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good auxiliary jack assembly (see page 23-261), and recheck. If the symptom/indication goes away, replace the original auxiliary jack assembly. If the symptom/indication is still present, replace the navigation unit (see page 23-355). ■

NO—Open in the wire(s) between the navigation unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

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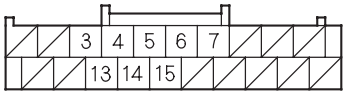
13. Disconnect auxiliary jack assembly 5P connector.

14. Disconnect audio unit connector B (20P).

15. Check for continuity between body ground and audio unit connector B (20P) according to the table.

Audio unit connector	Wire color
B3	BRN
B5	BLU
B13	YEL
B14	GRN
B15	WHT

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire(s) between the audio unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

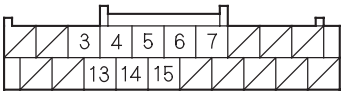
NO—Go to step 16.

16. Check for continuity between audio unit connector B (20P) according to the table.

From terminal	To terminals
B3	B4*, B5, B13, B14, B15
B4*	B5, B13, B14, B15
B5	B13, B14, B15
B13	B14, B15
B14	B15

*: Shielded wire

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

Is there continuity?

YES—Short in the wire(s) between the audio unit and the auxiliary jack assembly. Replace the affected shielded harness. ■

NO—Go to step 17.

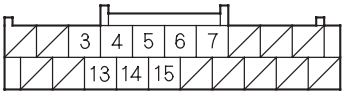
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Symptom Troubleshooting (cont'd)

17. Check for continuity between audio unit connector B (20P) and auxiliary jack assembly 5P connector according to the table.

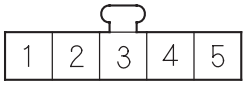
Audio unit connector	Auxiliary jack assembly connector	Wire color
B3	3	BRN
B5	2	BLU
B13	4	YEL
B14	5	GRN
B15	1	WHT

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

AUXILIARY JACK ASSEMBLY 5P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good auxiliary jack assembly (see page 23-261), and recheck. If the symptom/indication goes away, replace the original auxiliary jack assembly. If the symptom/indication is still present, replace the audio unit (see page 23-256). ■

NO—Open in the wire(s) between the audio unit and the auxiliary jack assembly. Replace affected shielded harness. ■

Audio system sound is weak or distorted (display is normal)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Check for sound in each mode (AM, FM, XM, and CD).

   Is there sound from the speakers, and is the sound quality normal in each mode?

   YES—Intermittent failure. The system is OK at this time. Check for loose connections at the navigation unit, audio unit, amplifier, and each speaker. ■

   NO—Speakers all work, sound quality is poor. ■

   - If the sound quality is poor only with the XM radio, or the XM radio does not function, go to poor or no sound with XM radio (see page 23-249).
   - If the sound quality is poor only with AM or FM radio, go to poor AM or FM radio reception or interference (see page 23-196).
   - If sound is poor in all modes, go to sound quality diagnosis (see page 23-251).

DYNOMITE -2009-

Radio preset memory is lost

NOTE: If only the XM stations are lost, go to XM radio preset memory is lost (see page 23-248).

1. Set each of the radio station preset buttons.

   Do each of the buttons set properly?

   YES—Go to step 2.

   NO—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

2. Turn the ignition switch to LOCK (0) for 1 minute, then turn it back to ON (II).

3. Test the preset buttons for proper recall operation.

   Do the preset buttons recall the set radio stations?

   YES—System is normal at this time. Check the connections at the navigation unit or audio unit. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

Volume does not change

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Set the fader and balance positions to the center.

1. Listen for sound from the speakers.

   Is the sound normal?

   YES—Go to step 2.

   NO—Go to audio system sound is weak or distorted, or no sound is heard from speaker(s) (see page 23-206). ■

2. Operate the volume knob to see if the volume changes.

   Does the volume change?

   YES—Operation is normal. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

Symptom Troubleshooting (cont'd)

Volume does not increase with speed (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Verify the SVC mode setting in the navigation unit sound set-up.

   Is the SVC set to off?

   YES—Change the setting to Mid and retest (see page 23-164). ■

   NO—Go to step 2.

2. Do the self-diagnostic function for the vehicle speed pulse indication (see page 23-190).

   Does the self-diagnostic function indicate a VSP signal?

   YES—Substitute a known-good navigation unit (see page 23-355), and retest. If the symptom/indication goes away, replace the original navigation unit. ■

   NO—Go to step 3.

3. Test-drive the vehicle at highway speeds, and monitor if the volume increases.

   Do the volume increase?

   YES—Intermittent failure, the system is OK at this time. ■

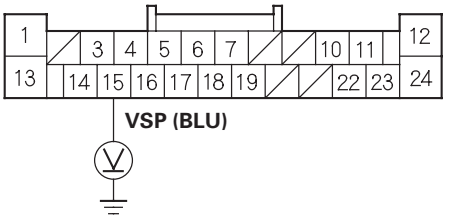
   NO—Go to step 4.

4. Remove the navigation unit (see page 23-355) and disconnect navigation unit connector A (24P).

   NOTE:
   - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
   - Remove the PC card before removing the navigation unit.

5. Drive the vehicle, and have an assistant measure voltage at navigation unit connector A (24P) terminal No. 15.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there a 0—5 V Pulse?

YES—Replace the navigation unit (see page 23-355). ■

NO—Repair open or shorts in the wire between navigation unit connector A (24P) terminal No. 15 and ECM/PCM connector A (44P) terminal No. 29. If no opens or shorts are found, Update the ECM/PCM (see page 11-227) if it does not have the latest software or substitute a known-good ECM/PCM (see page 11-228). ■

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Volume does not increase with speed (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Test-drive the vehicle at highway speeds, and monitor if the volume increases.

   Do the volume increase?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Go to step 2.

2. Verify the SVC mode setting in the audio unit sound set-up.

   Is the SVC set to off?

   YES—Change the setting to Mid, and retest (see page 23-164). ■

   NO—Go to step 3.

3. Do the self-diagnostic function for the vehicle speed pulse indication (see page 23-190).

   Does the self-diagnostic function indicate a VSP signal?

   YES—Substitute a known-good audio unit (see page 23-256), and retest. If the symptom/indication goes away, replace the original audio unit. ■

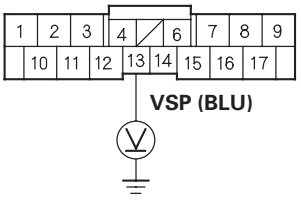
   NO—Go to step 4.

4. Remove the audio unit (see page 23-256) and disconnect audio unit connector A (17P).

   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.

5. Drive the vehicle, and have an assistant measure voltage at audio unit connector A (17P) terminal No. 13.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there a 0—5 V Pulse?

YES—Replace the audio unit (see page 23-256). ■

NO—Repair open or shorts in the wire between audio unit connector A (17P) terminal No. 13 and ECM/PCM connector A (44P) terminal No. 29. If no opens or shorts are found, Update the ECM/PCM (see page 11-227) if it does not have the latest software or substitute a known-good ECM/PCM (see page 11-228). ■

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Symptom Troubleshooting (cont'd)

Volume is too high or too low when driving at freeway speeds

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Test-drive the vehicle at highway speeds, and monitor volume level.

   Is the volume level too high, or too low?

   YES—Go to step 2.

   NO—Intermittent failure, the system is OK at this time. ■

2. Change the SVC mode setting in sound set-up to Mid (see page 23-164).

   Is the volume level still too high, or too low?

   YES—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

   NO—Improper SVC setting for customers sound taste. ■

Radio tuner does not change stations

1. Check the audio information on the display panel.

   Does the audio information display properly?

   YES—Go to step 2.

   NO—Go to power switch will not turn ON (see page 23-202). ■

2. Operate the tuning knob to see if the radio station changes.

   Does the radio station change?

   YES—Intermittent failure: the tuning knob is OK at this time. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

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Navigation unit button illumination does not work (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Turn the combination lighting switch to the parking light position.
3. Check the illumination of the navigation unit buttons.

   Are the buttons illuminated?

   YES—Intermittent problem: the navigation unit is OK at this time. Check for loose or poor connections at the navigation unit connector A (24P). ■

   NO—Go to step 4.
4. Check the illumination of several other buttons not related to navigation system.

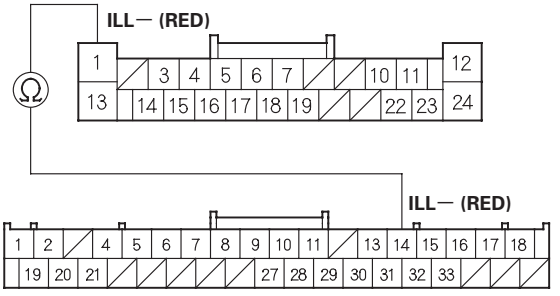
   Are the buttons illuminated?

   YES—Go to step 5.

   NO—Troubleshoot the interior lights. Start by checking the No. 14 (7.5 A) fuse in the under-dash fuse/relay box. If the fuse is OK, check for an open in the wire between the under-dash fuse/relay box and the navigation unit. ■
5. Turn the ignition switch to LOCK (0).
6. Disconnect navigation unit connector A (24P).

   NOTE:
   - Eject all the discs before removing the navigation unit to prevent damaging the CD player's load mechanism.
   - Remove the PC card before removing the navigation unit.
7. Disconnect gauge control module (tach) 36P connector.
8. Check for continuity between navigation unit connector A (24P) terminal No. 1 and gauge control module (tach) 36P connector terminal No. 14.

NAVIGATION UNIT CONNECTOR A (24P)
Wire side of female terminals



GAUGE CONTROL MODULE (TACH) 36P CONNECTOR
Wire side of female terminals

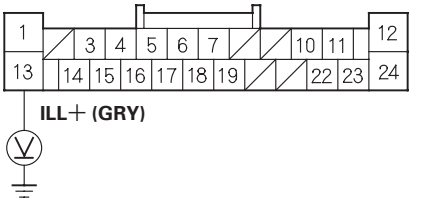
Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire between the gauge control module and the navigation unit. ■

9. Turn the ignition switch to ON (II).
10. With the headlight switch still on, measure the voltage between navigation unit connector A (24P) terminal No. 13 and body ground.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there battery voltage?

YES—Check the connections at navigation unit connector A (24P). If all connections are OK, replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

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Symptom Troubleshooting (cont'd)

Audio unit button illumination does not work (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Turn the combination lighting switch to the parking light position.
3. Check the illumination of the audio unit buttons.

   Are the buttons illuminated?

   YES—Intermittent problem: the audio unit is OK at this time. Check for loose or poor connections at the audio unit connector A (17P). ■

   NO—Go to step 4.
4. Check the illumination of several other buttons not related to the audio system.

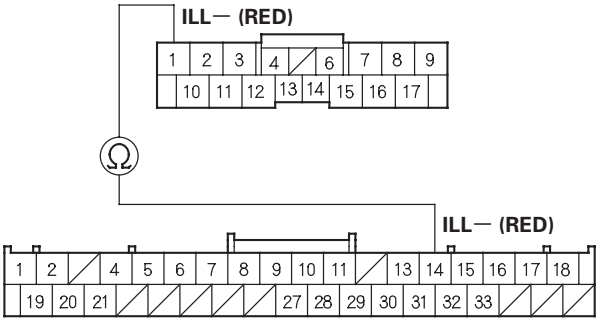
   Are the buttons illuminated?

   YES—Go to step 5.

   NO—Troubleshoot the interior lights. Start by checking the No. 14 (7.5 A) fuse in the under-dash fuse/relay box. If the fuse is OK, check for an open in the wire between the under-dash fuse/relay box and the audio unit. ■
5. Turn the ignition switch to LOCK (0).
6. Disconnect audio unit connector A (17P).

   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.
7. Disconnect gauge control module (tach) 36P connector.
8. Check for continuity between audio unit connector A (17P) terminal No. 1 and gauge control module (tach) 36P connector terminal No. 14.

AUDIO UNIT CONNECTOR A (17P)
Wire side of female terminals



GAUGE CONTROL MODULE (TACH) 36P CONNECTOR
Wire side of female terminals

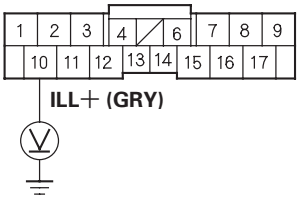
Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire between the gauge control module and the audio unit. ■

9. Turn the ignition switch to ON (II).
10. With the headlight switch still on, measure the voltage between audio unit connector A (17P) terminal No. 10 and body ground.

AUDIO UNIT CONNECTOR A (17P)



Wire side of female terminals

Is there battery voltage?

YES—Check the connections at audio unit connector A (17P). If all the connections are OK, replace the audio unit (see page 23-256). ■

NO—Repair open in the wire between the under-dash fuse/relay box and the audio unit. ■

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Display does not dim or brighten with dimmer (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Turn the combination light switch ON and OFF to see if the symptom can be duplicated.

   Is it duplicated?

   YES—Go to step 3.

   NO—Operation is normal.
3. Turn the combination light switch to OFF.
4. Rotate the illumination control dial.

   Does the illumination dim and brighten normally as you rotate the dial?

   YES—Operation is normal. ■

   NO—Go to step 5.
5. Disconnect, and check audio unit connector A (17P) for a loose or a poor connection. ■

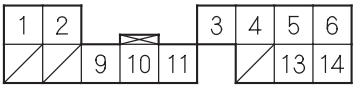
   NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD player's load mechanism.

   Reconnect audio unit connector A (17P), and recheck the symptom; does it still appear?

   YES—Go to step 6.

   NO—Operation is normal. ■
6. Turn the ignition switch to LOCK (0).
7. Remove the audio unit (see page 23-256).
8. Turn the ignition switch to ON (II).
9. Measure the voltage between audio unit connector A (17P) terminals No. 1 and No. 10. Rotate the dash brightness controller buttons to see if the voltage changes.

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

Does the voltage change?

YES—Substitute a known-good audio unit (see page 23-256), and recheck. If the symptom/indication goes away, replace the original audio unit. If symptom is still present, substitute a known-good center panel display and recheck. If the symptom/indication goes away, replace the original center panel display (see page 23-256). ■

NO—Repair open in the wire between the under-dash fuse/relay box and the gauge control module. ■

Symptom Troubleshooting (cont'd)

Audio disc does not load

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Disc labels should not be used in the navigation unit or audio unit. They may damage the player mechanism.
- Make sure the disc is compatible with the system (see the owner's manual for more information).

1. Insert a known-good disc to see if the symptom can be duplicated.

   Does the disc load?

   YES—Operation is normal. If the disc loads normally, but will not play, go to audio disc does not play (see page 23-229). ■

   NO—Go to step 2.

2. Insert another disc.

   Does the disc load?

   YES—The original disc is faulty. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

Audio disc does not eject

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Disc labels should not be used in the navigation unit or audio unit. They may damage the player mechanism.

1. Turn on the audio system.

   Does the system turn on?

   YES—Go to step 2.

   NO—Go to power switch will not turn ON (see page 23-202). ■

2. Check to see if the disc ejects correctly with no binding by pushing the EJECT button.

   Does the disc eject normally?

   YES—Operation is normal. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

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Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Audio disc does not play

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Try loading a known-good disc.

   Does the disc load?

   YES—Go to step 2.

   NO—Go to audio disc does not load (see page 23-228). ■

2. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) in the navigation unit or audio unit.

   Does the disc play?

   YES—The original disc is faulty, or has an unreadable format. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

Special Tools Required
- Diagnostics CD 07AAZ-SDBA100
- Skip test CD 07AAZ-SDBA200 (ABEX-TCD-725B)
- Skip test CD 07AAZ-SDBA300 (ABEX-TCD-721)

Audio disc skips

1. Confirm the vehicles tires are properly inflated.

2. Check the client's CD for scratches, fingerprints, and marks.

   NOTE: Do this following test with audio unit bass and treble set to clients listening performance. When comparing to known-good vehicles, comparison should be performed on same model and trim level.

3. Test drive to identify when the CD skips. The diagnostics CD (T/N: 07AAZ-SDBA100) can be used if clients CD is not available. Use tracks 10 to 12.

   Does the CD skip?

   YES—Go to step 4.

   NO—Operation is normal. ■

4. Compare the clients CD that skips in a known-good vehicle under the same conditions.

   Does the CD skip in the known-good vehicle under the same conditions?

   YES—Operation is normal. ■

   NO—Go to step 5.

   NOTE: Do this following test with vehicle parked and engine running.

(cont'd)

Symptom Troubleshooting (cont'd)

5. Insert the skip test CD (T/N: 07AAZ-SDBA300) (ABEX-TCD-721). Play tracks 2 to 11 and note the track number(s) where the CD starts skipping. Do the same test on a known-good vehicle.

   Does the CD skip on the same track number(s) as the known-good vehicle?

   YES—Operation is normal. ■

   NO—Go to step 6.

6. Insert the skip test CD (T/N: 07AAZ-SDBA200) (ABEX-TCD-725B), and play tracks 7 to 11 and tracks 13 to 15 and note the track number(s) where the CD starts skipping. Perform the same test on a known-good vehicle.

   Does the CD skip on same track number(s) as the known-good vehicle?

   YES—Operation is normal. ■

   NO—
   - With navigation: Replace the navigation unit (see page 23-355). ■
   - Without navigation: Replace the audio unit (see page 23-256). ■

Audio remote switch does not work properly (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Check the audio unit operation.

   Is the audio unit operation OK?

   YES—Go to step 2.

   NO—Replace the navigation unit (see page 23-355). ■

2. Test the audio remote switch (see page 23-262).

   Is the audio remote switch OK?

   YES—Go to step 3.

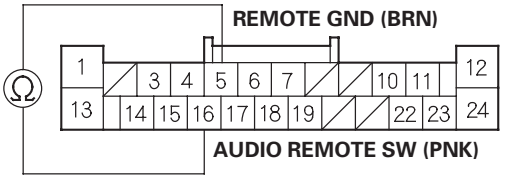
   NO—Replace the audio remote switch (see page 23-263). ■

3. Remove the navigation unit (see page 23-355).

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4. Measure the resistance between navigation unit connector A (24P) terminals No. 5 and No. 16 as specified in the table.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

AUDIO REMOTE SWITCH TABLE

Button held down	VOL DOWN	VOL UP	CH (−)	CH (+)	MODE	No button pressed
Resistance	about 100 Ω	about 357 Ω	about 775 Ω	about 1.7 kΩ	about 3.7 kΩ	about 10 kΩ

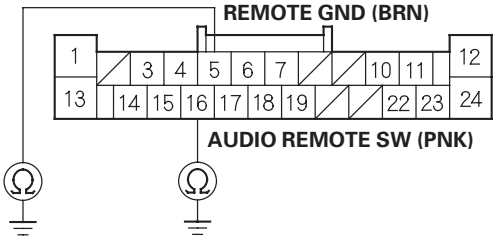
Is the resistance OK?

YES—Go to step 5.

NO—Repair open or high resistance in the circuit between the navigation unit and the audio remote switch. If the wires are OK, replace the cable reel (see page 24-200). ■

5. Check for continuity between navigation unit connector A (24P) terminals No. 5 and No. 16 and body ground individually.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the circuit between the navigation unit and the audio remote switch. If the wires are OK, replace the cable reel (see page 24-200). ■

NO—Replace the navigation unit (see page 23-355). ■

Symptom Troubleshooting (cont'd)

Audio remote switch does not work properly (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Check the audio unit operation.

   Is the audio unit operation OK?

   YES—Go to step 2.

   NO—Replace the audio unit (see page 23-256). ■

2. Test the audio remote switch (see page 23-262).

   Is the audio remote switch OK?

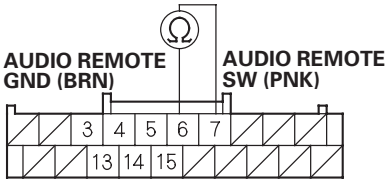
   YES—Go to step 3.

   NO—Replace the audio remote switch (see page 23-263). ■

3. Remove the audio unit (see page 23-256).

4. Measure the resistance between audio unit connector B (20P) terminals No. 6 and No. 7 as specified in the table.

AUDIO UNIT CONNECTOR B (20P)



Wire side of female terminals

AUDIO REMOTE SWITCH TABLE

Button held down	VOL DOWN	VOL UP	CH (−)	CH (+)	MODE	No button pressed
Resistance	about 100 Ω	about 370 Ω	about 840 Ω	about 2.0 KΩ	about 6.0 KΩ	about 10 kΩ

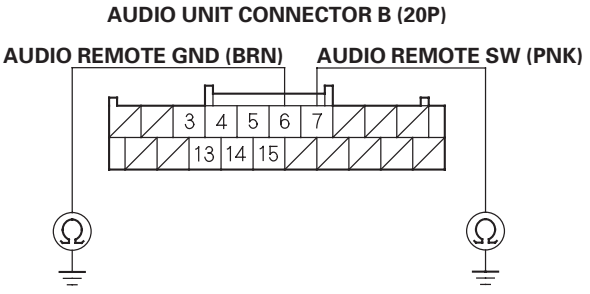
Is the resistance OK?

YES—Go to step 5.

NO—Repair open or high resistance in the circuit between the audio unit and the audio remote switch. If the wires are OK, replace the cable reel (see page 24-200). ■

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5. Check for continuity between audio unit connector B (20P) terminals No. 6 and No. 7 and body ground individually.



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the circuit between audio unit and the audio remote switch. If the wires are OK, replace the cable reel (see page 24-200). ■

NO—Replace the audio unit (see page 23-256). ■

Audio disc cannot be inserted and/or ejected (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Disc labels should not be used in the navigation unit or audio unit. They may damage the player mechanism.
- Make sure the disc is compatible with the system (see the owner's manual for more information).

1. Press the OPEN/CLOSE button to open the navigation display.

2. Try inserting an audio CD.

   Does the player accept the CD?

   YES—The system is OK at this time. ■

   NO—Go to step 3.

3. Press the CD eject button.

   Does the player eject the CD?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-355). ■

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Symptom Troubleshooting (cont'd)

PC card will not play/card icon on audio screen cannot be selected (with navigation)

Unfortunately there are no error messages, and no diagnostics for the PC card. There are many reasons why a card won't play audio files in the audio unit.

- The card may not be fully inserted into the slot. Eject the card, and inspect for warping or damage to the edge connector. Never use excessive force to insert a card. This can result in damage to the pins in the rear of the slot.
- The client's card may contain audio files that are not recognized by the system. Only MP3, and WMA music files are played.
- The flash card type may not be accepted by the system. Only Compact Flash and ATA cards have been tested.
- The card's PCMCIA adaptor may be preventing a known-good card from playing. New PCMCIA adaptors are constantly being released, and have not been tested.
- The card's capacity may exceed 1 GB. Only cards with capacities of up to 1 GB (1000 MB) have been tested.
- There may not be any files on the card. Some cards have write protection, make sure it is turned off before putting files on the card.
- Although flash memory chips are reliable, occasionally they develop bad sectors or other formatting errors that prevents them from playing. The client should re-format the card using the FAT, or FAT32 format.
- The card may have been damaged by heat. Suggest that the client remove their card when exiting the vehicle.
- The client may have formatted the card using the format NTFS. Only the formats FAT, and FAT32 are accepted by the system.
- Hard Disc Drive (HDD) cards may not work properly in the system and can overheat and quit functioning, particularly in a hot vehicle. They are not recommended.
- The filing structure of the card may exceed the specification of 8 folder levels deep, 99 folders maximum, and 999 total tracks maximum. If any of these limitations is exceeded, the system may not properly display or play the tracks.

NOTE: A delay when first inserting a card is normal. The system is reading the File Tag information for album names, artist, and song titles and there is no hour glass, The delay length depends on the number of tracks, and the complexity of the folder structure. See the audio section glossary for an explanation of the terms used above.

DYNOMITE -2009-

USB input sound is low or cannot be heard (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Do the speaker check mode with the self-diagnostic mode.

   Do all speakers make a sound?

   YES—Go to step 3.
   NO—Go to no sound is heard from speaker(s). ■
3. Turn the ignition switch to LOCK (0).
4. Connect the client's USB device to a known-good vehicle that equipped with the USB adapter, and check the USB device operation.

   Is the USB device working properly?

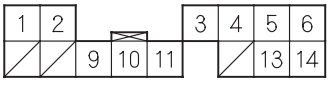
   YES—Go to step 5.
   NO—USB device is faulty. Also check the USB cable and USB adapter connector condition. ■
5. On the client's vehicle, connect the client's USB device to the USB adapter.
6. Turn the ignition switch to ON (II) and turn on the navigation unit.
7. Check if the USB device can be operated with the navigation unit (Folders or Files UP/DOWN, etc.).

   Can you operate the USB device, but there is no sound heard?

   YES—Go to step 8.
   NO—If the sound is normal, the USB device is OK at this time. If the USB device cannot be operated, go to USB audio device does not work. ■
8. Turn the ignition switch to LOCK (0).
9. Disconnect navigation unit connector E (14P).
10. Disconnect USB adapter unit connector A (14P).
11. Disconnect XM receiver connector A (14P).
12. Check for continuity between the terminal of navigation unit connector E (14P) and body ground according to the table.

Navigation unit connector	Wire color
E5	WHT
E6	RED
E13	BLK
E14	GRN

NAVIGATION UNIT CONNECTOR E (14P)



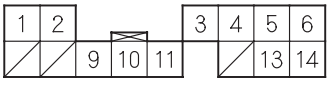
Wire side of female terminals

Is there continuity?
YES—Short to body ground in the wire(s) between the navigation unit and the USB adapter unit. Replace the affected shielded harness. ■
NO—Go to step 13.

13. Check for continuity between terminals of navigation unit connector E (14P) according to the table.

From terminal	To terminals
E4 (GRY)	E5 (WHT), E6 (RED), E13 (BLK), E14 (GRN)
E5 (WHT)	E6 (RED), E13 (BLK), E14 (GRN)
E6 (RED)	E13 (BLK), E14 (GRN)
E13 (BLK)	E14 (GRN)

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there continuity between any of the terminals?
YES—Short in the wires between the navigation unit and the USB adapter unit. Replace the affected shielded harness. ■
NO—Go to step 14.

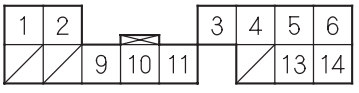
(cont'd)

Symptom Troubleshooting (cont'd)

14. Check for continuity between navigation unit connector E (14P) and USB adapter unit connector A (14P) according to the table.

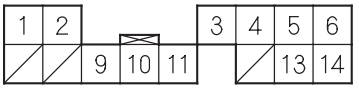
Navigation unit connector	USB adapter unit connector	Wire color
E5	A5	WHT
E6	A6	RED
E13	A13	BLK
E14	A14	GRN

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good USB adapter unit (see page 23-258), then reconnect all of the connectors and recheck. If the symptom/indication goes away, replace the original USB adapter unit. If the symptom/indication is still present, replace the navigation unit (see page 23-355). ■

NO—Open in the wire(s) between the navigation unit and the USB adapter unit. Replace affected shielded harness. ■

USB input sound is low or cannot be heard (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Turn the ignition switch to ON (II).
2. Do the speaker check mode with the self-diagnostic mode.

   Do all speakers make a sound?

   YES—Go to step 3.
   NO—Go to no sound is heard from speaker(s). ■
3. Turn the ignition switch to LOCK (0).
4. Connect the client's USB device to a known-good vehicle that equipped with the USB adapter and check the USB device operation.

   Is the USB device working properly?

   YES—Go to step 5.
   NO—USB device is faulty. Also check the USB cable and USB adapter connector condition. ■
5. On the client's vehicle, connect the client's USB device to the USB adapter.
6. Turn the ignition switch to ON (II), and turn on the audio unit.
7. Check if the USB device can be operated with the audio unit (Folders or Files UP/DOWN, etc.).

   Can you operate the USB device, but there is no sound heard?

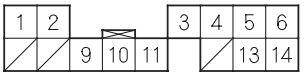
   YES—Go to step 8.
   NO—If the sound is normal, the USB device is OK at this time. If the USB device cannot be operated, go to USB audio device does not work. ■
8. Turn the ignition switch to LOCK (0).
9. Disconnect audio unit connector E (14P).
10. Disconnect USB adapter unit connector A (14P).

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11. Check for continuity between the terminals of audio unit connector E (14P) and body ground according to the table.

Audio unit connector	Wire color
E5	WHT
E6	RED
E13	BLK
E14	GRN

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there continuity?

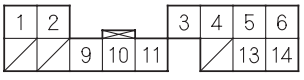
YES—Short to body ground in the wire(s) between the audio unit and the USB adapter unit. Replace the affected shielded harness. ■

NO—Go to step 12.

12. Check for continuity between the terminals of audio unit connector E (14P) according to the table.

From terminal	To terminals
E4 (GRY)	E5 (WHT), E6 (RED), E13 (BLK), E14 (GRN)
E5 (WHT)	E6 (RED), E13 (BLK), E14 (GRN)
E6 (RED)	E13 (BLK), E14 (GRN)
E13 (BLK)	E14 (GRN)

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there continuity between any of the terminals?

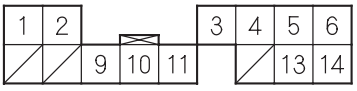
YES—Short in the wires between the audio unit and the USB adapter unit. Replace the affected shielded harness. ■

NO—Go to step 13.

13. Check for continuity between audio unit connector E (14P) and USB adapter unit connector A (14P) according to the table.

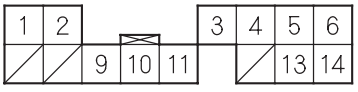
Audio unit connector	USB adapter unit connector	Wire color
E5	A5	WHT
E6	A6	RED
E13	A13	BLK
E14	A14	GRN

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good USB adapter unit (see page 23-258), then reconnect all of the connectors, and recheck. If the symptom/indication goes away, replace the original USB adapter unit. If the symptom/indication is still present, replace the audio unit (see page 23-256). ■

NO—Open in the wire(s) between the audio unit and the USB adapter unit. Replace the affected shielded harness. ■

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Symptom Troubleshooting (cont'd)

USB device does not function (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Check the USB device requirement:
  – Mass-storage class ready digital audio player with USB 2.0 port
  – More than 256 MB of RAM
  – Supports MP3, WMA, and AAC (encoded with the i-Tunes) files, DRM files are not supported

1. Turn the ignition switch to ON (II) and turn on the navigation unit.

2. Push the AUX button to select USB mode.

   Is USB NO DATA displayed?

   YES—Go to step 3.

   NO—Go to step 7.

3. Turn the ignition switch to LOCK (0).

4. Connect the client's USB device to a known-good vehicle that is equipped with the USB adapter and check the USB device operation.

   Is the USB device working properly?

   YES—Go to step 5.

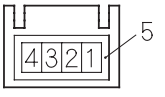
   NO—USB device is faulty. Also check the USB cable and USB adapter connector condition. ■

5. Disconnect USB adapter unit connector B (5P).

6. Check for continuity between terminals of USB adapter connector B (5P) and the USB adapter 5P connector according to the table.

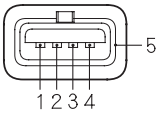
USB adapter unit connector	USB adapter connector
B1	1
B2	2
B3	3
B4	4

USB ADAPTER UNIT CONNECTOR B (5P)



Terminal side of female terminals

USB ADAPTER 5P CONNECTOR



Terminal side of male terminals

Is there continuity?

YES—Replace the USB adapter unit (see page 23-258). ■
NO—Open in the wire(s) between the USB adapter unit and the USB adapter. Replace the affected shielded harness. ■

7. Check the XM operation on the navigation display.

   Are the system working properly on the navigation screen?

   YES—Go to step 8.
   NO—Go to XM radio display is blank and no station information is displayed troubleshooting. ■

8. Turn the ignition switch to LOCK (0).

9. Check that the navigation unit connectors and the USB adapter unit connectors properly connected.

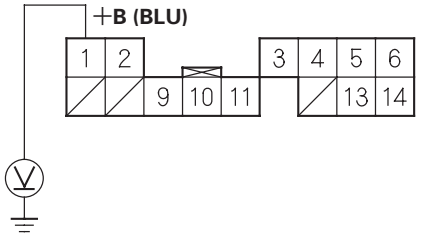
   Is the connectors properly connected?

   YES—Go to step 10.
   NO—Connect the connectors, and recheck. ■

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10. Measure the voltage between body ground and USB adapter unit connector A (14P) terminal No. 1.

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

Is there battery voltage?

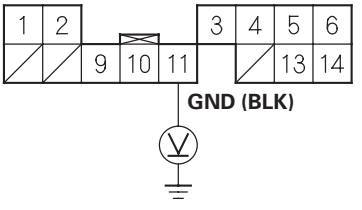
YES—Go to step 11.

NO—Repair open in the wire between the navigation unit and the USB adapter unit. ■

11. Turn the ignition switch to ON (II).

12. Measure the voltage between body ground and USB adapter unit connector A (14P) terminal No. 11.

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

Is there less than 0.1 V?

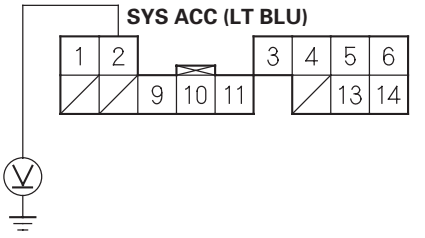
YES—Go to step 13.

NO—Repair open or high resistance in the wire between the navigation unit and the USB adapter unit. ■

13. Turn the ignition switch to LOCK (0).

14. Measure the voltage between body ground and USB adapter unit connector A (14P) terminal No. 2.

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

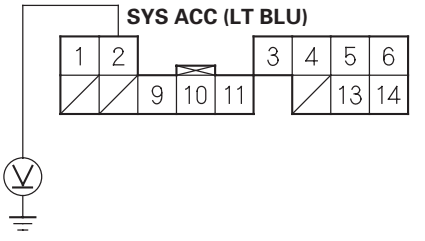
Is there 10 V or more present?

YES—Go to step 16.

NO—Go to step 15.

15. Measure the voltage between body ground and navigation unit connector E (14P) terminal No. 2.

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there 10 V or more present?

YES—Repair open or short in the wire(s) between the navigation unit and the USB adapter unit. ■

NO—Substitute a known-good navigation unit (see page 23-355), and recheck. If 10 V or more are present, replace the original navigation unit. ■

(cont'd)

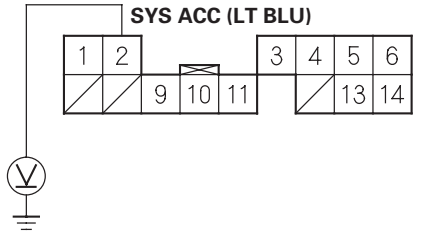
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Symptom Troubleshooting (cont'd)

16. Turn the ignition switch to ON (II).

17. Measure the voltage between body ground and navigation unit connector E (14P) terminal No. 2.

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there 10 V or more present?

YES—Substitute a known-good navigation unit (see page 23-355), and recheck. If 10 V or more are present, replace the original navigation unit. ■

NO—Go to step 18.

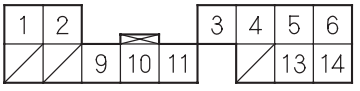
18. Turn the ignition switch to LOCK (0).

19. Disconnect navigation unit connector E (14P) and USB adapter unit connector A (14P).

20. Check for continuity between terminals of navigation unit connector E (14P) and USB adapter unit connector A (14P) according to the table.

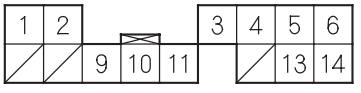
Navigation unit connector	USB adapter unit connector	Wire color
E9	A9	BLU
E10	A10	PNK

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good USB adapter unit (see page 23-258), then reconnect all of the connectors and recheck. If the symptom/indication goes away, replace the original USB adapter unit. If the symptom/indication is still present, replace the navigation unit (see page 23-355). ■

NO—Open in the wire(s) between the navigation unit and the USB adapter unit. Replace the affected shielded harness. ■

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USB device does not function (without navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Check the USB device requirement:
  – Mass-storage class ready digital audio player with USB 2.0 port
  – More than 256 MB of RAM
  – Supports MP3, WMA, and AAC (encoded with the i-Tunes) files, DRM files are not supported

1. Turn the ignition switch to ON (II) and turn on the audio unit.

2. Push the AUX button to select USB mode.

   Is USB NO DATA displayed?

   YES—Go to step 3.

   NO—Go to step 7.

3. Turn the ignition switch to LOCK (0).

4. Connect the client's USB device to a known-good vehicle that equipped with the USB adapter and check the USB device operation.

   Is the USB device working properly?

   YES—Go to step 5.

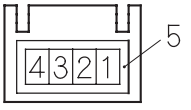
   NO—USB device is faulty. Also check the USB cable and USB adapter connector condition. ■

5. Disconnect USB adapter unit connector B (5P).

6. Check for continuity between terminals of USB adapter connector B (5P) and the USB adapter 5P connector according to the table.

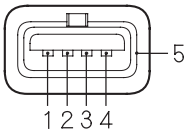
USB adapter unit connector	USB adapter connector
B1	1
B2	2
B3	3
B4	4

USB ADAPTER UNIT CONNECTOR B (5P)



Terminal side of female terminals

USB ADAPTER 5P CONNECTOR



Terminal side of male terminals

Is there continuity?

YES—Replace the USB adapter unit (see page 23-258). ■

NO—Open in the wire(s) between the USB adapter unit and the USB adapter. Replace the affected shielded harness. ■

7. Turn the ignition switch to LOCK (0).

8. Check that the audio unit connectors and the USB adapter unit connectors properly connected.

   Are the connectors properly connected?

   YES—Go to step 9.

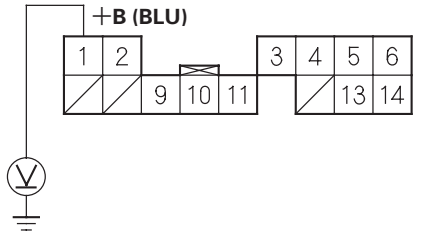
   NO—Connect the connectors and recheck. ■

(cont'd)

Symptom Troubleshooting (cont'd)

9. Measure the voltage between body ground and USB adapter unit connector A (14P) terminal No. 1.

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

Is there battery voltage?

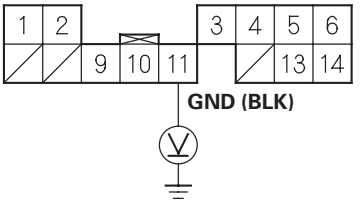
YES—Go to step 10.

NO—Repair open in the wire between the audio unit and the USB adapter unit. ■

10. Turn the ignition switch to ON (II).

11. Measure the voltage between body ground and USB adapter unit connector A (14P) terminal No. 11.

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

Is there less than 0.1 V?

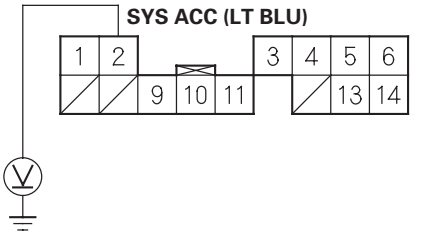
YES—Go to step 12.

NO—Repair open or high resistance in the wire between the audio unit and the USB adapter unit. ■

12. Turn the ignition switch to LOCK (0).

13. Measure the voltage between body ground and USB adapter unit connector A (14P) terminal No. 2.

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

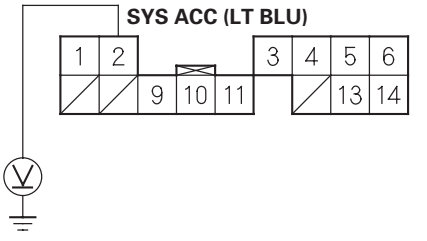
Is there 10 V or more present?

YES—Go to step 15.

NO—Go to step 14.

14. Measure the voltage between body ground and audio unit connector E (14P) terminal No. 2.

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there 10 V or more present?

YES—Repair open or short in the wire(s) between the audio unit and the USB adapter unit. ■

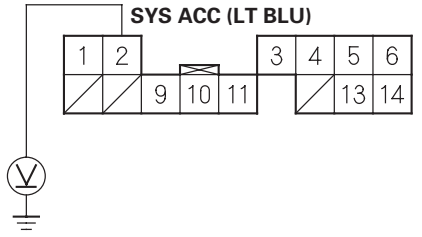
NO—Substitute a known-good audio unit (see page 23-256), and recheck. If 10 V or more are present, replace the original audio unit. ■

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15. Turn the ignition switch to ON (II).

16. Measure the voltage between body ground and audio unit connector E (14P) terminal No. 2.

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there 10 V or more present?

YES—Substitute a known-good audio unit (see page 23-256), and recheck. If 10 V or more are present, replace the original audio unit. ■

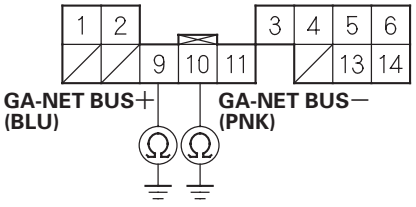
NO—Go to step 17.

17. Turn the ignition switch to LOCK (0).

18. Disconnect audio unit connector E (14P) and USB adapter unit connector A (14P).

19. Check for continuity between body ground and audio unit connector E (14P) terminals No. 9 and No. 10 individually.

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wires between the audio unit and the USB adapter unit. Replace the affected shielded harness. ■

NO—Go to step 20.

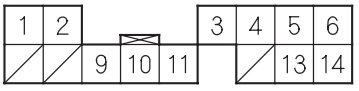
(cont'd)

Symptom Troubleshooting (cont'd)

20. Check for continuity between the terminals of audio unit connector E (14P) according to the table.

From terminal (wire color)	To terminals (wire color)
E3 (BRN)	E9 (BLU), E10 (PNK)
E9 (BLU)	E10 (PNK)

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there continuity between any of the terminals?

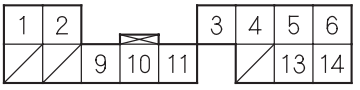
YES—Short in the wires between the audio unit and the USB adapter unit. Replace the affected shielded harness. ■

NO—Go to step 21.

21. Check for continuity between the terminals of audio unit connector E (14P) and USB adapter unit connector A (14P) according to the table.

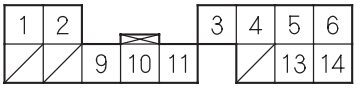
Audio unit connector	USB adapter unit connector	Wire color
E9	A9	(BLU)
E10	A10	(PNK)

AUDIO UNIT CONNECTOR E (14P)



Wire side of female terminals

USB ADAPTER UNIT CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good USB adapter unit (see page 23-258), then reconnect all of the connectors and recheck. If the symptom/indication goes away, replace the original USB adapter unit. If the symptom/indication is still present, replace the audio unit (see page 23-256). ■

NO—Open in the wire(s) between the audio unit and the USB adapter unit. Replace the affected shielded harness. ■

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Error code: XM NO SIGNAL or XM ANTENNA is displayed (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Check XM radio reception in an open area. Poor reception/interference can be caused by tall buildings, mountains, or high-voltage power lines.

1. Check that the XM receiver connectors properly connected.

   Is the connector connected?

   YES—Go to step 2.

   NO—Reconnect the connector. If the error message does not go away, go to step 2.

2. Check the connector at the XM antenna and XM antenna lead.

   Is the connector connected?

   YES—Go to step 3.

   NO—Reconnect the connector. If the error message does not go away, go to step 3.

3. Substitute known-good XM antenna (see page 23-264).

   Is the error message gone?

   YES—Replace the XM antenna (see page 23-264). ■

   NO—Go to step 4.

4. Substitute known-good XM receiver (see page 23-258).

   Is the error message gone?

   YES—Replace the XM receiver (see page 23-258). ■

   NO—Replace the XM antenna lead. ■

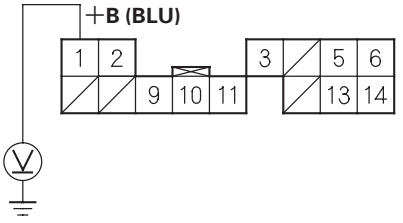
XM radio display is blank and no station information is displayed (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.

1. Disconnect XM receiver connector A (14P).

2. Measure the voltage between XM receiver connector A (14P) terminal No. 1 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there battery voltage?

YES—Go to step 3.

