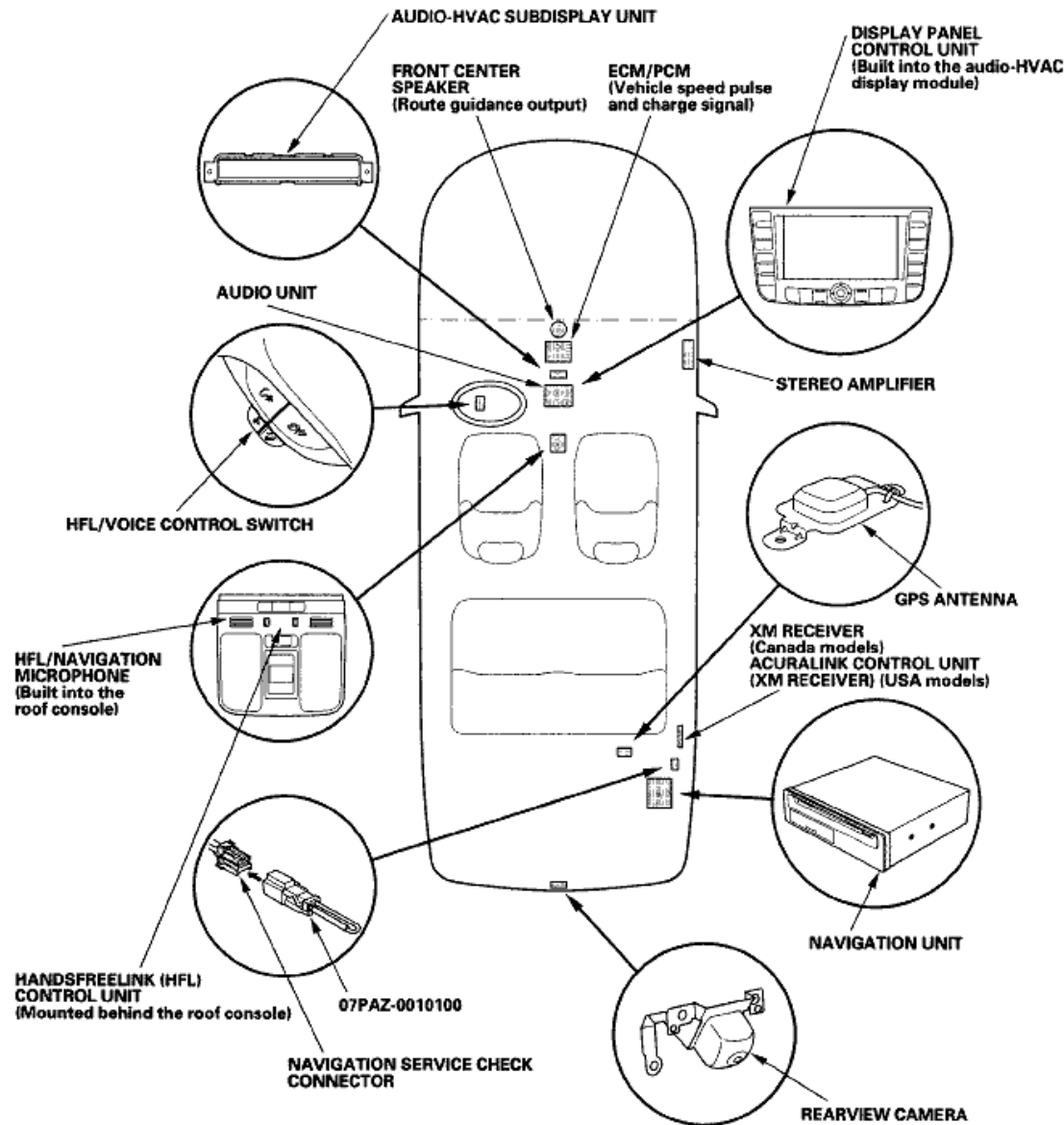


2007-08 ACCESSORIES AND BODY, CAB

Navigation System - TL

COMPONENT LOCATION INDEX

**Fig. 1: Identifying Navigation System Component Location**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 8P connector.
- Removing the No. 7 (7.5 A) fuse from the under-dash 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 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 Navi ECU diagnostic screen (see **UNIT CHECK**). Alternatively, you can get the serial number from the navigation unit in the trunk.

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

SYMPTOM DIAGNOSIS

Certain circumstances and system limitations will 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'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.

The accuracy of GPS is reduced during these instances:

- Metallic window tinting above the GPS antenna.
- When only three satellite signals can be 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. If the HandsFreeLink is in use, the voice control system is unavailable.

LCD DISPLAY 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 (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 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.

NOTE: **The display is unaffected by sunlight, contrary to previous displays.**

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 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 misunderstanding of the system.
 - Try to establish if outside interference may have been the cause.
 - Try to duplication 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.

NOTE: **When interchanging navigation DVD/parts during diagnosis**

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 causing side effects unrelated to the original problem.

SERVICE PRECAUTIONS

- If the navigation unit needs to be replaced, inform the client 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 and later models you can back-up the navigation data and transfer it to a new navigation unit. See save users memory (see **SAVE USERS MEMORY**).
- 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 will be 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 for any reason, you lose power to the navigation system (like the battery was disconnected). The navigation system will require initialization. Once completed, your system will be 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 SECURITY CODE

Any time power is disconnected from the navigation unit, the 4-digit anti-theft code must be entered on the navigation system display. This 4-digit code can be found on a small code card that was given to the client. Enter the 4-digit code, then select "Done".

If the navigation system anti-theft code cannot be found, 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 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, then replace the navigation unit.

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

GPS INITIALIZATION

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

Fig. 2: Identifying GPS Initialization Label
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

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**

Fig. 3: Identifying GPS Initialization Label

Courtesy of AMERICAN HONDA MOTOR CO., INC.

After 30 minutes with this screen displayed, turnoff the engine, then restart the vehicle. If you now see the Disclaimer screen, 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 GPS ICON IS WHITE OR NOT SHOWN).**

MAP MATCHING

This part of the initialization matches the GPS coordinates with a road on the map screen. To perform this part of the procedure, ensure that the navigation system is displaying 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 for this model has a white label, and cannot be ordered through the parts system. The following DVDs will not work in this navigation system:

- Earlier model navigation DVDs (black 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 clients future free updates. There are no free programs for updating the navigation DVD. Update DVDs are generally available for purchase each fall. The on-line DVD order site provides information when an update for a particular color DVD is available.
- Damaged discs are not warrantable unless the disc is damaged by the navigation unit.

DVD HANDING 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.

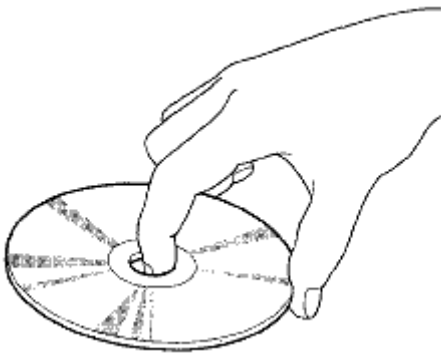


Fig. 4: Handling DVD Disc

Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

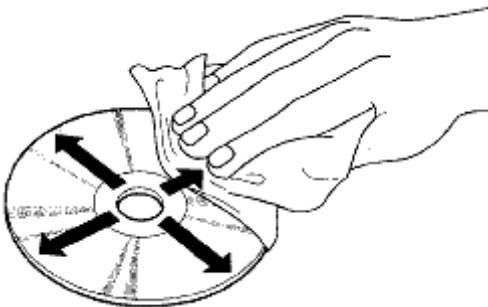


Fig. 5: Cleaning Disc

Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 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) may 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.

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 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.
 - Any time you call Tech Line regarding a navigation system issue.
 - To answer client inquiries 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 Acura Disc Fulfillment Center (see OBTAINING A NAVIGATION DVD) .

- Check the underside of the DVD for signs of mishandling. Deep scratches, swirl marks, or fingerprints can cause random lock-ups, reboots, 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 it causes system malfunctions that mimic a hardware problem. This result in the client driving away 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 (see **OBTAINING A NAVIGATION DVD**).

NOTE: **If it is determined that the navigation unit is defective (through the appropriate service manual troubleshooting procedures) and the DVD will not eject, order a replacement navigation unit, and also order a DVD from the Acura Disc Fulfillment Center.**

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 entering the client's address (street first) to see if their area is covered. Always enter the street first, because Sometimes their city maybe 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 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 verify whether the POI is accurate is to 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 **OBTAINING A NAVIGATION 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's vehicle. Inserting a new 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.

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, 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. Refer to the in for applicable patches that may need reinstalling.

SYMPTOM TROUBLESHOOTING INDEX

SYMPTOM TROUBLESHOOTING CHART

Symptom	Diagnostic procedure	Also check for
No picture is displayed	Symptom troubleshooting (see <u>NO PICTURE IS DISPLAYED</u>)	• Navigation unit • The wrong colored DVD or version is installed • Display panel control unit • Harness/fuses/switches
Picture has lines/rolls/other issues or is an odd color	Symptom troubleshooting (see <u>PICTURE HAS LINES/ROLLS/OTHER ISSUES OR IS AN ODD COLOR</u>)	• Navigation unit • The wrong colored DVD or version is installed • Aftermarket accessories • Display panel control unit • Harness/fuses/switches
Display panel control unit buttons or touch screen buttons do not	Symptom troubleshooting (see <u>DISPLAY PANEL CONTROL UNIT BUTTONS OR TOUCH SCREEN BUTTONS DO</u>)	• Navigation unit • The wrong colored DVD or version is installed

work or respond properly	<u>NOT WORK OR RESPOND PROPERLY)</u>	• Display panel control unit • Harness/fuses/switches
GPS icon is white or not shown	Symptom troubleshooting (see <u>GPS ICON IS WHITE OR NOT SHOWN)</u>)	• Navigation unit • GPS antenna/cable is disconnected or damaged • Harness/fuses/switches
Voice guidance cannot be heard, is broken up, or there is static	Symptom troubleshooting (see <u>VOICE GUIDANCE CANNOT BE HEARD, IS BROKEN UP, OR THERE IS STATIC)</u>)	• Navigation unit • Audio unit/amplifier • Harness/fuses/switches
Voice control does not work/respond	Symptom troubleshooting (see <u>VOICE CONTROL DOES NOT WORK/RESPOND)</u>)	• Navigation unit • Microphone/voice control switch • Harness/fuses/switches
Vehicle position icon constantly leaves road, moves erratically, or is very far from actual position	Symptom troubleshooting (see <u>VEHICLE POSITION ICON CONSTANTLY LEAVES ROAD, MOVES ERRATICALLY, IS VERY FAR FROM ACTUAL POSITION)</u>)	• Navigation unit • The wrong colored DVD or version is installed • GPS antenna/cable is disconnected or damaged • ECM/PCM (speed and fuel pulses) • Harness/fuses/switches
Vehicle icon wanders across the map when driving (does not follow a displayed road) or map or vehicle ICON spins	See vehicle position icon constantly leaves road, moves erratically, is very far from actual position troubleshooting (see <u>VEHICLE POSITION ICON CONSTANTLY LEAVES ROAD, MOVES ERRATICALLY, IS VERY FAR FROM ACTUAL POSITION)</u>)	• Navigation unit • GPS antenna/cable • ECM/PCM • The wrong colored DVD or version is installed
DVD screen error messages	Symptom troubleshooting (see <u>DVD SCREEN ERROR MESSAGES)</u>)	• Navigation unit • Display panel control unit • The wrong colored DVD or version is installed
Navigation cannot control HVAC by voice command	Symptom troubleshooting (see <u>NAVIGATION CANNOT CONTROL HVAC BY VOICE COMMAND)</u>)	• The wrong colored DVD or version is installed • Display panel control unit • Climate control unit • Harness/fuses/switches
Display day/night mode does not work	Symptom troubleshooting (see <u>DISPLAY DAY/NIGHT MODE DOES NOT WORK)</u>)	• Display panel control unit • Gauge control module (CAN) • Harness/fuses/switches
		• Navigation unit