NO—Repair open in the wire between the XM receiver and the navigation unit connector. ■

3. Reconnect XM receiver connector A (14P).

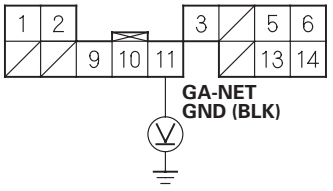
(cont'd)

Symptom Troubleshooting (cont'd)

4. Turn the ignition switch to ON (II).

5. Measure the voltage between XM receiver connector A (14P) terminal No. 11 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there less than 0.1 V?

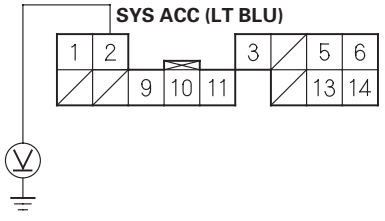
YES—Go to step 6.

NO—Repair open in the wire between the XM receiver and the navigation unit. ■

6. Turn the ignition switch to LOCK (0).

7. Measure the voltage between XM receiver connector A (14P) terminal No. 2 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there 10 V or more present?

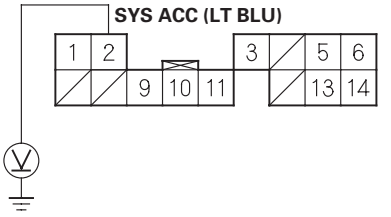
YES—Go to step 8.

NO—Substitute known-good XM receiver (see page 23-258), and recheck. If 10 V or more are present, replace the original XM receiver. ■

8. Turn the ignition switch to ON (II).

9. Measure the voltage between XM receiver connector A (14P) terminal No. 2 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there less than 0.5 V?

YES—Go to step 10.

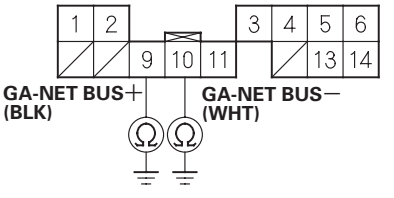
NO—Substitute a known-good navigation unit (see page 23-355), and recheck. If 0.5 V or less are present, replace the original navigation unit. ■

10. Turn the ignition switch to LOCK (0).

11. Disconnect navigation unit connector E (14P), USB adapter unit connector A (14P), and XM receiver connector A (14P).

12. Check for continuity between navigation unit connector E (14P) terminals No. 9 and No. 10 and body ground individually.

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 13.

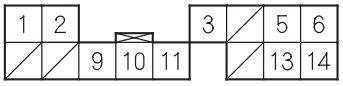
NO—Short to body ground in the wire between the XM receiver and the navigation unit. Replace the affected shielded harness. ■

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13. Check for continuity between XM receiver connector A (14P) according to the table.

From terminal	To terminals
A3 (BRN)	A9 (BLU), A10 (PNK)
A9 (BLU)	A10 (PNK)

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity between any of the terminals?

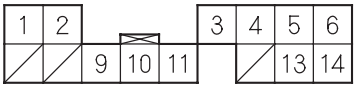
YES—Short in the wire(s) between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

NO—Go to step 14.

14. Check for continuity between navigation unit connector E (14P) and XM receiver connector A (14P) according to the table.

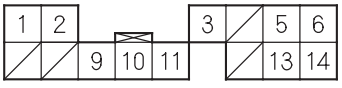
Navigation unit connector	XM receiver connector	Wire color
E9	A9	BLU
E10	A10	PNK

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good XM receiver (see page 23-258), then reconnect all connectors and recheck. If the symptom/indication goes away, replace the original XM receiver. If symptom/indication is still present, replace the navigation unit (see page 23-355). ■

NO—Open in the wire(s) between the navigation unit and the XM receiver. Replace affected shielded harness. ■

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Symptom Troubleshooting (cont'd)

XM radio preset memory is lost (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- If you can only tune to channel 000, 001, 174, and 247, make sure the navigation unit is set to channel mode (see owner's manual), if it is set to channel mode, call XM Satellite Radio customer support, and check the account activation status.

1. Turn the ignition switch to ON (II).
2. Turn on the navigation unit, and set each of the XM radio channel preset buttons.

   Do each of the XM radio channel preset buttons set properly?

   YES—Go to step 3.

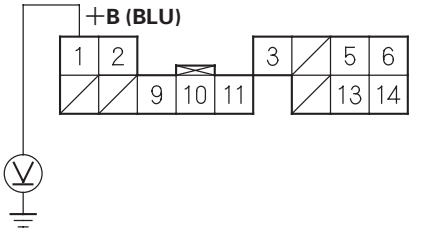
   NO—Go to step 7.
3. Turn the ignition switch to LOCK (0) for 1 minute, then turn it back to ON (II).
4. Test all of the XM radio channel preset buttons for proper recall operation.

   Do the preset buttons recall the radio stations?

   YES—System is normal at this time. Check connections at the navigation unit. ■

   NO—Go to step 5.
5. Turn the ignition switch to LOCK (0).
6. Disconnect XM receiver connector A (14P).
7. Measure the voltage between XM receiver connector A (14P) terminal No. 1 and body ground.

XM RECEIVER CONNECTOR A (14P)



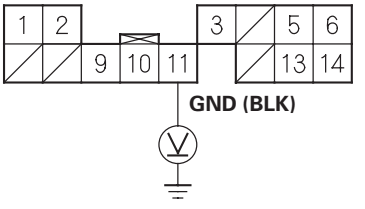
Wire side of female terminals

Is there battery voltage?

YES—Go to step 8.

NO—Repair open in the wire between the navigation unit and the XM receiver. ■
8. Reconnect XM receiver connector A (14P).
9. Measure the voltage between XM receiver connector A (14P) terminal No. 11 and body ground.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there less than 0.1 V?

YES—Substitute a known-good navigation unit (see page 23-355), and recheck. If the symptom/indication goes away, replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between the XM receiver connector and the navigation unit. ■

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Poor or no sound with XM radio (Audio unit does display XM channels) (with navigation)

NOTE:
- Check the vehicle battery condition first.
- Check the XM radio reception in an open area. Poor reception/interference can be caused by nearby tall buildings, mountains, or high-voltage power lines.
- Check the connectors for poor connections or loose terminals.
- If you can only tune to channel 000, 001, 174, and 247, make sure the navigation unit is set to channel mode (see owner's manual), if it is set to channel mode, call XM Satellite Radio customer support, and check the account activation status.

1. Turn the ignition switch to ON (II).
2. Turn on the navigation unit and select XM radio.
3. Check for an error message on the display.

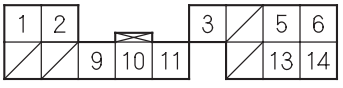
   Are there any messages displayed?

   YES—Go to error code list (see page 23-194). ■

   NO—Go to step 4.
4. Turn the ignition switch to LOCK (0).
5. Disconnect navigation unit connector E (14P), USB adapter unit connector A (14P), and XM receiver connector A (14P).
6. Check for continuity between XM receiver connector A (14P) and body ground according to the table.

XM receiver connector	Wire color
A5	WHT
A6	RED
A13	BLK
A14	GRN

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire(s) between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

NO—Go to step 7.

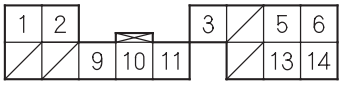
(cont'd)

Symptom Troubleshooting (cont'd)

7. Check for continuity between terminals of XM receiver connector A (14P) according to the table.

From terminal	To terminals
A4 (GRY)	A5 (WHT), A6 (RED), A13 (BLK), A14 (GRN)
A5 (WHT)	A6 (RED), A13 (BLK), A14 (GRN)
A6 (RED)	A13 (BLK), A14 (GRN)
A13 (BLK)	A14 (GRN)

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity between any of the terminals?

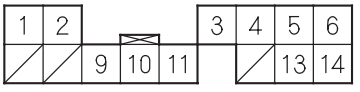
YES—Short in the wires between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

NO—Go to step 8.

8. Check for continuity between navigation unit connector E (14P) and XM receiver connector A (14P) according to the table.

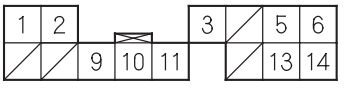
Navigation unit connector	XM receiver connector	Wire color
E5	A5	WHT
E6	A6	RED
E13	A13	BLK
E14	A14	GRN

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good XM receiver (see page 23-258), then reconnect all of the connectors and recheck. If the symptom/indication goes away, replace the original XM receiver. If the symptom/indication is still present, replace the navigation unit (see page 23-355). ■

NO—Open in the wire(s) between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

DYNOMITE -2009-

Sound Quality Diagnosis

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Use the following tests to check sound quality.

NOTE: Before beginning the following tests, write down the client's bass, treble, fader and balance settings, and then set them to their center positions for testing.

Left/Right Channel ID

Do this test to confirm proper channel routing.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.

2. Play track No. 1 (left, both, right channel ID) at a normal, or slightly higher than normal, volume level.

3. The voice should be audible only from the channel or channels when indicated.

   - If the channel ID is correct for each side, go to the phase test.
   - If the channel ID is not correct, check for;
     – Shorted speaker wire
     – Faulty amplifier (Type S model)
     – Faulty navigation unit
     – Faulty audio unit

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Phase Test

Do this test to confirm proper speaker phasing.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.

2. Play track No. 2 (phase) at a normal, or slightly higher than normal, volume level.

3. The voice should sound centered and focused when it is in-phase.

4. The voice should sound diffused, and have less bass when it is out of phase.

   - If the voice changes from in-phase to out of phase as indicated by the prompt, the phasing is correct. Go to electrical noise test.
   - If the voice always sounds out of phase, phasing is not correct. Check for;
     – Crossed speaker wires
     – Faulty amplifier (Type S model)
     – Faulty navigation unit
     – Faulty audio unit

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Sound Quality Diagnosis (cont'd)

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Electrical Noise Test

Do this test to check for electrical noise being induced into the audio system.

NOTE: Electrical noise may be caused by outside sources that cannot be handled by the audio system. Make sure you remove any cell phones and/or turn off any aftermarket device before beginning this test.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Play track No. 4 (digital zero) at a normal, or slightly higher than normal, volume level.
3. Operate any electrical device that may create electrical noise in the audio system, including starting the engine.
4. Play track No. 5 (near digital zero) at a normal, or slightly higher than normal, volume level.
5. Operate any electrical device that may create electrical noise in the audio system, including starting the engine.
6. Play track No. 6 (SNR) at a normal, or slightly higher than normal, volume level.
7. Operate any electrical device that may create electrical noise in the audio system, including starting the engine.

   - If no abnormal noise is heard, go to individual speaker test.
   - If the noise is present only during the SNR track, replace the navigation unit or audio unit.
   - If the noise is heard during the digital zero or near digital zero track, check for;
     – Poor ground for the audio unit, amplifier, engine or battery cable
     – Pinched or shorted speaker or amplifier wire
     – Faulty amplifier (Type S model)
     – Faulty navigation unit
     – Faulty audio unit
     – Other faulty components causing excessive electrical noise (ignition coils, alternator, door lock actuators, etc.). Disconnect any suspect components, and then replay the tracks that were originally noisy. If the noise is gone, check the component's circuit and the component.

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Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Individual Speaker Test

Do this test to identify a faulty speaker.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Play track No. 30 (steady 300 Hz tone) at a normal, or slightly higher than normal, volume level.
3. Listen to each speaker for poor sound compared to the other speakers. Use the audio unit's fader and balance settings to help isolate the channel with the problem.
   - If the sound quality produced by a specific speaker is poor, substitute it with a known-good speaker. If the poor sound quality continues, go to the sound balance test.
   - If the sound quality is OK, go to the sound balance test.

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Sound Balance Test

Perform this test to identify a faulty channel or speaker.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Confirm the bass and treble are set to the center positions.
3. Play track No. 3 (pink noise) at a normal, or slightly higher then normal, volume level.
4. A static type sound should be heard through all speakers.
5. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit of a known-good vehicle.
6. Set the bass and treble to the center position.
7. Play track No. 3 (pink noise) all the same level as was played in step 3.
8. Compare the sounds made by the two vehicles.
   - If the noise sounds made by the two vehicles are very similar, go to the Frequency Sweep Test (see page 23-254).
   - If the sound does not have as much bass, check the subwoofer and circuit.
   - If the sound does not have enough hiss, check the tweeters and their circuits.

Sound Quality Diagnosis (cont'd)

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Frequency sweep

Do this test to find rattles or reverberation that may cause a perception of poor sound quality.

1. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
2. Play track No. 13 (sweep from 500 Hz to 35 Hz) at a normal, or slightly higher than normal, volume level.
3. Listen to each speaker for poor sound quality or reverberations caused by specific frequencies. Use the voice-over to estimate the frequency that causes the vibration. Use the audio unit's fader and balance settings to help isolate the channel with the problem.
   - If vibrations or poor sound quality are heard, go to step 4.
   - If no vibrations or poor sound quality are heard, go to sound judging.
4. Choose the appropriate track from No. 14 to 25 (small range frequency sweep) or 26 to 53 (single frequencies) to recreate the frequency that caused the poor sound quality or vibration located in step 3: this aids in diagnosis of the cause.

   NOTE: When you get to the track that recreates the problem, select the repeat function on the navigation unit or audio unit, this will help you isolate the cause.
5. Replace or insulate the source of the vibrations or, if the speaker is the source of the poor sound quality, replace it.

Special Tools Required
Diagnostics CD 07AAZ-SDBA100

Sound judging

- Do this test to compare overall sound quality, imaging, and dynamics between the client's vehicle and a known-good vehicle. Only use a vehicle of the same model and trim level for this test.
- Make sure the vehicle is using only OEM speakers.

1. In the client's vehicle, set the bass, treble, fader, and balance settings to the client's normal settings that were written down before beginning testing.
2. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit.
3. Play tracks No. 7 to 12 (sound quality, midland, dynamics, and imaging demonstration tracks) at a normal, or slightly higher than normal, volume level. Write down the volume setting being used.
4. Listen to areas of the track that stand out as being either very clear, or poorer than other areas of the track.
5. Insert the diagnostics CD (T/N: 07AAZ-SDBA100) into the navigation unit or audio unit of a known-good vehicle.
6. Play the tracks at the same volume level and the same bass, treble, balance, and fader settings as used in step 3 in the client's vehicle.
7. Listen to the same area of the track that stood out as being either very clear or poorer than other areas of the track.

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8. Compare the client's vehicle's sound quality results to the known-good vehicle's results.

   - If the sound quality in the client's vehicle is comparable to the sound quality in the known-good vehicle, then the client's vehicle is operating as designed.
   - If the sound quality is not comparable, check these items in order.
     – Loose or improperly installed speakers or other hardware that may become excited by the vibrations generated by the speakers
     – Poor power or ground to the stereo amplifier (Type S model)
     – Damaged speaker(s)
     – Faulty amplifier
     – Faulty navigation unit
     – Faulty audio unit

Seek Stop Test

Do this test to check the performance of the audio unit's AM and FM reception. Refer to symptom troubleshooting: audio sound weak or distorted, or no sound is heard from speakers (display is normal) (see page 23-206) before continuing with this test.

NOTE:
- Window tint, aftermarket theft-recovery devices and other aftermarket accessories may reduce radio reception.
- Changes in cloud cover and other atmosphere conditions will affect the ability of the navigation unit or audio unit to receive radio signals.

1. Park the client's vehicle in an open area away from buildings or other obstructions.

2. Park a known-good vehicle (same year, model, and trim level) next to the client's vehicle, facing the same direction.

3. Start the engine in the client's vehicle, and turn on the radio.

4. Set the FM receiver to 87.7 MHz.

5. Press the Seek + button and record the first station that the navigation unit or audio unit locks onto.

6. Press the Seek + button repeatedly, and write down each station that the navigation unit or audio unit locks onto until the station recorded in step 5 is reached again.

7. Set the AM receiver to 530 kHz.

8. Press the Seek + button, and record the first station that the navigation unit or audio unit locks on to.

9. Press the Seek + button repeatedly, and write down each station that the navigation unit or audio unit locks onto until the station recorded in step 8 is reached again.

(cont'd)

Sound Quality Diagnosis (cont'd)

10. Turn the ignition switch to LOCK (0).

11. Start the engine in the known-good vehicle, and then do steps 4 thru 10 on the known-good vehicle.

12. Compare the number of stations received in steps 6 and 9 in the client's vehicle with the number of stations received in the known-good vehicle.

    - If the number of stations received is the same, or within 10 %, the audio unit's tuner performance is OK. The problem may be atmospheric conditions, multi path interference, or other obstructions to the radio signal.
    - If the customer's vehicle receives fewer stations by at least 10 %, go to step 2 of poor AM or FM radio reception of interference, with navigation (see page 23-196), without navigation (see page 23-199).

Audio Unit Removal/Installation

Without navigation

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the dashboard and related parts.
- Lay a workshop towel under the parts when working on them to protect the face panel from scratches or other damage.
- Do not work in a dusty or dirty place.
- Discharge static electricity from your body before and during the work.
- Do not touch the circuit board(s) with your bare hands.
- Do not work with dirty hands.
- Be careful not to fold the flat plate cable.
- Do not touch the terminal connector of the flat plate cable with your bare hands (If you have touched it, wipe it off thoroughly.).
- Eject all the discs before removing the audio unit to prevent damaging the CD/DVD player's load mechanism.
- If you are replacing the audio unit, write down the audio presets (if possible), and enter them into the new audio unit.

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Sound Quality Diagnosis (cont'd)

10. Turn the ignition switch to LOCK (0).

11. Start the engine in the known-good vehicle, and then do steps 4 thru 10 on the known-good vehicle.

12. Compare the number of stations received in steps 6 and 9 in the client's vehicle with the number of stations received in the known-good vehicle.

    - If the number of stations received is the same, or within 10 %, the audio unit's tuner performance is OK. The problem may be atmospheric conditions, multi path interference, or other obstructions to the radio signal.
    - If the customer's vehicle receives fewer stations by at least 10 %, go to step 2 of poor AM or FM radio reception of interference, with navigation (see page 23-196), without navigation (see page 23-199).

Audio Unit Removal/Installation

Without navigation

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

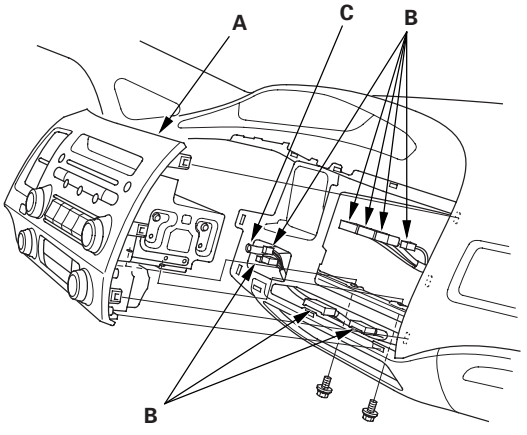
NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the dashboard and related parts.
- Lay a workshop towel under the parts when working on them to protect the face panel from scratches or other damage.
- Do not work in a dusty or dirty place.
- Discharge static electricity from your body before and during the work.
- Do not touch the circuit board(s) with your bare hands.
- Do not work with dirty hands.
- Be careful not to fold the flat plate cable.
- Do not touch the terminal connector of the flat plate cable with your bare hands (If you have touched it, wipe it off thoroughly.).
- Eject all the discs before removing the audio unit to prevent damaging the CD/DVD player's load mechanism.
- If you are replacing the audio unit, write down the audio presets (if possible), and enter them into the new audio unit.

DYNOMITE -2009-

1. Make sure you have the anti-theft code for the audio system.

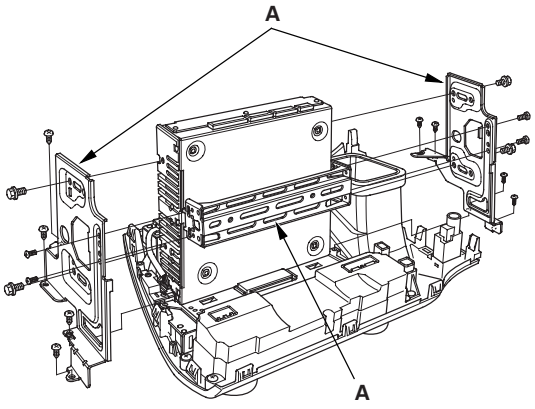
2. Remove the subdisplay visor (see page 20-100).

3. Remove the center pocket hole lid and bolts, then pull out the center panel (A).

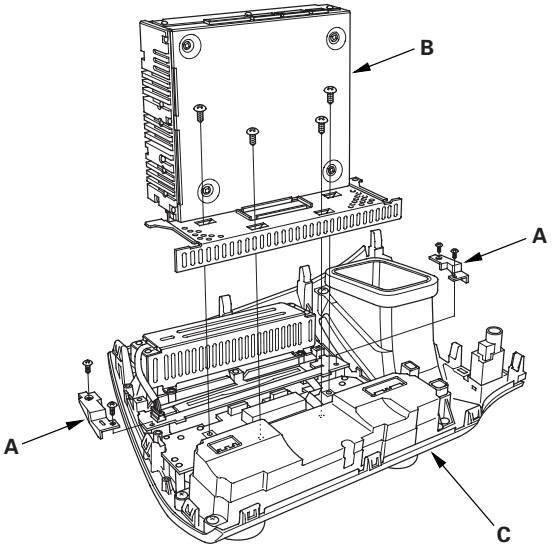


4. Disconnect the connectors (B) and the air hose (C), then remove the center panel.

5. Remove the bolts, screws and the brackets (A).



6. Remove the screws, rear covers (A) and the audio unit (B) from the center panel display (C).

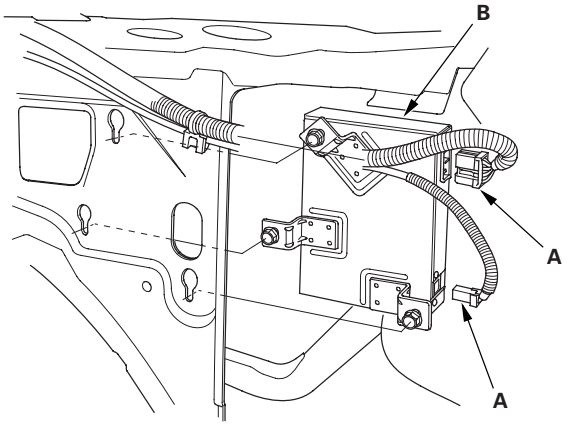


7. Install the audio unit in the reverse order of removal, and note these items:

   - Make sure all connectors and antenna lead are secure.
   - Enter the anti-theft code for the audio system, then set the clock.

XM Receiver Removal/Installation

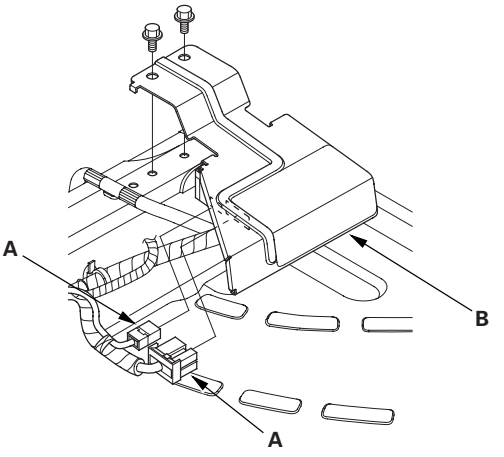
1. Open the trunk lid and remove the right trunk side trim panel (see page 20-80).
2. Disconnect connectors (A) from the XM receiver (B).



3. Loosen the three bolts, and remove the XM receiver.
4. Install the XM receiver in the reverse order of removal.

USB Adapter Unit Replacement

1. Remove the front passenger's seat (see page 20-118) and pull back the carpet.
2. Disconnect the connectors (A) from the USB adapter unit (B).

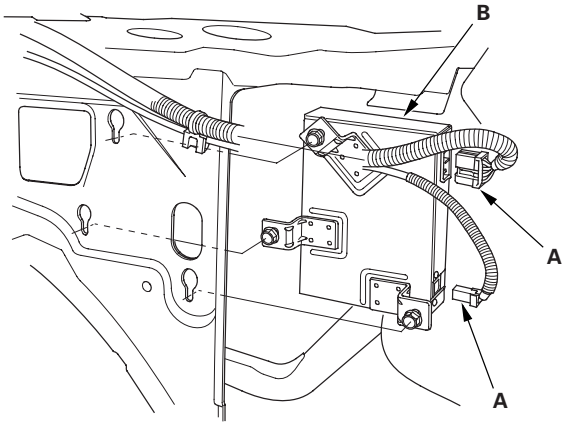


3. Remove the bolts and the USB adapter unit.
4. Install the USB adapter unit in the reverse order of removal.

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XM Receiver Removal/Installation

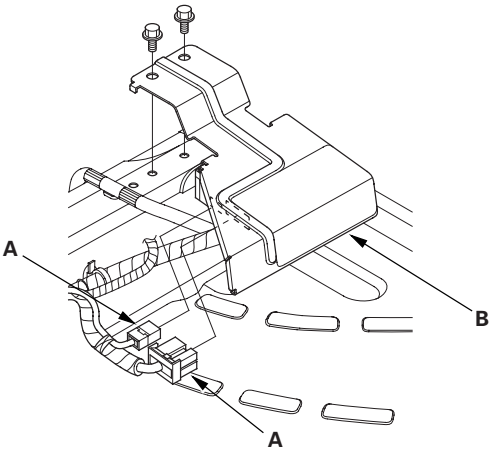
1. Open the trunk lid and remove the right trunk side trim panel (see page 20-80).
2. Disconnect connectors (A) from the XM receiver (B).



3. Loosen the three bolts, and remove the XM receiver.
4. Install the XM receiver in the reverse order of removal.

USB Adapter Unit Replacement

1. Remove the front passenger's seat (see page 20-118) and pull back the carpet.
2. Disconnect the connectors (A) from the USB adapter unit (B).



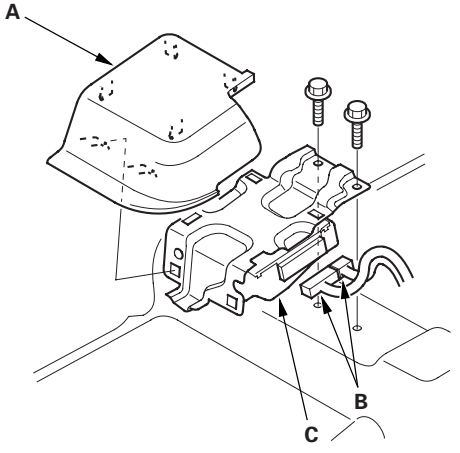
3. Remove the bolts and the USB adapter unit.
4. Install the USB adapter unit in the reverse order of removal.

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Stereo Amplifier Removal/ Installation

Type S model

1. Slide the driver's front seat forward fully.
2. Remove the amp cover (A), then disconnect the connectors (B).

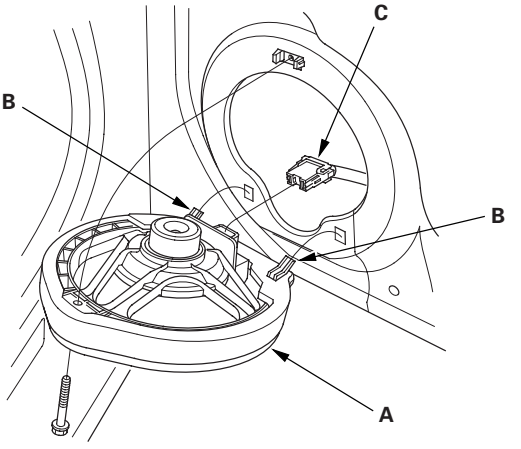


3. Remove the mounting bolts, then remove the stereo amplifier (C).
4. Install the stereo amplifier in the reverse order of removal.

Speaker Replacement

Front Door Speaker

1. Remove the front door panel (see page 20-7).
2. Remove the screw. Then lift the speaker (A) straight up to release the lower clips (B).



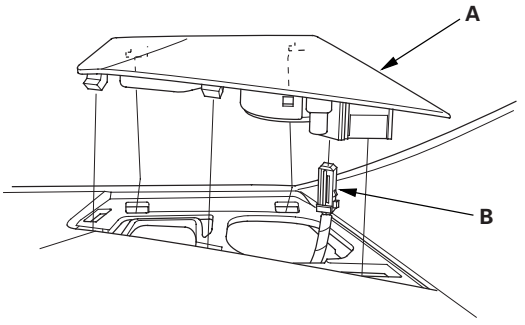
3. Disconnect the 2P connector (C), and remove the speaker.
4. Install the speaker in the reverse order of removal.

(cont'd)

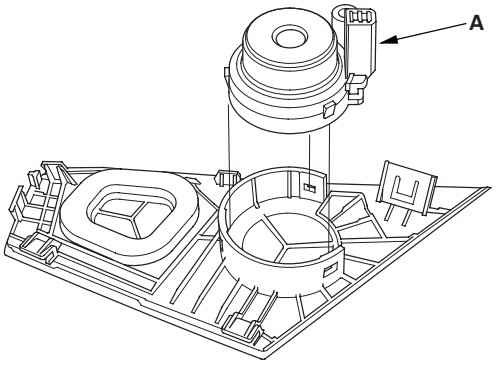
Speaker Replacement (cont'd)

Tweeter

1. Carefully pry the tweeter grille (A) out of the dashboard. Be careful not to damage the tweeter grille and the dashboard.



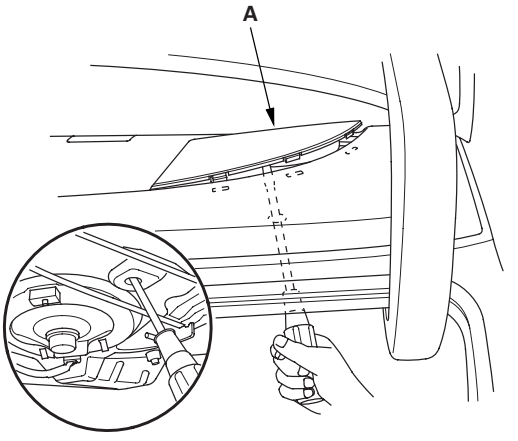
2. Disconnect the 2P connector (B) from the tweeter.
3. Remove the tweeter (A) from the speaker grille.



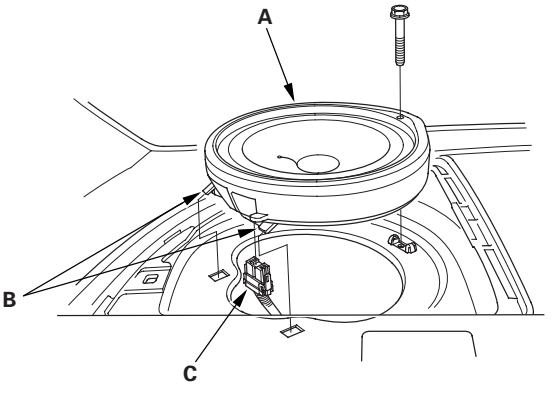
4. Install the tweeter in the reverse order of removal.

Rear Speaker

1. Remove the rear speaker grille (A).



2. Remove the screw. Then lift the speaker (A) straight up to release the clips (B).



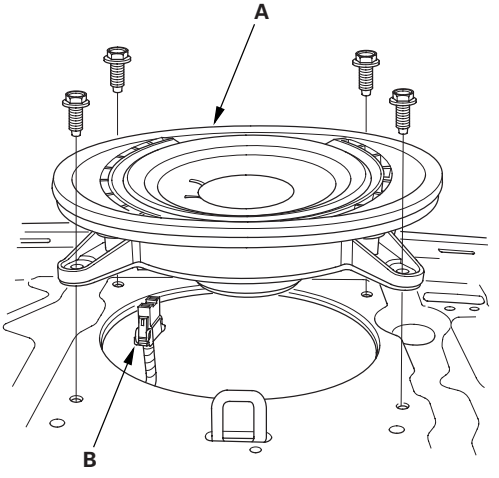
3. Disconnect the 2P connector (C), and remove the speaker.
4. Install the speaker in the reverse order of removal.

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Subwoofer (Type S model)

1. Remove the rear tray (see page 20-78).

2. Remove the four mounting bolts from the subwoofer (A).



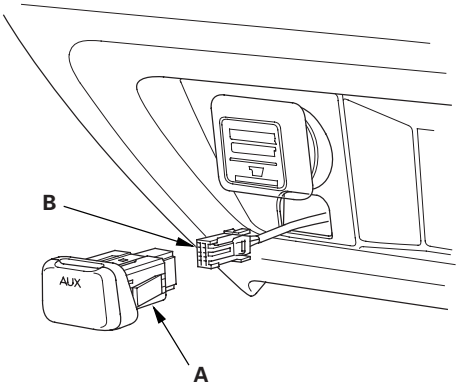
3. Disconnect the 2P connector (B), and remove the subwoofer.

4. Install the subwoofer in the reverse order of removal.

Auxiliary Jack Assembly Replacement

1. With navigation: Remove the navigation unit (see page 23-355).
   Without navigation: Remove the audio unit (see page 23-256).

2. Carefully pull out the auxiliary jack assembly (A), then disconnect the 5P connector (B).

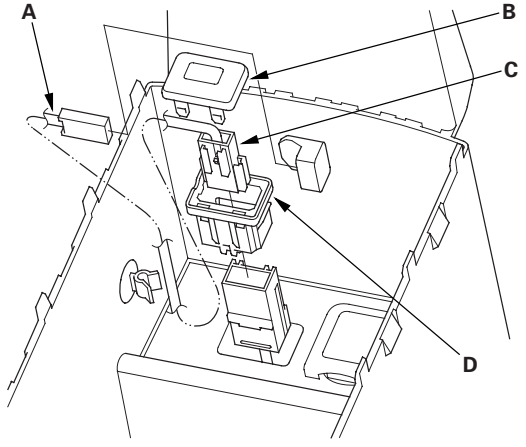


3. Install the auxiliary jack assembly in the reverse order of removal.

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USB Adapter Replacement

1. Remove the center console (see page 20-92).
2. Detach the USB adapter cable (A) from the clip. Remove the cover (B) and disconnect the USB adapter cable connector (C).

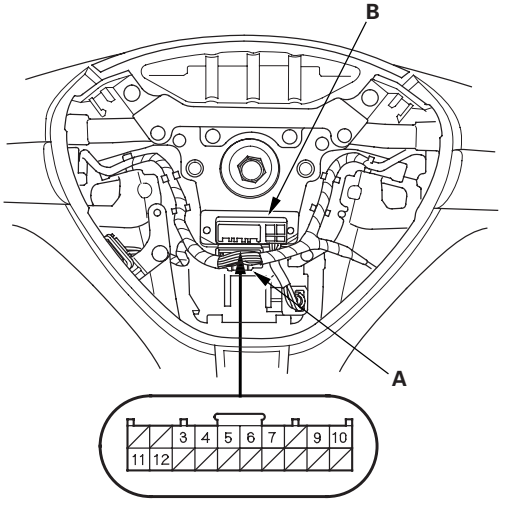


3. Carefully pull out the USB adapter holder (D) from the center console box.
4. Install the USB adapter in the reverse order of removal.

Audio Remote Switch Test

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

1. Remove the driver's airbag assembly (see page 24-188).
2. Remove the 20P connector (A) from the cable reel (B).



3. Measure the resistance between terminals No. 9 and No. 10 in each switch position according to the table.

Position	Resistance
No button pressed	About 10 kΩ
MODE	About 3.7 kΩ
CH (+)	About 1.7 kΩ
CH (−)	About 775 Ω
▲ (VOL.UP)	About 357 Ω
▼ (VOL.DOWN)	About 100 Ω

4. If the resistance is not as specified, replace the audio remote switch (see page 23-263).

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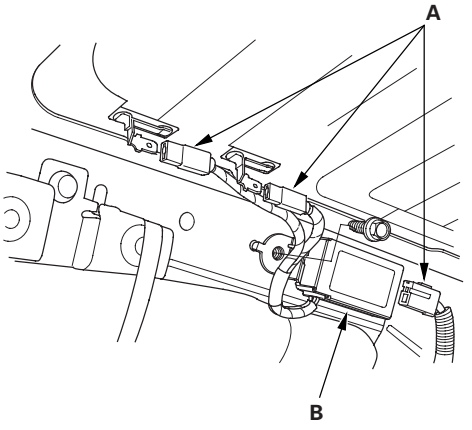
Audio Remote Switch Replacement

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

1. Remove the steering wheel (see page 17-6).
2. Remove the audio remote switch (see page 17-7).
3. Install the audio remote switch in the reverse order of removal.

AM/FM Antenna Amplifier Replacement

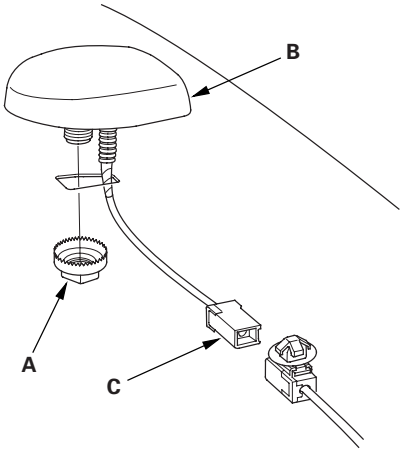
1. Remove the right side C-pillar trim (see page 20-75).
2. Disconnect the connectors (A) from the AM/FM antenna amplifier (B).



3. Remove the bolt and AM/FM antenna amplifier.
4. Install the unit in the reverse order of removal.

XM Antenna Replacement

1. Remove the headliner (see page 20-84).
2. Remove the nut (A) from the XM antenna (B).

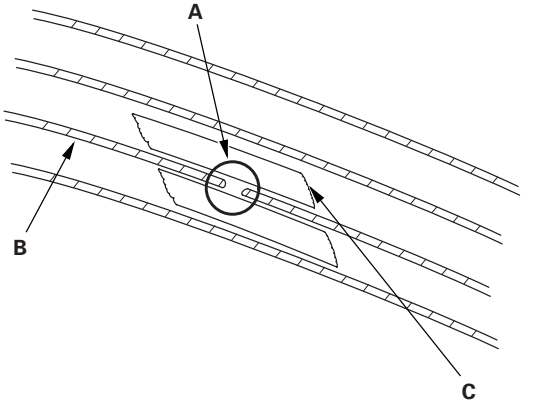


3. Disconnect the connector (C) and remove the XM antenna.
4. Install the antenna in the reverse order of removal.

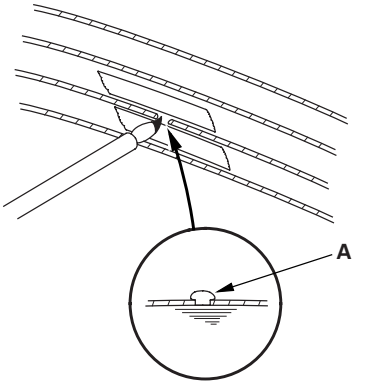
AM/FM Antenna Repair

NOTE: To make an effective repair, the broken section must not be longer than one inch.

1. Lightly rub the area around the broken section (A) with fine steel wool, then clean it with alcohol.



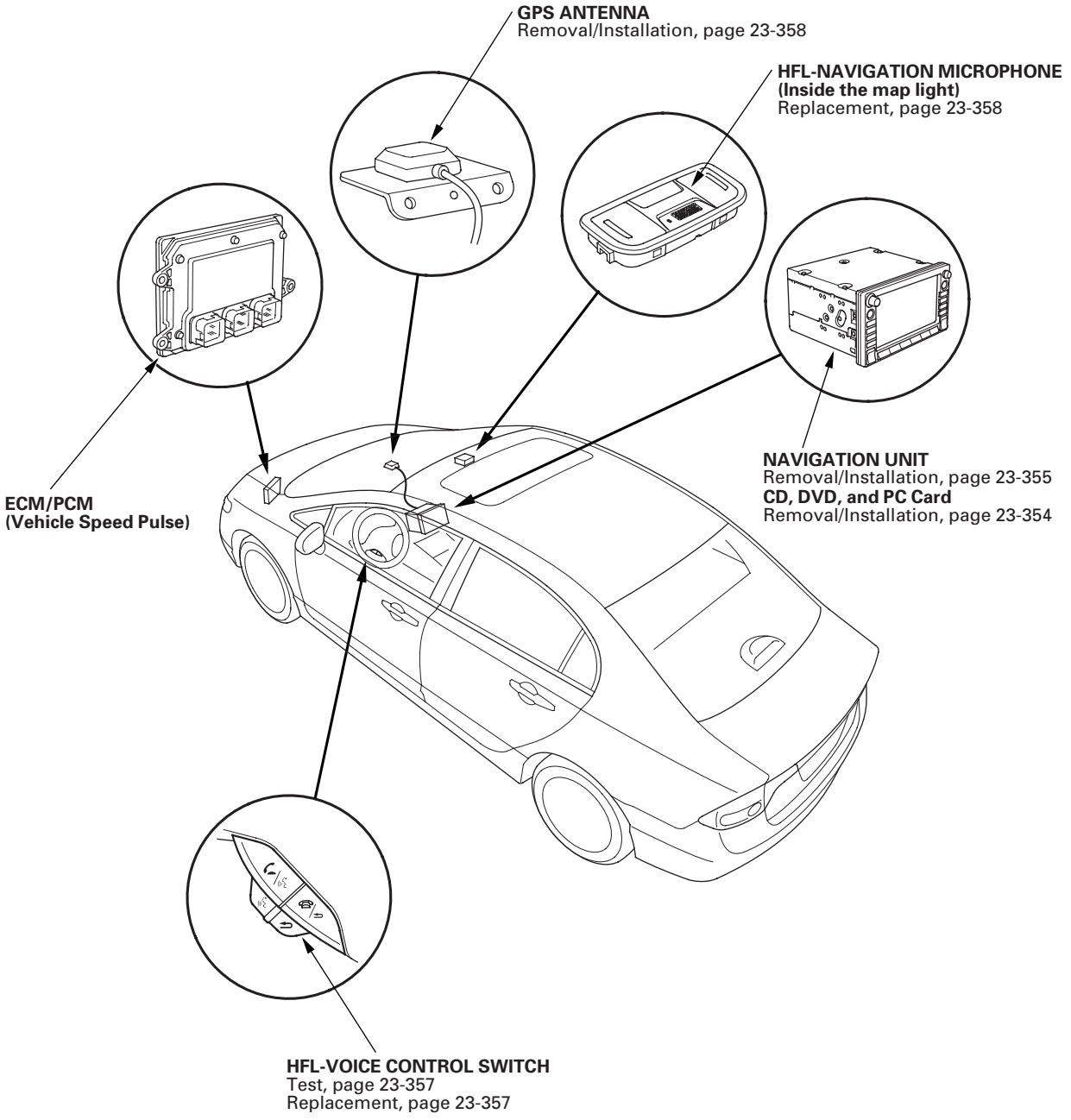
2. Carefully mask above and below the broken portion of the window antenna wire (B) with cellophane tape (C).
3. Mix the silver conductive paint thoroughly. Using a small brush, apply a heavy coat of paint (A) extending about 1/8'' on both sides of the break. Allow 30 minutes to dry.



4. Check for continuity in the repaired wire.
5. Apply a second coat of paint in the same way. Let it dry 3 hours before removing the tape.

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Component Location Index



General Troubleshooting Information

General Operation

Refer to the navigation system manual for the navigation system operating procedures.

Anti-theft Feature

The navigation system and audio unit have a coded theft protection circuit. Make sure you have the anti-theft security code before:

- Disconnecting the battery.
- Disconnecting the navigation unit connector A (24P) and C (8P).
- Removing the No. 23 (10 A) fuse from the under-hood fuse/relay box.

After service, reconnect power to the navigation unit, and turn the ignition switch to ON (II). Enter the 4-digit anti-theft security code, then select Done.

If the code cannot be found, use the interactive Network (iN) to look it up. You can view the serial number in one of the ECU Info diagnostic screens (see page 23-305). Alternatively, you can find the serial number on the underside label which is located on the navigation unit in the trunk.

When replacing the navigation unit, be sure to give the customer the new anti-theft security code.

Symptom Diagnosis

Certain circumstances and system limitations will result in occasional vehicle positioning errors. Some client's may think this indicates a problem with the navigation system when, in fact, the system is normal. Keep the following items in mind when interviewing client's about symptoms of the navigation system.

Self-Inertial Navigation Limitations

The limitations of the self-inertial portion of the navigation system (the yaw rate sensor and the vehicle speed signal) can cause discrepancies between the vehicle's actual position and the indicated vehicle's position (GPS vehicle position).