System locks up or freezes constantly	Symptom troubleshooting (see <u>SYSTEM LOCKS UP OR FREEZES CONSTANTLY</u>)	• Harness/fuses/switches • The wrong colored DVD or version is installed
Vehicle icon moves by itself or spins when parked	Symptom troubleshooting (see <u>VEHICLE ICON MOVES BY ITSELF OR SPINS WHEN PARKED</u>)	
Navigation display stays on with ignition switch OFF	Symptom troubleshooting (see <u>NAVIGATION DISPLAY STAYS ON WITH IGNITION SWITCH OFF</u>)	
Navigation cannot control audio system	Symptom troubleshooting (see <u>NAVIGATION CANNOT CONTROL AUDIO SYSTEM</u>)	The wrong colored DVD or version is installed
Audio-HVAC subdisplay unit does not work properly	Symptom troubleshooting (see <u>AUDIO-HVAC SUBDISPLAY UNIT DOES NOT WORK PROPERLY</u>)	• Navigation unit • Audio unit • Audio-HVAC subdisplay unit • The wrong colored DVD or version is installed • Harness/fuses/switches
The Honda Globe Screen appears every time the vehicle is started	Symptom troubleshooting (see <u>THE HONDA GLOBE SCREEN APPEARS EVERY TIME THE VEHICLE IS STARTED</u>)	Also see the symptom The wrong DVD was installed and now the system does not function properly
Navigation does not call using the HFL	Symptom troubleshooting (see <u>NAVIGATION DOES NOT CALL USING THE HFL</u>)	The wrong colored DVD or version is installed
Navigation cannot control XM radio	Symptom troubleshooting (see <u>NAVIGATION CANNOT CONTROL XM RADIO</u>)	The wrong colored DVD or version is installed
Navigation frequently asks for anti-theft code and needs GPS initialization	Symptom troubleshooting (see <u>NAVIGATION FREQUENTLY ASKS FOR ANTI-THEFT CODE AND NEEDS GPS INITIALIZATION</u>)	• Navigation unit • Harness/fuses/switches
Navigation system will not accept security code	Symptom troubleshooting (see <u>NAVIGATION SYSTEM WILL NOT ACCEPT SECURITY CODE</u>)	
Rearview camera image does not come on or work properly	Symptom troubleshooting (see <u>REARVIEW CAMERA IMAGE DOES NOT COME ON OR WORK PROPERLY</u>)	The wrong colored DVD or version is installed
Navigation unit will not eject or accept the navigation DVD	Symptom troubleshooting (see <u>NAVIGATION UNIT WILL NOT EJECT OR ACCEPT THE NAVIGATION DVD</u>)	
Traffic information is not being shown on map screen	Symptom troubleshooting (see <u>TRAFFIC INFORMATION IS NOT BEING SHOWN ON MAP SCREEN</u>)	Check any official Honda service web site for more service information about traffic

		information.
System always comes up in in-line diagnostic mode	See factory Diagnostic screen "In-Line Diag" (see <u>FACTORY DIAGNOSTIC SCREEN "IN LINE DIAG"</u>)	• Factory diag mode • Check the navigation SCS service connector
The map will not display the Southern portion of the U.S. or the Northern parts of Canada	North American coverage is different for U.S./Canada markets. See the version diagnostic screen (see <u>VERSION</u>) for details on coverage differences	The wrong colored DVD or version is installed
Navigation system stays on the GPS initialization screen	System Initialization (see <u>SYSTEM INITIALIZATION</u>) GPS initialization (see <u>GPS INITIALIZATION</u>)	• Navigation unit • GPS antenna/cable is disconnected or damaged • Harness/fuses/switches
The DVD is scratched or dirty	See "DVD Handling and Cleaning" (see <u>DVD HANDING AND CLEANING</u>)	Navigation unit
The wrong DVD was installed and now the system does not function properly	See "Precaution client Sneak Previews" (see <u>PRECAUTION ON CLIENT "SNEAK PREVIEWS"</u>)	• Install the correct version DVD • Check on-line for service bulletins or other service information for the navigation system
A POI cannot be found	See "How to answer client questions about navigation coverage" (see <u>HOW TO ANSWER CLIENT QUESTIONS ABOUT NAVIGATION COVERAGE</u>)	The DVD is scratched or dirty
A specific city cannot be found	See "How-to answer client questions about navigation coverage" (see <u>HOW TO ANSWER CLIENT QUESTIONS ABOUT NAVIGATION COVERAGE</u>)	The DVD is scratched or dirty
Time is not correct	Reset Time Adjustment in set-up	The wrong colored DVD or version is installed
Address cannot be found or system gives poor routing	• See "Answering client questions about navigation coverage" in general troubleshooting • Verify proper operation and system limitations using the navigation system manual	• The wrong colored DVD or version is installed • Database limitations (address not in database)
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	
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 them. Enter a destination, and allow the system to route to it. After the trip, the Previous Destinations button will be selectable	See Owner's Manual for more details

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

SYSTEM DESCRIPTION

OVERVIEW

The navigation system is a highly-sophisticated, hybrid locating system that uses satellites and a map database to show where the vehicle is and to help guide you to a desired destination.

The navigation system receives signals from the global positioning system (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. In addition, signals from the system's yaw rate sensor and the ECM/PCM (vehicle speed pulse) enable the system to keep track of the vehicle's direction and speed of travel.

This hybrid system has advantages over a system that is either entirely self-contained or one that relies totally on the GPS. For example, the self-contained portion of the system can keep track of vehicle position even when satellite signals cannot be received. When the navigation system is on, the GPS can keep track of the vehicle position even when the vehicle is transported by ferry.