The following circumstances may cause vehicle positioning errors:

- Moving the vehicle with the engine stopped and the vehicle stopped, such as by ferry or tow truck, or if the vehicle is spun on a turn table.
- Tire slippage, changes in tire rolling diameters, and some driving situations may cause discrepancies in travel distances. Examples of this include:
  - Continuous tire slippage on a slippery surface
  - Driving with snow chains mounted
  - Abnormal tire pressure
  - Incorrect tire size
  - Frequent lane changes across a wide highway
  - Continuous driving on a straight or gently curving highway
  - Very bumpy roads
- Tolerances in the system and map inaccuracies sometimes limit how precisely the vehicle's position is indicated. Examples of this include:
  - Driving on roads not shown on the map (map matching is not possible)
  - Driving on a road that winds in one direction, such as a loop bridge, an interchange, or a spiral parking garage
  - Driving on a road with a series of sharp hair-pin turns
  - Driving near a gradual highway exit or transition
  - Driving on one of two close parallel roads
  - Making many 90 degree turns

Global Positioning System (GPS) Limitations

The GPS cannot detect the vehicle's position or elevation during the following instances:

- For the first 5 to 10 minutes after reconnecting the battery (this process can take as long as 45 minutes).
- When the satellite signals are blocked by tall buildings, mountains, tunnels, large trees, inside parking structures or large trucks.
- When the GPS antenna is blocked by metallic window tinting or by an object placed above it in the vehicle. The GPS antenna requires a clear unobstructed view of the sky.
- When there is no satellite signal output (signal output is sometimes stopped for satellite servicing).
- When the satellite signals are blocked by the operation of some electronic aftermarket accessories including, but not limited to non-OEM in-dash entertainment units (radio, CD players/changers, radar detectors and theft recovery systems) and cell phones placed near the navigation system.

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The accuracy of the GPS is reduced during these instances:

- Metallic window tinting above the GPS antenna.
- When only three or less satellite signals are received (Four satellite signals are required for accurate positioning).
- When driving near high tension power lines.
- When the satellite control centers are experiencing problems.

Muting Logic

Whenever the navigation system is giving guidance, the front speakers are muted. When the voice control system is being used, all of the speakers are muted. If the HandsFreeLink is in use, the voice control system is unavailable and a message appears onscreen.

LCD Unit Limitations

NOTE: The screen is not touch sensitive. Use the interface dial and buttons to select items on the screen.

- In cold temperatures, the display may stay dark for the first 2 or 3 minutes until it warms up.
- When the display is too hot because of direct summer sunlight, it will remain dark until the temperature drops (you may see an error message displayed stating this fact).
- When the humidity is high and the interior temperature is low, the display may appear cloudy. The display will clear up after some use.
- Fingerprints on the screen may be noticeable. Clean the screen with a soft, damp cloth. You may use a mild cleaner intended for eye glasses or computer screens. To avoid scratching the panel, do not rub too hard or use abrasive cleaners or shop towels.

Symptom Duplication

- When the symptom can be duplicated, verify that it is not a characteristic of the system. Review the navigation system manual and compare it to a known-good vehicle (with the same software and database), under the same conditions. If the symptom is not the same as the known-good vehicle, follow the self-diagnostic procedures and the appropriate troubleshooting procedures.
- When the symptom does not reappear or only reappears intermittently, ask the client about the conditions when the symptom occurred.
  - Always ask the client to demonstrate the problem.
  - Try to establish possible user error or a misunderstanding of the system.
  - Try to establish if outside interference may have been the cause.
  - Try to duplicate the symptom under the same conditions the client experienced.
  - Vibration, temperature extremes, and moisture (dew, humidity) are factors that are difficult to duplicate.
  - Inspect the vehicle for after-market electronic devices (vehicle locators, amps, radar detectors, etc.) that may be hidden.

NOTICE

When troubleshooting navigation system problems, ensure that the known-good vehicle is the same software version year and model as the vehicle being serviced. Mixing incompatible navigation DVDs or other system components can delay the troubleshooting process by creating symptoms or issues causing effects unrelated to the original problem.

(cont'd)

General Troubleshooting Information (cont'd)

Service Precautions

- If you need to replace the navigation unit, you can back-up the navigation data and transfer it to a new navigation unit. See Save users memory (see page 23-310).
- When the battery is disconnected, the internal GPS clock resets to 0:00. The clock resets to the correct time after the system finishes GPS initialization.
- Before disconnecting the battery, make sure you have the anti-theft codes for the audio system and the navigation system, and write down the audio presets. Also obtain any PGM-FI or transmission DTCs and freeze frame date (which are lost when the ECM/PCM loses power).
- After reconnecting the battery, you have to wait to get the initial signal from the satellite. It will take from 10 to 45 minutes.
- Adjust the setup clock settings (time zone and daylight savings) in the navigation system.
- Before returning the vehicle to the client, enter the anti-theft codes for the audio system and the navigation system.

System Initialization

If the navigation system loses power (like the battery was disconnected), the navigation system requires initialization. Once completed, your system is ready to use.

This initialization requires the following:

- Entering the 4-digit anti-theft security code to unlock the system
- GPS initialization (may not be needed depending of the length of time the system was without power)
- Map matching to align the GPS to a location on the map

Entering the Security Code

Any time the navigation system loses power, you need to enter the 4-digit anti-theft code on the navigation system display. This 4-digit code is located on a small code card that was given to the customer. Enter the 4-digit code, then select Done.

If the navigation system anti-theft code is missing, use the interactive Network (iN) to look it up. You need the serial number for the navigation unit to do this.
You can view the serial number by entering the diagnostic mode. Select Unit Check from the main menu, then the ECU info diagnostic screen. This allows you to get the serial number without removing the navigation unit.

The iN may display more than one code for a given serial number. This is because serial numbers are not unique. You may have to try more than one 4-digit code. If no code is shown, or if the code(s) given do not work in the navigation unit, contact the Automobile Warranty department. If the code 0000 works, replace the navigation unit.

When replacing the navigation unit or audio unit, make sure you give the client the new anti-theft security code.

GPS Initialization

NOTE: You must park the vehicle outside with a clear view of the southern sky.

Depending on the length of time the battery was disconnected, your system may require GPS initialization. If it does, the following screen appears:

The navigation system lost power and is acquiring its location from the GPS satellites. This usually takes less than 10 minutes.

*** Start the engine.**
*** Park the vehicle in an open area away from trees, power lines, and tall buildings.**
*** Remove loose articles, cell phones, or electrical accessories located near the GPS antenna.**
*** If this screen is displayed repeatedly when starting the vehicle, see your dealer.**

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If this procedure is not necessary, the system proceeds directly to the Disclaimer screen. During initialization, the system searches for all available GPS satellites, and obtains their orbital information. During this procedure the vehicle should be out in the open with a clear view of the sky.

If the navigation system finds the satellites properly, this box clears, and changes to the Disclaimer screen. If within 10 minutes the system fails to locate a sufficient number of satellites to locate your position, the following screen appears.

Something is interfering with the system's ability to acquire its location. Check the following:

*** The vehicle must be in an open area with a clear view of the sky.**
*** Remove sources of GPS interference like metallic window tint above antenna, or electrical items near antenna(see owner's manual for details).**
*** Check GPS antenna cable connection.**
*** Restart the engine and repeat the GPS acquire procedure. If the problem persists, see your dealer.**

It this screen appears, turn off the engine, then restart the vehicle and move it to a different location. If the disclaimer screen appears, the GPS initialization is complete.

NOTE:
- The average acquiring time is less than 10 minutes, but it can take as long as 45 minutes.
- If the system is still unable to acquire a signal, follow the instructions on the screen. If this screen appears again, go to troubleshooting for the GPS icon is white or not shown (see page 23-341).
- Skip to a CSF screen by pushing the MENU and INFO buttons at the same time and can move to an System Links screen.

Map Matching

This part of the initialization matches the GPS coordinates with a road on the map screen. To do this part of the procedure, make sure that the navigation system is displays a map, and drive the vehicle on a mapped road shown on the map screen. Do not enter a destination at this time. When the name of the current road you are driving on, appears at the bottom of the screen, the entire procedure is complete. Your system is now ready to use.

Obtaining A Navigation DVD

If the Navigation DVD is lost or damaged, or you need a yearly updated DVD, you have two ways to purchase one. You can either call 888-549-3798, or order on-line at www.acura.com.

Both methods require a credit card. The DVD cannot be ordered through the parts system. The following DVDs will not work in this navigation system:

- Earlier model navigation DVDs (black, orange, light blue label and the older versions with a white label)
- Map software programs manufactured by other companies
- DVD movies, or DVDs containing audio recordings

Update DVDs are available for purchase usually in the fall of each year. They may contain the following:

- Enhanced maps and points of interest (POI) coverage
- Fixes for minor software bugs
- Additional features

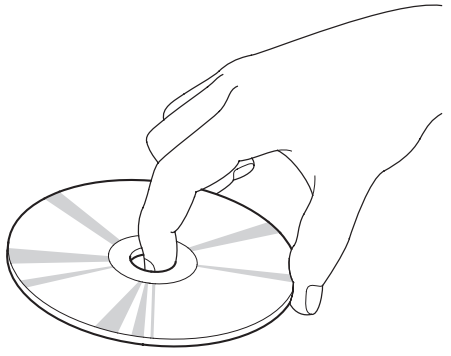
NOTE:
- Map matching must be done any time the DVD is removed or replaced.
- Always order navigation DVDs on an as-needed basis. During a typical model year, each color DVD may undergo a half a dozen software only version upgrades to fix minor issues on some or all models the DVD supports. This is normal. Usually only the letter at the end of the version number changes, while the database (maps and POIs) remain unchanged.
- Never promise your customer future free updates. There are no free programs for updating the navigation DVD. Update DVDs are generally available for purchase each fall. The online DVD order site provides information when an update for a particular color DVD is available.
- Damaged discs are not covered by warranty unless they have been damaged by the navigation system.

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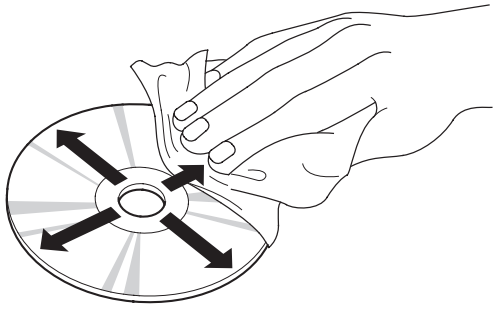
General Troubleshooting Information (cont'd)

DVD Handling and Cleaning

To avoid damaging or leaving fingerprints on the DVD, always handle it by the edges and place it in a jewel case whenever it is outside the navigation unit. Deep scratches or fingerprints on the back of the DVD can cause intermittent rebooting or other system errors.



Smudges and fingerprints can be carefully removed using a mild cleaner and tissues designed to clean eyeglasses. To clean a DVD, use a clean soft cloth. Very gently wipe across the DVD from the center to the outside edge, never in a circular motion.



Do not place stabilizer rings or labels on the DVD.

Earliest DVD Version Application for Each Model

Each navigation system DVD contains a map/POI (point of interest) database and the navigation system software for each model that it supports. Inserting an older DVD can cause problems since it lacks the software to provide the specific features needed for that model. Unfortunately, the navigation software does not detect or warn you that the version is outdated, and it may even appear to operate.

NOTE: Replacing a DVD just because the version number is higher is not always warranted. A higher software version does not necessarily mean it contains newer software for your model. The DVD contains software for all models that use the same color DVD, and a revised number may or may not have software fixes or upgrades for the model in question.

Typical warning symptoms that an outdated DVD is being used include:

- The Acura model navigation screen may display a Honda logo while booting up.
- A newly introduced model feature or current accessory may not display properly, and Extension will display instead.

  NOTE: Extension may be displayed when using Music Link, but should never be displayed when XM is selected.

- The current street (the street being driven on) does not appear properly at the bottom of the map screen display when the vehicle is driven on a main road.

  NOTE: If necessary, compare the operation to the navigation system of the same model and year vehicle that has a current DVD.

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How to Identify Navigation DVD Versions, and How to Inspect A DVD for Damage

To determine the navigation version on a particular model, start the engine, then locate the navigation unit. Open the DVD door, and push the eject button to eject the DVD. Hold the DVD by the edges, and check for these items:

- Check any official Acura service website for more service information about the navigation DVDs.
- The DVD label color.
- Read the DVD version on the label, and note it on the repair order. The version number is near the bottom of the label text (for example, ver: 4.23A). You will need this version number:
  - To verify that the DVD version is appropriate for the vehicle. Check any official Honda service website for more service information.
  - Any time you call Tech Line regarding a navigation system issue.
  - To answer client inquires concerning update or coverage issue.

    NOTE: Client's may obtain DVDs from sources outside the normal ordering process. If you determine this is the case, recommend that your customer purchase the appropriate DVD from the Acura Disc Fulfillment Center (see ORDERING A DVD).

  - Check the underside of the DVD for signs of mishandling. Deep scratches, or random scratches, light swirl marks, or fingerprints can cause random lock-ups, reboots, erratic voice response, erratic positioning errors, and DVD read or format errors.

    NOTE: A damaged DVD is not covered under warranty unless the disc is damaged by the navigation unit. Damage by the navigation unit typically appears as circular scratches caused by something rubbing against the DVD as it spins. The damage may appear as arcs or complete circles on the DVD reading surface.

  - Verify that the underside of the DVD is silver, and not a copy with a blue color. Copies will not work properly and can cause other symptoms that mimic hardware problems.
- Incorrectly colored DVDs being put into navigation vehicles. This causes the system to either display error messages, or causes system malfunctions that mimic a hardware problem. This results in the client leaving with a malfunctioning navigation system.
- The DVD version provided to the client is out-of date or incompatible with a particular model. This inconveniences your client by delaying the repair, or by causing additional (and unnecessary) returns to your dealership.
- The client experiences bugs or other issues that have already been resolved in later versions currently available at the fulfillment desk.

If the DVD is defective, or has any of the issues mentioned above, return the vehicle to your client and recommend that they order the proper DVD from the Acura Disc Fulfillment Center.

NOTE: Navigation DVDs do not come with replacement navigation units. If you are replacing a navigation unit because it is defective (following appropriate service manual troubleshooting), and the DVD does not eject, order a DVD. See Obtaining a navigation DVD.

(cont'd)

General Troubleshooting Information (cont'd)

How to Answer Client Questions About Navigation Coverage

Some clients may ask questions regarding a city, address, or POI (point of interest) covered by the navigation system. It is better to verify a coverage question on an actual vehicle than to disappoint your client by promising coverage that may be incomplete or missing in their area. The following suggestions can be used to answer coverage inquiries from your client.

Is my address covered by the navigation system?

Using a current production vehicle (of the same model), try and enter the client's address (street first) to see if their area is covered. Always enter the street first, because sometimes their city may be included in a neighboring township, or under some larger metropolitan city name. If the address is shown in a later year vehicle, but not your client's vehicle, you might recommend that your client purchase an update.

Is my city covered by the navigation system?

For general questions about whether a city is covered, view the map coverage link on the DVD order site. On the site, select a year, and select a model, then click on the Coverage link. You then select a state or province, and the cities are listed. Of course, this does not guarantee that the customer's road or address is in the system. Verifying on an actual production vehicle is always the best guarantee that your information is accurate.

The gas station on my corner is now a restaurant. Why is it still incorrect in the navigation system?

For POI-related client questions, explain that businesses are constantly moving, and there can be a considerable lag in updating the millions of POIs in the system. The database is updated annually, and the best way to the verify whether the POI is accurate is verify the inquiry on a current production vehicle.

Answers to these and other questions regarding coverage can be found in these locations:

- In the Frequently Asked Questions section of the navigation system manual.
- At the online DVD order site, by clicking on the FAQs link.

How do I find the local address of a business that is part of a national chain (for example, Starbucks)?

There are three ways to find the local address to businesses:

- If you know the phone number of the business, select Phone Number and enter the 10 digit phone number (area code plus seven digit number).
- Select Category, then Restaurant. Enter the keyword Star. The resulting list includes all restaurants that have the letters Star anywhere in the name.
- Select Name and enter Starbucks. For more common business names, like McDonalds, you may have to search through a list that includes other businesses like McDonalds Welding, McDonalds Automotive, etc.

Precaution on Client "Sneak Previews"

Your client might request a look (or sneak preview) at features in the latest navigation software. You should never preview a navigation DVD in a client's vehicle. Inserting a newer DVD installs the latest software from the DVD into the memory of the client's navigation system. When the original DVD is reinstalled, the newer software remains in memory and is often incompatible with the client's original DVD Map and POI database, or software.

If your client wishes to see the latest navigation coverage or software features, demonstrate it on an in-stock vehicle that already has the latest DVD version.

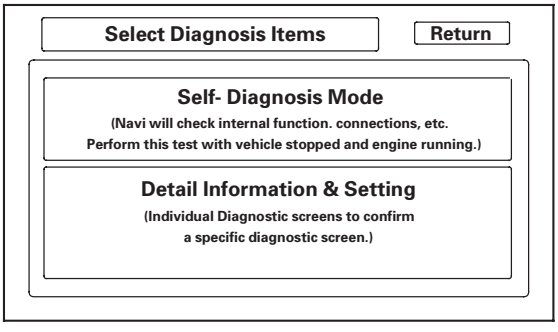
If a newer version is loaded either by the dealer or the client, the only remedy is to enter the navigation diagnostic mode's Version screen and do a forced download. Check any official Honda service website for more information about what patches may need reinstalling.

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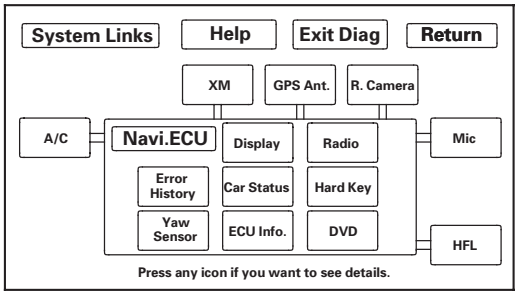
How to Check Error History

The Error History feature is to record intermittent navigation issues that occur while using the system. Sometimes the client complaint cannot be duplicated. The error history may record the information needed to diagnose the problem. To check the error history:

1. Start the engine.
2. Press and hold the MAP/GUIDE, MENU, and CANCEL buttons for 3 seconds.
3. When the Select Diagnosis Items menu is displayed, select Detail Information & Setting.

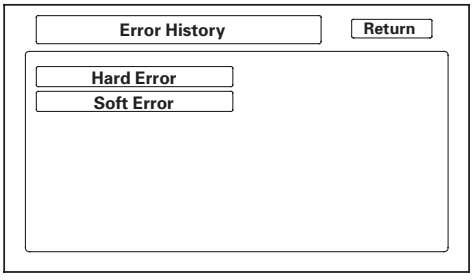


4. When the navigation unit has hard codes, the Error History icon appears yellow when the Self Diagnosis mode (System links) screen is displayed. When no hard errors are stored, the icon appears gray. To view the errors with their DTC codes, select the error history icon.



5. Select Hard Error.

   NOTE: Soft errors are for factory use only.



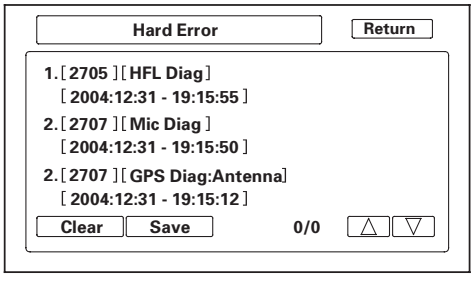
Hardware Error History

6. The Hard Error screen displays the following information for each error:

   - The DTC trouble code for the error
   - A brief description of the DTC code
   - The date and time when the error occurred.

   NOTE:
   - To see additional errors, use the joystick to select UP or DOWN.
   - Select Clear to delete the error history. The Save feature is for factory use only.

7. Use the DTC Symptom Troubleshooting table to troubleshoot the error.



8. Clear the DTCs.
9. Select Return to exit the error history.

Software Error (Soft error) History

Software errors are not available. They are for factory use only.

(cont'd)

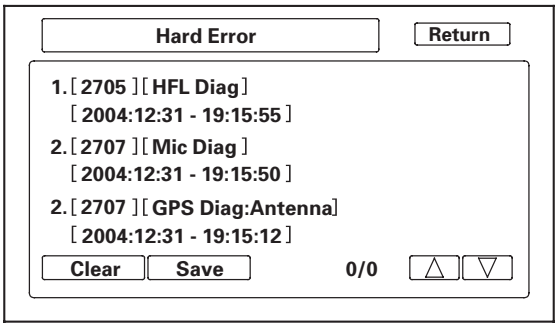
General Troubleshooting Information (cont'd)

How to Clear Error History

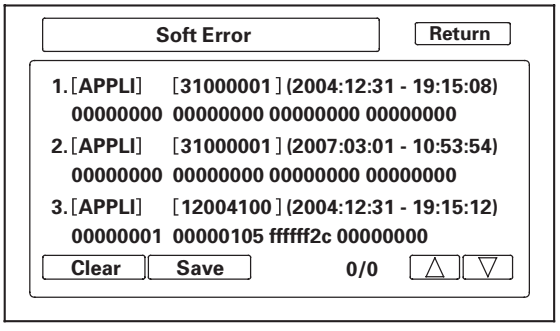
1. Do the steps in How to check Error History.
2. Select Clear in the error menu.

NOTE:
- By selecting Clear, all software and hardware errors stored in history are erased at the same time.
- Save is for factory use only.

Hard error history is displayed

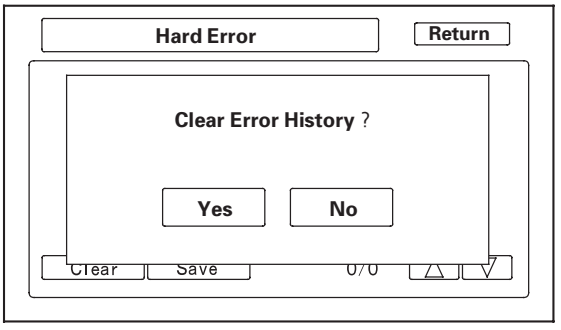


Soft error history is displayed (Soft errors are for factory use only)

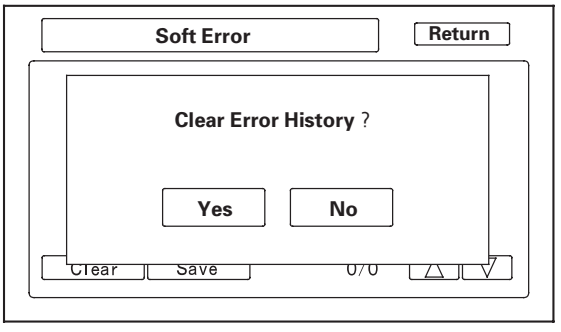


3. After selecting Clear, then selecting Yes, both Hard Error history and Soft Error history are cleared at the same time.

Hard error history clear



Soft error history clear (Soft errors are for factory use only)



4. Press return to exit.

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DTC Troubleshooting Index

DTC	Description	Circuit	Failure Detection	Page	Also Check for
1001	FROM system Info Error	Flash ROM management	Navigation unit internal data error.	(see page 23-320)	Low or weak battery voltage
1101	Media Bus Send Error	Media condition monitoring	Navigation unit internal media error.	(see page 23-320)	Low or weak battery voltage
1201	DVD High Temp	DVD drive	Navigation unit temperature above the upper limit. Failure in navigation unit fan circuit.	(see page 23-321)	• Low or weak battery voltage • High temperature around the navigation unit
1202	DVD Low Temp	DVD drive	Navigation unit temperature below the lower limit.	(see page 23-321)	• Low or weak battery voltage • High temperature around the navigation unit
1301	GPS Antenna Error	GPS Antenna	GPS antenna circuit malfunction.	(see page 23-322)	Low or weak battery voltage
1302	GPS Receiver Error 1	GPS Receiver	GPS antenna circuit malfunction. Navigation unit internal GPS receiver malfunction.	(see page 23-323)	Low or weak battery voltage
1303	GPS Receiver Error 2	GPS Receiver	Navigation unit internal GPS receiver malfunction.	(see page 23-324)	Low or weak battery voltage
1305	Gyro Error 2: ECU Temp XX ℃	Gyro	Navigation unit internal gyro malfunction.	(see page 23-324)	Low or weak battery voltage
1306	Vehicle Speed Pulse	Vehicle Speed Pulse	VSP circuit malfunction.	(see page 23-325)	Check for F-CAN DTCs
1307	DVD Read Error	DVD	Scratched/Dirty DVD or navigation unit internal DVD ROM drive.	(see page 23-325)	Low or weak battery voltage
1402	Audio Error 2	CD	Mechanical malfunction in the CD changer.	(see page 23-326)	Low or weak battery voltage
1409	Audio Error 9	XM	XM Antenna/circuit malfunction.	(see page 23-326)	Low or weak battery voltage
2607	XM Diag	XM	GA-NET Bus circuit malfunction Open/Short. XM Antenna circuit malfunction.	(see page 23-327)	
2609	VRAM Diag	ECU VRAM	Navigation unit internal VRAM malfunction.	(see page 23-329)	
2610	DRAM Diag	ECU DRAM	Navigation unit internal DRAM malfunction.	(see page 23-330)	
2701	GPS Diag: Antenna	GPS	GPS antenna malfunction.	(see page 23-330)	
2702	GPS Diag: Receiver in Navi	GPS	GPS antenna malfunction.	(see page 23-331)	
2703	Aircon Diag	Aircon	Communication error between climate control unit and navigation unit (open/short).	(see page 23-331)	Check for F-CAN DTCs
2705	HFL Diag	HFL	HandsFreeLink control unit internal malfunction.	(see page 23-334)	Check for F-CAN DTCs
2706	Gyro Diag: ECU Temp XX ℃	Gyro	Navigation unit internal malfunction.	(see page 23-336)	
2707	Mic Diag	Mic	Mic circuit malfunction Open/Short.	(see page 23-337)	

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Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
Navigation system stays on the GPS initialization screen	System Initialization (see page 23-268)	• Navigation unit • GPS antenna/cable is disconnected or damaged • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
Vehicle position icon constantly leaves road, moves erratically, or is displayed very far from actual vehicle position	Symptom Troubleshooting (see page 23-344)	• Navigation unit • GPS antenna/cable • ECM/PCM (speed and fuel pulses) • Harness/fuses/switches
System always comes up in in-line diagnostic mode	Symptom Troubleshooting (see page 23-347)	
Navigation system will not accept security code	Symptom Troubleshooting (see page 23-353)	The wrong color DVD is installed
Navigation frequently asks for anti-theft code and/or needs GPS initialization	Symptom Troubleshooting (see page 23-350)	• Loss of voltage or poor ground (G504, G505) • Navigation unit • Low battery voltage • Harness/fuses/switches
GPS icon is white or not shown	Symptom Troubleshooting (see page 23-341)	• Navigation unit • Aftermarket accessories connected to the system • The wrong color DVD is installed • The DVD is damaged or dirty • GPS antenna/cable • Harness/fuses/switches
Vehicle icon wanders across the map when driving (does not follow a displayed road) or map or vehicle ICON spins	Symptom Troubleshooting (see page 23-345)	• Navigation unit • GPS antenna/cable • ECM/PCM (speed signal)
No picture is displayed	Symptom Troubleshooting (see page 23-338)	• Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
Picture has lines/rolls/other issues or is an odd color	Symptom Troubleshooting (see page 23-339)	• Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Aftermarket accessories connected to the system • Harness/fuses/switches
Display day/night mode does not work or does not work properly	• If you use the display mode button, the auto day/night function is disabled until you turn the ignition switch to ON (II) • Symptom Troubleshooting (see page 23-348)	• Display brightness set to High in day or night mode • Gauge control module • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
System locks up or freezes constantly	Symptom Troubleshooting (see page 23-348)	• Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches

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Symptom	Diagnostic procedure	Also check for
Voice guidance cannot be heard, is broken up, or there is static	Symptom Troubleshooting (see page 23-341)	• Volume or voice feedback setting (see Owner's manual) • Navigation unit • Stereo amplifier • Harness/fuses/switches
Voice control does not work/ respond	Symptom Troubleshooting (see page 23-342)	• Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Microphone harness/switches HandsFreeLink control unit
Navigation cannot control HVAC by voice command	Symptom Troubleshooting (see page 23-346)	• The wrong color DVD is installed • Harness/fuses/switches • Wrong navigation unit (model code)
Navigation cannot control XM radio	Symptom Troubleshooting (see page 23-350)	Low or weak battery
Navigation cannot control audio system	Symptom Troubleshooting (see page 23-349)	Wrong color DVD
Navigation display buttons do not work or respond properly	Symptom Troubleshooting (see page 23-340)	• Navigation unit • Open/short between the XM receiver or the GA-Net bus • The wrong color DVD is installed • The DVD is damaged or dirty
Today's Destinations button is dim and not selectable in the Enter destination by screen (grayed-out)	The client has not entered a group of locations for Today's Destinations. This is normal. The button is only selectable if the client is using this function	See Owner's Manual
Some set-up and information functions of the navigation system are grayed-out and do not work	Client did not select OK from Disclaimer screen. Refer to System Function Diagram (see page 23-289)	
Previous Destinations button is dim and not selectable in the Enter destination by screen (grayed-out)	The vehicle may be new, or the customer deleted the destination. Enter a destination, and allow the system to route to it. After the trip, the Previous Destinations button will be selectable	
Address cannot be found or system gives poor routing	• Verify proper operation and system limitations using the owner's manual. • See Answering client question Navigation coverage in general troubleshooting • Refer to Database limitation in the navigation system manual to report database errors	• Database limitations (address not in database) • The wrong color DVD is installed
OPEN/CLOSE function of the display does not work	Symptom Troubleshooting (see page 23-351)	• Navigation unit • Harness
Navigation display will not close	Symptom Troubleshooting (see page 23-352)	• Navigation unit • Harness
Navigation display does not open or opens part way	Symptom Troubleshooting (see page 23-352)	• Navigation unit • Harness

(cont'd)

Symptom Troubleshooting Index (cont'd)

Symptom	Diagnostic procedure	Also check for
PC card will not play/card icon on audio screen cannot be selected	Symptom Troubleshooting (see page 23-234)	Navigation unit
Navigation display stays on with ignition switch in LOCK (0)	Symptom Troubleshooting (see page 23-349)	• Harness/fuses/switches • Aftermarket accessories connected to the system
DVD read error messages	Symptom Troubleshooting (see page 23-346)	• Navigation unit • The wrong color DVD is installed • Damaged DVD
Navigation system will not go beyond the disclaimer screen and displays the OK button	See navigation display buttons do not work or respond properly	• The wrong color DVD is installed • Scratched or damaged DVD • Navigation unit
The navigation anti-theft code card is lost or missing	See anti-theft feature (see page 23-266)	
The vehicle icon lags behind when the vehicle turns	See self-inertial navigation limitations (see page 23-266)	• Aftermarket accessories connected to the system • GPS antenna/cable
Navigation screen is darker than normal or takes time to brighten when it is cold	See LCD unit limitations (see page 23-267)	
The navigation clock is off by 1 to 3 hours after replacing the navigation unit	See service precautions (see page 23-268)	• Perform map matching (see page 23-269) • GPS antenna/cable • Check and adjust the clock settings
A new navigation DVD is needed	See obtaining a navigation DVD (see page 23-269)	
Time is not correct	Reset Time Adjustment in set-up	The wrong colored DVD or version is installed
The DVD is scratched or dirty	See DVD Handling and Cleaning (see page 23-270)	Navigation unit
The wrong DVD was installed and now the system does not function properly	See Precaution client Sneak Previews (see page 23-272)	• Install the correct version DVD • Check any official Honda service website for more service information about the navigation system.
A specific city cannot be found	See How to answer client questions about navigation coverage (see page 23-272)	• The DVD is scratched or dirty • Refer to Database limitation in the navigation system manual to report database errors
The Honda Globe Screen (not the Acura Globe Screen) appears every time the vehicle is started	Symptom troubleshooting (see page 23-354)	Also see the symptom The wrong DVD was installed and now the system does not function properly

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System Description

Overview

The navigation system is a highly sophisticated, hybrid locating system.

The navigation unit uses global positioning system (GPS) satellite signals, internal yaw and vehicle speed inputs, and a map database to show where the vehicle is and to help guide you to a desired destination.

The navigation unit's GPS receiver receives signals from the GPS, a network of 24 satellites in orbit around the earth. By receiving signals from several of these satellites, the navigation system can determine the latitude, longitude, and elevation of the vehicle.

Signals from the system's yaw rate sensor (inside the navigation unit) detects turns, and the ECM/PCM vehicle speed pulse (VSP) and reverse signal enable the system to keep track of the vehicle's speed and direction of travel. The advantage of this hybrid system is that the system can track your position if either the GPS signal or the vehicle speed signal is missing. For instance, when in a tunnel (no GPS), the speed signal is used to update your position on the map. Alternately, while the vehicle is being transported on a ferry, GPS signals can show the vehicle position on the map as it crosses the water.

The navigation system uses the location, direction, and speed information to display the appropriate map and calculate a route to the destination entered. As you drive to a destination, the system provides both visual and audio guidance. Audio guidance is sent to the audio unit, and an RGB graphics color signal is sent to the navigation display.

This navigation system also has voice recognition that allows voice control of most of the navigation, and audio functions. The voice control switches (navigation TALK and navigation BACK buttons on the steering wheel) activate the voice control system. The microphone on the ceiling receives your voice commands. For more information on this feature, consult the navigation owner's guide.

The illumination signal is used by the navigation unit to automatically switch the display mode between the Night and Day display modes. When the headlights are on, the dash brightness control setting full brightness overrides the Night display mode, and allows a daytime navigation display with the lights on.

When the navigation system is giving voice guidance commands, the front speakers are muted. When the voice control system is being used (navigation TALK button pressed), all of the speakers are muted.

The internal GA-Net II bus passes information back and forth between the navigation display, the navigation unit, and the audio system components. The information passed on this bus are touch button commands, audio muting signal, audio (radio and XM), and any open in these bus lines can affect the navigation system or other audio accessory operation.

The clock on the navigation display is set and maintained by the navigation unit. The time is automatically adjusted for daylight savings, and time zone changes while driving. The time can be adjusted in setup.

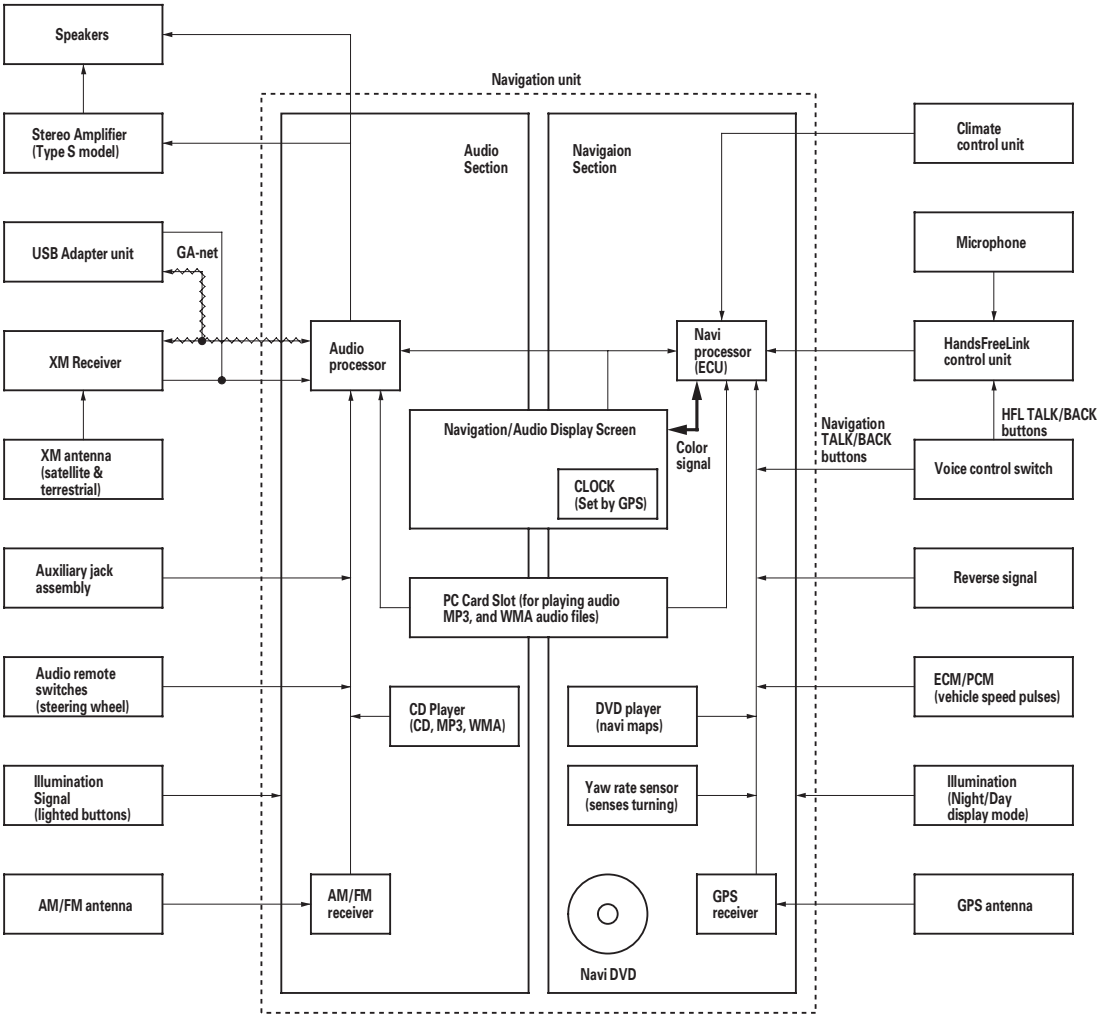
Additional information is available about the navigation components following the System Diagram. A glossary of terms that are used throughout this section follows the detailed information.

The Navigation System Manual in the glove box covers all of the system functions and settings. Use this as a resource when evaluating a customer concern.

The Comm.Bus connects the HFL and the navigation unit.
If a POI phone number is available, the navigation unit sends the phone number (on the calcurate route to screen) to the HandsFreeLink control unit for dialing.

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System Description (cont'd)

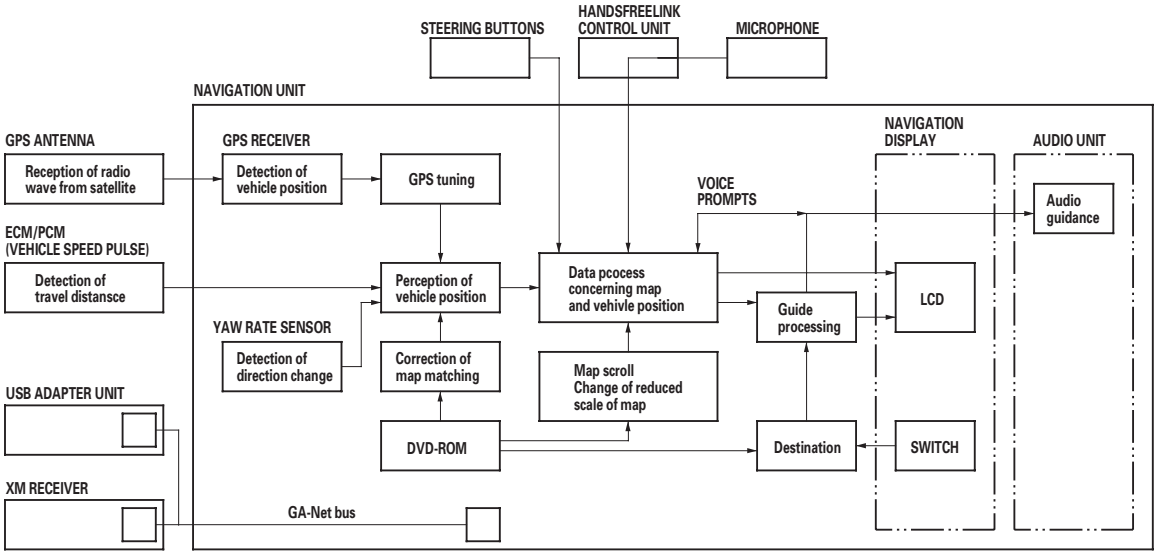


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Navigation Function

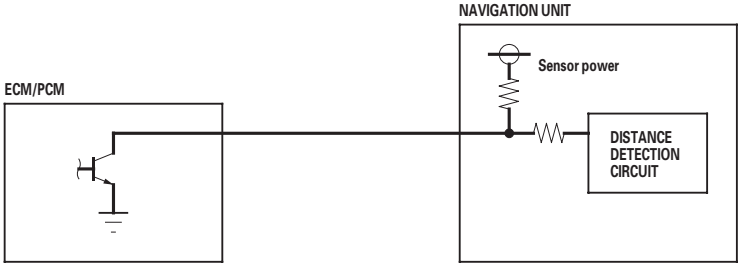
The navigation system is composed of the navigation unit, the ECM/PCM (vehicle speed signal), the GPS antenna, microphone, voice control switch, XM receiver, and the climate control unit.
These units communicate with each other on the GA-Net bus.

Function Diagram



Vehicle Speed Pulse

The vehicle speed pulse is sent by the ECM/PCM. The ECM/PCM receives a signal from the output shaft (countershaft) speed sensor, then it processes the signal and transmits it to the speedometer and other systems.



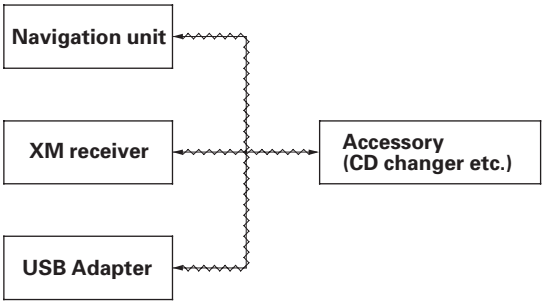
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System Description (cont'd)

GA-Net Bus Configuration

The GA-Net bus passes audio and navigation commands throughout the navigation and audio components. These commands include audio/XM selections by voice, and XM station and music title names. Because the entire bus is daisy chained between components (see diagram below), any open or short in the GA-Net bus harness will cause any or all of these functions to become inoperative. The addition of any factory audio accessory must maintain the continuity of the GA-Net bus by installing the Y cable included with the accessory kit.



Muting Signal Logic

The audio muting logic is orchestrated by the navigation unit. The navigation unit determines what audio source has priority to use the speakers.

The priority of the audio sources is as follows:
HandsFreeLink has the highest priority, followed by, navigation, and finally the radio/CD player. The priority is passed by HandsFreeLink to the navigation unit by dedicated mute wires. The navigation mute signal is passed to the stereo amplifier.

The navigation unit temporarily disables the voice control buttons, but allows guidance to be heard. In addition, the navigation unit suppresses the output from the XM receiver, disc player, or other audio accessories.

When the navigation system sends out a voice route guidance command, the rear speakers are muted, and the navigation voice is heard in the front speakers.

When the navigation voice control system and HandsFreeLink is use, the rear speakers are muted, and the navigation voice prompts are heard from the front speakers.

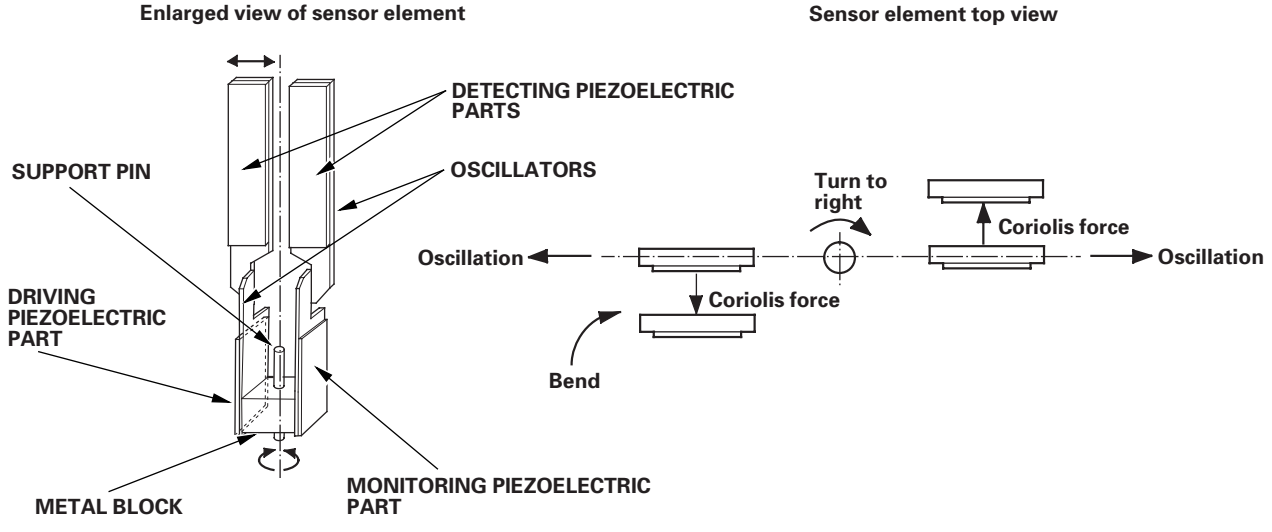
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Yaw Rate Sensor
The yaw rate sensor (located in the navigation unit) detects the direction change (angular speed) of the vehicle. The sensor is an oscillation gyro built into the navigation unit.