The navigation system applies all location, direction, and speed information to maps and calculates a route to the destination entered. As you drive to that destination, the system provides both visual and audio guidance.

This navigation system also has voice recognition that allows voice control of most of the navigation functions. The Talk and Back buttons on the steering wheel activate the voice control. The voice control also allows control of the audio and climate control.

The illumination signal is used by the navigation unit to automatically switch the display between Night and Day brightness modes when display is set to Auto. When the instrument panel brightness control is set to full brightness (MAX button pressed), the navigation system stays in the Day mode, even with the headlights on.

The GA-NET II bus passes information back and forth between the display panel control unit, the navigation unit, and the audio system. The information passed on this bus are touch button commands, and audio and climate control settings directed by the navigation unit. The audio unit uses this bus to control the XM receiver or other accessories.

The "communication bus" connects the HFL, XM (AcuraLink) and navigation unit. This bus supports these functions:

- The navigation unit receives traffic and message information from the AcuraLink control unit (XM receiver).
- The navigation unit sends a POI phone number ("Calculate route to" screen) to the HFL for dialing.
- If vehicle problems are detected, and the client's cellular contract includes data service, then the HFL can send vehicle data to the HandsFreeLink control unit for transmitting back to the AcuraLink

servers.

- The AcuraLink server can pass additional problem details back through the HFL, to the AcuraLink control unit (XM receiver), and finally to the navigation unit for display.

System Diagram

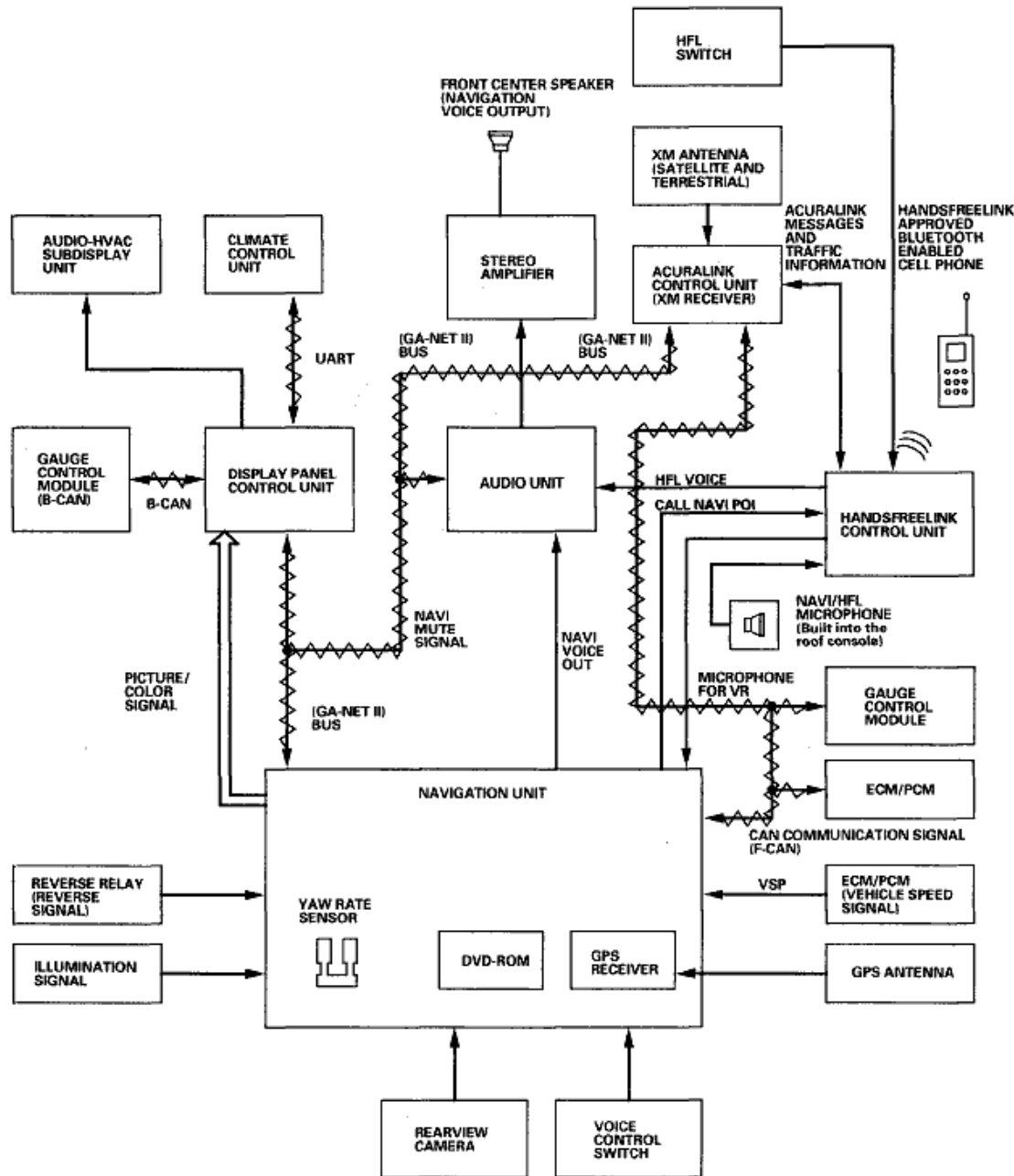


Fig. 6: Navigation System - System Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION FUNCTION

The navigation system is composed of the navigation unit, the ECM/PCM (vehicle speed signal), the GPS antenna, microphone, voice control switch, audio unit, audio-HVAC subdisplay unit and the display panel control unit.