Sensor Element Structure
The sensor element is shaped like a tuning fork, and it consists of the piezoelectric parts, the metal block, and the support pin. There are four piezoelectric parts: one to drive the oscillators, one to monitor and maintain the oscillation at a regular frequency, and two to detect angular velocity. The two oscillators, which have a 90-degree twist in the center, are connected at the bottom by the metal block and supported by the support pin. A detection piezoelectric part is attached to the top of each oscillator. The driving piezoelectric part is attached to the bottom of one oscillator, and the monitoring piezoelectric part is attached to the bottom of the other oscillator.

Oscillation Gyro Principles
The piezoelectric parts have electric/mechanical transfer characteristics. They bend vertically when voltage is applied to both sides of the parts, and voltage is generated between both sides of the piezoelectric parts when they are bent by an external force. The oscillation gyro functions by utilizing this characteristic of the piezoelectric parts and Coriolis force. (Coriolis force deflects moving objects as a result of the earth's rotation.) In the oscillation gyro, this force moves the sensor element when angular velocity is applied.

Operation
1. The driving piezoelectric part oscillates the oscillator by repeatedly bending and returning when an AC voltage of 6 kHz is applied to the part. The monitoring-side oscillator resonates because it is connected to the driving-side oscillator by the metal block.
2. The monitoring piezoelectric part bends in proportion to the oscillation and outputs voltage (the monitor signal). The navigation unit control circuit controls the drive signal to stabilize the monitor signal.
3. When the vehicle is stopped, the detecting piezoelectric parts oscillate right and left with the oscillators, but no signal is output because the parts are not bent (no angular force).
4. When the vehicle turns to the right, the sensor element moves in a circular motion with the right oscillator bending forward and the left oscillator bending rearward. The amount of forward/rearward bend varies according to the angular velocity of the vehicle.
5. The detecting piezoelectric parts output voltage (the yaw rate signal) according to the amount of bend. The amount of vehicle direction change is determined by measuring this voltage.

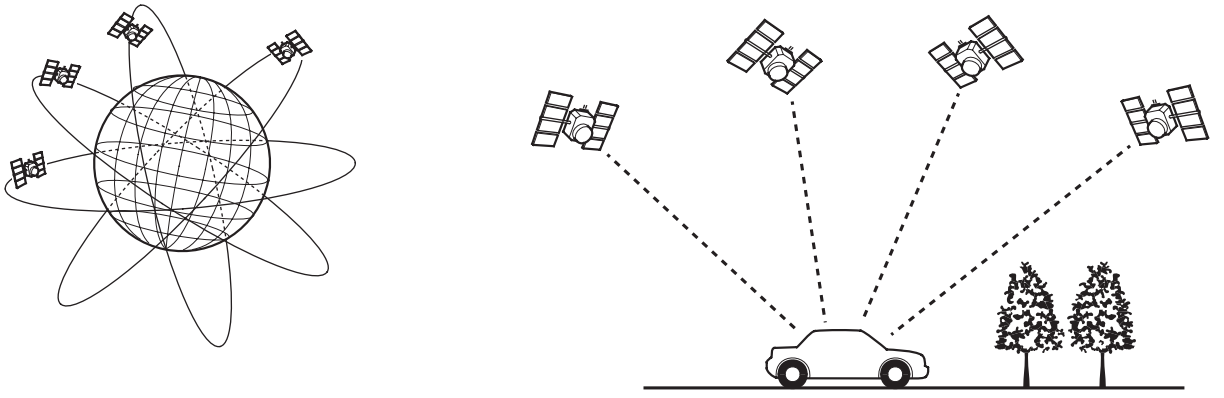


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System Description (cont'd)

Global Positioning System (GPS)
The global positioning system (GPS) enables the navigation system to determine the current position of the vehicle by using the signals transmitted from the satellites in orbit around the earth. The satellites transmit the satellite identification signal, orbit information, transmission time signal, and other information. When the GPS receiver receives a signal from four or more satellites simultaneously, it calculates the current position of the vehicle based on the distance to each satellite and the satellite's positions in its respective orbit.

Position Detection Image with GPS Satellite



Precision of GPS
The precision of the GPS varies according to the number of satellites from which signals are received and the view of the sky. The accuracy is indicated by the color and shape of the GPS icon shown on the display.

GPS ICON COLOR	NUMBER OF SATELLITES	CONDITION	DESCRIPTION
No GPS icon	None	Faulty reception	The GPS can't be utilized due to a faulty GPS receiver, open in the wire, or other fault or interference.
White GPS icon	2 or less	Impossible to detect vehicle position	GPS function is normal. The satellite signals received by the GPS are too few to detect the vehicle position.
Green GPS icon	3	Vehicle position detectable in 2 dimensions	The longitude and latitude of the vehicle position can be detected. (Less precise than detection in three dimensions)
	4 or more	Vehicle position detectable in 3 dimensions (elevation displayed)	The longitude, latitude and the altitude of the vehicle position can be detected. (More precise than detection in two dimensions)

GPS Antenna
The GPS antenna amplifies and transmits the signals received from the satellites to the GPS receiver.

GPS Receiver and Clock
The GPS receiver is built into the navigation unit. It calculates the vehicle position by receiving the signal from the GPS antenna. The current time vehicle position and signal reception condition is transmitted from the GPS receiver to the navigation unit to adjust vehicle position.

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Navigation Unit
The navigation unit calculates the vehicle position and guides you to the destination. The unit performs map matching correction, GPS correction, and distance tuning. It also controls the menu functions and the DVD-ROM drive, and interprets voice commands. With control of all these items, the navigation unit makes the navigation picture signal, then it transmits the signal to the navigation display and audio driving instructions to the audio unit.

Calculation of Vehicle Position
The navigation unit calculates the vehicle position (the driving direction and the current position) by receiving the directional change signals from the yaw rate sensor and the travel distance signals from the PCMs vehicle speed pulse (VSP) signal.

Map Matching Tuning
The map matching tuning is accomplished by indicating the vehicle position on the roads on the map. The map data transmitted from the DVD-ROM is checked against the vehicle position data, and the vehicle position is indicated on the nearest road. Map matching tuning does not occur when the vehicle travels on a road not shown on the map, or when the vehicle position is far away from a road on the map.

GPS Tuning
The GPS tuning is accomplished by indicating the vehicle position as the GPS's vehicle position. The navigation unit compares its calculated vehicle position data with the GPS vehicle position data. If there is large difference between the two, the indicated vehicle position is adjusted to the GPS vehicle position.

Distance Tuning
The distance tuning reduces the difference between the travel distance signal from the VSP and the distance data on the map. The navigation unit compares its calculated vehicle position data with the GPS vehicle position data. The navigation unit then decreases the tuning value when the vehicle position is always ahead of the GPS vehicle position, and it increases the tuning value when the vehicle position is always behind the GPS vehicle position.

Route Guidance
The navigation unit can calculate different routes to a selected destination. You have five options:

- Direct Route — Calculate a route that is the most direct.
- Easy Route — Calculate a route that minimizes the number of turns needed.
- Minimize Freeways — Calculate a route that avoids freeway travel. If that is not possible, keep the amount of freeway travel to a minimum.
- Minimize Toll Roads — Calculate a route that avoids, or minimizes travel on toll roads.
- Maximize Freeways — Calculate a route that uses freeways as much as possible.

Audio Guidance
The navigation unit transmits audio driving instructions before entering an intersection or passing a junction. The audio instructions come through the audio unit to the front speakers.

NOTE: The front speakers are muted whenever the navigation system is giving guidance commands, and all of the speakers are muted when the voice control system is being used.

DVD-ROM
The map data (including all scale rates) is stored in the DVD-ROM. The map data includes:

- Road distances, road widths, speed limits, traffic regulations, passing time at junction, distances to junctions, and the driving instructions for audio guidance.
- Latitude and longitude GPS.

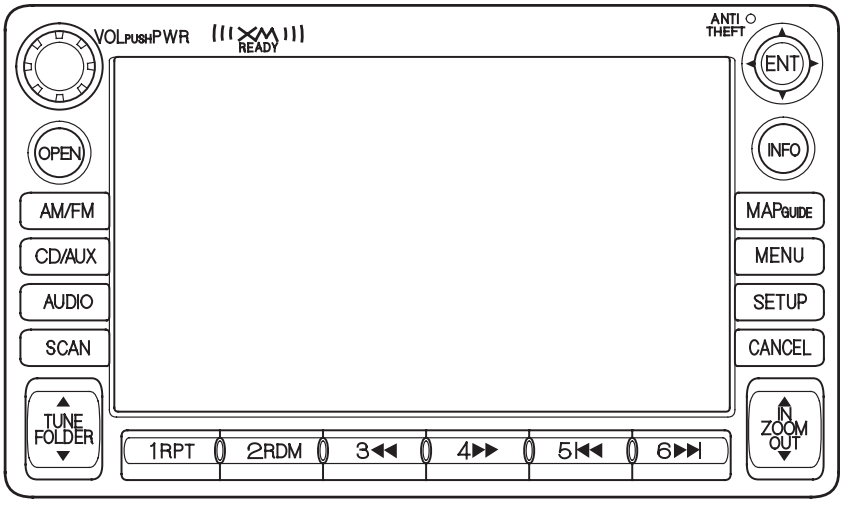
(cont'd)

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System Description (cont'd)

Audio Unit (Built in the navigation unit)
The audio unit receives the audio driving instructions from the navigation unit, and transmits the instructions through the front speakers even when the audio system is in use.

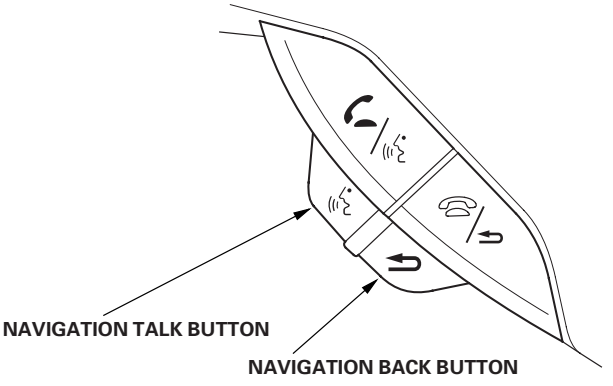
Navigation Display
The navigation display uses liquid crystal display (LCD). The LCD is a 6.5-inch-diagonal, thin film transistor (TFT), stripe type with 65,536 color. The color film and fluorescent light are laid out on the back of the liquid crystal film. The touch sensor on the front of the LCD consists of a touch sensitive resistive membrane with an infinite number of possible touch locations.



Microphone
The microphone (on the ceiling, near the front map light) receives voice commands and transmits them to the navigation unit for interpretation.

Navigation TALK Button
Activates the voice control system in the navigation unit to accept voice commands.

Navigation BACK Button
Returns the display to the previous screen (similar function as the CANCEL button).



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Glossary
The following is a glossary of terms pertaining to the Voice Recognition Navigation System.

Item	Definition
Active noise cancellation (ANC)	The active noise cancellation system cancels some of the vehicle noise. This occurs in the 1,500—2,400 rpm range. Microphones detect the low frequency sound, and the system outputs a canceling sound from the audio speaker.
Address Book	The HFL system can import a copy of the phone book from and approved HFL compatible phone and display the imported phone book on the navigation screen as the address book. See the Owner's Manual for more information.
B-CAN	Body CAN Bus (see CAN)
Bread-crumbs (White dots)	Off road tracking dots that can be followed on the map to retrace your route back to a mapped (digitized) road. This function can be turned on/off in Setup screen 1.
CAN	Controller Area Network. This communication network allows processors in the vehicle to send/receive information. The fuel pulses used by the MID trip computer are received from the ECM/PCM using the F-CAN (Fast Controller Area Network) bus.
CPU	Central Processing Unit. The main device within the navigation unit that coordinates the rest of the electronic functions.
CSS	Countershaft (Output) Speed Sensor. This sensor reads the output shaft speed at the transmission and provides a speed pulse to the ECM/PCM.
Database	This consists of the Map data, and the POI (Points Of Interest) data stored on the DVD.
DBW	Drive By Wire. Allows electrical control of the throttle without the need of a mechanical linkage.
DCA	Detailed Coverage Area. Main metropolitan areas in the Lower 48 states, and Canada are mapped to this level. See the navigation system manual for a list of these areas.
DTC	Diagnostic Trouble Codes. Use the HDS tablet to obtain, and troubleshoot the cause of these codes.
Dead reckoning	The use of the speed signal, and yaw rate sensor to position the vehicle on the map even when tall buildings, or driving in a tunnel obscures the GPS signal.
Digitized road	A road that appears on the navigation screen. The road name appears at the bottom of the navigation screen. If the user drives off road, the navigation system displays not on a digitized road, and after 1/2 mile, the bread-crumbs appear.
Disclaimer screen	Screen containing cautionary information. It is meant to be read carefully, and acknowledged by the customer when using the navigation system.
DVD or DVD-ROM	Digital Versatile Disk. The navigation program and database resides on this disk. See the Navigation Owner's Manual for information on how to order a replacement or an update DVD.
ECM	Engine Control Module. Typically referred to as the ECM.
FAQ	Frequently Asked Questions. See the navigation system manual for a list of the customer FAQs, and troubleshooting information.
F-CAN	Fast CAN Bus (see CAN)
GA-NET	The GA-NET allows the audio unit to communicate with all the audio and navigation components in a vehicle. If there is an open in the GA-NET, components or the entire audio and navigation system may appear inoperative.
GPS	Global Positioning System. A network of 24 satellites in orbit around the earth. The navigation system can simultaneously receive signals from up to 12 satellites to accurately position the vehicle on the map.
HDS	Honda Diagnostic System. A hand held tablet PC used for diagnosing vehicle problems. This device can be used to obtain DTC codes for diagnosis of the navigation system and CAN related problems.
HFL	HandsFreeLink uses Bluetooth technology as a wireless link between it and an approved Bluetooth compatible cell phone. See Vehicle Owner's manual or Quick Start Guide for more information.
HIP (AcuraLink)	Honda Information Platform (see AcuraLink)
H/U	Head Unit. The audio unit in the dash.
Initialization	This refers to the period needed to re-acquire the GPS satellite orbital information whenever the navigation system power has been disconnected. This can take from 10 to 45 minutes.
Interface Dial	This control device consists of a rotating knob and the buttons surrounding it. This device allows control of the navigation, audio, and climate functions displayed on the screen.
Jog Dial	See interface dial.

(cont'd)

System Description (cont'd)

Item	Definition
LCD	Liquid Crystal Display (the navigation screen)
Map matching	The received GPS information allows the navigation system to position the vehicle on the map. MAP matching has occurred if the map screen displays the current street name in the bottom-shaded area.
Mic	Abbreviation for the microphone used for receiving voice commands. It is located near the map light in the ceiling. The ANC circuit may also use it to check its tuning.
MID	Multi-Information Display
MW	Maneuver Window. While on - route to a destination, this window displays information about the next maneuver.
Navi	Abbreviation for the Navigation System.
Off-road tracking	See bread-crumbs.
Off route	This occurs when the user leaves mapped roads. Off road tracking dots (bread-crumbs) are displayed If the option is enables in the setup menu. The user can use them to return to a mapped road. The bottom of the navigation screen displays not on a digitized road.
Outlying areas	These are rural areas that typically have only their main roads mapped. All other roads are shown in light brown for reference only, since the have not been verified.
Paired	Linking your call phone to the HFL.
PC Card Slot	The PC Card (PCMCIA, type II) slot is for factory use only. Make sure that the sliding door is closed at all times, if opened, an error message is displayed on the screen.
PCM	Powertrain Control Module. This unit supplies the navigation system speed signal, also refered to as PCM.
PCMCIA	A computer industry defined term referring to the PC Card slot standard.
PIN	Personal Identification Number, a random 4 digit number created by the customer to protect personal information.
POI	Point Of Interest. These are the businesses, schools, etc. found under the places option on the main menu.
Polygon	Colored areas on the map screen denoting parks, schools, etc. See the Navigation System Manual Driving to Your Destination for a list of the assigned colors.
QWERTY	Keyboard layout resembling the typewriter keys. The keyboard layout can be changed to an alphabetical layout in the Setup mode.
SCS connector	The service check signal 2-pin connector used to put the navigation system into the diagnostic mode.
Security code	Code needed to activate the navigation system. You can get the security code from the in by entering the navigation unit serial number. You can find the serial number on the diagnostic screens (unit check, Navi ECU), or on the underside of the navigation unit.
Tuning	A continual update of internal navigation system scaling factors. See the individual sensor tuning discussions under either System Description, or System Diagnosis Mode (see page 23-297).
Unverified streets	These streets have not been verified for turn restrictions, one-way, etc. They appear light brown on the map. You can enter address destinations in these areas, but depending on your Unverified. Routing choice in setup, voice guidance may end at the last verified street closest to your destination.
USB	Universal Serial Bus. The USB is used for playing the compressed audio files (MP3, WMA, and AAC) on the external device through the audio unit.
Verified streets	These streets consist of the detailed metropolitan coverage areas, and other inter-town connection roads. These roads are shown in black or red on the map. (interstates are red)
VP	Vehicle Position. When in map mode, this circular icon shows the vehicle position on the map.
VR	Voice Recognition. This allows voice control of many of the navigation functions. The hardware consists of the microphone, voice control switch (navigation TALK/BACK buttons), and the center speaker. See the overview for more information.
VSP	Vehicle Speed Pulse. This pulse signal coming from the PCM (VIA the CSS) is used to update the Vehicle position on the map. These pulses do not indicate direction (forward or backward). When in reverse, the navigation receives a signal and directs the VP to move backwards on the map.
XM	This device receives information from the XM satellites and passes XM audio information to the audio unit. In addition, traffic information is sent to the navigation unit.
Yaw sensor	This device is located in the navigation system control unit and senses the side-to-side twisting force generated when the vehicle turns. See a detailed description of how this sensor works in system description.

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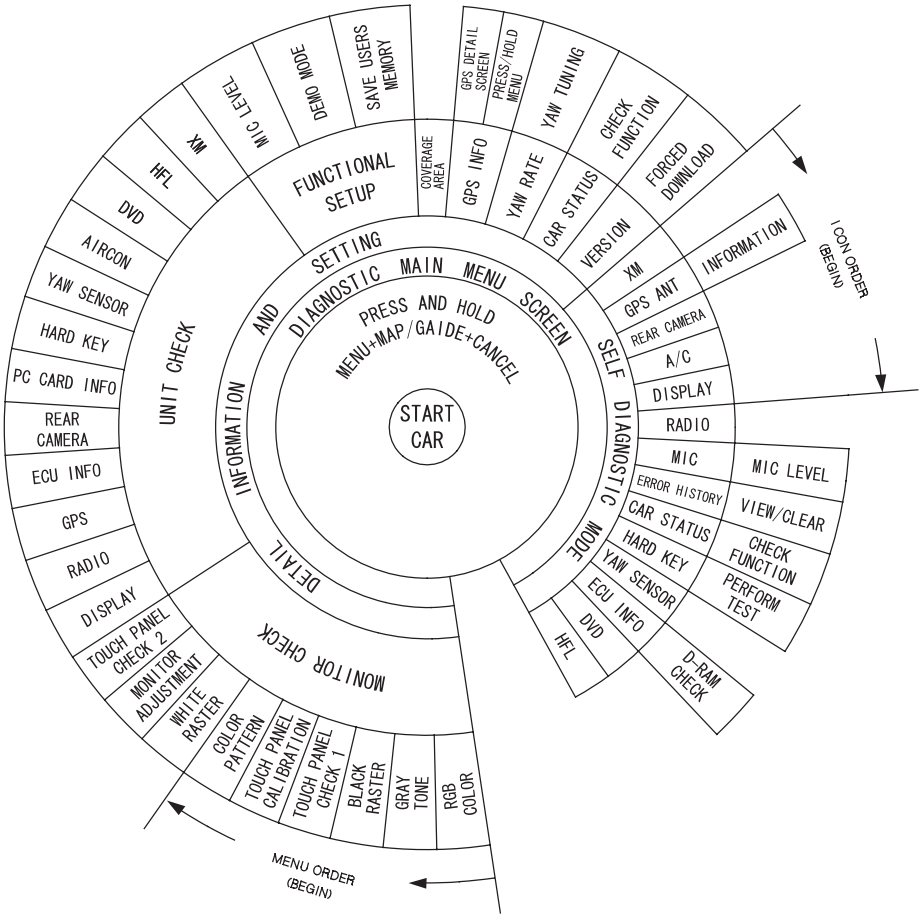
Diagnostic System Diagram
This diagram below shows all of the navigation diagnostic features available for system troubleshooting. The diagram starts at the center, and works outward in layers.

Access to the diagnostic features begins by starting the vehicle. This is necessary so the system can check the other systems connected by various busses. After starting the vehicle you can enter the diagnostic mode either by pressing and holding MENU, MAP/GUIDE, and CANCEL.

The main menu screen allows 2 checking modes - one automatic, and one manual:

- The automatic diagnostic check starts when you select SELF DIAGNOSTIC MODE. The system runs for several seconds, and reports any issues with Red icons. Rotate the interface dial and select the icon you wish obtain the problem details.
- The manual diagnostic check is selected from the main menu by selecting DETAIL INFORMATION AND SETTING. The traditional diagnostic menu is displayed. This allows you to obtain additional details as instructed in the troubleshooting procedures.

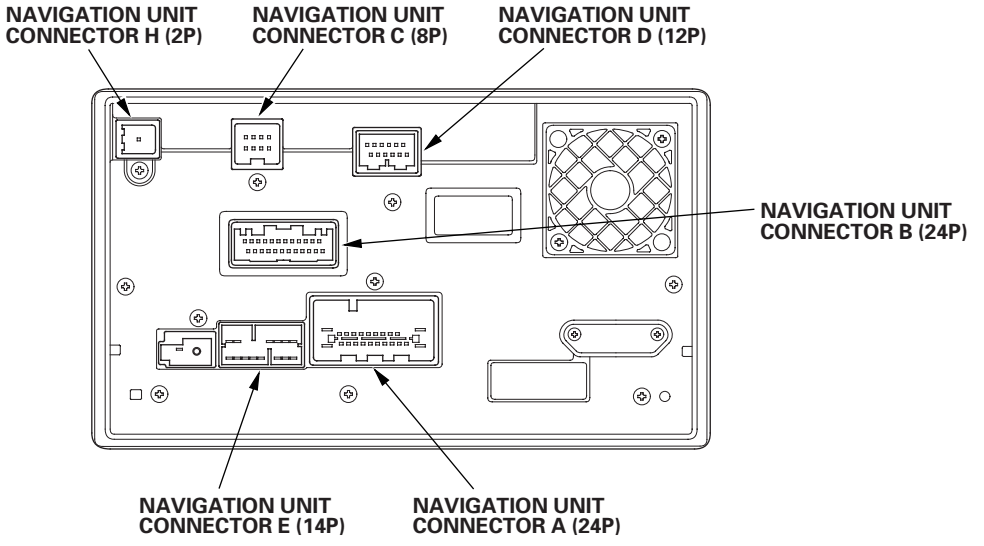
NOTE: Do not clear or change settings unless specified by either the Service Manual troubleshooting procedures or by the factory. Otherwise, you may accidentally delete customer information, or remove the latest flash software version installed by the factory.



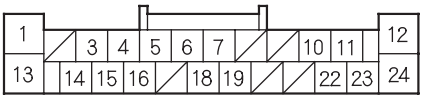
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System Description (cont'd)

Navigation System Connector Location

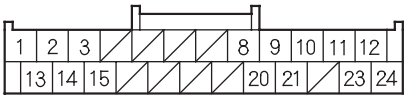


NAVIGATION UNIT CONNECTOR A (24P)



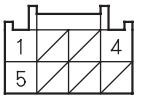
Wire side of female terminals

NAVIGATION UNIT CONNECTOR B (24P)



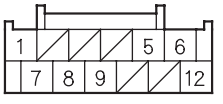
Wire side of female terminals

NAVIGATION UNIT CONNECTOR C (8P)



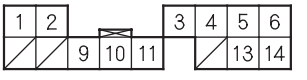
Wire side of female terminals

NAVIGATION UNIT CONNECTOR D (12P)



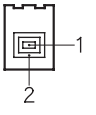
Wire side of female terminals

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

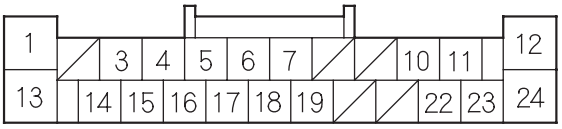
NAVIGATION UNIT CONNECTOR H (2P)



Terminal side of female terminals

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Navigation Unit Inputs and Outputs for Connector A (24P)



Wire side of female terminals

Navigation Unit Connector A (24P)

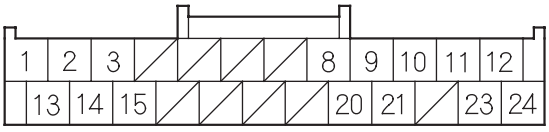
Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	RED	ILL (−)	Ground for illumination light	With full dash lights brightness, 0 V	If open: When brightness = Auto, night mode for the display is inoperative when lights on. If short to ground: No change to display.
12	BLK	RADIO GND (Ground)	Ground for display unit	0 V	If open: No change to display. If short to ground: No change to display.
13	GRY	ILL (+) (Illumination positive)	Parking light on signal from dash and console lights	Light on = battery voltage, Lights off = 0 V	If open: When brightness = Auto, night mode for the display is inoperative when lights on. If short to ground: Blows fuse No. 14 (7.5 A) in under-dash fuse/relay box.
15	BLU	VSP (Vehicle speed pulse)	Vehicle speed pulse signal from ECM/PCM	Pulses 0—5 V: Average 2.5 V, when moving	If open: No vehicle speed pulses. Diagnostic screen Car Status, VSP Navi = 0. If short to ground: No vehicle speed pulses. Diagnostic screen Car Status, VSP Navi = 0.
24	WHT	+B (+B power source)	Continuous power source	Battery voltage	If open: Screen completely off (no backlight visible). If short to ground: Blows fuse No. 23 (10 A) in the under-hood fuse/relay box.

(cont'd)

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System Description (cont'd)

Navigation Unit Inputs and Outputs for Connector B (24P)



Wire side of female terminals

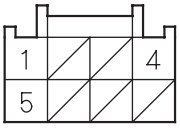
Navigation Unit Connector B (24P)

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
10	GRY*	HFL/NAVI COMM SH (Shield HFL)	Shield for terminal No. 11, 12, 23, 24	———	———
11	GRN	HFL/NAVI COMM2 (HFL communication 2)	Communication signal for HFL	———	HFL icon in Navi System Link changes between red and green
12	WHT	HFL/NAVI COMM4 (HFL communication 4)	Communication signal for HFL	———	Solid red HFL icon in Navi System Link
23	BLK	HFL/NAVI COMM1 (HFL communication 1)	Communication signal for HFL	———	HFL icon in Navi System Link changes between red and green
24	RED	HFL/NAVI COMM3 (HFL communication 3)	Communication signal for HFL	———	Solid red HFL icon in Navi System Link

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

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Navigation Unit Inputs and Outputs for Connector C (8P)



Wire side of female terminals

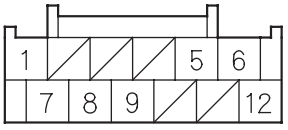
Navigation Unit Connector C (8P)

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	+B BACK UP	Continuous power source	Battery voltage	If open: Display picture goes out (display back light still on). NOTE: System will reboot to enter code screen. If short to ground: Blows fuse No. 23 (10 A) in the under-dash fuse/relay box.
4	BLK	GND	Ground for navigation unit	0 V	If open: No effect on system. If short to ground: No effect on system.
7	BRN	BACK LT—	Reverse signal of select laver from Multiplex integrated Control unit (A/T) or backup light switch (M/T)	In reverse, battery voltage: Otherwise 0 V	If open: Navigation never sees the reverse signal and back-up camera does not come on when in reverse. Diagnostic screen Car Status, Back = 0. If short to ground: Blows fuse No. 10 (7.5 A) in the under-dash fuse/relay box.

(cont'd)

System Description (cont'd)

Navigation Unit Inputs and Outputs for Connector D (12P)



Wire side of female terminals

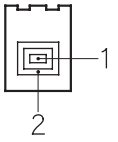
Navigation Unit Connector D (12P)

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	GRN	NAVI GUIDE	Steering wheel switch output	4—5 V (navigation TALK button pressed) 2.5—3 V (navigation BACK button pressed)	If open: Steering wheel navigation TALK, and navigation BACK switch/buttons do not work. If short to ground: Steering wheel navigation TALK, and navigation BACK switch/buttons do not work.
5	YEL	AC SI	A/C input signal	0-battery voltage pulses	If open: voice control does not work. If short to ground: Voice control does not work.
6	RED	AC SO	A/C output signal	0-battery voltage pulses	If open: A/C voice control does not work. If short to ground: A/C voice control does not work.
7	BRN	MIC GND	Ground for microphone signal	0 V	If open: No microphone signal shown in diagnostics: Navi System Link and Functional Set up Mic Level. If short to ground: No effect on voice recognition.
8	YEL	MIC SIG+	Microphone output signal positive	4—5 V (with navigation TALK button pressed)	If open: No microphone signal shown in diagnostic screens: Navi System Link and Functional Setup Mic Level. If short to ground: No microphone signal shown in diagnostic screens: Navi System Link and Functional Setup Mic Level.
9	GRY*	MIC SHIELD	Shield for terminal No. 7, 8	0 V	If open: No effect on voice recognition. If short to ground: No effect on voice recognition.
12	BLU	AC CK	Time set sync signal	0-battery voltage pulses	If open: A/C voice control does not work. If short to ground: A/C voice control does not work.

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

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Navigation Unit Inputs and Outputs for Connector H (2P)



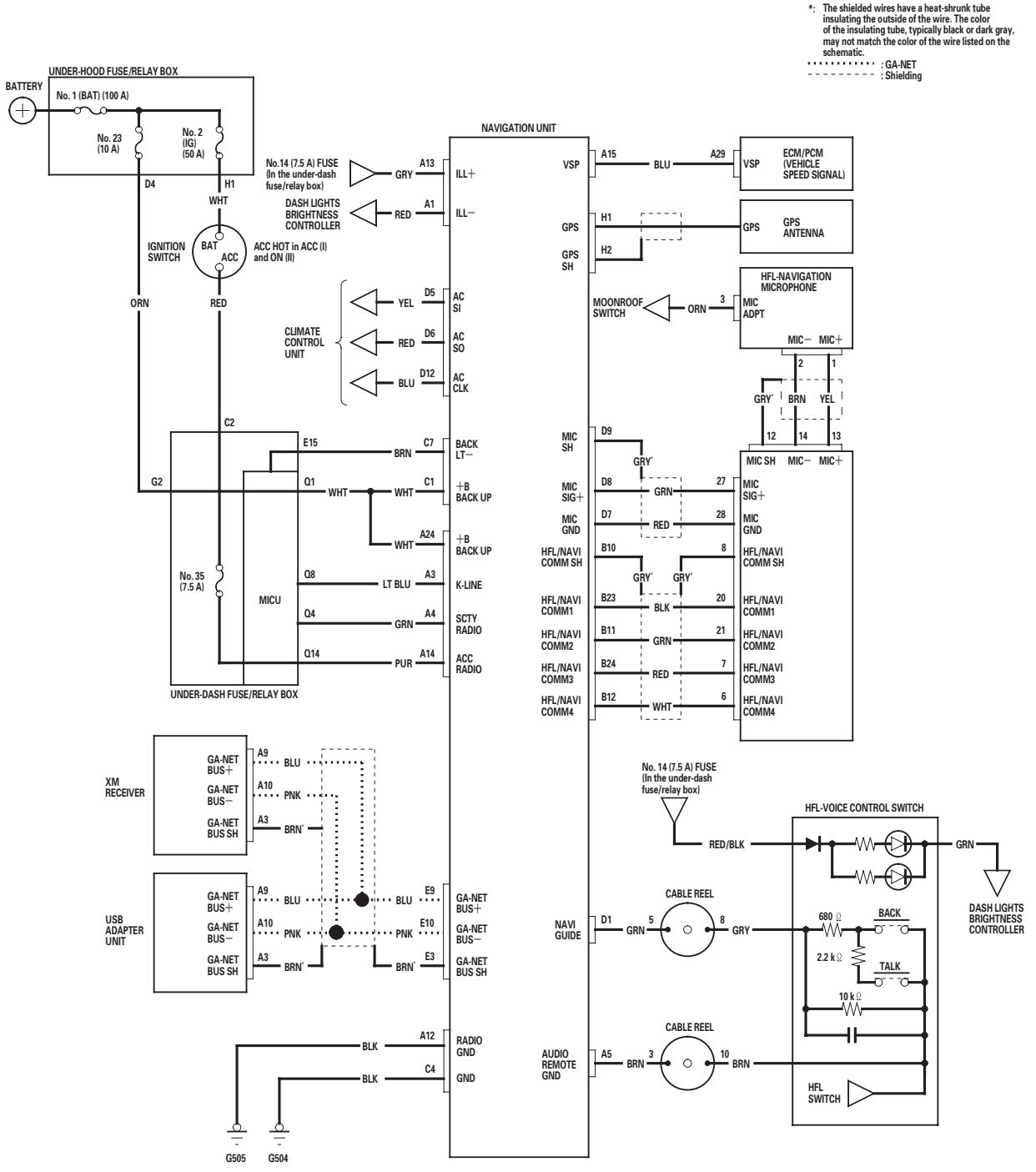
Terminal side of female terminals

Navigation Unit Connector H (2P)

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	———	GPS	GPS signal (5 V in, GPS signal out)	5 V	If open: GPS icon on screen is white, system links screen ANT shows NG. If short to ground: GPS icon on screen is white, system links screen ANT shows NG.
2	———	GPS SH	Shield for terminal No. 1	0 V	If open: GPS icon on screen is white, system links screen ANT shows NG. If short to ground: No effect on system.

Navigation System

Circuit Diagram



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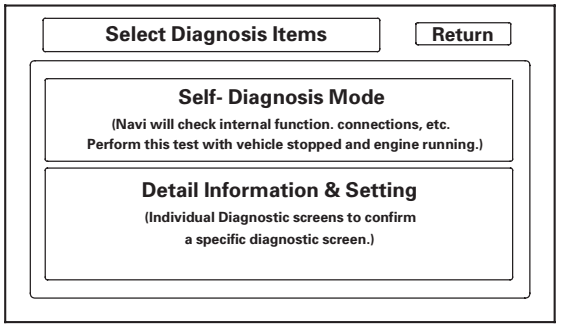
System Diagnostic Mode

Start-up procedure and Diagnostic Menu

Start the vehicle, and at the disclaimer screen use the navigation display hard buttons as described below:

Make sure the battery is in good condition, then press and hold the three buttons MAP/GUIDE, MENU, and CANCEL, for about 3 seconds. The display screen goes directly to the Select Diagnosis Items menu shown below.

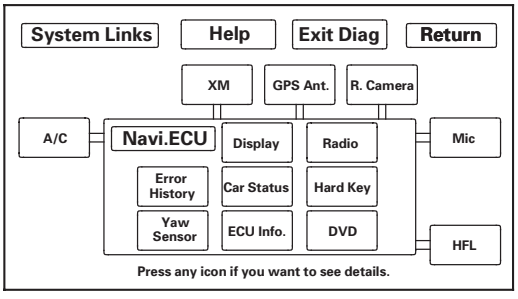
- Self-Diagnosis Mode (runs the automatic diagnosis of the navigation system)
- Detail Information & Setting (allows you to manually diagnose the navigation system)



System Links

1. By selecting Self-Diagnosis Mode from the navigation screen main menu. The message at the bottom of the screen flashes indicating the diagnostic is running. Make sure you enter the audio anti-theft code.

   NOTE:
   - The system cannot complete a full diagnosis unless the engine is running.
   - DTC 2703 can be stored when the ignition switch is at ACCESSORY (I). With the ignition switch is in ACCESSORY (I), the climate control unit is turned off and the navigation unit loses communication and stores DTCs. Therefore, there is a possibility that the system is normal even DTC 2703 is stored. Check system links with the engine running, and if it shows normal, the system is OK at this time.



2. Select the icon you want to diagnose. Push in the select the icon to see the details of that diagnostic function.

(cont'd)

System Diagnostic Mode (cont'd)

The System Links function runs automatically and displays a flashing message at the bottom of the screen reminding you to have the engine running for the test. The diagnostic tests the following:

- Most of the wires connecting the navigation components shown in the block diagram.
- The results from the various components shown in the block diagram.
- The microphone is tested by listening to the bong sound produced by the navigation unit from the speakers when the diagnostic is started. This requires that the audio system be operating normally.

When the diagnostic finishes, the icons turn different colors based on their test status. The color definitions are shown below and can also be seen by selecting Help on the System Links screen.

The indication on the screen may not change until you exit and reenter the Self-Diagnosis mode. In some cases, you may have to restart the engine for the indication to change. After you repair the affected component or harness, repeat this diagnostic.

Explanation of each icon
Each icon color is explained in the table below.

Icon Colors	Description
Green	The system ran a diagnosis and the results are OK.
Red	Errors that require replacement of hardware or harness. Examples are connection error or memory diagnosis errors. Troubleshooting for DTCs.
Yellow	Errors that doesn't require hardware replacement, such as an open display cover, an incorrect DVD, leaving the vehicle in ACCESSORY (I), or because of a missing accessory, like the rearview camera.
White	The diagnosis is running. The screen functions are locked out while the diagnosis is runs.
Gray	The system cannot automatically check this function. You have to select the diagnosis item and manually do additional testing, like checking the navigation buttons in the Hard Key test. When you complete the Hard Key test and return to the System Links menu, the gray icon turns green.

NOTE: By selecting the HELP icon, you can see a description for each color.

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Icon Color Information

Icon	Icon Color				
	GREEN	RED	YELLOW	WHITE	GRAY
Display	Result of Connection under the Display diagnosis menu is OK.	Result of Connection under the Display diagnosis menu is NG.	———	Executing (Not completed)	———
Radio	Result of Connection under the Radio diagnosis menu is OK.	Result of Connection under the Radio diagnosis menu is NG.	———	Executing (Not completed)	———
XM	Result of Connection under the XM diagnosis menu is OK.	Result of Connection under the XM diagnosis menu is NG.	———	Executing (Not completed)	———
GPS Ant.	All result of Antenna and Receiver in NAVI ECU is OK.	Any result of Antenna and Receiver in NAVI ECU is OK.	———	Executing (Not completed)	———
R-Camera	Result of Connection under the R-Cammera diagnosis menu is OK. (optional)	Result of Connection under the R-Cammera diagnosis menu is NG. (optional)	Result of the Connection under the R-Cammera diagnosis menu is NG. (optional)	Executing (Not completed)	———
A/C*	Result of Connection under the Aircon diagnosis menu is OK.	Result of Connection under the Aircon diagnosis menu is NG.	———	Executing (Not completed)	———
HFL	Result of Connection under the HFL diagnosis menu is OK.	Result of Connection under the HFL diagnosis menu is NG.	———	Executing (Not completed)	———

*: DTC 2703 can be stored when the ignition switch is in ACCESSORY (I). With the ignition switch in ACCESSORY (I), the climate control unit is turned off and the navigation unit loses communication and stores DTCs. It is possible that the system is normal with DTC 2703 stored. Check the system links with the engine running, and if it shows normal, the system is OK at this time.

(cont'd)

System Diagnostic Mode (cont'd)

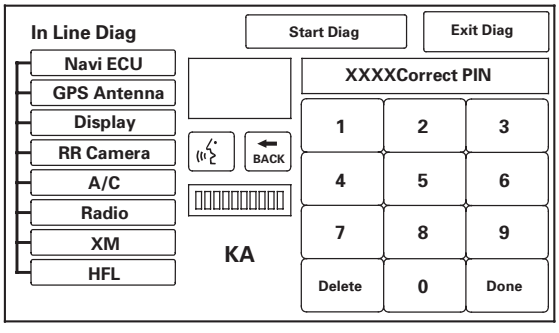
Icon	Icon Color				
	GREEN	RED	YELLOW	WHITE	GRAY
Mic	The microphone detects the sound ''Pi-Pi-Pon'' at the system link menu.	The microphone could not detects the sound ''Pi-Pi-Pon'' at the system link menu.	———	Executing (Not completed)	———
ECU Info.	Both V-RAM or D-RAM is OK, and all Program Flash, Serial No., Model is available, and the DVD lid is closed.	Either the V-RAM or D-RAM is NG, or any of the Program Flash, Serial No., Model is unavailable.	DVD lid is opened	Executing (Not completed)	———
Hard Key	All buttons are pressed and are detected under Hard key menu.	All buttons are not pressed or pressed but not detected under Hard key menu, or exit from Hard key menu without the button not detected.	———	———	Until changing to Hard key menu.
Error History	———	———	Hard Error or Soft Error is detected under Error History menu.	Executing (Not completed)	Hard Error or Soft Error is not detected under Error History menu.
DVD	DVD mechanism is normal and the proper DVD is installed.	———	Improper DVD is installed, or DVD is not installed, or can not identify software version from the DVD or internal mechanism failure.	Executing (Not completed)	———
Yaw Sensor	Result of the Yaw Sensor diagnosis menu is OK.	Result of the Yaw Sensor diagnosis menu is NG.	Result of the Zero Point Output under the Yaw Sensor diagnosis menu is NO CHECK.	Executing (Not completed)	———
Car Status	———	———	———	———	Check these systems manually.

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Factory diagnostic screen In Line Diag

NOTE: If the vehicle left the factory in the factory diagnostic mode, or if the navigation unit is replaced you will see this screen every time you turn on the ignition.

When a navigation unit is powered up for the first time at the factory or after replacement with a new or remanufactured navigation unit, the factory diagnosis screen (In Line Diag) appears. Normally the factory does the steps necessary to verify proper operation and terminate the factory diagnostic.
Until the proper confirmation sequence is done, the screen appears every time the vehicle is started.



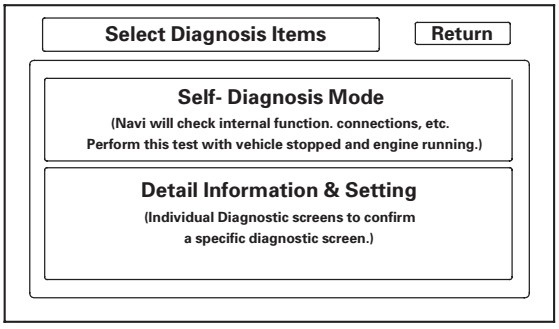
Follow the steps below to prevent the screen from showing up in the future:

- Press and hold the buttons (MENU, MAP/GUIDE, and CANCEL) for about 3 seconds. The Select Diagnosis items screen appears.
- Press and hold the MAP/GUIDE button for 5—10 seconds. A screen with a Complete button, appears.
- Press complete, then Return, and then shut the key off for 5 seconds. Do not disconnect the battery during this period as the unit is saving the setting to the SRAM memory. The In Line Diag should not appear again.
- Restart the vehicle, and confirm normal operation by completing the TQI of the Navigation System Service Bulletin.

Detailed Information & Settings

These section allows you to run a specific diagnostic and allows additional setting choices for some screens that are not shown when selecting an icon from the System Links screen.