Function Diagram

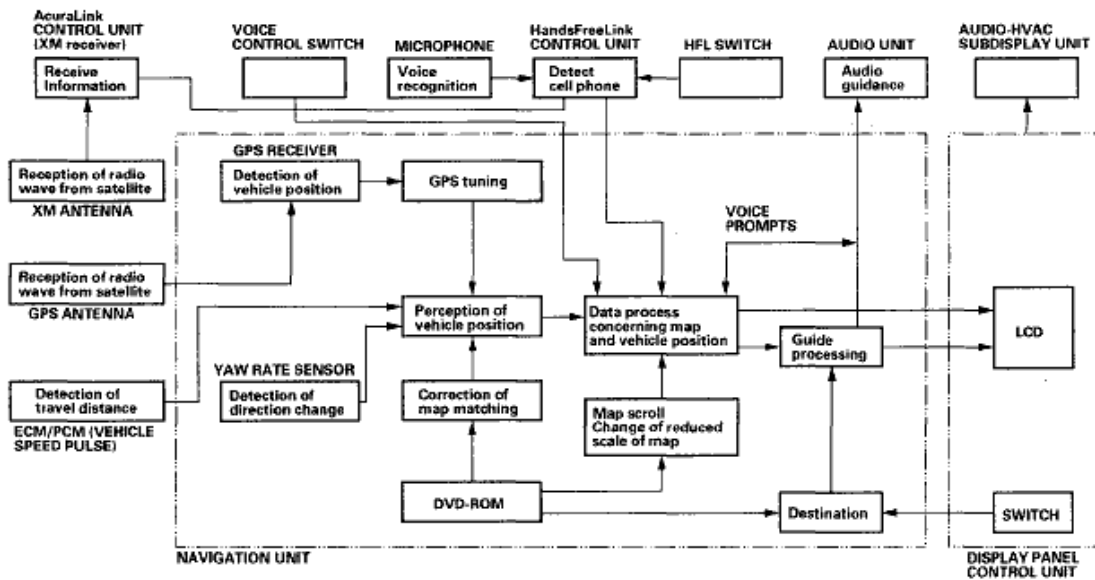


Fig. 7: Navigation System - Function Diagram
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

GA-Net Bus Configuration

The GA-Net bus passes audio and navigation commands throughout the navigation and audio components. These commands include navigation audio/XM selections by voice, and XM station and music title names. Because the entire bus is interconnected between components, an open or short in the GA-Net bus harness may cause any or all of these functions to become inoperative.

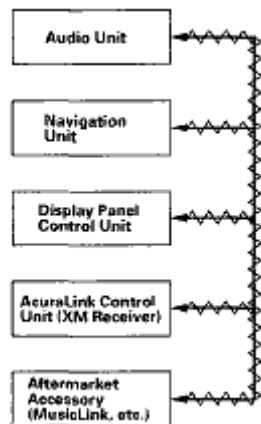


Fig. 8: GA-Net Bus Configuration Diagram
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 processes the signal and transmits it to the speedometer and other systems.

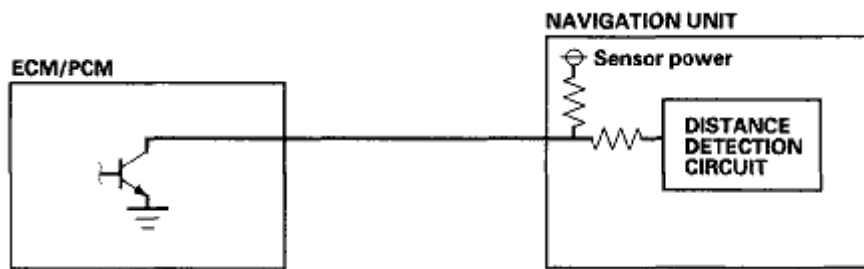


Fig. 9: Vehicle Speed Pulse - Communication Diagram
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Charge Signal and Navigation Unit Cooling Fan Operation

The ECM/PCM sends a charge signal to the navigation unit via F-CAN. A thermistor inside the navigation unit monitors the units internal temperature. This information combined with charge signal determines the control units internal cooling fan operation.

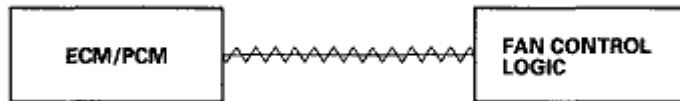


Fig. 10: ECM/PCM Signal - Communication Diagram
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Yaw Rate-Lateral Acceleration Sensor

The yaw rate-lateral acceleration 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.

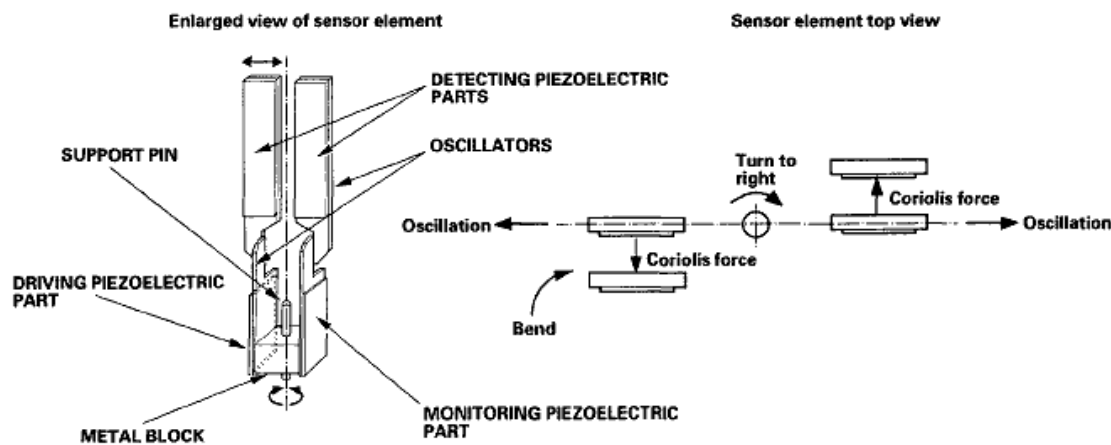
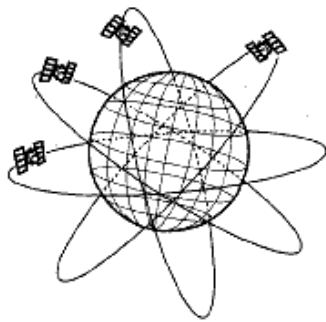


Fig. 11: Sensor Element Diagram
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 position in its respective orbit.

Position detection Image with GPS satellite



NOTE: Four satellites on each of 6 orbits.

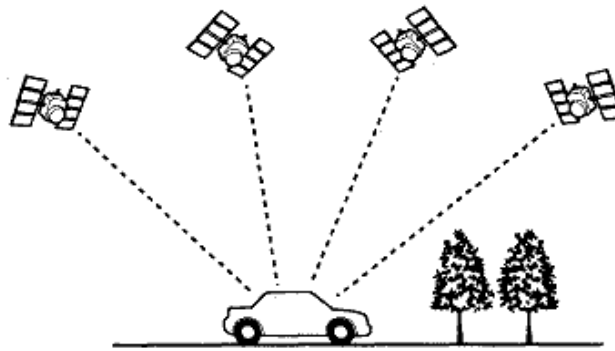


Fig. 12: Identifying GPS Satellite
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 precision is indicated by the color of the GPS icon shown on the display.

GPS DESCRIPTION CHART

GPS ICON COLOR	NUMBER OF SATELLITES	CONDITION	DESCRIPTION
White GPS icon	None	Faulty	The GPS can't be utilized due to a faulty GPS receiver, open in the wire, or other fault or interference.
	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 control unit to adjust vehicle position.

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 display panel control unit 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 vehicle speed pulse (VSP) signal of the ECM/PCM.

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. This is not selectable (button grayed out) for trips greater than 100 miles.
- Minimize Toll Roads-Calculates route that avoids, or minimizes travel on toll roads. This is not selectable (button grayed out) for trips greater than 100 miles.
- 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 when the voice control system**

is being used.

Muting Signal Logic

All muting signals are passed through the GA-Net II bus. The audio unit determines the muting logic and what audio source has priority to use the speakers.

If the HandsFreeLink (HFL) is in use, a signal is passed through the audio unit to tell the navigation unit that the HFL is in use. The navigation unit temporarily disables the voice control system and suppresses voice guidance commands. In addition, the audio unit suppresses the output from the radio, XM radio, disc player, or other audio accessories. When the navigation system sends out a voice guidance command, the front speakers are muted, and the navigation voice is heard from the center speaker. When the voice control system is in use, all of the speakers are muted, and the navigation voice prompts are heard from the center speaker. Signals sent on the bus also control turning on the external amplifier when the audio unit is off.

Solar Angle

The navigation system uses the sun's angle, along with the sunlight sensor to control the driver/passenger A/C air flow.

Off Road Tracking (breadcrumbs)

Off road tracking dots that can be followed on the map retrace your route back to a mapped (digitized) road.

Clock and Time Zone

The clock set up allows you to set daylight savings time, auto time zone and time adjustment.

DVD-ROM

The map and points of interest data (including all scale rates) are 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.

Audio Unit

The audio unit receives the voice guidance instructions from the navigation unit and transmits the instructions through the center speaker even when the audio system is in use.

NOTE: **If the navigation volume is turned OFF, this feature is disabled.**

Display Panel Control Unit

The display panel control unit uses a liquid crystal display (LCD). The LCD is a 8-inch-diagonal, thin film transistor (TFT), stripe type with 336,960 picture elements. 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. To maintain compatibility with

earlier display units, the sensing locations are confined to a grid of 20 vertical and 10 horizontal touch locations. This produces 180 total sensing zones. The display panel control unit transmits the signal from each operation key and the touch switches to the navigation unit over the GA-Net bus.

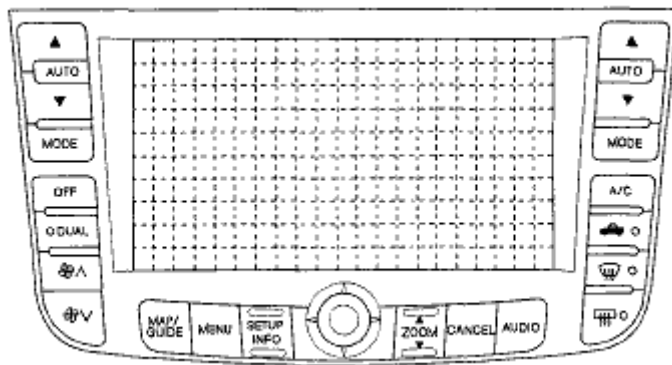


Fig. 13: Identifying Display Panel Control Unit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Microphone (Mic)

Receives voice commands and transmits them to the navigation unit or HandsFreeLink control unit for interpretation.

Talk Button

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

Back Button

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

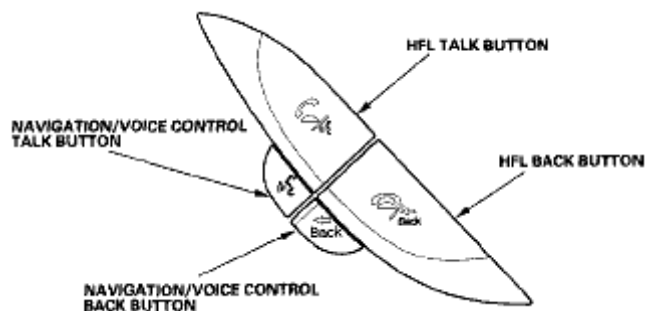


Fig. 14: Identifying Display Panel Control Unit Button
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Glossary

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

ITEM DEFINITION CHART

Item	Definition
	This device receives information from the XM satellites and passes XM audio