When you select the menu item Detail Information & Setting menu, the main diagnosis menu is displayed.



(cont'd)

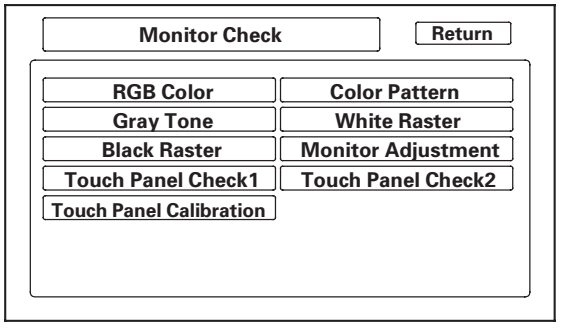
System Diagnostic Mode (cont'd)

Monitor Check

Overview of navigation display

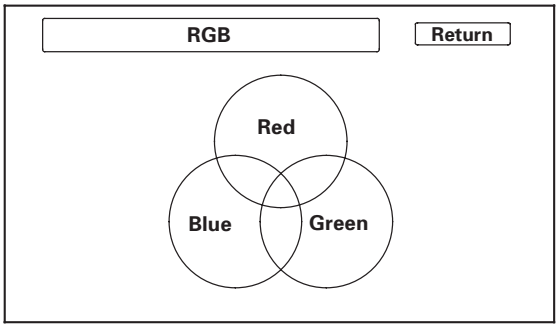
The illumination input from the gauge brightness control provides back lighting for the buttons surrounding the screen.

These screens allow you to troubleshoot the navigation display. Select the item you want to troubleshoot, and follow the diagnostic instructions.



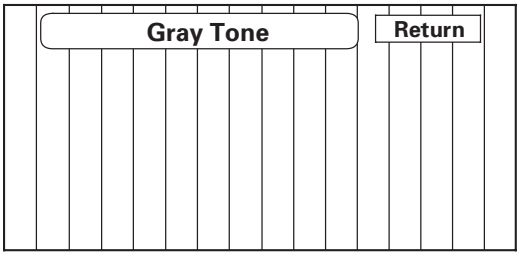
RGB Color

This screen verifies that the display unit is receiving the video (R, G, B and Composite sync) signals properly. The three primary colors should all appear without distortion. The combination of all three should produce a central white section. If the picture has lines in it, or scrolls horizontally or vertically, and any of the colors are missing, troubleshoot for a composite sync and color signal problem (see page 23-339).



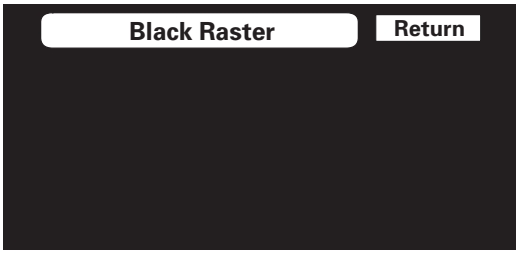
Gray Tone

This screen diagnoses problems with contrast. You should be able to see the changes from bar to bar across the scale. It is normal for the two bars on either side to appear the same. If you can't see changes from bar to bar, replace the navigation unit.



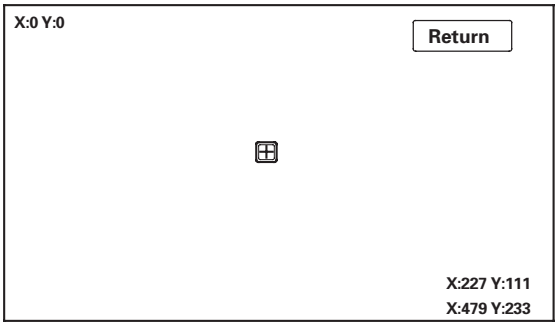
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Black Raster
This diagnostic screen checks for pixels that may be stuck on. The entire display must be black. If pixels are stuck on, replace the navigation unit.



Touch Panel Check 1
The panel touch sensing system consists of a touch sensitive resistive membrane covering the display. Contrary to other systems using infrared beams, the screen has to be physically touched to make it work. The display has the capability of 479 touch locations (left to right), and 233 touch locations (top to bottom). The upper left hand corner is position (0, 0) and the lower right hand corner is (479, 233) as displayed. Touching anywhere on the screen displays the coordinate of the location, and a + icon appears where you touched the screen. If any area of the screen either doesn't respond, or responds at some other location when touched, then replace the navigation unit.

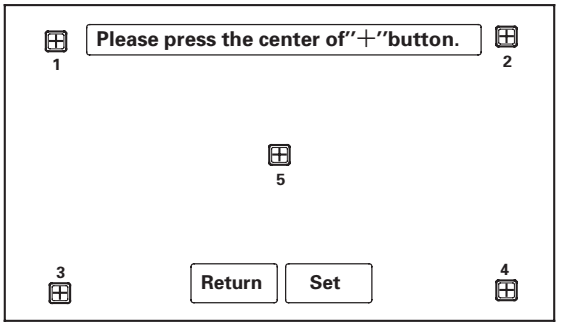
NOTE: Unlike earlier screens that used infrared sensors, direct sunlight does not affect this test.



Touch Panel Calibration
The display screen uses a touch sensitive membrane. This means that every location of the entire surface of the display is touch sensitive. This diagnostic allows alignment of these touch locations with the location of the buttons images on the screen.

Normally this should never need adjustment, and is used only to adjust the touch locations for parallax (the touch locations appear different when viewed at an angle). However, if an adjustment is necessary, follow this procedure:

- The screen consists of the + button icons. Touch the center of the five + buttons on order 1—5.
- To store any change you make, touch the Set button.
- Use the Return key to exit the diagnostic.

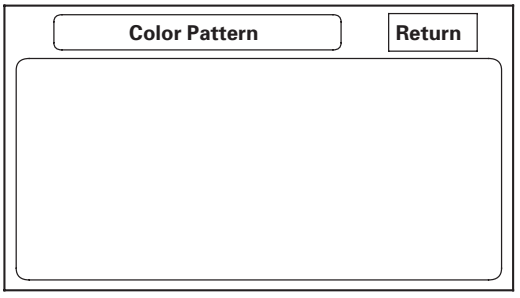


(cont'd)

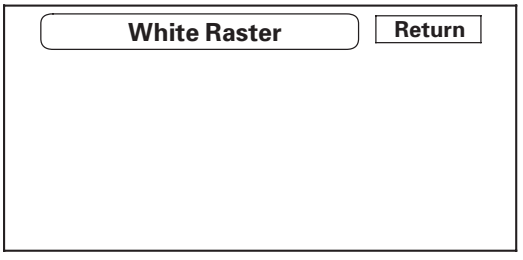
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System Diagnostic Mode (cont'd)

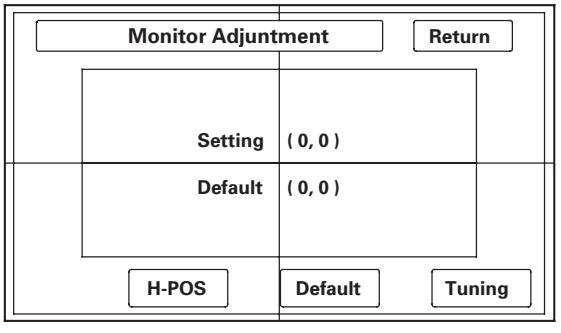
Color Pattern
The chart below shows the colors being used for the map and menu screens. This is for factory use only. To check the color signal use the RGB Color diagnostic found under the Monitor Check.



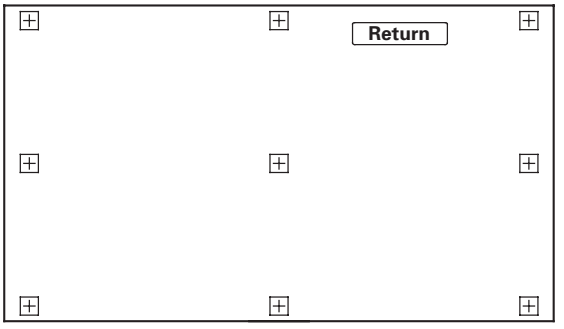
White Raster
This diagnostic screen checks for pixels that may be dead (off). The entire display must be white. If there are dead pixels, replace the navigation unit.



Monitor Adjustment
This allows you to center the navigation display. Use the joystick to move the picture up/down or left/right. It is unlikely that you will ever need to adjust the monitor position. The Default button resets the display position to factory specifications. The factory default is 0, 0 The H-POS button is for factory use only.



Touch Panel Check 2
If you touch the any icons on the screen, the icon changes the color while pressing the icon. If any icons of the screen doesn't respond, replace the navigation unit.



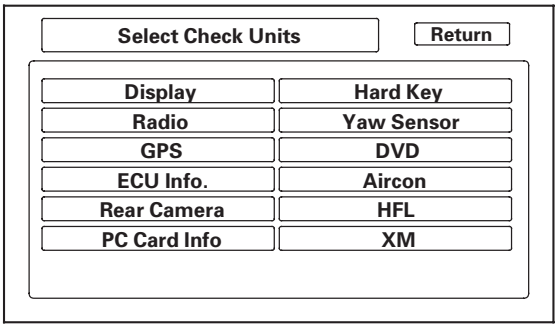
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Unit Check (Quick Check)

Some of the tests and screens that are displayed under the Unit Check are different from the more detailed checks listed in other areas of this service manual.

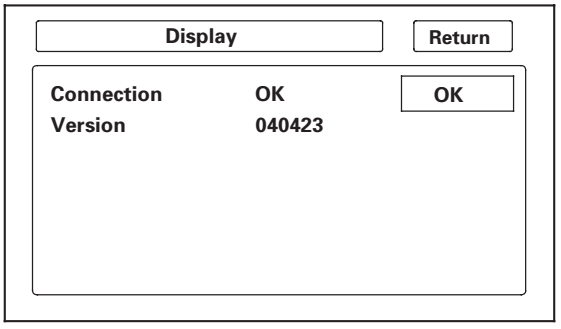
To start the test, select the item you want to check.

- Display
- Radio
- GPS
- ECU Info.
- Rear Camera
- PC Card Info.
- Hard Key
- Yaw Sensor
- DVD
- Aircon
- HFL
- XM

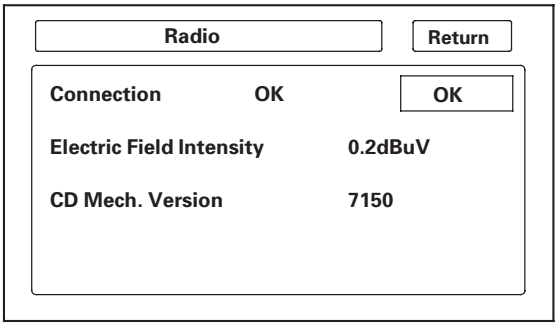


Display
This performs additional checks on the communication bus between the navi CPU and the navigation display. In addition, this test checks the internal electronic functions

If the connection is NG, replace the navigation unit.
- Connection verifies internal communications.
- Version represents the software version for the display.



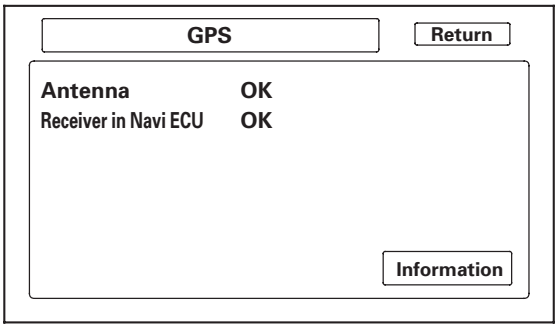
Radio
This diagnostic screen checks the internals of the radio (AM and FM) and CD player. If NG, replace the navigation unit.



(cont'd)

System Diagnostic Mode (cont'd)

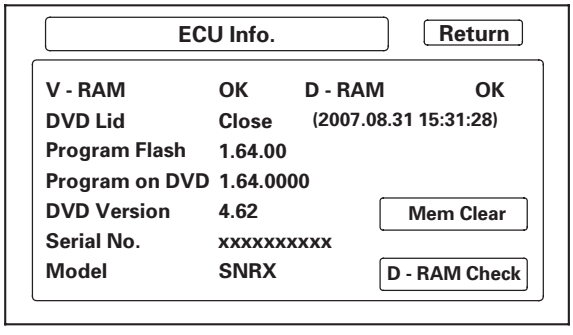
GPS
If GPS indicates NG (ANT), then check the entire GPS antenna wire from the navigation unit to the GPS antenna. If the wire is crushed or damaged, try a known-good antenna. If the diagnostic reads OK, replace the original GPS antenna. If the diagnostic still reads NG (ANT), replace the navigation unit.
Select information to see the GPS satellite details.



ECU Info.
This screen looks for problems in the navigation unit. When you initiate this diagnosis, the navigation unit may freeze or delay up to a minute while the diagnosis runs.

NOTE: Do not try to end this diagnostic by pressing OK or Mem clear before it finishes, otherwise the system may reboot.

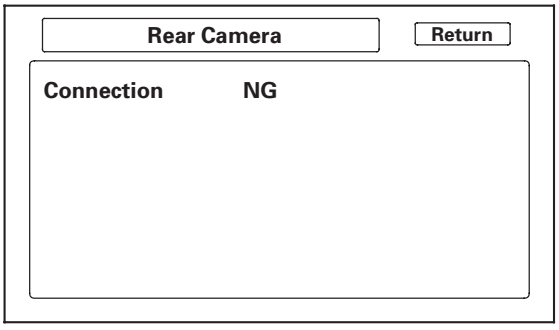
- If V-RAM or D-RAM is NG, replace the navigation unit.
- DVD lid displays the state of DVD Lid of navigation unit.
- Program Flash: Displays the version of the navi software in memory.
- Program on DVD: If displayed, this value represents the version of the navigation software on the navi DVD.
- DVD version represents the database version on the DVD. You can find this information in either the Setup Screen Version, or in the Diagnostic Screen Version.
- Serial No. should be the same as the serial number found on the underside of the navigation unit. You need this number to obtain the security code from the Interactive Network (iN) system.
- The Mem Clr is for factory use and should not be used unless instructed by the factory.
  Selecting this will clear the customer's settings, personal information, GPS orbital data, and anything else stored in memory.



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Rear Camera (Optional)

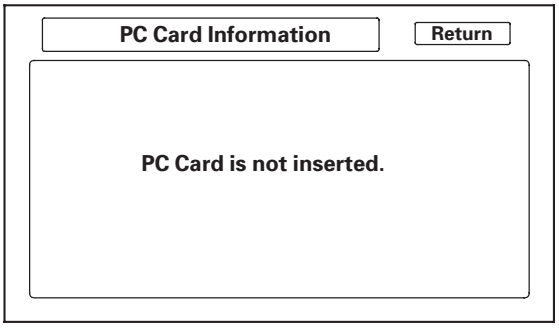
- If the optional rearview camera is connected, it appears as OK.
- It displays OFF when the optional rearview camera is not connected.



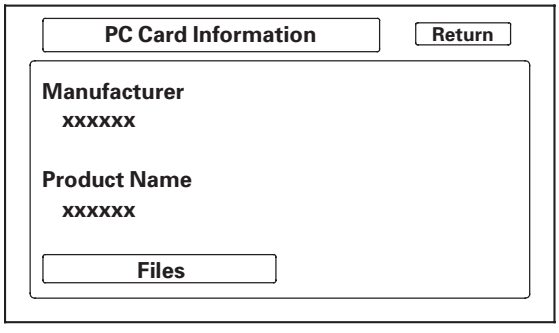
PC Card info.

There is no PC Card in the PC slot, and the screen should display, PC Card is not inserted.

NOTE: Do not insert any card or object into the slot.



If the factory provides a PC card and instructs you to insert it, the screen displays the Manufacturer, and Product Name as shown in the following screen. Follow the instructions provided by the factry to complete the test.

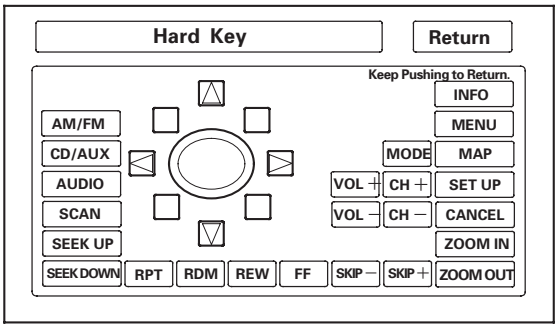


(cont'd)

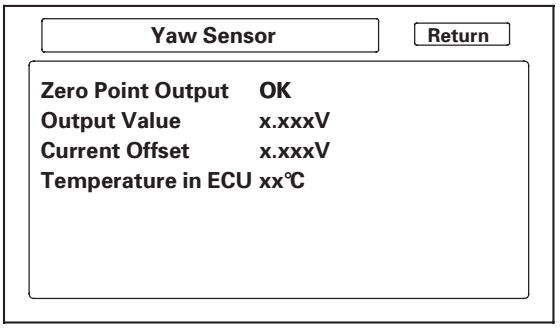
System Diagnostic Mode (cont'd)

Hard Key
This diagnostic screen checks the status of each of the hard buttons surrounding the navigation display. When you press each hard button, the corresponding item on the screen should flash blue. Touch the return key, or press and hold the joystick to exit.

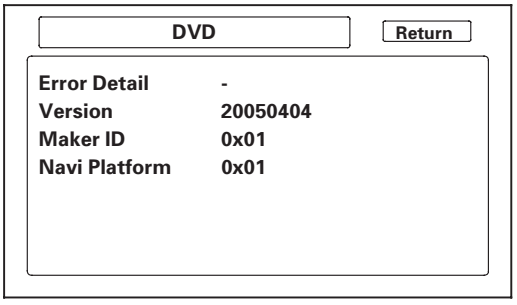
NOTE: It is normal for the VOL (+, −) CH (+, −) and MODE button to be inactive.



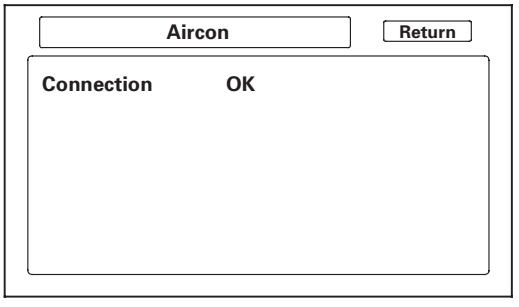
Yaw Sensor
This screen gives a quick test of the yaw sensor functionality based on the two voltages Sensor and Offset. For more information see the Yaw Rate Diagnostic.



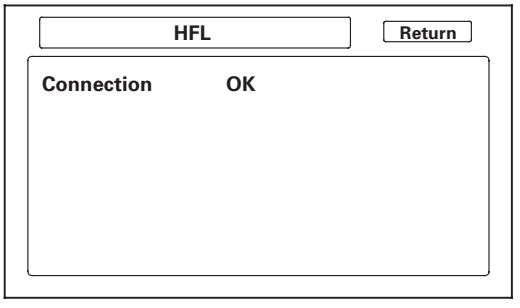
DVD
This diagnostic tests the navigation DVD reader.



Aircon
This diagnostic tests the climate bus connection (AC-SI and AC-SO) between the navigation unit and climate control unit. Make sure the engine is running for this test.



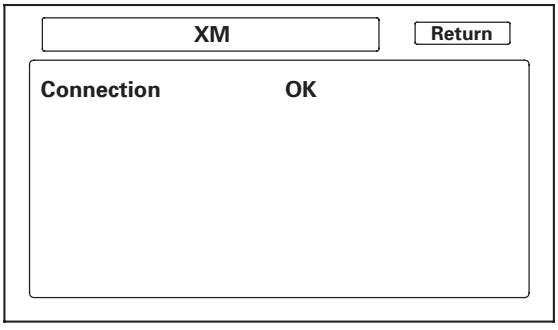
HFL
- This checks the 4 wire communication bus between the HFL and the navigation.
- When connection is shown with NG, check the connection between the navigation unit and the HandsFreeLink control unit.



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XM

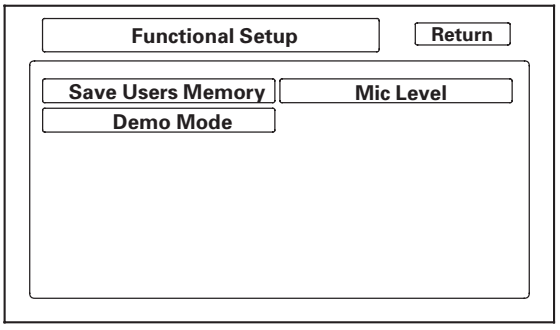
- This checks the GA-NET Bus line to the XM receiver.
- When connection is shown with NG, check the connection between the XM receiver and the navigation unit.



Functional Setup

Select the item you want to check.

- Save Users Memory
- Demo Mode
- Mic Level

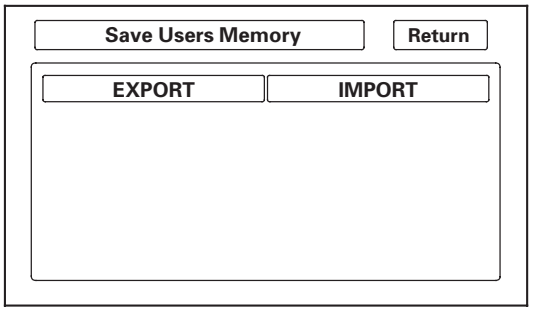


(cont'd)

System Diagnostic Mode (cont'd)

Save Users Memory

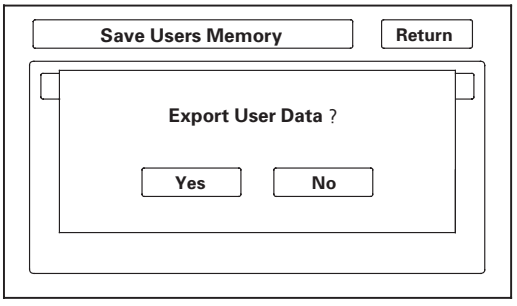
When replacing the navigation unit, this function allows the dealer to transfer the client's personal data to the new navigation unit. The transferred information includes their Setup settings, and personal addresses. The dealer inserts a PC card to the navigation unit, and then selects the Save Users Memory function. The two functions in this diagnostic screen are EXPORT and IMPORT. EXPORT saves the client's data to the PC card, and IMPORT moves the PC card files to the new navigation unit.



Before starting this function, see the PC Card FAQs for information regarding PC cards, and how to use this function.

1. Select EXPORT button to move the client's data from the original navigation unit to the PC card. Select YES on the Export User Data Confirmation screen. The process takes only a couple of seconds. The system stores two files on the card.

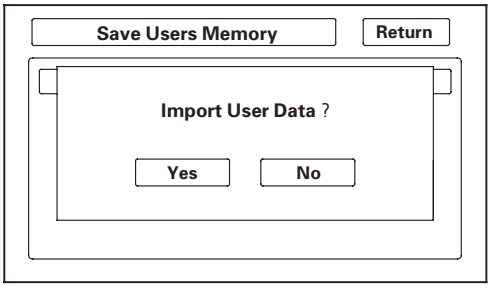
   NOTE: If the EXPORT button is grayed out, check the PC card's edge connector, and the pins inside the navigation unit (with a flashlight) for damage.



2. After installing the client's original DVD in the new navigation unit, allow the system to boot up. Insert the PC card in the new navigation unit and enter the Save Users Memory in the navigation system diagnostic mode.

3. Select IMPORT button to move the two files stored by the Export process from the PC card to the new navigation unit. Select YES on the Import User Data Confirmation screen. When the transfer is finished (a few seconds) the system automatically reboots. After the system reboots, remove the PC card from the PC slot.

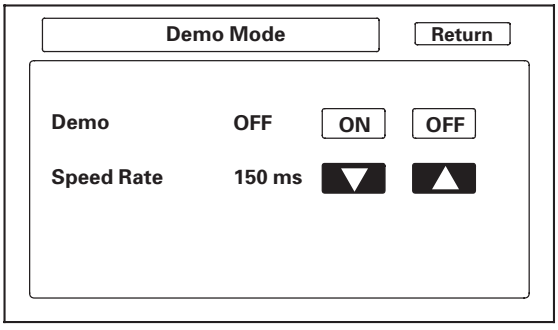
   NOTE: If the IMPORT button is grayed out, check if the Model and the Program Flash shown on the Version screen are the same.



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Demo Mode

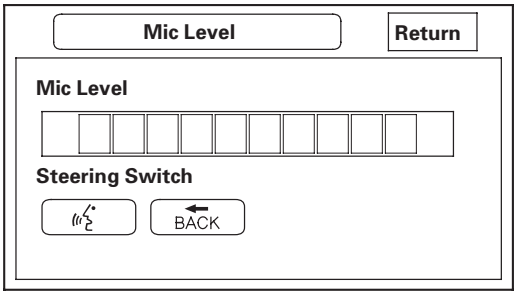
This screen is for factory use only, and should always be set to OFF. Occasionally the DEMO setting is turned ON when vehicles are being used at Auto Shows or similar events. Turning this feature on, allows the navigation system to automatically follow a route to a destination when the vehicle is stationary. The Speed changes the speed of the demo mode.



Mic Level

This diagnostic allows you to independently test the microphone and the navigation TALK and BACK buttons. They are used to activate the voice control system. The microphone is located near the map light in the roof console. It is directional, and works only with the voice coming from the driver's seat.

- Press the navigation TALK button on the steering wheel, wait unit you hear a beep, and in a normal voice say ''testing''. The TALK indicator on the screen should momentarily turn green, and the text Now Recording... should appear in yellow. If the talk indicator shown on the screen does not briefly turn green, check the wiring from the steering wheel navigation TALK button to the navigation unit. If there is no Mic Level movement when you speak, then you should check the wires running from the microphone in the roof console to the HandsFreeLink control unit and the navigation unit. If the wires are OK, the microphone must be faulty; replace the microphone located in roof console (see page 23-358).
- Press the navigation BACK button on the steering wheel. This should cause the Cancel indicator on the screen to momentarily turn green. If it does not briefly turn green, check the wiring from the steering wheel navigation BACK button to the navigation unit.



(cont'd)

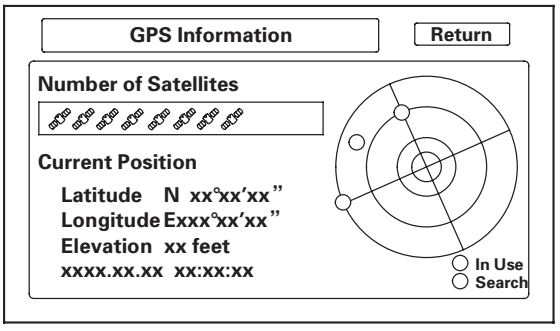
System Diagnostic Mode (cont'd)

GPS Information

This screen shows the current status of GPS reception. The circular diagram shows the current location of the GPS satellites (yellow numbers) as they would appear in the sky. The outer circle represents the horizon (0 degrees elevation). The middle and inner circles represents 30 and 60 degrees respectively. The very center of the diagram (90 degrees elevation) is directly overhead. Nearby obstructions, like tall buildings will block satellites in that direction. That is why it is necessary to be in an open area to effectively troubleshoot GPS reception issues. The satellite numbers shown on the diagram correspond to the PRN number in the GPS Details screen. There are always at least 24 active GPS satellites in orbit. Because satellites fail, and have to be removed from service, spares are always parked in orbit, ready to be activated. This is why the PRN (satellite ID number) can be greater than 24.

NOTE: When you use this screen for troubleshooting, park the vehicle outside, away from buildings, tall trees, and high-tension wires for at least 10 minutes with the engine running.

- The Number of Satellites box shows the number of acquired satellites (maximum of 12). It should contain three or more icons. If not troubleshoot for GPS icon is white or not shown (see page 23-341).
- The Current Position shows latitude, longitude, and elevation (in feet). If there are less than four satellites, the elevation can be grossly inaccurate.
- The Date/Time field shows the current date, and also a time that includes daylight savings and other offsets entered by the customer in Setup screen 2 Adjust Time Zone/Clock.



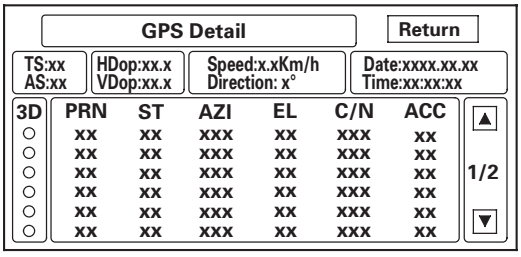
NOTE: Pressing the map/guide button displays the satellite number on each circle.

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GPS Detail

By pressing and holding the MENU button for 2 seconds, a GPS Detail screen appears. This screen displays real time incoming satellite positional data when the vehicle is outside in the open. The information shown on this screen is for factory use.

NOTE: The data shown in an example only.



- The box TS/AS and H Dop/V Dop is for factory use.
- The Speed and Direction information is updated in real time when driving.
- The Date/Time Information is the same as in Setup screen 2 Adjust Time Zone/Clock.
- If the 3D icon is shown above the yellow dots, this implies that at least four satellites are available for map positioning, and the GPS indicator on the map screen will be green. See the Global Positioning System detailed explanation in the System Description.
- If the row of data in the table below begins with a yellow dot, the AZI and EL fields can be used to locate each satellite on the circular GPS diagram (see prior screen).

NOTE: The table of values define the terms at the top of the columns in the GPS Detail screen.

Column	Description	Problem indication
3D	Active satellites (Yellow Dot)	If 3D or 2D is missing when the vehicle is parked outside, follow GPS icon is white or not shown troubleshooting (see page 23-341).
PRN	The satellite ID number	
ST	The status: 0 = cannot view or searching, 2 = acquiring	If all 0, then, follow GPS icon is white or not shown troubleshooting (see page 23-341).
AZI	Azimuth, the angle (0—360) clockwise from north	
EL	Elevation from the horizon (90 deg is overhead)	
C/N	N/A	Normal signal is 49-52, no signal: 27-33
ACC	N/A	
△ 1/2 or 2/2 ▽	Shows view of all satellites in two screen views 1/2 or 2/2	

(cont'd)

System Diagnostic Mode (cont'd)

Yaw Rate

This diagnostic checks the yaw rate sensor in the navigation unit. This device detects when the vehicle turns, and repositions the vehicle position icon on the map screen. For more detailed information, see the yaw rate sensor theory of operation under System Description (see page 23-283).

- Sensor indicates the voltage output from the yaw rate sensor. It should indicate about 2.500 V when the vehicle is stopped.
- Offset is the reference voltage or standard within the yaw rate sensor. It also should indicate about 2.500 V when the vehicle is stopped.
- A sensor output voltage LOWER than the Offset voltage indicates that the vehicle is turning to the right.
  A sensor output voltage HIGHER than the Offset voltage indicates that the vehicle is turning to the left.
- The yaw rate offset, and sensor should both indicate about 2.500 V when the vehicle is stopped. If either reads zero, or 5.000 V, replace the navigation unit.
- The yaw rate offset and sensor should be within +/—0.01 V of each other when the vehicle is stopped. The sensor value should change relative to the offset as the vehicle turns while driving. If not, replace the navigation unit.

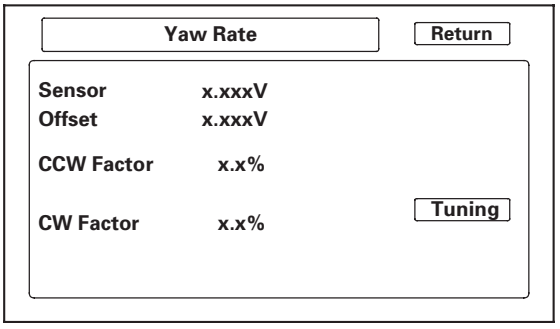
Example: Vehicle stopped

Normal		**Abnormal**	
Offset	2.526 V	Offset	2.526 V
Sensor	2.516—2.536 V	Sensor	2.623 V

Example: Vehicle turning

Normal		**Abnormal**	
Offset	2.526 V	Offset	2.526 V
Sensor	2.678 V (left turn) 2.478 V (right turn)	Sensor	2.623 V (no change on turns)

- Sensitivity study represents the status of the internal tuning function. At initialization, this value starts at 6 and increases to 10 as the internal correction values become more accurate.
- The settings CCW Cal Factor, CW Cal Factor, and Set are for factory use only. THIS SHOULD NEVER BE ADJUSTED.
- For detailed analysis of the yaw rate select tuning.



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Yaw Rate Tuning

This diagnostic allows you to graphically display problems with the yaw rate sensor.

- The ANG-Disp value accumulates any differences between the offset and sensor voltages (see Yaw Rate diagnostic). When the sensor functions properly, the random changes in these two voltages generally cancels out, so the value is 0. However if one voltage is consistently higher than the other, then the ANG-Disp value accumulates the constant change.
- The Reset button temporarily clears the angular accumulation (ANG-Disp), and clears the display dots.
- Do not touch the CCW, CW, or Set buttons. These are used for factory setup only.

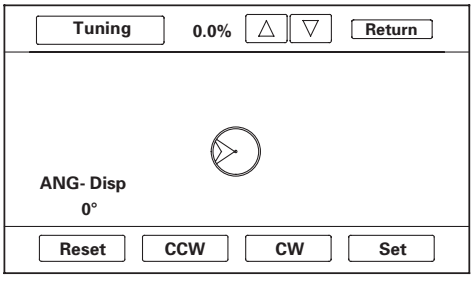
Two tests are explained below. For large problems with the sensor values, the stationary test usually confirms whether the sensor is defective. For yaw rate issues related to driving, do the road test described below.

1. Stationary test: If the VP icon spins in place and the ANG-Disp value slowly increases or decreases in value, the yaw rate sensor is defective. Replace the navigation unit.

2. Road test: Drive the vehicle on a very straight road. Enter the diagnostic mode, select Yaw rate, and touch the Tuning button. While driving down a straight road, the white dots should trace a straight line across the screen. However, if you are driving on a straight road, and you notice the dots constantly dropping down or heading up as you drive, the navigation unit's yaw sensor is defective. You can touch Reset to clear ANG-Disp, and dotted lines.

   If either test above fails, please enter Yaw rate sensor defective for the problem description, on the Navigation core return form.

   NOTE: The CCW, CW and Set buttons are disabled, and cannot be activated.



Car Status

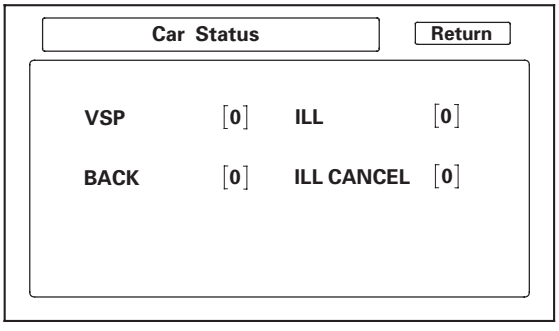
Use this screen to confirm that the navigation unit is properly receiving input signals. Signals equal to (0) are OFF, and signals equal to (1) are ON. If the value on the display does not match the actual vehicle status, then check the wire carrying the signal.

- VSP-Vehicle Speed Pulse from ECM/PCM (Connector A (24P) terminal No. 15)
  a) OFF (0) when vehicle is not moving
  b) ON (1) when vehicle is moving

The VSP comes from the ECM/PCM as a dedicated signal. Internally, the navigation unit compares the actual VP on the map against street data to adjust the pulse to speed scaling factor. As this scaling factor becomes more accurate, the Level gradually increases from 0 to 10 (see the Tire Calibrate diagnostic screen).

- BACK-Reverse indication from taillight relay (Connector C (8P) terminal No. 7)
  a) OFF (0) when the shift lever is in any position other than reverse
  b) ON (1) when the shift lever is in reverse

The Back signal is used by the navigation unit to allow the map screen to show the VP moving backwards when in reverse. This signal is needed because the Speed Pulse has no direction indication.



(cont'd)

System Diagnostic Mode (cont'd)

- ILL-Illumination Indication
  (Connector A (24P) terminal No. 13)
  a) OFF (0) when parking lights, or headlights are off
  b) ON (1) when parking lights, or headlights are on

The navigation uses the signal to determine whether to put the navigation screen into the Day or Night brightness mode. (Setup screen 1)

- ILL CANCEL
  a) OFF (0) when the dash lights brightness control button is less than 90 % brightness with the headlights turned on.
  b) ON (1) when the dash lights brightness control button is more than 90 % brightness with the headlights turned on.

Version

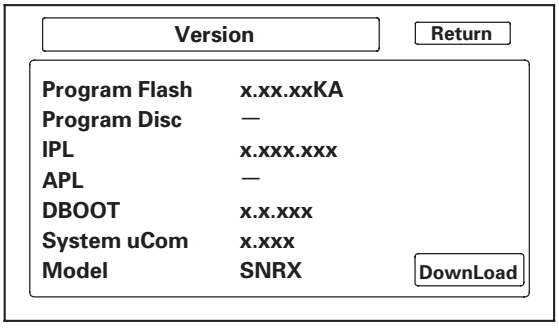
This screen displays the current version information for the navigation system software. In addition, this screen allows the loading of updated software if requested by the factory, or instructed by a Service Bulletin. Software may be loaded from a CD or a PC card.

- Program Flash: Displays the version of the navigation software in memory.
- Program Disc: If displayed, this value represents the version of the navi software on the navi DVD.

  NOTE: The last two letters of the Program Flash or DVD fields indicate which DVD is installed in the unit.

- IPL, APL, DBOOT, and System uCom, are all for factory use.
- Model: For this model, the field should begin with SNR
- Download: Do not touch, unless instructed by the factory.

  Check any official Acura service website for more service information about navigation DVDs.



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PC Card FAQs

Question	Answer
Where do we buy the flash memory or adaptors, and what do we ask for?	You need a PCMCIA type II adaptor and a flash memory chip. You can purchase them at a computer, or office supply store. The card is the same size and shape as the PC card in the HDS. Adaptors that accept multiple flash types are not recommended.
What memory flash chips will work with what adaptors?	The flash memory devices that have been tested include Compact Flash (CF), and ATA style (like the card in the HDS). Other card types and flash memory chips may work, but have not been tested.
What capacity card do I need for this function?	A memory chip with capacity of 64 MB to 2 GB will work. The two files moved to the PC card during export are less than a Megabyte in size.
Should the dealer have a dedicated PC card for the Export and Import navigation function?	Yes, treat the PC card as a dedicated special tool that you can use any time you need to transfer the navigation personal files to a new navigation unit or '09 and later vehicles.
What device can I use to maintain the PC card, and delete files?	Any computer store sells USB style card readers that accept the PC card, and allow you to do file maintenance on your PC card. Most laptops will also accept the PC card.
Can we move the client's data to different models?	No, the files are model specific and will only load into a navigation unit with the same part number.
Can we move the client's data to the same vehicle with a different software version (like moving from version 4.41 to version 4.51)?	The client's files can only be transferred to a new navigation unit, if the Model and the Program Flash shown on the Version screen are the same. Files cannot be transferred to the different model and different versions.
Will other files on the PC card like images or music files prevent the Export/Import function from working?	No, the system simply adds two small files that are recognized by the new navigation unit when performing the import function. However, it the PC card is full, the Export function won't work correctly.
Do I have to delete the files on the PC card after each transfer of the personal data?	After the transfer of personal data to the new navigation unit, the files remain on the PC card. Since this is confidential information, Acura recommends deleting these files after the transfer use. Please note that each time you export navigation files of the same model and version, the files are overwritten. Over time the PC card accumulates two files for each version of the 8 or so Acura navigation models.
It the memory card needs formatting, what format should I use?	It is unlikely that the PC card will ever need formatting, however, if it does, use the FAT (file allocation table) file system.
I can't enter the navigation diagnostic mode to do the Export/Import function. How can I transfer the personal data?	Some internal navigation unit ECU failures may make it impossible to use the Export/Import function.

(cont'd)

System Diagnostic Mode (cont'd)

Question	Answer
Why wont the Export or Import functions work? What do I check as part of troubleshooting?	• The card may not be fully inserted into the slot. Eject the PC card, and inspect for warping or damage to the edge connector. Never use excessive force to insert a PC card. This can damage the pins in the rear of the slot. • The PC card may not contain files that are recognized by the new navigation unit. Navigation data can only be transferred between navigation units with the same Model code, and with the same navi Program flash version. • The flash memory chip type may not be accepted by the system. Only Compact Flash and ATA cards have been tested. • The card's PCMCIA adaptor may prevent a known-good PC card from being recognized. Avoid multi-slot type PCMCIA adaptors that accept several different flash memory types. • The card may be full and as a result the files are stored, but without any data. Export and import appear to function, but move nothing. Delete unused files from the PC card. • There may not be any files on the PC card. If the PC card has a write protection switch, make sure it is turned off before using the Export function. • Although flash memory chips are reliable, occasionally they develop bad sectors or other formatting errors that prevents them from accepting files. The PC card should be reformatted using the FAT format. • The PC card may have been formatted using the format NTFS. Only the FAT format is accepted by the system. • Hard Disc Drive (HDD) cards may not work properly in the system and can overheat or quit functioning, particularly in a hot vehicle. They are not recommended. • Before performing the Import function, ensure that the original navigation DVD is loaded into the new navigation unit and working properly.

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Error Message Table

Screen Error Message	Solution
Navigation system is unable to acquire a proper GPS signal.	Make sure there is nothing on the dashboard blocking the GPS antenna. If not, move the vehicle to an open space away from tall buildings, trees, etc. Aftermarket metallic window tinting and other aftermarket devices can affect the GPS reception.
Navigation unit door is open or No DVD disc installed. Please check system.	Make sure the navigation DVD is the correct color and is not scratched or damaged. Make sure it is installed with the label side up and the navigation unit door is snapped fully closed.
No DVD disc, please check system.	Check that the navigation DVD is installed with the label side up.
Display temp is too high. System will shut down until display cools down.	This message appears briefly when the display temperature is too high, and then the display turns off until the temperature cools down. The system turns back on when the display cools down.
Outside temperature is low, system will take a while to start up.	The temperature is below −30 ℃ and the navigation unit has difficulties reading the navigation DVD. The system will start up when the temperate warms up.
DVD disc reading error (unformatted), please consult your dealer.	Check the navigation DVD for the correct color and software version. Also check for deep scratches or other damage. Make sure you are using an official Acura navigation DVD. The system cannot read other mapping databases or video DVDs. Check any official Acura service website for more service information about the navigation system.
Route has not been completed. Please try again from a different location.	Routing to or from a place (new area) that is not in the database. Try planning a different route to or from a different location that is clearly displayed on the map (map matched).
No alternate route found. Original route will be guided.	No alternate route method was found. The original route method will be used.
This destination cannot be found in database.	The destination was not found in the database. Try another destination nearby, or select the destination with the jog dial.

DTC Troubleshooting

DTC 1001: FROM System Info Error

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Turn the ignition switch to LOCK (0), and then back to ON (II).
2. Check for the hard error code (see page 23-273).

   Is DTC 1001 indicated?

   YES—Replace the navigation unit (see page 23-355), because there is an internal problem with the Flash-ROM. ■

   NO—Intermittent failure, the system is OK at this time. ■

DTC 1101: Media Bus Send Error

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Check for the hard error code (see page 23-273).

   Is DTC 1101 indicated?

   YES—Replace the navigation unit (see page 23-255). ■

   NO—Intermittent failure, the system is OK at this time. ■

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DTC 1201: DVD High Temp

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- This code sets when the internal temperature of the navigation unit ECU rises above 70 ℃ (158 ℉). The unit is designed to shut down to protect the navigation unit ECU. This could be caused by an inoperative navigation unit ECU fan or if the passenger's compartment temperature exceeds the maximum. Do the troubleshooting when the unit is within the allowable temperature range.

1. Check that the temperature is below 70 ℃ (158 ℉) in the passenger's compartment.

2. Clear the hard error code (see page 23-274).

3. Turn the ignition switch to LOCK (0), and then back to ON (II).

4. Check for the hard error code (see page 23-273).

   Is DTC 1201 indicated?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Intermittent failure, the system is OK at this time. If the unit repeatedly comes back with the DTC, replace the navigation unit. ■

DTC 1202: DVD Low Temp

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- This code sets when the internal temperature of the navigation unit ECU falls below —20 ℃ (—4 ℉). The unit is designed to shut down to protect the navigation unit ECU. This is usually caused by very cold exterior temperatures. Do the troubleshooting when the unit is within the allowable temperature range.