AcuraLink	information to the audio unit. In addition, traffic information is sent to the navigation unit.
Address Book	The HFL system can import a copy of the phone book from an approved HFL compatible phone and can 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)
Breadcrumbs (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 Owner's manual for a list of these areas.
DTC	Diagnostic Trouble Codes. Use the PGM Tester, or 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 will appear at the bottom of the navigation screen. If the user drives "off road" the navigation system will display "Not on a digitized road", and after 1/2 mile, the "breadcrumbs" will 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	Frequency Asked Questions. See the Navigation Owner's 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 in 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)	This device receives information from the XM satellites and presses XM audio information to the audio unit. In addition, traffic information is sent to the navigation unit.
H/U	Head Unit. The navigation system display assembly 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.
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 is displaying 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.
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 " <u>BREADCRUMBS</u> "
Off Route	This occurs when the user leaves mapped roads. Off road tracking dots ("breadcrumbs") 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 will say "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	The PC Card (PCMCIA, type II) slot is for factory use only. Make sure that the sliding door is closed at all items, if opened, an error message is displayed on the screen.
PCM	Powertrain Control Module. This unit supplies the navigation system speed signal, and charge signal via the F-CAN network. Also referred to as ECM.
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 service 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.
Touch Screen Buttons or Touch Sensor	Audio-HVAC display panel has 2 layers of clear film on the screen panel. If you touch the screen panel, the film layers engage and the display unit detects the touch point.
Tuning	A continual update of internal navigation system scaling factors. See the individual sensor tuning discussions under either "System Description", or "System Diagnostic Mode" (see <u>SYSTEM DIAGNOSTIC MODE</u>) in this manual.
Unverified Streets	These streets have not been verified for turn restrictions, one-way, etc. They are shown in 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.
Verified Streets	These streets consist of the detailed metropolitan coverage areas, and all other inter-town connection roads. These roads are shown in black on the map.
VP	Vehicle Position. When in map mode, this circular icon shows the vehicle position on the map. Touch this icon to show the latitude, longitude, and elevation of your current position.
VR	Voice Recognition. This allows voice control of many of the navigation functions. The hardware consists of the microphone, voice control switch (Talk/ Back buttons), and the front speakers. See the <u>OVERVIEW</u> 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 (see <u>ACURALINK</u>).
Yaw Sensor	This device is located in the navigation unit and senses the side-to-side twisting force generated when the vehicle turns. See a detailed description of how this sensor works in this manual.

Diagnostic Function Diagram

The diagram shows an over view of the navigation diagnostic features starting at the center and working outward in layers. The diagram starts with "Key on". The diagram shows two ways to get to the diagnostic main menu:

- By starting the vehicle with the SCS service connector plugged in, you will enter the diagnostic "System Links" screen. Select "Return" to get to the main diagnostic menu.
- From any of the navigation Map or Menu screens, press and simultaneously hold the keys Menu + Map + Cancel. 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.

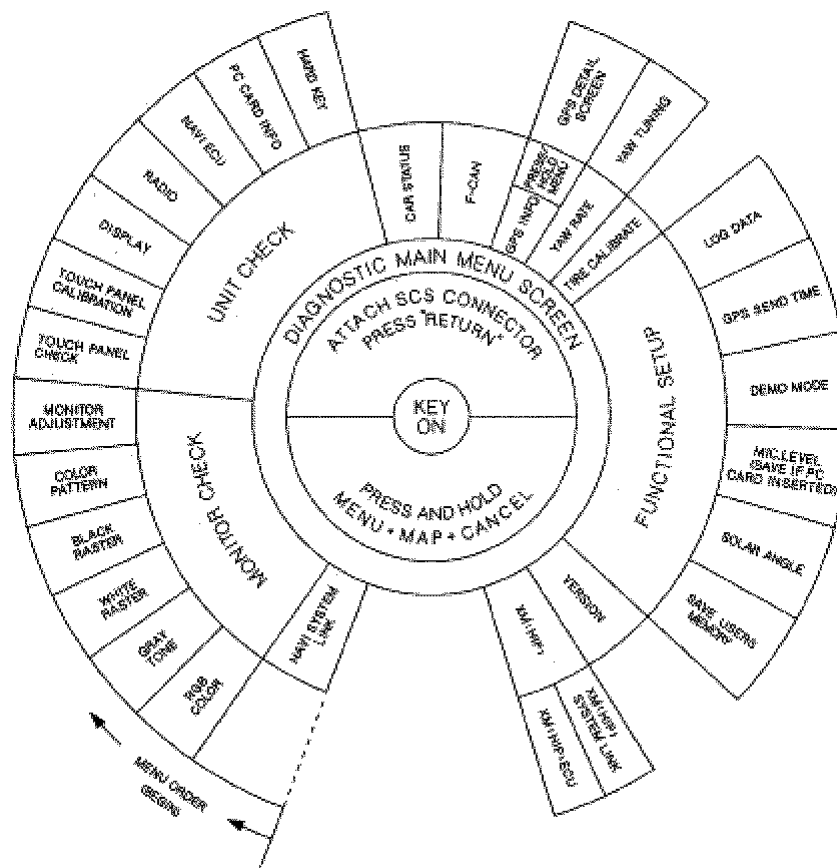
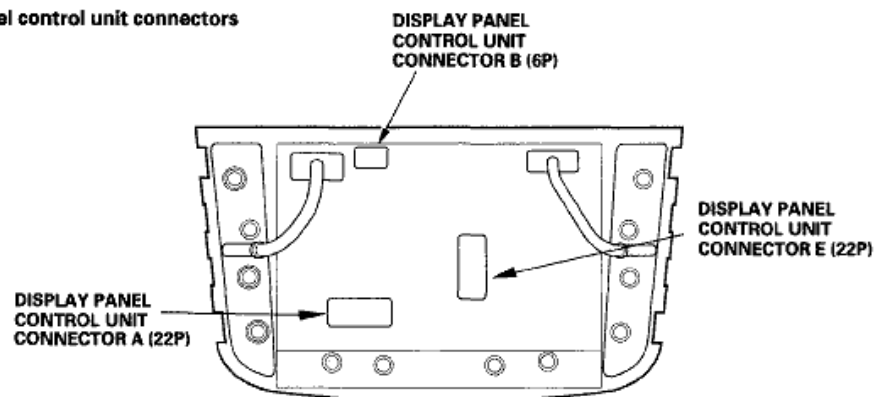