1. Check that the temperature is above —20 ℃ (—4 ℉) in the passenger's compartment.

2. Clear the hard error code (see page 23-274).

3. Turn the ignition switch to LOCK (0), and then back to ON (II).

4. Check for the hard error code (see page 23-273).

   Is DTC 1202 indicated?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Intermittent failure, the system is OK at this time. ■

DTC Troubleshooting (cont'd)

DTC 1301: GPS Antenna Error

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- Make sure the vehicle is parked outside, away from buildings.
- Aftermarket electronic devices located near the navigation unit or GPS antenna can potentially interfere with the operation of the navigation system.

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Check for the hard error code (see page 23-273).

   Is DTC 1301 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. ■
4. Turn the ignition switch to LOCK (0).
5. Check for poor connections or loose terminals at the navigation unit connector H (2P).
6. Clear the hard error code.
7. Turn the ignition switch to LOCK (0), and then back to ON (II).
8. Check for the hard error code.

   Is DTC 1301 indicated?

   YES—Go to step 9.

   NO—Intermittent failure, the system is OK at this time. ■
9. Turn the ignition switch to LOCK (0).
10. Replace a known-good GPS antenna (see page 23-358).
11. Turn the ignition switch to ON (II).
12. Clear the hard error code.
13. Turn the ignition switch to LOCK (0), and then back to ON (II).
14. Check for the hard error code.

    Is DTC 1301 indicated?

    YES—Replace the original GPS antenna. ■

    NO—Replace the navigation unit (see page 23-355). ■

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DTC 1302: GPS Receiver Error 1

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- Make sure the vehicle is parked outside, away from buildings.
- Aftermarket electronic devices located near the navigation unit or GPS antenna can potentially interfere with the operation of the navigation system.

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Check for the hard error code (see page 23-273).

   Is DTC 1302 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. ■
4. Turn the ignition switch to LOCK (0).
5. Check for poor connections or loose terminals at the navigation unit connector H (2P).
6. Clear the hard error code (see page 23-274).
7. Turn the ignition switch to LOCK (0), and then back to ON (II).
8. Check for the hard error code (see page 23-273).

   Is DTC 1302 indicated?

   YES—Go to step 9.

   NO—Intermittent failure, the system is OK at this time. ■
9. Turn the ignition switch to LOCK (0).
10. Replace a known-good GPS antenna (see page 23-358).
11. Turn the ignition switch to ON (II).
12. Clear the hard error code (see page 23-274).
13. Turn the ignition switch to LOCK (0), and then back to ON (II).
14. Check for the hard error code (see page 23-273).

    Is DTC 1301 indicated?

    YES—Replace the original GPS antenna. ■

    NO—Replace the navigation unit (see page 23-355). ■

DTC Troubleshooting (cont'd)

DTC 1303: GPS Receiver Error 2

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- Make sure the vehicle is parked outside and away from buildings.
- Aftermarket electronic devices located near the navigation unit or GPS antenna can potentially interfere with the operation of the navigation system.

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Check for the hard error code (see page 23-273).

   Is DTC 1303 indicated?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Intermittent failure, the system is OK at this time. ■

DTC 1305: Gyro Error 2: ECU Temp XX ℃

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- Make sure the vehicle is parked outside and away from buildings.
- Aftermarket electronic devices located near the navigation unit or GPS antenna can potentially interfere with the operation of the navigation system.
- Do this test only when the dash temperature is between —20 ℃ (—4 ℉) and 70 ℃ (158 ℉).

1. Clear hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Check for the hard error code (see page 23-273).

   Is DTC 1304 indicated?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Intermittent failure, the system is OK at this time. ■

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DTC 1306: Vehicle Speed Pulse

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then start the engine.
3. Check for the hard error code (see page 23-273).

   Is DTC 1306 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. ■
4. Drive the vehicle and watch the VSP signal.

   Does the VSP signal change from [0] *to* [1] *as you drive?*

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Do the symptom troubleshooting for vehicle position icon constantly leaves road, moves erratically or is very far from actual position (see page 23-344). ■

DTC 1307: DVD Read Error

NOTE:
- Check the vehicle battery condition first.
- Check any official Honda service website for more information about the navigation system.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- Inspect the navigation DVD for scratches or damage.

1. Turn the ignition switch to ON (II).

   Is there a DVD error message?

   YES—Go to DVD screen error messages (see page 23-319).

   NO—Go to step 2.
2. Clear the heard error code (see page 23-274).
3. Turn the ignition switch to LOCK (0), then back to ON (II).
4. Check for the hard error code (see page 23-273).

   Is DTC 1307 indicated?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Intermittent failure, the system is OK at this time. ■

DTC Troubleshooting (cont'd)

DTC 1402: Audio Error 2

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Check for the hard error code (see page 23-273).

   Is DTC 1402 indicated?

   YES—Check if the audio unit functions are working properly. If any problems are found, go to the applicable troubleshooting in audio section. ■

   NO—Intermittent failure, the system is OK at this time. ■

DTC 1409: Audio Error 9

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Check for the hard error code (see page 23-273).

   Is DTC 1409 indicated?

   YES—Check the XM error codes (see page 23-194). If any codes are detected, go to the applicable troubleshooting in audio (XM) section. ■

   NO—Intermittent failure, the system is OK at this time. ■

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DTC 2607: XM Diag

NOTE: Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back ON (II).
3. Go into the Diagnostic Menu, and select the Self-Diagnosis Mode in the Select Diagnosis Items menu (see page 23-297).
4. Check the System Links.

   Is the XM icon red?

   YES—Go to step 5.

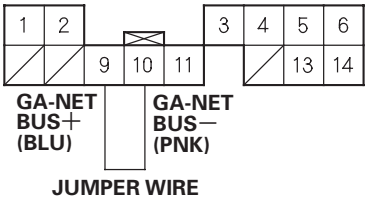
   NO—Intermittent failure, the system is OK at this time. ■
5. Turn the ignition switch to LOCK (0).
6. Check for poor connections or loose terminals at navigation unit connector E (14P), USB adapter unit connector A (14P), and XM receiver connector A (14P).

   Are the connections OK?

   YES—Go to step 7.

   NO—Repair poor connections or loose terminals, and recheck the self-diagnosis mode (see page 23-297). ■
7. Disconnect navigation unit connector E (14P) and XM receiver connector A (14P).
8. Connect navigation unit connector E (14P) terminals No. 9 and No. 10 with a jumper wire.

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

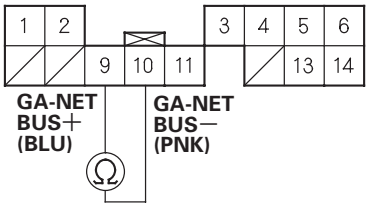
(cont'd)

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DTC Troubleshooting (cont'd)

9. Check for continuity between XM receiver connector A (14P) terminals No. 9 and No. 10.

XM RECEIVER CONNECTOR A (14P)



Wire side of female terminals

Is there continuity?

YES—Go to step 10.

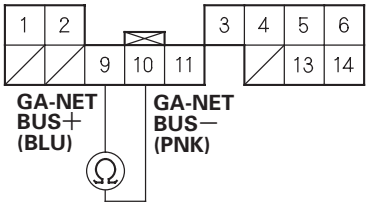
NO—Open in the wire between the navigation unit and the XM receiver. Replace the affected shielded harness. ■

10. Disconnect the jumper wire.

11. Disconnect USB adapter unit connector A (14P).

12. Check for continuity between navigation unit connector E (14P) terminals No. 9 and No. 10.

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

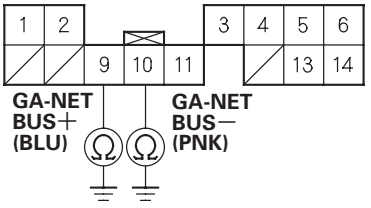
Is there continuity?

YES—Short in the wire(s) between GA-NET (+) and (−) wire. Replace the affected shielded harness. ■

NO—Go to step 13.

13. Check for continuity between body ground and navigation unit connector E (14P) terminals No. 9 and No. 10 individually.

NAVIGATION UNIT CONNECTOR E (14P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire(s) between the navigation unit, the USB adapter unit, and the XM receiver. Replace the affected shielded harness. ■

NO—Go to step 14.

14. Reconnect the all connectors, then turn the ignition switch to ON (II).

15. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).

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16. Check the System Links.

    Is the XM icon red?

    YES—Go to step 17.

    NO—Intermittent failure, the system is OK at this time. ■

17. Turn the ignition switch to LOCK (0).

18. Disconnect USB adapter unit connector A (14P), and then turn the ignition switch to ON (II).

19. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).

20. Check the System Links.

    Is the XM icon red?

    YES—Go to step 21.

    NO—Internal short circuit in the USB adapter unit. ■

21. Turn the ignition switch to LOCK (0).

22. Connect USB adapter unit connector A (14P).

23. Disconnect XM receiver connector A (14P), and then turn the ignition switch to ON (II).

24. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).

25. Check the System Links.

    Is the XM icon red?

    YES—Replace the navigation unit (see page 23-355). ■

    NO—Replace the XM receiver (see page 23-258). ■

DTC 2609: VRAM Diag

NOTE: Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear the hard error code (see page 23-274).

2. Turn the ignition switch to LOCK (0), and then back to ON (II).

3. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).

4. Select the System Links, then select the ECU Info.

    Is V-RAM OK indicated?

    YES—Intermittent failure, the system is OK at this time. ■

    NO—Replace the navigation unit (see page 23-355). ■

DTC Troubleshooting (cont'd)

DTC 2610: DRAM Diag

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).
4. Select the System Links, then select the ECU Info.

   Is D-RAM OK indicated?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-355). ■

DTC 2701: GPS Diag: Antenna

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- Make sure the vehicle is parked outside, away from buildings.
- Check for electronic aftermarket accessories (possibly hidden) mounted near the GPS antenna or the navigation unit.

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).
4. Select the System Links, then select the GPS Ant.

   Is Antenna OK indicated?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Go to step 5.
5. Turn the ignition switch to LOCK (0).
6. Check for poor connections at navigation unit connector H (2P).

   Is the connection OK?

   YES—Replace the GPS antenna (see page 23-358). ■

   NO—Repair the poor connection. ■

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DTC 2702: GPS Diag: Receiver in Navi ECU

NOTE:
- Check the vehicle battery condition first.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- Make sure the vehicle is parked outside, away from buildings.
- Check for electronic aftermarket accessories (possibly hidden) mounted near the GPS antenna or the navigation unit.

1. Clear the hard error code (see page 23-274).

2. Turn the ignition switch to LOCK (0), and then back to ON (II).

3. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).

4. Select the System Links, then select the GPS Ant.

   Is Receiver in Navi ECU OK indicated?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-355). ■

DTC 2703: Aircon Diag

NOTE:
- Check the vehicle battery condition first.
- Check for B-CAN DTCs and resolve them before troubleshooting.
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- DTC 2703 can be stored when the ignition switch is at ACCESSORY (I). With the ignition switch is in ACCESSORY (I), the climate control unit is turned off and the navigation unit loses communication and stores DTCs. Therefore, there is a possibility that the system is normal even DTC 2703 is stored. Check system links (see page 23-297) with the engine running, and if it shows normal, the system is OK at this time. If not, do this troubleshooting.

1. Clear the hard error code (see page 23-274).

2. Turn the ignition switch to LOCK (0), and then back to ON (II).

3. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).

4. Check the System Links.

   Is the Aircon icon red?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. ■

5. Turn the ignition switch to LOCK (0).

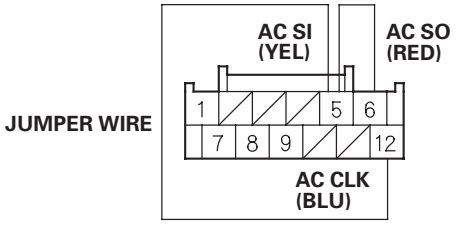
(cont'd)

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DTC Troubleshooting (cont'd)

6. Disconnect navigation unit connector D (12P).
7. Connect navigation unit connector D (12P) terminals No. 5, No. 6, and No. 12 with a jumper wire.

NAVIGATION UNIT CONNECTOR D (12P)



Wire side of female terminals

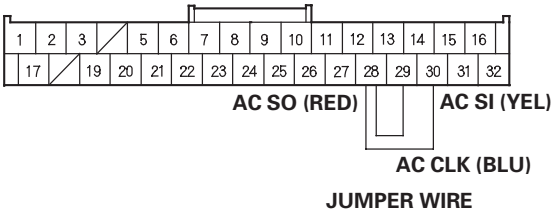
8. Turn the ignition switch to ON (II).
9. Press the RECIRCULATION and OFF buttons.

   Does the RECIRCULATION indicator turn on?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Go to step 10.
10. Turn the ignition switch to LOCK (0), then disconnect the jumper wire.
11. Disconnect climate control unit connecter A (32P).
12. Connect climate control unit connector A (32P) terminals No. 28, No. 29, and No. 30 with a jumper wire.

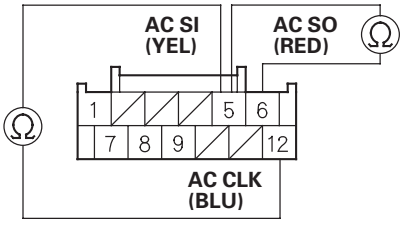
CLIMATE CONTROL UNIT CONNECTOR A (32P)



Wire side of female terminals

13. Check for continuity between navigation unit connector D (12P) terminals No. 5 and No. 6, then between terminals No. 5 and No. 12.

NAVIGATION UNIT CONNECTOR D (12P)



Wire side of female terminals

Is there continuity?

YES—Go to step 14.

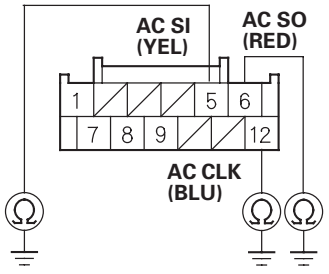
NO—Repair open in the wire(s) between the navigation unit and the climate control unit. ■

14. Disconnect the jumper wire.

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15. Check for continuity between body ground and navigation unit connector D (12P) terminals No. 5, No. 6, and No. 12 individually.

NAVIGATION UNIT CONNECTOR D (12P)



Wire side of female terminals

Are there continuity?

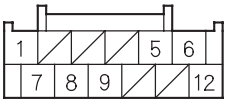
YES—Repair short to body ground in the wire(s) between the navigation unit and the climate control unit. ■

NO—Go to step 16.

16. Check for continuity between the terminal of navigation unit connector D (12P) according to the table.

From terminal	To terminals
D5 (YEL)	D6 (RED), D12 (BLU)
D6 (RED)	D12 (BLU)

NAVIGATION UNIT CONNECTOR D (12P)



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire(s) between the navigation unit and climate control unit. ■

NO—Go to step 17.

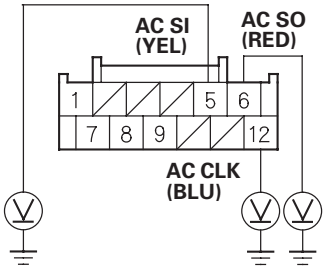
(cont'd)

DTC Troubleshooting (cont'd)

17. Turn the ignition switch to ON (II).

18. Measure the voltage between body ground and navigation unit connector D (12P) terminals No. 5, No. 6, and No. 12 individually.

NAVIGATION UNIT CONNECTOR D (12P)



Wire side of female terminals

Is there voltage above 0.2 V?

YES—Repair short to power in the wire(s) between the navigation unit and the climate control unit. ■

NO—Replace the climate control unit (see page 21-75). ■

DTC 2705: HFL Diag

NOTE: Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear the hard error code (see page 23-274).

2. Turn the ignition switch to LOCK (0), and then back to ON (II).

3. Go into the Diagnostic Menu, and Select the Self-Diagnosis Mode in the Select Diagnosis Items Menu (see page 23-297).

4. Select the System Links.

   Is the HFL icon red?

   YES—Go to step 5.

   NO—Intermittent failure, the system is OK at this time. ■

5. Turn the ignition switch to LOCK (0).

6. Connect the HDS to the DLC (see page 23-359).

7. Clear the DTCs with the HDS.

8. Turn the ignition switch to LOCK (0), and then back to ON (II).

9. Check for DTCs with the HDS.

   Are there any HFL DTCs indicated?

   YES—Do the HFL DTC troubleshooting. ■

   NO—Go to step 10.

10. Turn the ignition switch to LOCK (0).

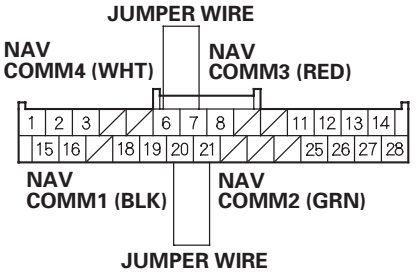
11. Disconnect navigation unit connector B (24P).

12. Disconnect the HandsFreeLink control unit 28P connector.

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13. Connect HandsFreeLink control unit 28P connector terminals No. 6 and No. 7 with a jumper wire, then connect the terminals No. 20 and No. 21 with a jumper wire.

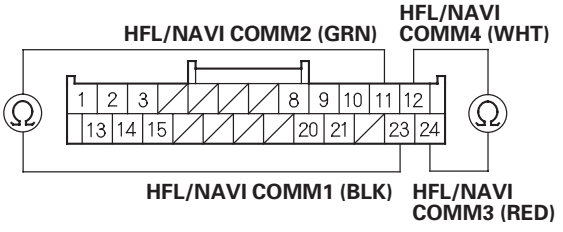
HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

14. Check for continuity between navigation unit connector B (24P) terminals No. 11 and No. 23 then check for continuity between terminals No. 12 and No. 24.

NAVIGATION UNIT CONNECTOR B (24P)



Wire side of female terminals

Is there continuity?

YES—Go to step 15.

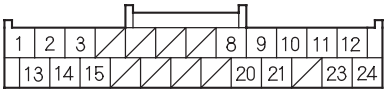
NO—Open in the wire between the navigation unit and the HandsFreeLink control unit. Replace the affected shielded harness. ■

15. Disconnect the jumper wire.

16. Check for continuity between the terminals of navigation unit connector B (24P) according to the table.

From terminal	To terminals
B11 (GRN)	B12 (WHT), B23 (BLK), B24 (RED)
B12 (WHT)	B23 (BLK), B24 (RED)
B23 (BLK)	B24 (RED)

NAVIGATION UNIT CONNECTOR B (24P)



Wire side of female terminals

Is there continuity?

YES—Short in the wires between the navigation unit and the HandsFreeLink control unit. Replace the affected shielded harness. ■

NO—Go to step 17.

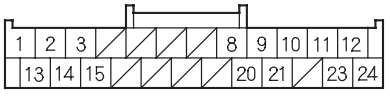
(cont'd)

DTC Troubleshooting (cont'd)

17. Check for continuity between navigation unit connector B (24P) and body ground according to the table.

Navigation unit connector	Wire color
B11	GRN
B12	BLK
B23	WHT
B24	RED

NAVIGATION UNIT CONNECTOR B (24P)



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wires between the navigation unit and the HandsFreeLink control unit. Replace the affected shielded harness. ■

NO—Replace the HandsFreeLink control unit (see page 23-388). ■

DTC 2706: Gyro Diag: ECU Temp XX ℃

NOTE:
- Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).
- Do this test only when the passenger's compartment temperature is between —20 ℃ (—4 ℉) and 70 ℃ (158 ℉).

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back ON (II).
3. Check for the hard error code (see page 23-273).

   Is DTC 2706 indicated?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Intermittent failure, the system is OK at this time. ■

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DTC 2707: MIC Diag

NOTE: Before you troubleshoot, make sure to follow the general troubleshooting information (see page 23-266).

1. Clear the hard error code (see page 23-274).
2. Turn the ignition switch to LOCK (0), and then back to ON (II).
3. Go into the Diagnostic Menu, and select the Self-Diagnosis Mode in the Select Diagnosis items menu (see page 23-297).
4. Select the System Links.

   Is the Mic icon red?

   YES—Go to step 5.

   NO—Go to step 8.
5. Turn the ignition switch to LOCK (0).
6. Check for poor connections or loose terminals at the HandsFreeLink control unit 28P connector, the HFL-navigation microphone 3P connector, and the navigation unit B (24P) connector.

   Are the connections OK?

   YES—Go to step 7.

   NO—Repair the poor connections or loose terminals. ■
7. Check for DTCs with the HDS.

   Is DTC B1775 or B1776 indicated?

   YES—Troubleshoot the indicated DTC. ■

   NO—Replace the HFL-navigation microphone (see page 23-358). ■
8. Select the Mic in the System Links.
9. Press the navigation Talk button on the steering wheel switch, then check the Mic Level (see page 23-311).

   Is the microphone level OK?

   YES—Intermittent failure, the system is OK at this time. ■

   NO—Replace the HFL-navigation microphone (see page 23-358). ■

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Symptom Troubleshooting

No picture is displayed

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the navigation system anti-theft code.

1. Check the No. 23 (10 A) fuse in the under-hood fuse/relay box and the No. 35 (7.5 A) fuse in the under-dash fuse/relay box, and reinstall the fuse if it is OK.

   Is the fuse OK?

   YES—Go to step 2.

   NO—Replace the fuse and recheck. ■

2. Turn the ignition switch to ON (II).

3. Operate the radio and listen to the audio.

   Can you hear the audio?

   YES—Go to step 4.

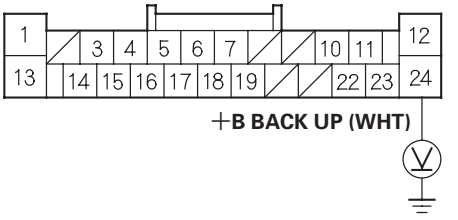
   NO—Refer to audio system troubleshooting. ■

4. Turn the ignition switch to LOCK (0).

5. Remove the navigation unit (see page 23-355).

6. Measure the voltage between navigation unit connector A (24P) terminal No. 24 and body ground.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there battery voltage?

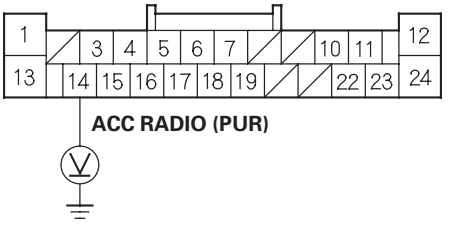
YES—Go to step 7.

NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

7. Turn the ignition switch to ON (II).

8. Measure the voltage between navigation unit connector A (24P) terminal No. 14 and body ground.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

Is there battery voltage?

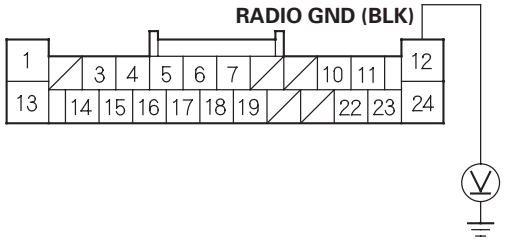
YES—Go to step 9.

NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

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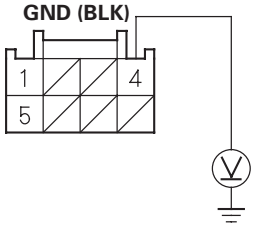
9. Measure the voltage between navigation unit connector A (24P) terminal No. 12 and body ground, and between navigation unit connector C (8P) terminal No. 4 and body ground.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

NAVIGATION UNIT CONNECTOR C (8P)



Wire side of female terminals

Is there less than 0.1 V?

YES—Replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between the navigation unit and body ground (G504) (see page 22-30), (G505) (see page 22-32). ■

Picture has lines/rolls/other issues or is an odd color

Diagnostic Test: Monitor Check

NOTE:
- Check the vehicle battery condition frist.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check the navigation screen settings for brightness, contrast, black level and the color screen for map color and menu color.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the navigation system anti-theft codes.

1. Check for electronic aftermarket accessories (possibly hidden) mounted near the navigation unit.

   Are there any electronic accessories?

   YES—Disable the accessories, and recheck. ■

   NO—Go to step 2.

2. Turn the ignition switch to ON (II).

3. Start up the navigation picture.

   Is the picture scrolling horizontally (left to right or right to left)?

   YES—Go to step 5.

   NO—Go to step 4.

4. Go into the Detail Information & Settings, select Monitor Check, and use RGB Color diagnostic under Monitor Check (see page 23-302).

   Are the red, green, and blue colored circles shown?

   YES—Go to step 5.

   NO—Replace the navigation unit (see page 23-355). ■

(cont'd)

Symptom Troubleshooting (cont'd)

5. Turn the ignition switch to LOCK (0), then turn to ON (II), and observe the navigation picture.

   Did the image improve?

   YES—Check for sources of electrical noise, such as poor battery connection, alternator, defective battery, aftermarket accessories or cell phone, and poor pin fits at the navigation unit. ■

   NO—Replace the navigation unit (see page 23-355). ■

Navigation display buttons do not work or respond properly

NOTE:
- Check the vehicle battery condition first.
- Always make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Always check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the navigation system anti-theft codes.

1. Turn the ignition switch to ON (II).

2. Go into the Detail Information & Settings select Unit Check, and use Hard Key test under Unit Check (see page 23-305).

   Does the navigation unit buttons work properly?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-355). ■

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GPS icon is white or not shown

Diagnostic Test: Self-Diagnosis Mode

NOTE:
- Check the vehicle battery condition first.
- With good reception, the icon is normally green.
- Make sure the GPS antenna is plugged in.
- Check for any aftermarket accessories or metallic window tinting that may be interfering with the GPS signal.
- Make sure the vehicle is parked outside, away from buildings.
- Refer to GPS Information (see page 23-312) for realtime satellite reception display.

1. Check for aftermarket metallic window tint on the rear window and electronic aftermarket accessories (possibly hidden) mounted near the GPS antenna or the navigation unit.

   Is there aftermarket metallic window tint or electronic accessories?

   YES—Remove tint or the accessories, and recheck. ■

   NO—Go to step 2.

2. Turn the ignition switch to ON (II).

3. Go into the Self-Diagnosis Mode, and use the System Links diagnostic (see page 23-297) to check the GPS antenna.

   Is the GPS Ant icon red?

   YES—Check for a kinked, crushed, or disconnected GPS antenna wire. If the icon is still red, replace the GPS antenna (see page 23-358). ■

   NO—Check that nothing is blocking the GPS antenna located under the package shelf and recheck. Substitute a known-good GPS antenna, and recheck. ■

   - If the symptom is gone, replace the GPS antenna.
   - If the symptom is still present, substitute a known-good navigation unit (see page 23-355), and recheck. If the symptom is gone, replace the original navigation unit.

Voice guidance cannot be heard, is broken up, or there is static

Diagnostic Test: Self-Diagnosis Mode

NOTE:
- Check the vehicle battery condition first.
- Check the navigation volume level (see Owner's Manual).
- Check the connectors for poor connections or loose terminals.
- If the Hard Error Code is stored, check the Hard Error Code troubleshooting first.
- Make sure that the correct DVD color and version are installed.
- Inspect the DVD for dirt or damage.
- Before troubleshooting, make sure you have anti-theft codes for the navigation system.
- After troubleshooting, enter the anti-theft codes for the navigation system.

1. Turn the ignition switch to ON (II).

2. Press the SET-UP button.

3. Check the volume and voice feedback setting for the navigation system in set-up.

   Is either set to OFF?

   YES—Set the voice feedback to ON, and select an audible level for the volume. ■

   NO—Go to step 4.

4. Check the audio system operation.

   Can you hear the audio?

   YES—Go to step 5.

   NO—Troubleshoot audio system. ■

5. Select the Self-Diagnosis mode.

6. Check for error code to the Error History.

   Is the Hard Error Code in stored?

   YES—Refer to the Hard Error Code troubleshooting. ■

   NO—Replace the navigation unit (see page 23-355). ■

Symptom Troubleshooting (cont'd)

Voice control does not work/respond

Diagnostic Test: Mic Level

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.
- Check the connector for poor connection or loose terminals.
- Before troubleshooting, make sure you have the navigation system anti-theft codes.
- After troubleshooting, enter the anti-theft codes for the navigation system.

Before assuming that a voice complaint is hardware related, ensure that the voice control system is being operated correctly.

- Make sure you are on the correct screen when trying to issue a voice command. For instance, the command ''Find the nearest Italian Restaurant'' only works on a Map screen.
  (See the Navigation System Manual for a complete list of allowed voice commands for the information being displayed.)
- Close the windows, moonroof, and doors.
- Set the fan speed to low (1 or 2).
- Adjust the air flow from the air conditioning vents so that they do not blow against the microphone on the ceiling.
- Pause after pressing the navigation TALK button, then give a voice command clearly in a natural speaking voice. If the system cannot recognize your command, speak louder.
- If the microphone picks up voices other than yours, the system may not interpret your voice commands correctly.
- If you speak a command with something in your mouth, or your voice is too husky, the system may misunderstand your command.
- Compare the system operation with a known-good vehicle. Have more than one person test the system operation. If the like known-good vehicle performs the same, if is a characteristic of the system.

1. Turn the ignition switch to ON (II).
2. Go into the Self-Diagnosis Mode select, Mic Icon Menu, and use the Mic Level test under Functional Setup (see page 23-309) to check the operation of the navigation Talk and Back buttons.

   Are the navigation TALK and BACK buttons operational?

   YES—step 10

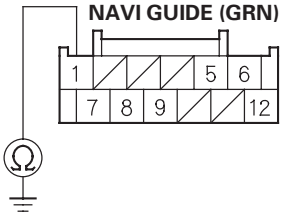
   NO—Go to step 3.
3. Turn the ignition switch to LOCK (0).
4. Do the voice control switch test (see page 23-357).

   Is the voice control switch OK?

   YES—Go to step 5.

   NO—Replace the HFL-voice control switch. ■
5. Disconnect the HFL-voice control switch 5P connector and navigation unit connector D (12P).
6. Check for continuity between body ground and navigation unit connector D (12P) terminal No. 1.

NAVIGATION UNIT CONNECTOR D (12P)



Wire side of female terminals

Is there continuity?

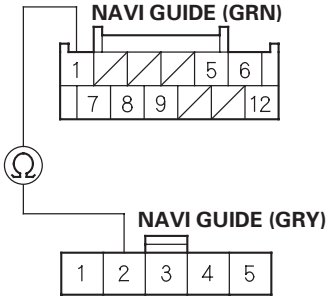
YES—Repair short to body ground in the wire between the navigation unit and the voice control switch, or replace the cable reel. ■

NO—Go to step 7.

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7. Check for continuity between navigation unit connector D (12P) terminal No. 1 and HFL-voice control switch 5P connector terminal No. 2.

NAVIGATION UNIT CONNECTOR D (12P)
Wire side of female terminals



HFL-VOICE CONTROL SWITCH 5P CONNECTOR
Wire side of female terminals

Is there continuity?

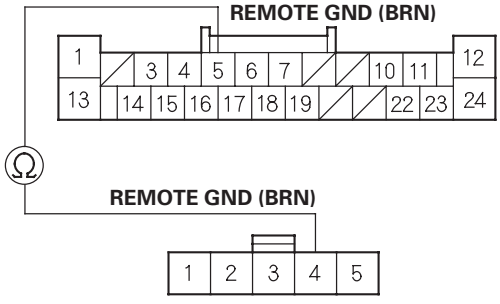
YES—Go to step 8.

NO—Repair open in the wire between the navigation unit and the HFL-voice control switch, or replace the cable reel. ■

8. Disconnect navigation unit connector A (24P).

9. Check for continuity between navigation unit connector A (24P) terminal No. 5 and HFL-voice control switch 5P connector terminal No. 4.

NAVIGATION UNIT CONNECTOR A (24P)
Wire side of female terminals



HFL-VOICE CONTROL SWITCH 5P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between navigation unit and voice control switch, or replace the cable reel. ■

10. Use the Mic Level diagnostic under Functional Setup (see page 23-309) to check the operation of the microphone.

Is the microphone operational?

YES—Check the operation of the voice control system (see the Navigation System Manual). ■

NO—Go to step 11.

11. Check the HFL DTCs (see page 23-360).

Are there any DTCs indicated?

YES—Repair the indicated DTCs. ■

NO—Substitute a known-good HFL-navigation microphone (see page 23-358), then reconnect all of the connectors and recheck. If the symptom/indication goes away, replace the original microphone. If the symptom/indication is still present, replace the navigation unit (see page 23-355). ■

Symptom Troubleshooting (cont'd)

Vehicle position icon constantly leaves road, moves erratically, or is displayed very far from actual vehicle position

NOTE:
- Check the vehicle battery condition first.
- Check that the GPS antenna is plugged in.
- This is not the same condition as when driving off-road (or on a fire or logging road). This condition is caused by a loss of map matching from a bad sensor input. Check for after market window tinting or other objects that can block the GPS signal. Always do the Map matching (see page 23-269) before proceeding with the troubleshooting.
- Make sure that the correct DVD color and version are installed.
- Inspect the DVD for dirt or damage.
- Check any official Honda service website for more service information about the navigation system.
- Check the GPS signal reception in an open area.

1. Check the GPS icon on the navigation screen.

   Is the GPS icon white?

   YES—Do the troubleshooting for GPS icon is white or not shown (see page 23-341). ■

   NO—Go to step 2.

2. Go into the Self-Diagnosis Mode, and use the Yaw Rate test (see page 23-314) to check the yaw rate sensor.

3. Go into the Self-Diagnosis Mode, and use the Car Status test (see page 23-315) to check the vehicle speed pulse.

   Are the yaw rate sensor and vehicle speed pulse OK?

   YES—The condition may be normal. Check to see if the condition occurs in the same place in a known-good vehicle. If it does, the problem could be in the database. Go to step 4.

   NO—If the problem is the yaw rate sensor, replace the navigation unit (see page 23-355). If the problem is the vehicle speed pulse, check for an open in the wire between the navigation unit and the ECM/PCM (VSP signal). If the wire is OK, substitute a known-good navigation unit, and retest. If the problem goes away, replace the original navigation unit. If the problem is still present, replace the ECM/PCM. ■

4. Substitute a known-good navigation unit, and check to see if the problem occurs in the same place.

   Does the problem occur in the same place?

   YES—The problem is in the database. Report the problem according to the Navigation System Manual under Reporting Errors. ■

   NO—Replace the original navigation unit (see page 23-355). ■

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Vehicle icon wanders across the map when driving (does not follow a displayed road) or map or vehicle ICON spins

NOTE:
- Check the vehicle battery condition first.
- This is not the same condition as when driving off-road (or on a fire or logging road).
- This condition is caused by a loss of map matching from a bad sensor input. Check for aftermarket or other objects that can block the GPS signal. Always perform Map matching (see page 23-269) before proceeding with the troubleshooting.
- Always check for and resolve all CAN DTCs before troubleshooting the navigation system.
- Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode, and use Version (see page 23-316).
- Make sure that the correct DVD color and version are installed.
- Check for aftermarket metallic window tinting.
- Inspect the DVD for dirt or damage.
- Check any official Honda service website for more service information about the navigation system.
- Before troubleshooting, make sure you have anti-theft codes for the navigation system.
- After troubleshooting, enter the anti-theft codes for the navigation system.
- Check the DVD for damage or scratches.
- Check for connectors for poor connections or loose terminals.

1. Check the GPS icon on the navigation screen.

   Is the GPS icon white or missing?

   YES—Do the troubleshooting for GPS icon is white or not shown (see page 23-341). ■

   NO—Go to step 2.

2. Go into the Self-Diagnostic mode, and use the Yaw Rate diagnosis (see page 23-314) to check the yaw rate sensor.

   Is the yaw rate sensor OK?

   YES—Go to step 3.

   NO—Replace the navigation unit (see page 23-355). ■

3. Go into the Diagnostic mode, and use the Car Status diagnosis (see page 23-315) to check the vehicle speed pulse (VSP) and the BACK signals.

   Are the vehicle speed pulse and the BACK signals OK?

   YES—The problem may be a characteristic of the system. Check to see if the problem occurs in the same place in a known-good vehicle. If it does, the problem could be in the database. Go to step 4.

   NO—
   - If the problem is the vehicle speed pulse, troubleshoot the vehicle speed signal circuit. BLU wire for open or short. If OK, good ECM/PCM. If the problem or symptom goes Update the ECM/PCM (see page 11-227) if it does not have the latest software or substitute a known-good ECM/PCM (see page 11-228).
   - If the BACK signal is indicated ON (I), when in any shift lever position other than reverse, troubleshoot the back-up light switch circuit or MICU (A/T). ■

4. Substitute a known-good navigation unit (see page 23-355), and check to see if the problem occurs in the same place.

   Does the problem occur in the same place?

   YES—The problem is in the database and should be considered a characteristic of the system. Report the problem according to the Navigation System Owner's Manual under Reporting Errors and look for improvements in future databases. ■

   NO—Replace the navigation unit (see page 23-355). ■

Symptom Troubleshooting (cont'd)

DVD read error messages

Diagnostic Test: Car Status

NOTE:
- Check the vehicle battery condition first.
- Confirm the correct DVD color and version is installed in the navigation unit (see page 23-270).
- Refer to General Troubleshooting for a list of common DVD screen error messages and the probable causes (see page 23-319).
- Check any official Honda service website for more service information about the navigation system.
- Go into the Diagnostic mode and use the ECU Info diagnostic (see page 23-305) to check the status of the DVD cover.
- Inspect the navigation DVD for scratches or damage.
- The following troubleshooting is for the error message shown on the error messages table (see page 23-319).

1. Check the DVD-ROM reading surface for scratches and finger prints.

   Are there any scratches or finger prints on the DVD-ROM reading surface?

   YES—Clean or replace the DVD-ROM (see page 23-270).■

   NO—If the problem occurs occasionally when the system is cold, this is normal. If the problem occurs frequently when driving, replace the navigation unit (see page 23-355).■

Navigation cannot control HVAC by voice command

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connections or loose terminals.
- Check for and resolve all CAN DTCs before troubleshooting the navigation system.
- If the Hard Error Code stored, check the Hard Error Code troubleshooting first.
- Before troubleshooting, make sure the anti-theft codes for the navigation system.
- After troubleshooting, enter the anti-theft codes for the navigation system.
- Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode, and use Version (see page 23-316).
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.

1. Connect the HDS to the DLC. Check for B-CAN or F-CAN DTCs in the data list.

   Are there any DTCs in the B-CAN or F-CAN systems?

   YES—Troubleshoot and repair all CAN related DTCs, and then retest.

   NO—Go to step 2.

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2. Turn the ignition switch to ON (II).

3. Select the Self-Diagnosis mode.

4. Check for error code in the Error History.

   Are there any Hard Error Code stored?

   YES—Refer to the Hard Error Code troubleshooting. ■

   NO—Go to step 5.

5. Substitute a known-good climate control unit. Reconnect all connectors, and retest.

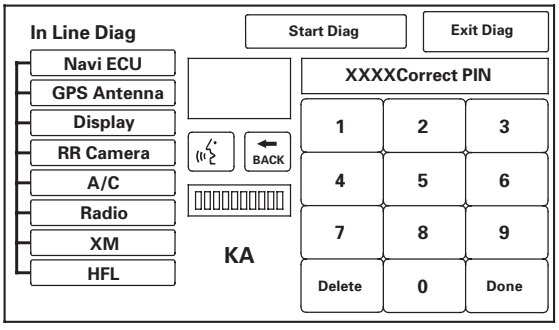
   Does the symptom go away?

   YES—Replace the original climate control unit (see page 21-75). ■

   NO—Replace the navigation unit (see page 23-355). ■

System always comes up in in-line diagnostic mode

1. When a navigation unit is powered up for the first time at the factory, the factory diagnosis screen (In Line Diag) appears. Normally the factory performs the steps necessary to verify proper operation, and terminate the factory diagnostic. Until the proper confirmation sequence is performed, the screen will appear every time the vehicle is started.



2. Follow the steps to prevent the screen from showing up in the future:

   - Hold down the buttons (Menu, Map/Guide, and Cancel) for about 5 seconds. The Select Diagnosis Items screen appears.
   - Hold down the Map/Guide button for 5—10 seconds. A screen with a Complete button, appears.
   - Touch Complete, and then the Return button (the system may re-boot).
   - Restart the vehicle, and confirm normal operation by completing the PDI of the navigation system Service Bulletin.

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Symptom Troubleshooting (cont'd)

Display day/night mode does not work or does not work properly

NOTE:
- Check the vehicle battery condition first.
- Check the connectors for poor connection or loose terminals.
- Before troubleshooting, get the navigation system anti-theft code.
- After troubleshooting, enter the navigation system anti-theft code.
- Full brightness on the instrument panel brightness control with the head lights turned on causes the system to stay in the day mode, even when the lights are on.

1. Make sure the instrument panel brightness control is not on full brightness. Turn the headlights on, and adjust the dash brightness to the middle range.

2. Change the day/night mode under Set-up to AUTO, and recheck.

   Does the display change to day and night modes when turning the headlights on and off?

   YES—The system is OK at this time. ■

   NO—Go to step 3.

3. Go into the Diagnostic Menu and use the Car Status test to check for an ILL signal (see page 23-315).

   Is the ILL signal OK?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Check the ILL+ circuit between the navigation unit and the No. 14 (7.5 A) fuse in the under-dash fuse/relay box. ■

System locks up or freezes constantly

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.

1. Start the engine, and turn the ignition switch to LOCK (0), then turn the ignition switch to ON (II).

   Does the system reboot?

   YES—The system is OK at this time. ■

   NO—Check the DVD for scratches or damage, and the navigation unit for water damage. If OK, go into the Diagnostic Menu, and do all of the Unit Check tests (see page 23-305). Also check for low battery charge or poor charging system performance. ■

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Navigation display stays on with ignition switch in LOCK (0)

NOTE:
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, get the navigation system anti-theft code, then write down the audio presets.
- After troubleshooting, re-enter the anti-theft code, and re-initialize the navigation system, then enter the audio presets.
- Check for aftermarket accessories that use the same power circuit. A feedback can cause this problem.

1. Remove the key from the ignition.

   Does the navigation screen stay on?

   YES—Go to step 2.

   NO—The system is OK at this time. ■

2. The vehicle may have been used as a demonstration vehicle at an event like an auto show. In these events, power is often jumpered to the navigation system so that the ignition key is not needed in the vehicle. At the end of the show, the jumper wire may not have been removed. Check the navigation unit connector A (24P) for a non-factory jumper wire in series with the factory cable.

   Is there a jumper wire?

   YES—Remove the jumper wire, and re-test. Return the jumper wire to Tech Line. ■

   NO—Go to step 3.

3. Check if the audio unit works.

   Does the audio unit work with the ignition switch off?

   YES—Troubleshoot the ACC circuit for a short to power with another circuit. ■

   NO—Replace the navigation unit (see page 23-355). ■

Navigation cannot control audio system

NOTE:
- Check the vehicle battery condition first.
- Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode and use Version (see page 23-316).
- Check for connectors for poor connections loose terminals.
- Before troubleshooting, make sure you have anti-theft codes for the navigation system.
- After troubleshooting, enter the anti-theft codes for the navigation system.
- Make sure that the correct navigation DVD color and version are installed.
- Inspect the navigation DVD for dirt or damage.
- Check any official Honda service website for more service information about the navigation system.

1. Make sure the anti-theft code for the navigation system is entered.

2. Go into the Diagnostic Menu, and use the Navi System Link test (see page 23-297).

   Is the Radio icon red?

   YES—Do the troubleshooting for the voice guidance cannot be heard (see page 23-341). ■

   NO—Go to step 3.

3. Substitute a known-good navigation unit (see page 23-355), and recheck.

   Can the navigation control audio?

   YES—Replace the navigation unit (see page 23-355). ■

   NO—Do the audio system troubleshooting. ■

Symptom Troubleshooting (cont'd)

Navigation cannot control XM radio

NOTE:
- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.

1. Start the vehicle.
2. Make sure the anti-theft code for the navigation system is entered.
3. Go into the Diagnostic mode, and use the System Links diagnosis (see page 23-297).

   Is the XM icon red?

   YES—Do the troubleshooting for the voice guidance cannot be heard (see page 23-341). ■

   NO—Go to step 4.
4. Substitute a known-good navigation unit (see page 23-355).

   Can the navigation system control XM radio?

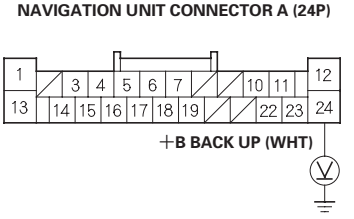
   YES—Replace the navigation unit (see page 23-355). ■

   NO—Replace the XM receiver (see page 23-258). ■

Navigation frequently asks for anti-theft code and/or needs GPS initialization

NOTE:
- This is often caused by a loss of battery power, a low or poor battery condition, or a poor ground.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.

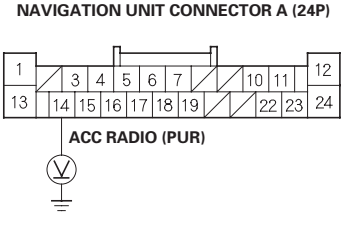
1. Measure the voltage between navigation unit connector A (24P) terminal No. 24 and body ground.



   Is there battery voltage?

   YES—Go to step 2.

   NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■
2. Turn the ignition switch to ON (II).
3. Measure the voltage between navigation unit connector A (24P) terminal No. 14 and body ground.



   Is there battery voltage?

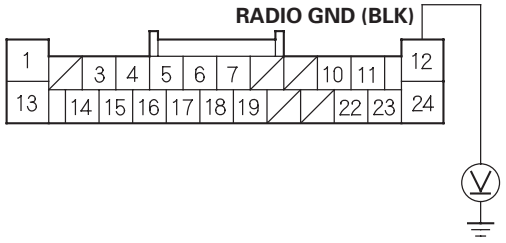
   YES—Go to step 4.

   NO—Repair open in the wire between the under-dash fuse/relay box and the navigation unit. ■

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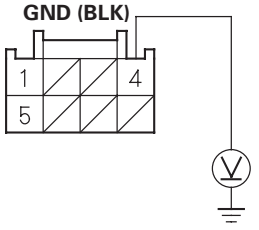
4. Measure the voltage between navigation unit connector A (24P) terminal No. 12 and body ground, and between navigation unit connector C (8P) terminal No. 4 and body ground.

NAVIGATION UNIT CONNECTOR A (24P)



Wire side of female terminals

NAVIGATION UNIT CONNECTOR C (8P)



Wire side of female terminals

Is there less than 0.1 V?

YES—Replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between the navigation unit and body ground (G504, G505). ■

OPEN/CLOSE function of the display does not work

NOTE:
- Check the vehicle battery condition first.
- If the display's Open/Close button does not work, you must manually open the display to obtain the client's navigation DVD, audio CD, and PC card (see page 23-269).

1. Press the OPEN/CLOSE button.

   Does the display open and/or close normally?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-355). ■

Symptom Troubleshooting (cont'd)

Navigation display will not close

NOTE: Check the vehicle battery condition first.

1. Check the CD slot. Look for foreign objects, stuck CD, broken or sticking slot.

   Is the CD slot OK?

   YES—Go to step 2.

   NO—Replace the navigation unit (see page 23-355). ■

2. Check the PC card.

   Is the PC card fully seated?

   YES—Go to step 3.

   NO—Reseat the card or remove it. If it still won't close, replace the navigation unit (see page 23-355). ■

3. Press the OPEN/CLOSE button.

   Does the display open and/or close normally?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-355). ■

Navigation display does not open or opens part way

NOTE: Check the vehicle battery condition first.

1. Press the OPEN/CLOSE button.

   Does the unit beep?

   YES—Go to step 2.

   NO—Replace the navigation unit (see page 23-355). ■

2. Press the OPEN/CLOSE button.

   Does the display open normally?

   YES—The system is OK at this time. ■

   NO—Replace the navigation unit (see page 23-355). ■

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Navigation system will not accept security code

NOTE:
- Check the vehicle battery condition first.
- The system will not operate without the 4-digit security (anti-theft) code. Follow the this procedure. (After 10 consecutive tries, you must cycle the key to continue trying)
- The Navigation System Diagnosis and Core Return From is available online, under Job aids, and can be printed out for recording this information. This information will help the reman facility determine what caused the failure.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the anti-theft codes for the navigation system.
- Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode, and use Version (see page 23-316).
- Make sure that the correct navigation DVD color and version are installed.
- Check any official Honda service website for more service information about the navigation system.

1. Go into the System diagnosis menu (see page 23-297), select Unit check, and then ECU info. A brief diagnostic runs for 20 seconds, and the serial number is displayed.

   Is the serial number displayed?

   YES—Go to step 4.

   NO—Go to step 2.

2. Remove the navigation unit (see page 23-355).

3. Check the serial number on the label on the underside of the navigation unit.

   Is the serial number confirmed on the underside of the navigation unit?

   YES—Go to step 4.

   NO—Replace the navigation unit (see page 23-355). ■

4. Using the serial number, look up the navigation security code in the Interactive Network. (click: Service, Vehicle Information, Anti-Theft code Inquiry, and then select Navigation from the Product dropdown box). Enter the serial number.

   Is a 4-digit code displayed on the screen?

   YES—Go to step 5.

   NO—Call the Warranty Department to obtain the code (the telephone number is in the PDI service bulletin). Then go to step 5.

5. Check that the obtained code works to bypass the code screen in the navigation system.

   Does the code work?

   YES—The system is OK at this time Return the vehicle to the client, and give them the anti-theft code. ■

   NO—Go to step 6.

6. Try entering four zeros (0000) in place for the code.

   Do the four zeros work to bypass the code screen?

   YES—Replace the navigation unit, and enter Security code is 0000 in the problem description field of the core return form. ■

   NO—Replace the navigation unit, and enter Won't take security code (as proof, enclose the sticker that contains the Serial number and the Code) in the problem description field of the core return form. ■

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Symptom Troubleshooting (cont'd)

The Honda Globe Screen (not the Acura Globe Screen) appears every time the vehicle is started

NOTE: The navigation DVD and the navigation unit are correct for the vehicle, but earlier and possibly later versions of the navigation software may have been installed. When this happens, the software may not be recognized by the navigation unit, and could cause the navigation unit to revert to a Honda model profile.

1. Remove the navigation unit (see page 23-355) and verify that the part number printed on the navigation unit label is the correct one for the year/model vehicle you are working on.

   Is the correct navigation unit installed based on the part number?

   YES—Go to step 2.
   NO—Replace the navigation unit with the correct unit for the year/model vehicle you are working on. ■

2. Reinstall the navigation unit.

3. Remove the navigation DVD (see page 23-354).

4. Note the software version marked on the navigation DVD label and verity if it is the correct version for the vehicle year/model you are working on by checking any official Honda service website for more service information about the navigation system and navigation software.

   Is the software version marked on the navigation DVD label the correct one for the vehicle year/model you are working on?

   YES—Replace the navigation unit (see page 23-355). ■
   NO—Go to step 5.

5. Obtain the correct version DVD (see page 23-269) and install it.

   Does the navigation system boot-up with the Acura Globe Screen?

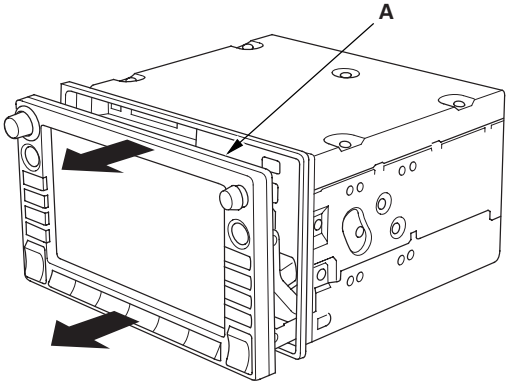
   YES—The problem is resolved, troubleshooting is complete. ■
   NO—The system still shows a Honda Globe Screen. Replace the navigation unit (see page 23-355). ■

CD, DVD, and PC Card Removal/ Installation

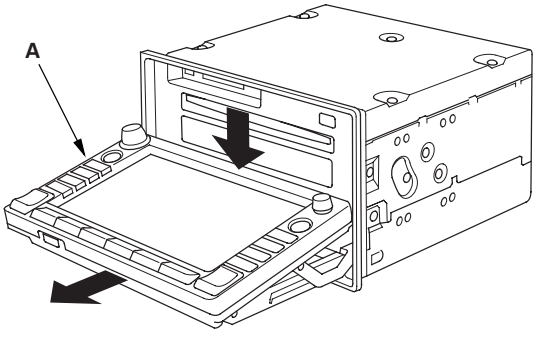
If the displays Open and Close buttons do not work, you must manually open the display to remove the client's Navigation DVD, CD, and possibly their PC card. Follow to the steps.

1. Remove the navigation unit from the vehicle (see page 23-255).

2. On the bench, carefully pull the display (A) straight out (about 1/2 inch).



3. Fold down the display (A).



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Symptom Troubleshooting (cont'd)

The Honda Globe Screen (not the Acura Globe Screen) appears every time the vehicle is started

NOTE: The navigation DVD and the navigation unit are correct for the vehicle, but earlier and possibly later versions of the navigation software may have been installed. When this happens, the software may not be recognized by the navigation unit, and could cause the navigation unit to revert to a Honda model profile.

1. Remove the navigation unit (see page 23-355) and verify that the part number printed on the navigation unit label is the correct one for the year/model vehicle you are working on.

   Is the correct navigation unit installed based on the part number?

   YES—Go to step 2.
   NO—Replace the navigation unit with the correct unit for the year/model vehicle you are working on. ■

2. Reinstall the navigation unit.

3. Remove the navigation DVD (see page 23-354).

4. Note the software version marked on the navigation DVD label and verity if it is the correct version for the vehicle year/model you are working on by checking any official Honda service website for more service information about the navigation system and navigation software.

   Is the software version marked on the navigation DVD label the correct one for the vehicle year/model you are working on?

   YES—Replace the navigation unit (see page 23-355). ■
   NO—Go to step 5.

5. Obtain the correct version DVD (see page 23-269) and install it.

   Does the navigation system boot-up with the Acura Globe Screen?

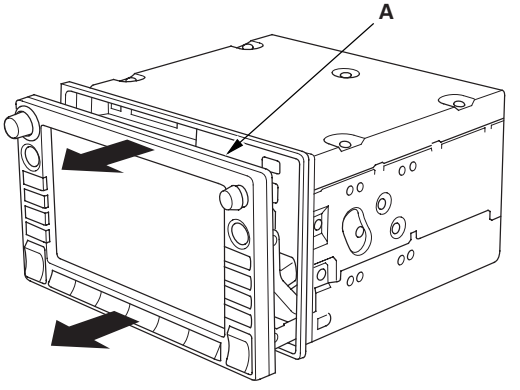
   YES—The problem is resolved, troubleshooting is complete. ■
   NO—The system still shows a Honda Globe Screen. Replace the navigation unit (see page 23-355). ■

CD, DVD, and PC Card Removal/ Installation

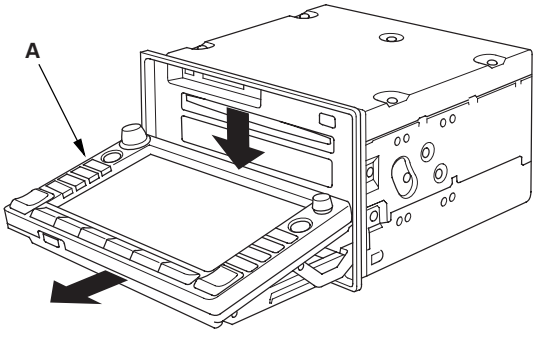
If the displays Open and Close buttons do not work, you must manually open the display to remove the client's Navigation DVD, CD, and possibly their PC card. Follow to the steps.

1. Remove the navigation unit from the vehicle (see page 23-255).

2. On the bench, carefully pull the display (A) straight out (about 1/2 inch).

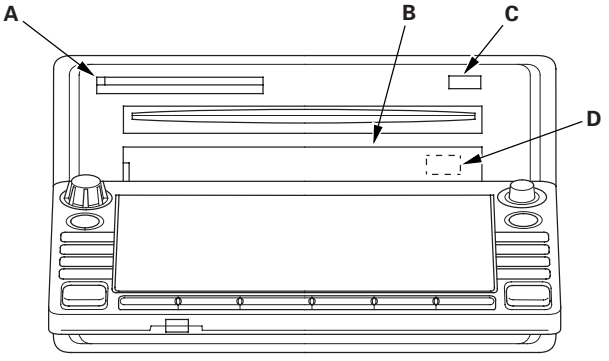


3. Fold down the display (A).



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4. Push the PC card eject button (A) to eject the client's PC card (if installed). Power is not required for this function.



5. Remove the plastic cover (B) over the navigation DVD slot.

6. With the display open, temporarily reconnect the unit in the dash (to power it up).

7. Push the CD eject button (C), and navigation DVD eject button (D) (the button is behind the plastic cover and works only when the unit is powered) and remove the discs (hold the discs by their edges to avoid fingerprints). To avoid scratches, place the navigation DVD and the client's CD in a jewel case if available.

8. Re-attach the plastic lid that hides the navigation DVD slot.

9. Close the display by first returning the display to the upward position, and then pushing the entire display straight back into the unit.

10. After installing the new navigation unit, re-insert the navigation DVD, the client's CD, and the PC card.

Navigation Unit Removal/ Installation

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the dashboard and related parts.
- Lay a workshop towel under the parts when working on them to protect the face panel from scratches or other damage.
- Do not work in a dusty or dirty place.
- Discharge static electricity from your body before and during the work.
- Do not touch the circuit board(s) with your bare hands.
- Do not work with dirty hands.
- Be careful not to fold the flat plate cable.
- Do not touch the terminal connector of the flat plate cable with your bare hands. (If you have touched it, wipe it off thoroughly.)
- Before replacing the navigation unit, make sure to remove the client's navigation DVD, and their audio CD, or PC card. Remanufactured navigation units do not come with a navigation DVD. Re-install the client's navigation DVD, audio CD, and audio PC card into the new remanufactured unit. If the navigation display won't open, manually remove the navigation DVD, audio CD, and PC card (see page 23-354).
- If you are replacing the navigation unit, write down the audio presets (if possible), then enter them into the new navigation unit.

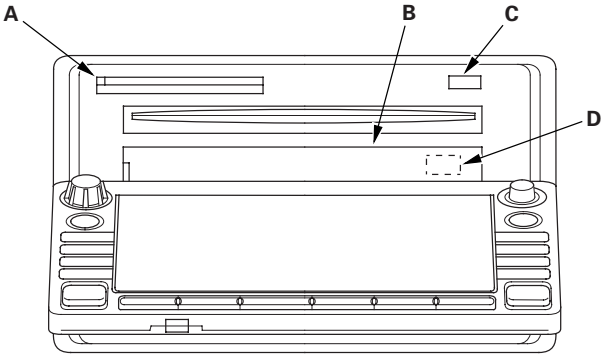
1. Make sure you have the 4-digit anti-theft code for the navigation system.

2. Eject the DVD from the original navigation unit. To avoid scratching or damaging the DVD, temporarily place the DVD in jewel case.

3. Remove the subdisplay visor (see page 20-100).

(cont'd)

4. Push the PC card eject button (A) to eject the client's PC card (if installed). Power is not required for this function.



5. Remove the plastic cover (B) over the navigation DVD slot.

6. With the display open, temporarily reconnect the unit in the dash (to power it up).

7. Push the CD eject button (C), and navigation DVD eject button (D) (the button is behind the plastic cover and works only when the unit is powered) and remove the discs (hold the discs by their edges to avoid fingerprints). To avoid scratches, place the navigation DVD and the client's CD in a jewel case if available.

8. Re-attach the plastic lid that hides the navigation DVD slot.

9. Close the display by first returning the display to the upward position, and then pushing the entire display straight back into the unit.

10. After installing the new navigation unit, re-insert the navigation DVD, the client's CD, and the PC card.

Navigation Unit Removal/ Installation

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

NOTE:
- Put on gloves to protect your hands.
- Take care not to scratch the dashboard and related parts.
- Lay a workshop towel under the parts when working on them to protect the face panel from scratches or other damage.
- Do not work in a dusty or dirty place.
- Discharge static electricity from your body before and during the work.
- Do not touch the circuit board(s) with your bare hands.
- Do not work with dirty hands.
- Be careful not to fold the flat plate cable.
- Do not touch the terminal connector of the flat plate cable with your bare hands. (If you have touched it, wipe it off thoroughly.)
- Before replacing the navigation unit, make sure to remove the client's navigation DVD, and their audio CD, or PC card. Remanufactured navigation units do not come with a navigation DVD. Re-install the client's navigation DVD, audio CD, and audio PC card into the new remanufactured unit. If the navigation display won't open, manually remove the navigation DVD, audio CD, and PC card (see page 23-354).
- If you are replacing the navigation unit, write down the audio presets (if possible), then enter them into the new navigation unit.

1. Make sure you have the 4-digit anti-theft code for the navigation system.

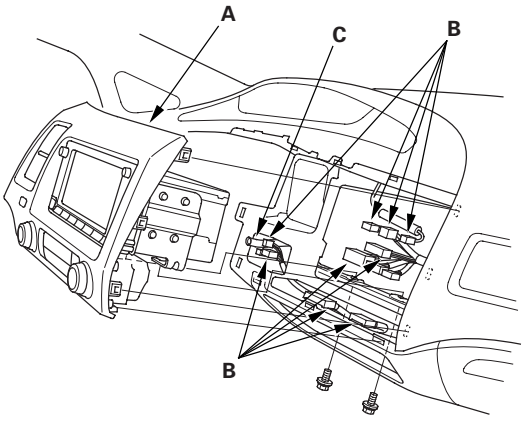
2. Eject the DVD from the original navigation unit. To avoid scratching or damaging the DVD, temporarily place the DVD in jewel case.

3. Remove the subdisplay visor (see page 20-100).

(cont'd)

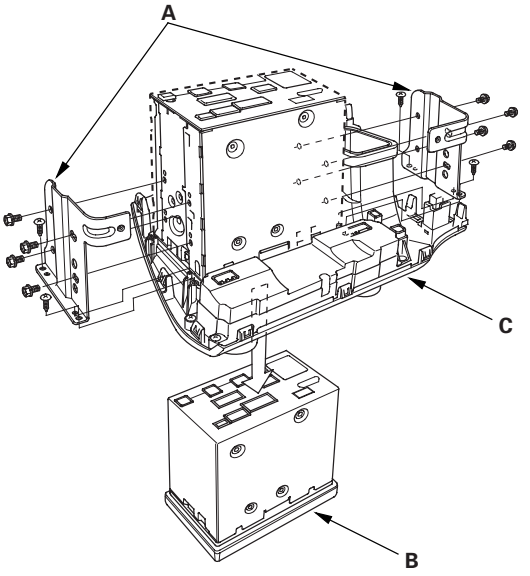
Navigation Unit Removal/Installation (cont'd)

4. Remove the center pocket hole lid and bolts, then pull out the center panel (A).



5. Disconnect the connectors (B) and air hose (C), then remove the center panel.

6. Remove the screws, brackets (A), and the navigation unit (B) from the center panel (C).



7. Install the navigation unit in the reverse order of removal and make sure all connectors are secure.

8. Turn the ignition switch to ON (II), then reinstall the client's original DVD, verifying than the DVD is free of scratches or smudges.

9. Check any official Honda service website for more service information about the navigation system.

   NOTE: Simply transferring the DVD from the original navigation unit to the new navigation unit does not assure the correct software for the vehicle will be loaded into the new navigation unit. Doing the DVD transfer without doing software patches may cause the new navigation unit to appear to be malfunctioning.

10. Enter the new navigation anti-theft code.

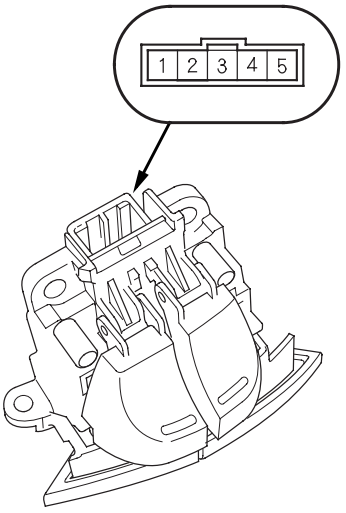
11. Park the vehicle outside, and do the GPS initialization (see page 23-268).

12. Give the new navigation anti-theft code to the client.

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Voice Control Switch Test

1. Remove the voice control switch (see page 23-357).



2. Measure the resistance between terminals No. 2 and No. 4 in each switch position according to the table.

Position	Resistance
No button pressed	About 10 kΩ
TALK	About 2.9 kΩ
BACK	About 680 Ω

3. If the resistance is not as specified, replace the voice control switch (see page 23-357).

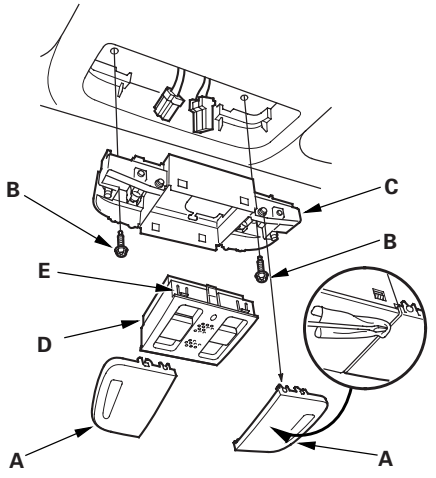
Voice Control Switch Replacement

SRS components are located in this area. Review the SRS component location (see page 24-11).
Also review the precautions and procedures (see page 24-13) in the SRS section before doing repairs or service.

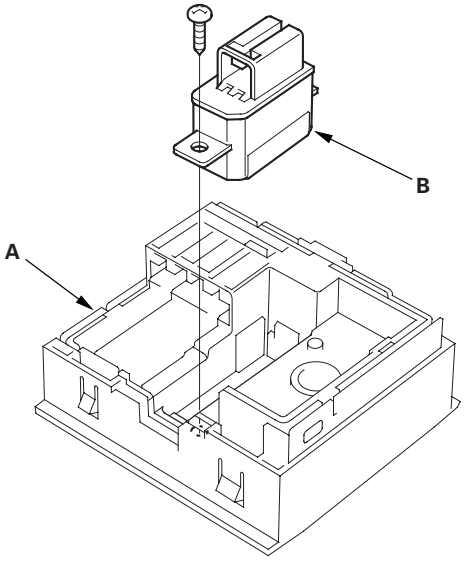
1. Remove the steering wheel (see page 17-6).
2. Remove the voice control switch (see page 17-7).
3. Install the voice control switch in the reverse order of removal.

HFL-Navigation Microphone Removal/Installation

1. Remove the front individual map light lens (A).



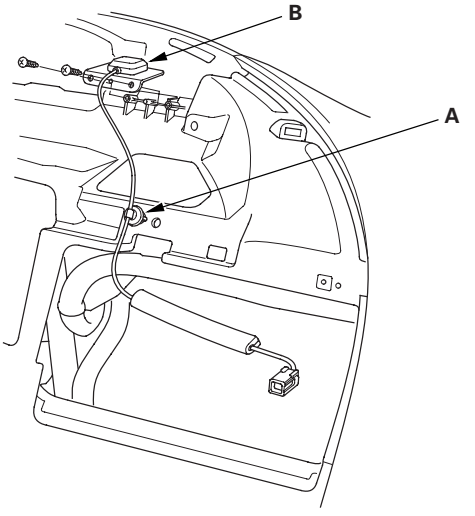
2. Remove the bolts (B), then disconnect the connectors, and remove the map lights housing (C).
3. Carefully pry off the moonroof switch (D) from the map light housing while pressing in on the retaining tabs (E).
4. From the moonroof switch (A), remove the screw and microphone (B).



5. Install the microphone in the reverse order of removal.

GPS Antenna Removal/Installation

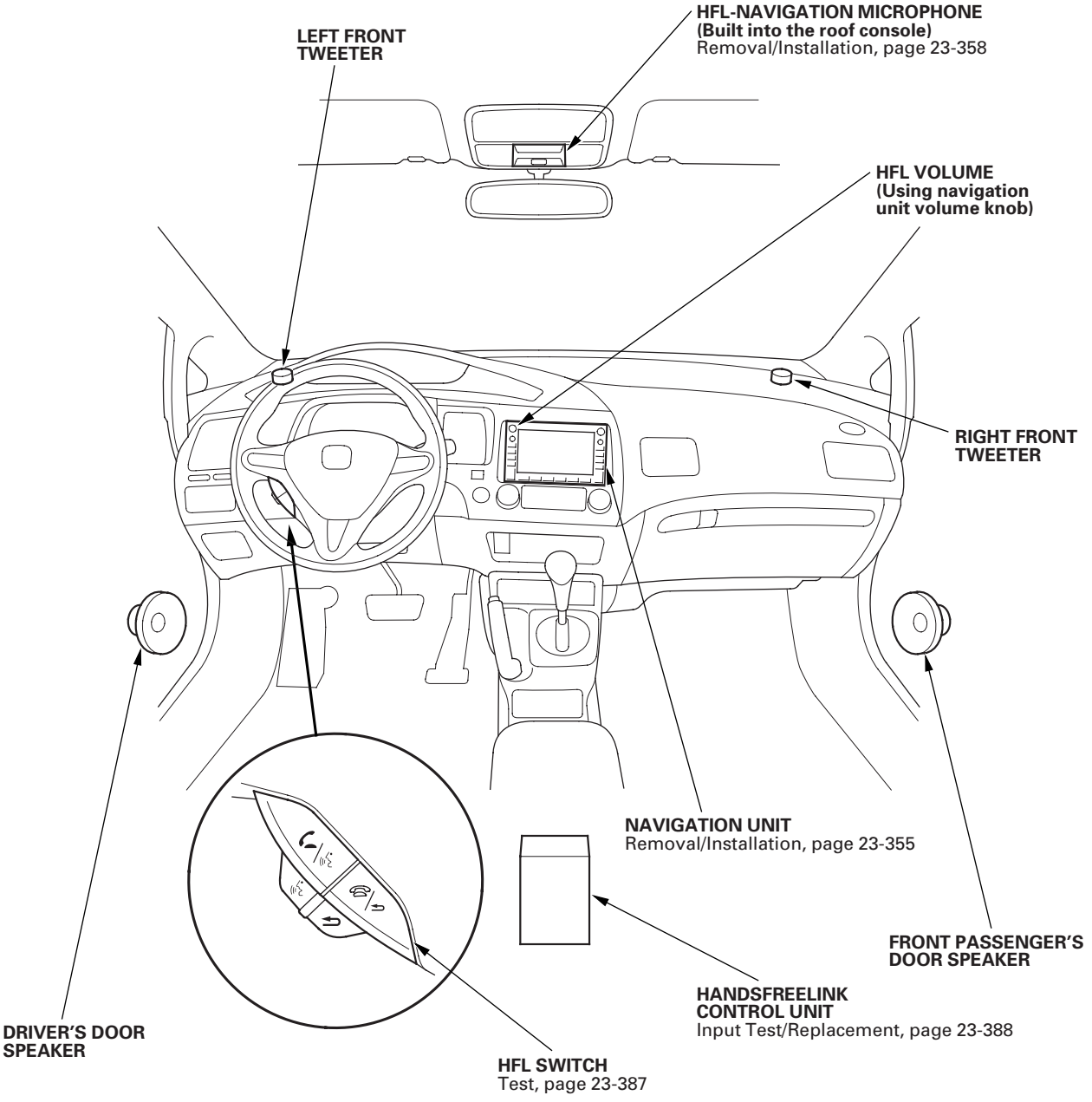
1. Remove the navigation unit (see page 23-355).
2. Remove the instrument panel visor (see page 20-98).
3. Remove the wire harness clip (A), screws, and GPS antenna (B).



4. Install the antenna in the reverse order of removal.

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Component Location Index

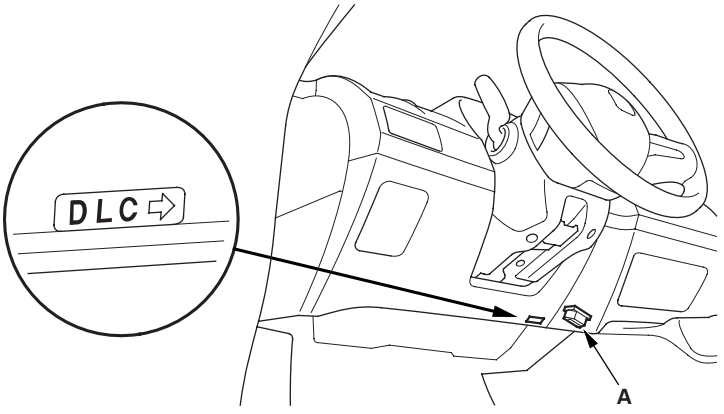


General Troubleshooting Information

How to Check for DTCs with the HDS

NOTE: Check the vehicle battery condition first.

1. Make sure the ignition switch is in LOCK (0).
2. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



3. Turn the ignition switch to ON (II).
4. Make sure the HDS communicates with the vehicle and the HandsFreeLink control unit. If it doesn't, troubleshoot the DLC circuit (see page 11-204).
5. Select HandsFreeLink in the BODY ELECTRICAL menu.
6. Select DTCs in the HandsFreeLink menu.
7. Check for DTCs. If any DTCs are indicated, write down the DTCs, then go to the indicated DTC troubleshooting. If no DTCs are indicated, refer to symptom troubleshooting.

   NOTE:
   - After troubleshooting, clear the DTCs with the HDS.
   - For specific operations, refer to the user's manual that came with the HDS.

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Introduction

The HFL system works only with Honda approved Bluetooth®-enabled cell phones with a hands-free profile. If you are not sure if a particular cell phone is compatible with the HFL system, Acura has a dedicated call center at 888-528-7876 and website www.acura.com/handsfreelink to answer your questions.

The HFL system allows you to make and receive hands-free calls. It cannot control the phone's performance (call quality and signal strength). For more information about performance and performance problems, refer to Dropped Calls.

Checking Cell Phone Compatibility

The most important step in troubleshooting HFL issues is to identify the model, software version, and wireless carrier of the phone in question. Not all phones with the Bluetooth feature and a hands-free profile are compatible with the HFL system.

Go to handsfreelink.com, and check if the client phone is approved to work with Honda HFL system.

NOTE:
- The lists of approved, archived, and currently testing phones are constantly changing, so make sure you view them frequently.
- Phones are added as they are approved.
- Phones can be removed from the approved list if a software bug is discovered that makes the phone incompatible. These phones can be added back to the approved list if the phone manufacturer corrects the bug.
- If the software bug is corrected, a new software version is created and may be listed in the Supported Features section of the phone.
- The software versions that are approved are now being listed in the Software Version field.
- If you cannot access the Acura website, call the HFL call center at 888-528-7876 for further assistance. The call center is open Monday thru Friday from 6:00 a.m. to 6:00 p.m. CT; Saturday from 7:00 a.m. to 6:00 p.m. CT; and Sunday from 8:00 a.m. to 6:00 p.m. CT.

Voice Control Tips and Improving Voice Recognition

To give a voice command to the HFL system, press and release the HFL TALK button. Always wait for the beep, then give your command in a clear, natural voice. The HFL microphone is on the ceiling by the map lights. If the HFL system doesn't recognize your voice command, you'll hear ''Pardon.'' If your command isn't recognized a second time, you'll hear ''Please repeat.'' If your command isn't recognized a third time, the HFL system sends you to its Help menu.

To hear a list of available options at any time, press the HFL TALK button and say ''Hands-free help.''

The HFL system may have problems recognizing some voices. To improve voice recognition:

- Close the windows and the moonroof.
- Set the fan speed to low (1 or 2) or off.
- Adjust the airflow from the center vents down, so that it's not blowing against the microphone on the ceiling.
- Speak in a clear and natural voice. If the system cannot recognize your command, try speaking louder, in a deeper tone.
- If the background noise is too loud, you may need to speak louder.
- If you speak with something in your mouth, or your voice is too high, the system may not interpret your command correctly.
- Find out if the problem is with one person or with everyone who uses the system. If the system has a problem with only one person's voice, this is a system limitation.

(cont'd)

General Troubleshooting Information (cont'd)

Many issues result from the client not using the system properly. Make sure the client is using the HFL buttons and not the navigation buttons. When the HFL TALK button is pressed, the client hears one audible tone. When the HFL BACK button is pressed, the client hears two audible tones. Make sure to press the HFL BACK button to exit the HFL main menu after completing a call and before giving any navigation commands.

The HFL system may experience a number recognition issue, such as when a client says a set of numbers in a group unrecognized by the system. The HFL system understands phone numbers in specific blocks of 1, 3, 4, 7, and 10 numbers. For example, the system understands:

1234567890
123-456-7890
1-2-3-4-5-6-7-8-9-0

The system may become confused if numbers are stated in other blocks, as following:

1234-567-890
12-34-56-78-90
12345-67890
123-4567-890

Navigation Through Menus

To skip a voice prompt, press and release the HFL TALK button while the HFL system is speaking. The system beings listening for your next voice command.

To go back a step in a voice command sequence, press and release the HFL BLACK button, or press the HFL TALK button and say ''Go back.'' If you don't say anything while the HFL system is listening for your voice command, it times out and stops voice recognition. The next time you press and release the HFL TALK button, the HFL system begins listening from the point it timed out.

If you've finished or want to stop a voice command sequence at any time, press and release the HFL BACK button, or press and release the HFL TALK button, wait for the beep, and say ''Cancel.'' The next time you press and release the HFL TALK button, the HFL system begins from its main menu. To avoid keeping the audio system muted, press and release the HFL BACK button when you are finished.

NOTE: You can say multiple commands in one sequence, like ''Phone setup-pair'' after pressing the HFL TALK button.

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Pairing a Cell Phone

You must pair an approved Bluetooth-compatible phone to the HFL system before you can make and receive calls. For a current list of approved phones and specific phone pairing instructions for each phone, see Checking Cell Phone Compatibility, go to www.acura.com/handsfreelink, or call 888-528-7876.

The following procedure works for most phones. If you cannot pair a phone to the HFL system with this procedure, refer to the phone's operating manual, visit www.acura.com/handsfreelink, or call 888-528-7876.

NOTE:
- You cannot pair a phone while the vehicle is moving.
- Your phone must be in Discovery Mode.
- A maximum of six Bluetooth-compatible phones can be paired to the system.

1. With the phone on and the ignition switch in ACCESSORY (I) or ON (II), press and release the HFL TALK button. After the beep, say ''Phone setup.'' The HFL responds, ''Phone setup options are status, pair, edit, delete, and list.''

2. Press and release the HFL TALK button. After the beep, say ''Pair.'' The HFL responds, ''The pairing process requires operation of your mobile phone. For safety, only perform this function while the vehicle is stopped. State a four-digit code for pairing. Note this code. It will be requested by the phone.''

3. Press and release the HFL TALK button. After the beep, say the four-digit code you want to use. This can be any four-digit number you want. For example, say ''1, 2, 3, 4.'' The HFL responds, ''1, 2, 3, 4. Is this correct?''

4. Press and release the TALK button. After the beep, say ''Yes.'' The HFL responds, ''HFL is now searching for a Bluetooth phone. Make sure the phone you are trying to pair is in Discovery mode.'' If these steps do not work on the phone you are pairing, refer to the phone's operating manual.

5. Follow the prompts on your phone to get it into its Discovery mode. The phone will search for the HFL. When it comes up, select HandsFreeLink from the list of options displayed on your phone.

6. When asked by the phone, enter the four-digit code from step 3 into your phone. The HFL responds, ''A new phone has been found. What would you like to name this phone?''

7. Press and release the HFL TALK button. After the beep, say the name you want to use. For example, say ''Tom's phone.'' The HFL responds, ''Tom's phone has been successfully paired. Returning to the main menu.''

(cont'd)

General Troubleshooting Information (cont'd)

Pairing Troubleshooting

Many pairing issues are resolved by altering the client's phone settings.

Bluetooth feature settings must be turned on. Phone manufacturers set the default to disable Bluetooth features to conserve battery life. Cell phones may provide procedures to Temporary Power On Bluetooth, or Power On Bluetooth. Turn the Bluetooth feature on, pair the phone to the vehicle, and confirm the phone is linked. Do this by turning the phone off and back on. Make or receive a call to confirm that the cell phone is successfully paired.

When the phone's Bluetooth feature is on, other handsfree accessories such as earpieces or headsets may automatically reconnect to the phone when you turn on the accessory or move it within range of the cell phone. This results in the phone not connecting to the HFL system when the client's enters the vehicle. You must unlink the hands-free accessory from the phone before the HFL system can reconnect.

Some phones have an Auto Answer setting that functions with a headset. This setting must be turned off or the HFL system cannot accept any incoming calls. When this setting is on, it blocks the HFL system from answering the call, and the call goes to voice mail. This can cause the client to think that the cell phone is not paired properly.

If the HFL system has six phones paired, it will not tell you that it has reached its maximum, and will not allow you to pair a new phone. To check how many phones are paired, press and release the HFL TALK button. After the beep, say ''Phone setup list.'' The HFL system lists every assigned phone name paired with it, then finishes by saying ''The entire list has been read. Returning to the main menu.'' Count the number of phones listed. If there are six, you must delete one phone before adding a new one.

Pairing Checks

For more information about pairing, refer to the cell phone owner's manual, or go to handsfreelink.com.

1. Is the cell phone compatible with the HFL?
2. Is the Bluetooth feature turned on?
3. Is the client using the HFL buttons, not the navigation buttons, when pairing?
4. Is the cell phone battery fully charged, and is there good signal strength when pairing?
5. Do a soft reset on the cell phone.
6. If the client is trying to pair a Blackberry® or Palm Treo™ device, make sure the client uses the shift key when entering the pass code. If the shift key is not pressed, the client may be entering letters. The HFL does not recognize letters.

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Dropped Calls

Clients may perceive dropped calls as being an HFL system fault, but most dropped calls are from cell phone and cell phone carrier issues. The HFL system does not directly handle the cell phone signal. It allows the cell phone to transmit the cell phone audio over the vehicle's audio system.

Before troubleshooting for dropped calls, confirm the cell phone settings:

- Disable Audio Answer. If Auto Answer is enabled, incoming calls are routed to voice mail.
- Disable Always Ask/Trust, Authorize Device, or similar setting, If these settings are enabled, each time the HFL system attempts to link to the phone, the phone will ask if you want to connect. If you do not allow the connection, the HFL will not operate. The phone must be set to Never Ask, Authorize Device, etc. (based on the phone manufacturer and carrier) for permission. Refer to the cell phone owner's manual for more information.
- Disable Flip Open to Answer. If this setting is enabled, the phone must remain open in the vehicle. If it is closed, the incoming calls are routed to voice mail.

Always confirm with the client if the number of dropped calls is higher while using the HFL system as opposed to using the cell phone only. Clients often confuse problems with their phone or carrier as a problem with the HFL system. The HFL system cannot control or determine:

- Cellular connection quality.
- Signal strength.
- Cellular coverage.
- Ambient weather conditions that affect cellular signals.

When a client complains about dropped calls, ask questions about when or where the calls are dropped, such as:

- Do you drive the same route on a regular basis?
- Does the call drop in the same location?
- Where do you keep your cell phone?
- Have you compared the number of dropped calls using the HFL versus making calls from the handset?
- Does your phone have an antenna that needs to be extended?

(cont'd)

General Troubleshooting Information (cont'd)

Many reasons for a dropped call are not related to the HFL system. Here are some causes for dropped calls:

- If the quantity of dropped calls is about the same when the client uses the HFL system versus the handset, the issue is likely due to the cellular phone or carrier.
- If the phone is equipped with a retractable antenna, it needs to be extended to maximize signal strength.
- If a client also notices that the calls tend to drop in the same areas, the HFL system may be operating normally, but something about the area diminishes cellular coverage to a point where the call drops.
- Hills or mountains can block or interfere with cellular signals.
- High-rise buildings, bridges, or other large structures may block or interfere with cellular signals.
- Placing the cell phone in a purse, in a metal briefcase, under the seat, in the glove box, or in the trunk can all affect signal reception.
- There are coverage gaps in the cellular service. When driving, a call is typically passed from one tower to another. If the client drives through an area where there is a coverage gap between towers, the call drops.
- Electrical storms, heavy rain, or overcast conditions interfere with signal strength.
- The cell phone battery's state of change can affect signal reception. A low battery may reduce the phone's ability to boost the antenna's power and function properly, especially in low signal strength areas. Some phone manufacturers trade off signal transmission and reception strength for battery life. As the battery weakens, the signal strength may also weaken. Some cell phones may operate more effectively than others in low signal strength areas, especially with a partially charged battery, and depending on whether or not the retractable antenna is fully extended (if applicable). On these models, make sure the antenna is always extended to maximize signal strength and extend battery life.

Phone Will Not Automatically Connect the HFL

If a client complains that their cell phone is not automatically connecting to the HFL system when they enter the vehicle, do this:

1. Make sure the Bluetooth feature is turned on in the cell phone.
2. Make sure the cell phone is properly painted to the HFL system.
3. Do a soft reset to the cell phone.
4. Check if the phone has an Authorized Connection or Trusted option.
5. Check the battery and signal strength on the cell phone. Pairing a phone requires optimal signal strength and a nearly full battery.

Incoming Calls

If a client complains that they cannot receive incoming calls through the HFL system, see if the call is routing to the cell phone instead of the HFL system. An easy way to know if the call is routed to the cell phone is when the client says, ''I can't hear the caller, but they can hear me.''

1. Make sure the Bluetooth feature is turned on in the cell phone.
2. Make sure the cell phone is paired to the HFL system and linked.
3. Make sure the answer settings in the cell phone are set to multi-key or any-key answer. If the phone is set to flip open to answer, recommend changing the setting to Any Key or leaving the phone flipped open when using the HFL system.
4. Make sure the Auto Answer feature is turned off in the cell phone.
5. Do a soft reset to the phone.
6. Make sure the battery is fully charged and there is adequate signal strength.
7. Ask the client if they have set specific ring tones or ringer IDs to specific contacts. If they have, recommend using one standard ring tone for all calls.
8. Make sure the client is pressing the HFL TALK button and not the HFL BACK button or the navigation buttons.

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Outgoing Calls

If a client says that they cannot place a call using the HFL system, ask if the call was initiated through the HFL system or the cell phone itself.

If the call is placed by the HFL system:

1. Make sure the Bluetooth feature is turned on in the cell phone.
2. Make sure the cell phone is paired to the HFL system and linked.
3. Make sure the client is pressing the HFL TALK button before each command and going through the calling process correctly.
4. Make sure the client is pressing the HFL TALK button and not the HFL BACK button or the navigation buttons.
5. Check if the cell phone has an Authorized Connections or Trusted option.
6. Do a soft reset to the cell phone.

If the call is placed by the cell phone:

The call will remain on the handset until you transfer it over to the HFL system. To continue the call on the HFL system, you must use the Transfer command by pressing and releasing the HFL TALK button during an active call and saying ''Transfer.'' The client can now continue the call using the HFL system.

Clearing the HFL System

NOTE:
- This operation clears the HFL system of all passcode(s), any paired phones, and all names in the HFL phonebook.
- Clearing the HFL system is recommend before selling the vehicle.
- If the system is locked and the pass code is lost or forgotten, see the symptom troubleshooting.

1. Press and release the HFL TALK button. After the beep, say ''System clear'' and the HFL system responds, ''This process will clear all paired phone, clear all entries in the phonebook, clear the passcode and restore all defaults in the system setup. Is this what you would like to do?''
2. Press and release the HFL TALK button. After the beep, say ''Yes'' and the HFL system responds, ''Preparing to clear all paired phone, all phonebook entries, the passcode. This may take up to 2 minutes to complete''.
3. Press and release the HFL TALK button. After the beep, say ''OK'' to proceed, or say ''Go back'' or ''Cancel''.
4. If you said ''OK'', after a short period of time, the HFL system responds, ''System has been cleared. Returning to the main menu, the Clearing HFL system procedure is now complete''.

(cont'd)

General Troubleshooting Information (cont'd)

Self-diagnostic Function

NOTE: This procedure should be used only if HDS is unavailable.

To run the self-diagnostic function, do the following:

1. Turn the ignition switch to ON (II).
2. Press and hold the HFL BACK button for more than 5 seconds.
3. When the HandsFreeLink system enters the self-diagnostic function, the following will occur.
   - If the system has not completed testing for DTCs, the HandsFreeLink system says ''The hands free system test is in progress''.
   - If there is no DTC, the HandsFreeLink system says ''The hands free system is OK''.
   - If there is any DTC, the HandsFreeLink system says ''The hands free system needs to be serviced''.

NOTE:
- The self-diagnostic function can only be initiated while the HFL is in its idle state.
- The self-diagnostic function is considered start once the 5 seconds press and hold is detected, and ends when the units returns to idle state.

Glossary of Terms

Auto Answer

This cell phone setting forces incoming calls to automatically be answered by the handset. Disable this feature on the phone when using the HFL system, as it may interfere with the HFL system answering incoming calls. Set the phone setting to:

- Send Key
- Any Key
- Multi Key answer

Answer Options

These cell phone settings allow you to select how you would like to answer an incoming call on the handset. The answer option in the phone can affect inbound calls on the HFL system.

Authorized Connection

This cell phone setting allows the phone to connect automatically with the HFL system without prompting the client for permission to connect. In some instances, it can affect the ability of the phone to properly route sound to the HFL system.

Bluetooth Power

This cell phone function enables or disables the Bluetooth application. When using a hands-free device such as HFL, the Bluetooth application needs to be enabled.

Discovery Mode

You need to have the cell phone in Discovery Mode to allow other devices with Bluetooth capabilities (such as the HFL system) to find the phone during the pairing process.

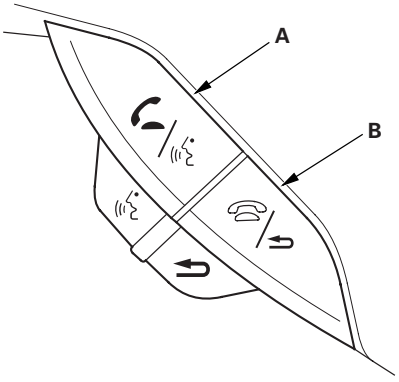
Downloaded Ringtones

A client gets these ringtones from an outside source, such as the internet or a mobile phone store.

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HFL Buttons

- HFL TALK button (A): Use this button on the steering wheel to give commands. Press the button before a voice command is given.
- HFL BACK button (B): Use this button on the steering wheel to end a call or return to a previous prompt in the HFL menu. Pressing the button twice or holding it down returns you to the HFL main menu.



Hard Reset

Hard resets clear the saved settings in the cell phone and restores it to the factory defaults. A hard reset should be done only as a last resort (see the sell phone owner's manual for more information).

Linking

This is when your paired phone is actively ready to use the HFL system. You can pair up to six phones to the HFL system, but only one phone can be linked at a time. If two paired phones are in the vehicle, only the phone that is linked can use the HFL system and functions. The second phone must be used as a normal handset.

Pairing

A description for linking two Bluetooth devices together. In this case, you are linking a cell phone with the HFL system. After the pairing process is complete, the devices are able to recognize each other and communicate wirelessly via Bluetooth.

Soft Reset (cellular phone)

This helps to restore the basic functions of the phone. To do a soft reset, turn the phone power off, remove and reinsert the cell phone battery, then turn the phone back on.

Software Version

This refers to the software version loaded in the cell phone. The software version that was tested and determined to be compatible with the HFL system may be listed on the HFL website. Not all software versions are compatible with the HFL system.

Standard Ringtone

These ringtones come factory-installed on the cell phone.

DTC Troubleshooting Index

HandsFreeLink Control Unit

DTC	Description	DTC type	Page
B1750	Communication bus line error (Bus-off)	Loss of communication	(see page 22-107)
B1775	Microphone input/output short to power/open	Signal error	(see page 23-376)
B1776	Microphone input/output short to ground/open	Signal error	(see page 23-377)
B1779	HFL switch (HFL TALK/HFL BACK buttons) circuit open/short	Signal error	(see page 23-379)
B1780	HFL switch (HFL TALK/HFL BACK buttons) circuit short	Signal error	(see page 23-381)
B1792	HandsFreeLink control unit internal error	Internal error	(see page 23-382)

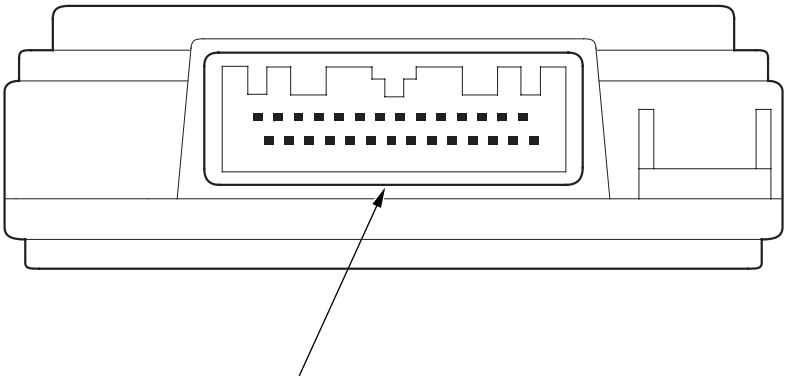
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Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
HFL does not respond	Control Unit Input Test (see page 23-388)	Check and repair all CAN related DTCs
The Bluetooth icon in the navigation display is grayed-out	There is no HFL-compatible phone paired to the vehicle. Pair an approved HFL-compatible phone to the vehicle	The phone must be on the Honda list of approved Bluetooth phones and configured correctly. For a current list of approved phones, go to www.acura.com/handsfreelink, or call 888-528-7876 for further assistance. Check the Diagnostic Menu and use the Navi System Link
The Honda approved Bluetooth phone is having problems pairing to the vehicle	HFL System Troubleshooting (see page 23-373)	The phone must be on the Honda list of approved Bluetooth phones and configured correctly. For a current list of approved phones, go to www.acura.com/handsfreelink, or call 888-528-7876 for further assistance. Check the Diagnostic Menu and use the Navi System Link
The Honda approved Bluetooth phone cannot use all its functions	HFL System Troubleshooting (see page 23-373)	The phone must be on the Honda list of approved Bluetooth phones and configured correctly. For a current list of approved phones, go to www.acura.com/handsfreelink, or call 888-528-7876 for further assistance. Check the Diagnostic Menu and use the Navi System Link
The Honda approved Bluetooth phone does not place or receive calls using the HFL system	HFL System Troubleshooting (see page 23-373)	The phone must be on the Honda list of approved Bluetooth phones and configured correctly. For a current list of approved phones, go to www.acura.com/handsfreelink, or call 888-528-7876 for further assistance. Check the Diagnostic Menu and use the Navi System Link
The client wants the HFL system reset (all phones and address information cleared from the HFL system)	Clearing the system (see page 23-367)	See the owner's manual for additional information.
The HFL system is locked and the pass code has been lost or forgotten	Symptom Troubleshooting (see page 23-383)	
The HFL system does not recognize all voice prompts	Symptom Troubleshooting (see page 23-382)	Also see Voice control tips.
The address book does not transfer from Honda approved Bluetooth phone to HFL system	There is no HFL compatible phone paired to the vehicle or the approved phone does not support the function. Pair an approved HFL compatible phone to the vehicle.	The phone must be on the Honda list of approved Bluetooth phones and configured correctly. For a list of approved phones, go to www.acura.com/handsfreelink, or call 888-528-7876.
The HFL messages cannot be heard or are weak	Symptom Troubleshooting (see page 23-383)	Excessive interior noise (open windows, vents blowing on microphone, etc.).
The Bluetooth icon does not display (the Bluetooth phone is linked)	Symptom Troubleshooting (see page 23-386)	

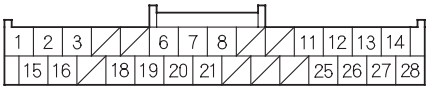
System Description

HandsFreeLink Control Unit Inputs and Outputs



HANDSFREELINK CONTROL UNIT 28P CONNECTOR

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Cavity	Wire Color	Connect to
1	BLK	Body ground to G501 (GND)
2	BLU	HFL switch (HFL STRG SW)
3	LT BLU	Navigation unit (HFL MUTE)
6	WHT	Navigation unit (HFL/NAVI COMM4)
7	RED	Navigation unit (HFL/NAVI COMM3)
8	GRY*	Shield for terminals No. 6, No. 7, No. 20, and No. 21 (HFL/NAVI COMM SH)
11	BLU	Navigation unit (TELM SIG+)
12	GRY*	Shield for terminals No. 13 and No. 14 (MIC SH)
13	YEL	HFL-navigation microphone (MIC+)
14	BRN	HFL-navigation microphone (MIC−)
15	WHT	No. 23 (10 A) fuse in the under-dash fuse/relay box (+B)
16	PUR	No. 35 (7.5 A) fuse in the under-dash fuse/relay box (ACC)
18	PNK	B-CAN communication (B-CAN)
19	LT GRN	Navigation unit (HFL icon)
20	BLK	Navigation unit (HFL/NAVI COMM1)
21	GRN	Navigation unit (HFL/NAVI COMM2)
25	PNK	Navigation unit (TELM SIG−)
26	GRY*	Shield for terminals No. 11 and No. 25 (TELM SIG SH)
27	GRN	Navigation unit (MIC SIG+)
28	RED	Navigation unit (MIC SIG−)

*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.

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HFL System Troubleshooting

NOTE:
- You must be able to duplicate the client's concern to successfully diagnose the problem.
- Always use the client's phone.
- Make sure the phone is approved and configured correctly. Online, go to www.acura.com/handsfreelink, or call the HFL support desk at 888-528-7876.

1. Connect the HDS to the DLC.

2. Turn the ignition switch to ON (II).

3. Check for DTCs.

   Are any DTCs indicated?

   YES—Repair the indicated DTCs and recheck. ■

   NO—Go to step 4.

4. Try to duplicate the problem.

   Can you duplicate the problem?

   YES—Go to step 5.

   NO—The system is OK at this time. ■

5. Pair the phone to a known-good vehicle (same model, year, and trim), and try duplicate the problem.

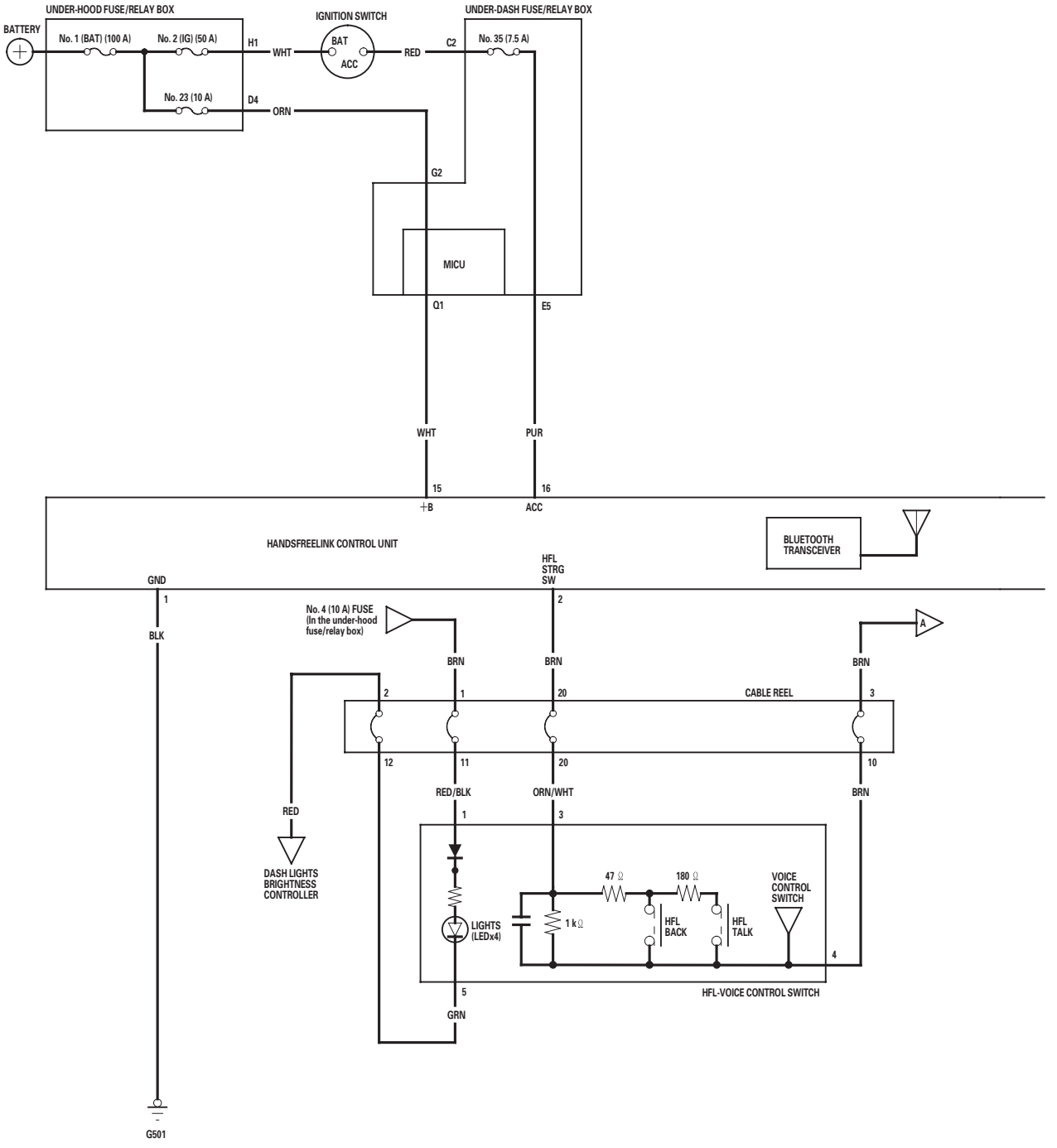
   Does the phone have the same problem on the known-good vehicle?

   YES—Call the HFL support desk at 888-528-7876 to make sure the phone is configured correctly and has the correct software. If the phone is configured correctly, it is either a characteristic of the HFL system, or a characteristic of the particular approved phone being used. Explain to your client that this is a system characteristic. Another phone from the approved phone list may give more favorable results. ■

   NO—Substitute a known-good HandsFreeLink control unit and recheck. If the problem goes away, replace the original HandsFreeLink control unit. ■

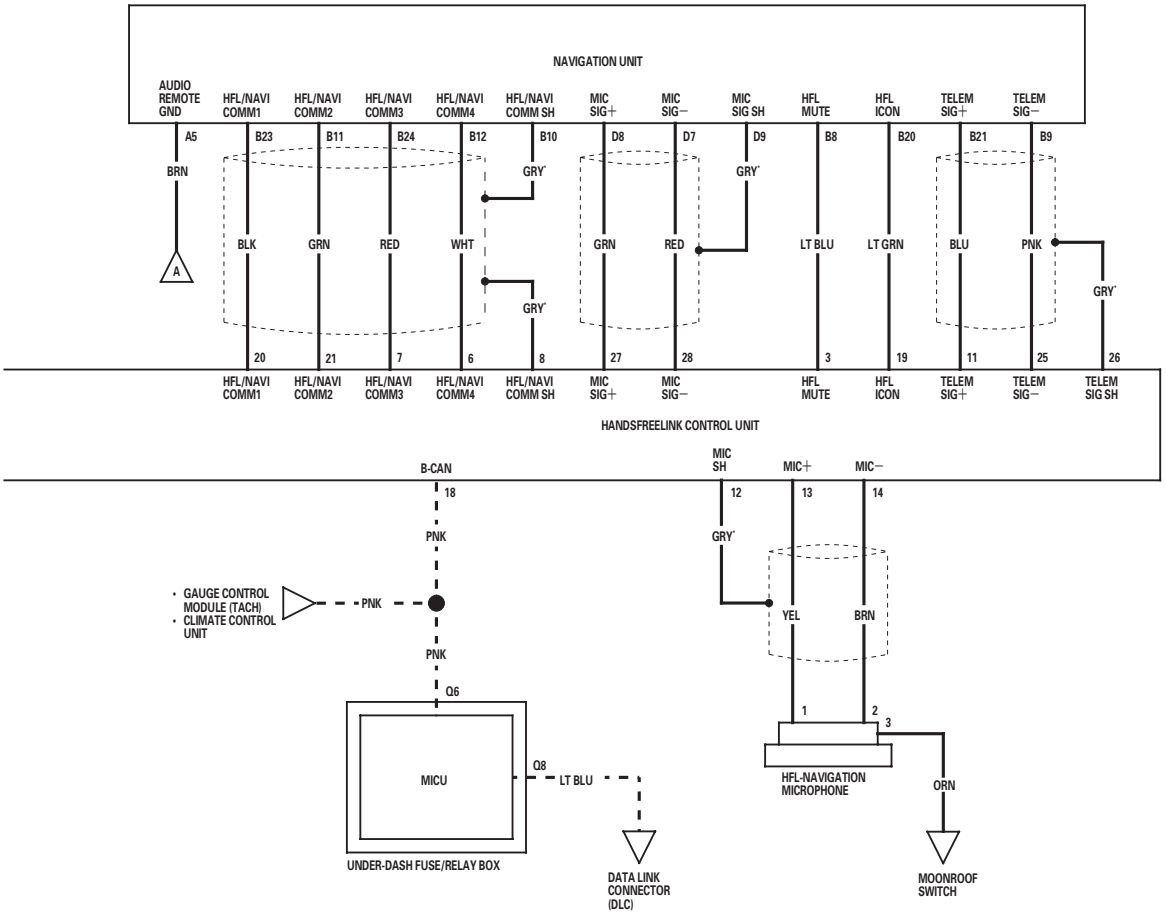
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Circuit Diagram



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*: The shielded wires have a heat-shrunk tube insulating the outside of the wire. The color of the insulating tube, typically black or dark gray, may not match the color of the wire listed on the schematic.
- - - - : CAN line
- - - - : Shielding



DTC Troubleshooting

DTC B1775: Microphone Input/Output Short to Power/Open

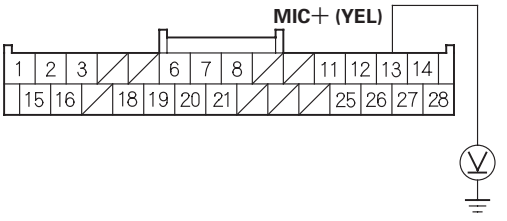
1. Clear the DTCs with the HDS.
2. Turn the ignition switch to LOCK (0), then turn it to ON (II).
3. Check for DTCs with the HDS.

   Is DTC B1775 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. ■
4. Turn the ignition switch to LOCK (0).
5. Disconnect the HandsFreeLink control unit 28P connector.
6. Disconnect the HFL-navigation microphone 3P connector.
7. Turn the ignition switch to ON (II).
8. Measure the voltage between HandsFreeLink control unit 28P connector terminal No. 13 and body ground.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

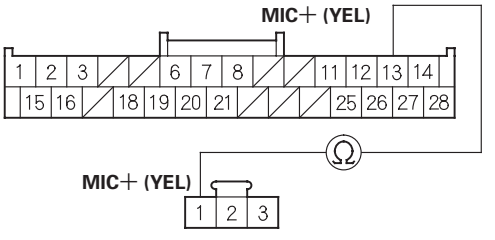
Is there voltage?

YES—Short to power in the wire between the HandsFreeLink control unit and the HFL-navigation microphone. Replace the affected shielded harness. ■

NO—Go to step 9.

9. Turn the ignition switch to LOCK (0).
10. Check for continuity between HandsFreeLink control unit 28P connector terminal No. 13 and the HFL-navigation microphone 3P connector terminal No. 1.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR
Wire side of female terminals



HFL-NAVIGATION MICROPHONE 3P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to step 11.

NO—Open in the wire between the HandsFreeLink control unit and the HFL-navigation microphone. Replace the affected shielded harness. ■

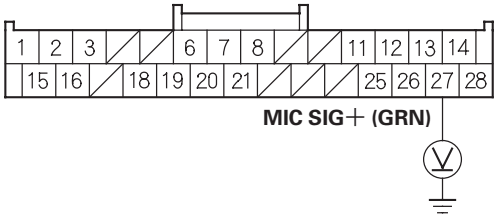
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11. Disconnect navigation unit connector D (12P).

12. Turn the ignition switch to ON (II).

13. Measure the voltage between HandsFreeLink control unit 28P connector terminal No. 27 and body ground.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there voltage?

YES—Short to power in the wire between the HandsFreeLink control unit and the navigation unit. Replace the affected shielded harness. ■

NO—Substitute a known-good microphone (see page 23-358), then recheck. If the symptom goes away, replace the original HFL-navigation microphone. ■

DTC B1776: Microphone Input/Output Short to Ground/Open

1. Clear the DTCs with the HDS.

2. Turn the ignition switch to LOCK (0), then turn it to ON (II).

3. Check for DTCs with the HDS.

   Is DTC B1776 indicated?

   YES—Go to step 4.

   NO—Intermittent failure, the system is OK at this time. ■

4. Turn the ignition switch to LOCK (0).

5. Disconnect the HandsFreeLink control unit 28P connector.

6. Disconnect the HFL-navigation microphone 3P connector.

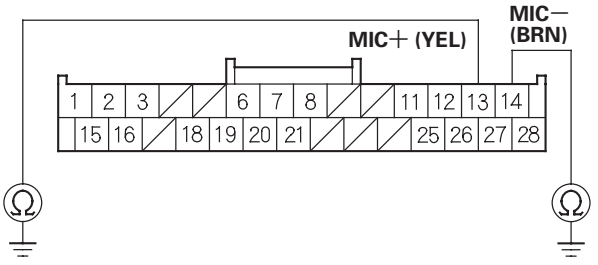
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DTC Troubleshooting (cont'd)

7. Check for continuity between body ground and HandsFreeLink control unit 28P connector terminals No. 13 and No. 14 individually.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

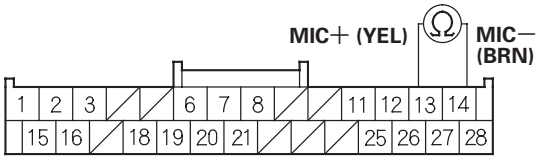
Is there continuity?

YES—Short to body ground in the wire(s) between HandsFreeLink control unit and HFL-navigation microphone. Replace the affected shielded harness. ■

NO—Go to step 8.

8. Check for continuity between HandsFreeLink control unit the 28P connector terminal No. 13 and No. 14.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there continuity?

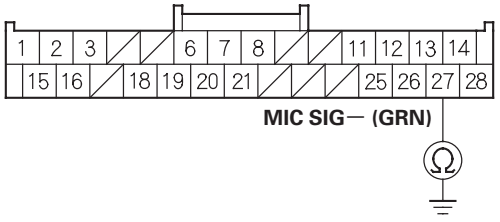
YES—Short in the wire(s) between the HandsFreeLink control unit and HFL-navigation microphone. Replace the affected shielded harness. ■

NO—Go to step 9.

9. Disconnect navigation unit connector D (12P).

10. Check for continuity between HandsFreeLink control unit 28P connector terminal No. 27 and body ground.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Short to body ground in the wire(s) between the HandsFreeLink control unit and the navigation unit. Replace the affected shielded harness. ■

NO—Substitute a known-good navigation unit (see page 23-355), then recheck. If the symptom goes away, replace the original navigation unit (see page 23-355). ■

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DTC B1779: HFL Switch (HFL TALK/HFL BACK Buttons) Circuit Open/Short

1. Clear the DTCs with the HDS.
2. Turn the ignition switch to LOCK (0), then start the vehicle, and turn the steering wheel back and forth several times.
3. Check for DTCs with the HDS.

   Is DTC B1779 indicated?

   YES—Go to step 4.

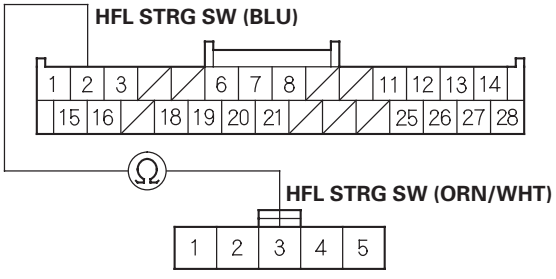
   NO—Intermittent failure, the system is OK at this time. ■
4. Turn the ignition switch to LOCK (0).
5. Do the HFL switch test (see page 23-387).

   Is the switch OK?

   YES—Go to step 6.

   NO—Replace the HFL-voice control switch (see page 23-357). ■
6. Disconnect the HandsFreeLink control unit 28P connector.
7. Disconnect the HFL-voice control switch 5P connector.
8. Check for continuity between HandsFreeLink control unit 28P connector terminal No. 2 and the HFL-voice control switch 5P connector terminal No. 3.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR
Wire side of female terminals



HFL-VOICE CONTROL SWITCH 5P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Go to step 9.

NO—Repair open in the wire between the switch, the cable reel, and the HandsFreeLink control unit. ■

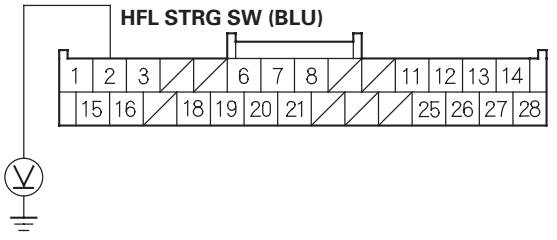
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DTC Troubleshooting (cont'd)

9. Turn the ignition switch to ON (II).

10. Measure the voltage between HandsFreeLink control unit 28P connector terminal No. 2 and body ground.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there voltage?

YES—Repair short to power in the wire between the HandsFreeLink control unit and the HFL-voice control switch. ■

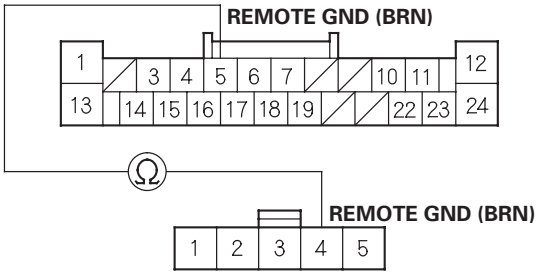
NO—Go to step 11.

11. Turn the ignition switch to LOCK (0).

12. Disconnect navigation unit connector A (24P).

13. Check for continuity between navigation unit connector A (24P) terminal No. 5 and HFL-voice control switch 5P connector terminal No. 4.

NAVIGATION UNIT CONNECTOR A (24P)
Wire side of female terminals



HFL-VOICE CONTROL SWITCH 5P CONNECTOR
Wire side of female terminals

Is there continuity?

YES—Replace the HandsFreeLink control unit. ■

NO—Repair open in the wire between the switch, the cable reel, and the navigation unit . ■

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DTC B1780: HFL Switch (HFL TALK/HFL BACK Buttons) Circuit Short

1. Clear the DTCs with the HDS.
2. Turn the ignition switch to LOCK (0), then start the vehicle, and turn the steering wheel back and forth several times.
3. Check for DTCs with the HDS.

   Is DTC B1780 indicated?

   YES—Go to step 4.

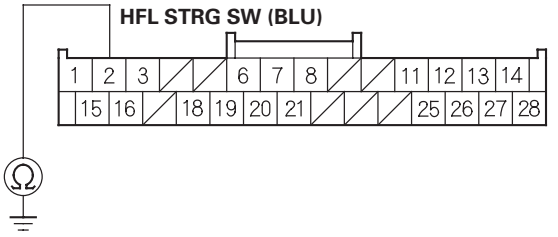
   NO—Intermittent failure, the system is OK at this time. ■
4. Turn the ignition switch to LOCK (0).
5. Do the HFL switch test (see page 23-387).

   Is the switch OK?

   YES—Go to step 6.

   NO—Replace the HFL-voice control switch (see page 23-357). ■
6. Disconnect the HandsFreeLink control unit 28P connector.
7. Disconnect the HFL-voice control switch 5P connector.
8. Check for continuity between HandsFreeLink control unit 28P connector terminal No. 2 and body ground.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short in the wire between the HandsFreeLink control unit and the HFL-voice control switch. ■

NO—Replace the HandsFreeLink control unit (see page 23-388). ■

DTC Troubleshooting (cont'd)

DTC B1792: HandsFreeLink Control Unit Internal Error

1. Clear the DTCs with the HDS.
2. Turn the ignition switch to LOCK (0), then turn it to ON (II).
3. Check for DTCs with the HDS.

   Is DTC B1792 indicated?

   YES—Replace the HandsFreeLink control unit. ■

   NO—Intermittent failure, the system is OK at this time. ■

Symptom Troubleshooting

The HFL system does not recognize all voice prompts

1. Connect the HDS to the DLC.
2. Clear the DTCs with the HDS.
3. Turn the ignition switch to LOCK (0), then turn it to ON (II).
4. Check for DTCs.

   Are there any DTCs indicated?

   YES—Repair the indicated DTCs. ■

   NO—Go to step 5.

5. Check if the problem is duplicated.

   Can the client's problem be duplicated?

   YES—Go to step 6.

   NO—The system is OK at this time. Ask the customer to demonstrate the problem. ■

6. Check if the navigation system can recognize voice prompts.

   Can the voice prompts be recognized?

   YES—Go to step 7.

   NO—Refer to the navigation system troubleshooting (see page 23-342). ■

7. Pair the client's phone to a known-good vehicle and try to duplicate the problem.

   Can you duplicate the problem?

   YES—Call the HFL support desk at 888-528-7876, and inquire if there are any known issues for the problem. If there are no known issues, explain to the client's this is a system characteristic and cannot be improved at this time. ■

   NO—Substitute a known-good HFL-navigation microphone (see page 23-358). If the problem is still present, substitute a known-good HandsFreeLink control unit (see page 23-388). If the problem goes away, replace the original HFL-navigation microphone. ■

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DTC Troubleshooting (cont'd)

DTC B1792: HandsFreeLink Control Unit Internal Error

1. Clear the DTCs with the HDS.
2. Turn the ignition switch to LOCK (0), then turn it to ON (II).
3. Check for DTCs with the HDS.

   Is DTC B1792 indicated?

   YES—Replace the HandsFreeLink control unit. ■

   NO—Intermittent failure, the system is OK at this time. ■

Symptom Troubleshooting

The HFL system does not recognize all voice prompts

1. Connect the HDS to the DLC.
2. Clear the DTCs with the HDS.
3. Turn the ignition switch to LOCK (0), then turn it to ON (II).
4. Check for DTCs.

   Are there any DTCs indicated?

   YES—Repair the indicated DTCs. ■

   NO—Go to step 5.

5. Check if the problem is duplicated.

   Can the client's problem be duplicated?

   YES—Go to step 6.

   NO—The system is OK at this time. Ask the customer to demonstrate the problem. ■

6. Check if the navigation system can recognize voice prompts.

   Can the voice prompts be recognized?

   YES—Go to step 7.

   NO—Refer to the navigation system troubleshooting (see page 23-342). ■

7. Pair the client's phone to a known-good vehicle and try to duplicate the problem.

   Can you duplicate the problem?

   YES—Call the HFL support desk at 888-528-7876, and inquire if there are any known issues for the problem. If there are no known issues, explain to the client's this is a system characteristic and cannot be improved at this time. ■

   NO—Substitute a known-good HFL-navigation microphone (see page 23-358). If the problem is still present, substitute a known-good HandsFreeLink control unit (see page 23-388). If the problem goes away, replace the original HFL-navigation microphone. ■

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The HFL system is locked and the pass code has been lost or forgotten

1. Connect the HDS to the DLC.
2. Turn the ignition switch to ON (II).
3. From the Body Electrical menu, select HandsFreeLink.
4. Select Miscellaneous Tests, then select Pass code reset.
5. Follow the HDS prompts to reset the pass code.

HFL message cannot be heard or are weak

1. Turn the ignition switch to ON (II).
2. Check that the audio system is operating normally, and the speaker sound levels from different audio sources (AM/FM, CDs, etc.).

   Does the audio system work normally, and is the audio output from the speaker normal when playing various audio sources?

   YES—Go to step 3.

   NO—Refer to the audio system symptom troubleshooting. ■
3. Check the navigation voice recognition system.

   Does the voice recognition system work properly?

   YES—Go to step 4.

   NO—Refer to the navigation system troubleshooting. ■
4. Check the audio system when HFL messages are played.

   Dose the audio system mute when HFL messages are being played?

   YES—Go to step 5.

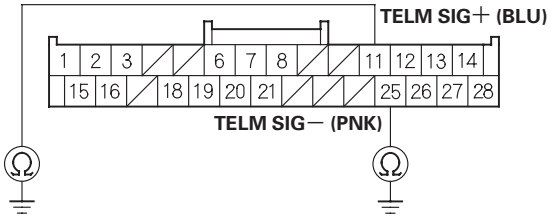
   NO—Go to step 10.
5. Turn the ignition switch to LOCK (0).
6. Disconnect navigation unit connector B (24P) and the HandsFreeLink control unit 28P connector.

(cont'd)

Symptom Troubleshooting (cont'd)

7. Check for continuity between body ground and HandsFreeLink control unit 28P connector terminal No. 11 and No. 25 individually.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there continuity?

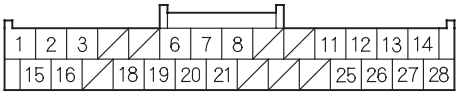
YES—Short to body ground in the wire(s) between the HandsFreeLink control unit and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 8.

8. Check for continuity between terminals of the HandsFreeLink control unit 28P connector according to the table.

From terminal	To terminals
11 (BLU)	25 (PNK), 26 (GRY)
25 (PNK)	26 (GRY)

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there continuity between any of the terminals?

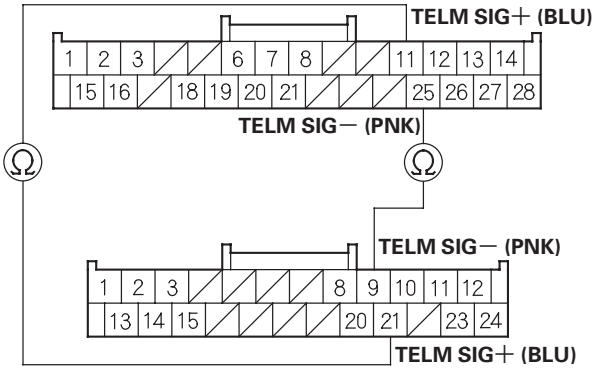
YES—Short in the wire(s) between the HandsFreeLink control unit and the navigation unit. Replace the affected shielded harness. ■

NO—Go to step 9.

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9. Check for continuity between HandsFreeLink control unit 28P connector terminal No. 11 and No. 25 and navigation unit connector B (24P) terminal No. 21 and No. 9.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR
Wire side of female terminals



NAVIGATION UNIT CONNECTOR B (24P)
Wire side of female terminals

Is there continuity?

YES—Substitute a known-good HandsFreeLink control unit (see page 23-388), and recheck. If the symptom/indication goes away, replace the original HandsFreeLink control unit. If the symptom/indication is still present, replace the navigation unit (see page 23-355). ■

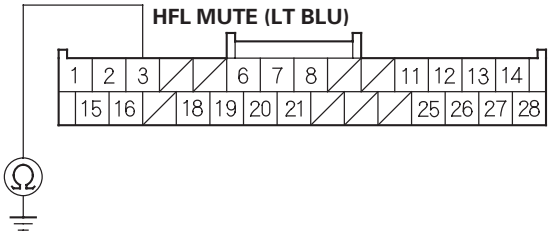
NO—Open in the wire(s) between HandsFreeLink control unit and the navigation unit. Replace the affected shielded harness. ■

10. Turn the ignition switch to LOCK (0).

11. Disconnect navigation unit connector B (24P) and the HandsFreeLink control unit 28P connector.

12. Check for continuity between body ground and HandsFreeLink control unit 28P connector terminal No. 3.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Repair short to body ground in the wire between the HandsFreeLink control unit and the navigation unit. ■

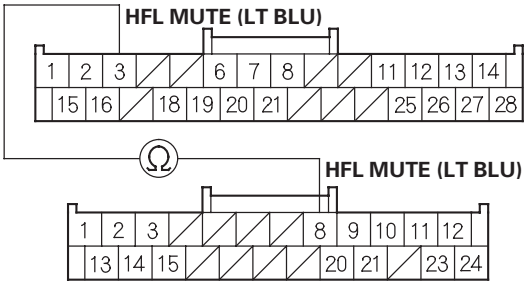
NO—Go to step 13.

(cont'd)

Symptom Troubleshooting (cont'd)

13. Check for continuity between HandsFreeLink control unit 28P connector terminal No. 3 and navigation unit connector B (24P) terminal No. 8.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR
Wire side of female terminals



NAVIGATION UNIT CONNECTOR B (24P)
Wire side of female terminals

Is there continuity?

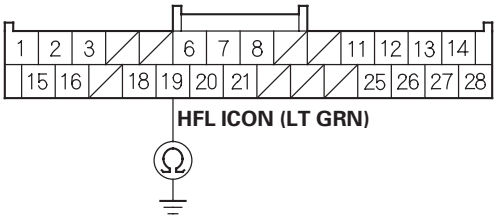
YES—Substitute a known-good HandsFreeLink control unit (see page 23-388), and recheck. If the symptom/indication goes away, replace the original HandsFreeLink control unit. If the symptom/indication is still present, replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between HandsFreeLink control unit and the navigation unit. ■

The Bluetooth icon does not display (the Bluetooth phone is linked)

1. Turn the ignition switch to ON (II).
2. Disconnect navigation unit connector B (24P) and the HandsFreeLink control unit 28P connector.
3. Check for continuity between body ground and HandsFreeLink control unit 28P connector terminal No. 19.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Is there continuity?

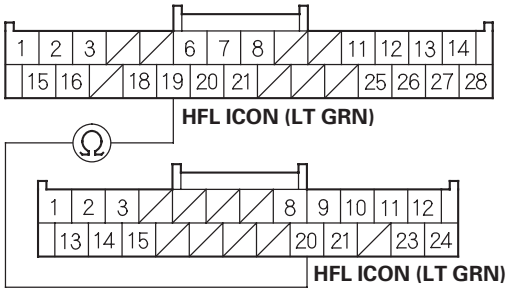
YES—Repair short to body ground in the wire between the HandsFreeLink control unit and the navigation unit. ■

NO—Go to step 4.

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4. Check for continuity between HandsFreeLink control unit 28P connector terminal No. 19 and navigation unit connector B (24P) terminal No. 20.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR
Wire side of female terminals



NAVIGATION UNIT CONNECTOR B (24P)
Wire side of female terminals

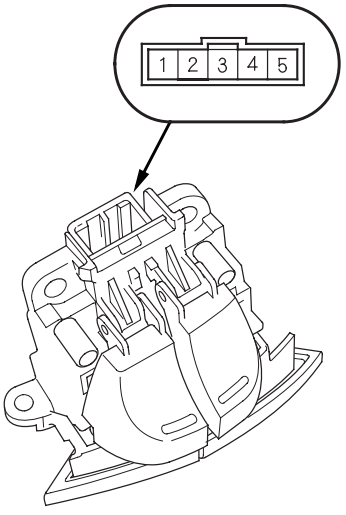
Is there continuity?

YES—Substitute a known-good HandsFreeLink control unit (see page 23-388) and recheck. If the symptom/indication goes away, replace the original HandsFreeLink control unit. If the symptom /indication is still present, replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between HandsFreeLink control unit and navigation unit. ■

HFL Switch Test

1. Remove the HFL-voice control switch (see page 23-357).



2. Measure resistance between the terminals No. 3 and No. 4 in each switch position according to the table.

HFL Switch

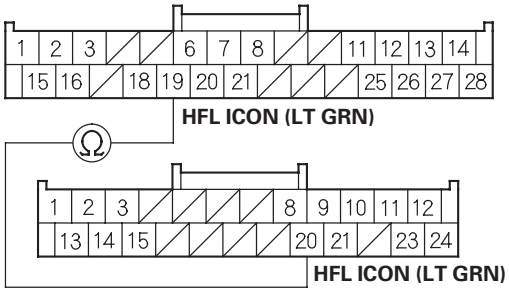
Position	Resistance
No button pressed	About 1 kΩ
HFL Talk button pressed	About 185 Ω
HFL Back button pressed	About 45 Ω

3. If the resistance is not as specified, replace the HFL-voice control switch.

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4. Check for continuity between HandsFreeLink control unit 28P connector terminal No. 19 and navigation unit connector B (24P) terminal No. 20.

HANDSFREELINK CONTROL UNIT 28P CONNECTOR
Wire side of female terminals



NAVIGATION UNIT CONNECTOR B (24P)
Wire side of female terminals

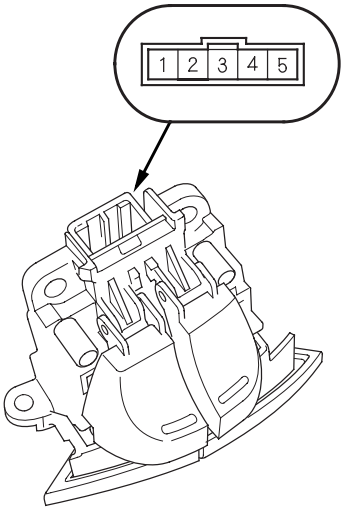
Is there continuity?

YES—Substitute a known-good HandsFreeLink control unit (see page 23-388) and recheck. If the symptom/indication goes away, replace the original HandsFreeLink control unit. If the symptom /indication is still present, replace the navigation unit (see page 23-355). ■

NO—Repair open in the wire between HandsFreeLink control unit and navigation unit. ■

HFL Switch Test

1. Remove the HFL-voice control switch (see page 23-357).



2. Measure resistance between the terminals No. 3 and No. 4 in each switch position according to the table.

HFL Switch

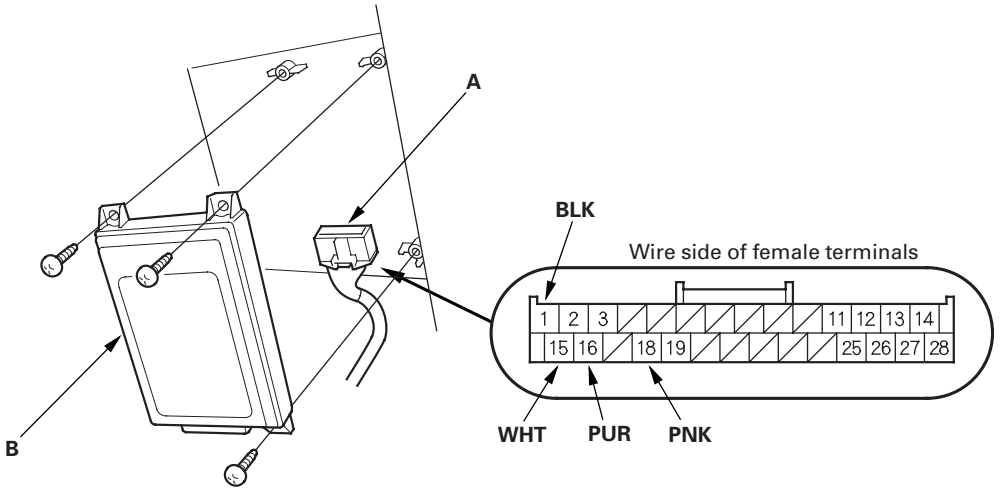
Position	Resistance
No button pressed	About 1 kΩ
HFL Talk button pressed	About 185 Ω
HFL Back button pressed	About 45 Ω

3. If the resistance is not as specified, replace the HFL-voice control switch.

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Control Unit Input Test/Replacement

1. Remove the center console (see page 20-92).
2. Remove the console lower box (see page 20-95).
3. Disconnect the 28P connector (A) from the HandsFreeLink control unit (B).



4. Inspect the connector and socket terminals for a good pinfit to be sure they are all making good contact.
   - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
   - If the terminals look OK, go to step 5.
5. Reconnect the connector and make these input tests at the connector.
   - If any test indicates a problem, find and correct the cause, then recheck the system.
   - If all the input tests prove OK, go to step 6.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
1	BLK	Under all conditions	Check for voltage to ground: There should be less than 0.5 V.	• Poor ground (G501) • An open in the wire
15	WHT	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 23 (10 A) fuse in the under-hood fuse/relay box • An open in the wire
16	PUR	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 35 (7.5 A) fuse in the under-dash fuse/relay box • An open in the wire

6. Disconnect the 28P connector again, and make this input test at the connector.
   - If the test indicates a problem, find and correct the cause, then recheck the system.
   - If the input test proves OK, the HandsFreeLink control unit must be faulty, replace it.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
18	PNK	Under all conditions	Check for continuity between No. 18 terminal and the driver's under-dash fuse/relay box connector Q (16P) terminal No. 6: There should be continuity.	An open in the wire
		Driver's under-dash fuse/relay box connector Q (16P) disconnected	Check for continuity to ground: There should be no continuity.	Short to ground

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