Fig. 15: Diagnostic Function Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Display panel control unit connectors

Display panel control unit connectors



DISPLAY PANEL CONTROL UNIT CONNECTOR A (22P)

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

DISPLAY PANEL CONTROL UNIT CONNECTOR B (6P)

1	2	3	4	5
---	---	---	---	---

DISPLAY PANEL CONTROL UNIT CONNECTOR E (22P)

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

Wire side of female terminals

Navigation unit connectors

Fig. 16: Identifying Display Panel Control Unit Connectors

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Navigation unit connectors

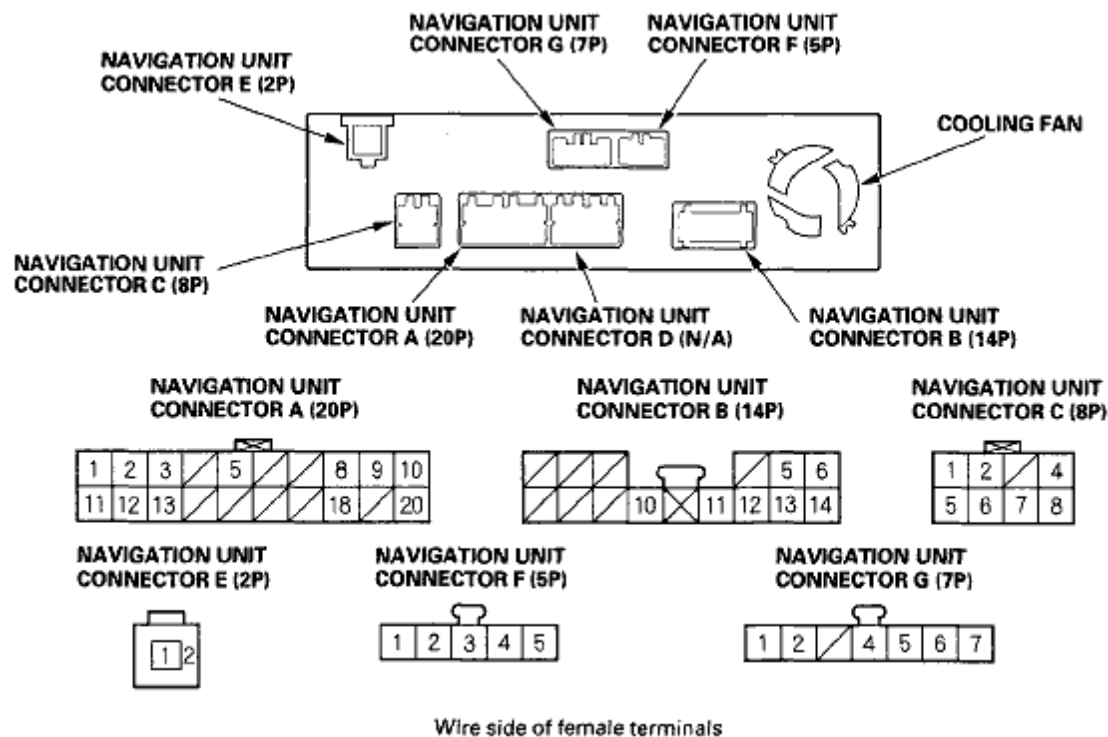


Fig. 17: Identifying Navigation Unit Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Audio unit connectors

Audio unit connectors

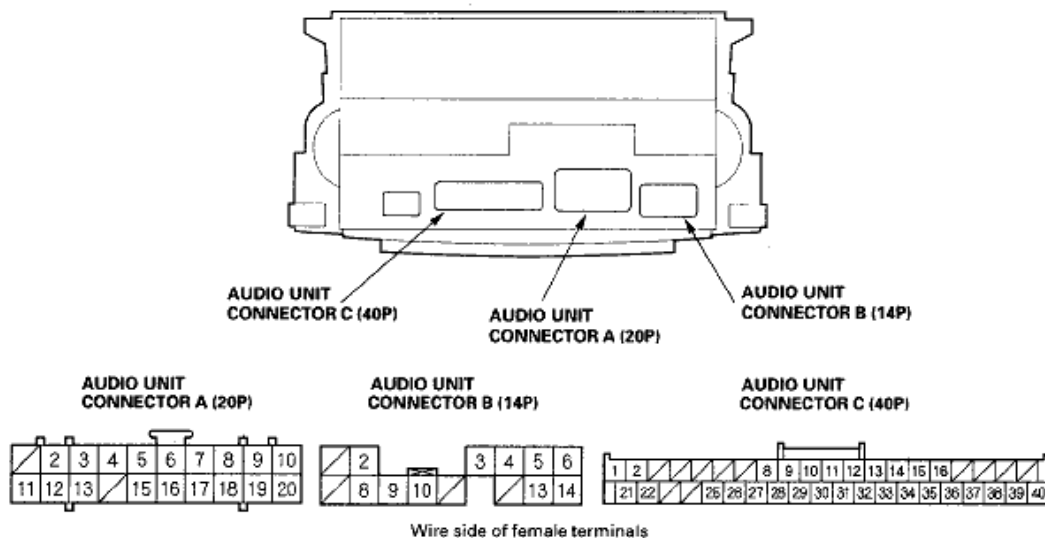


Fig. 18: Identifying Audio Unit Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Audio-HVAC subdisplay unit connector

AUDIO-HVAC SUBDISPLAY UNIT 10P CONNECTOR

Wire side of female terminals

Fig. 19: Identifying Audio-HVAC Subdisplay Unit Connector
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Rearview camera connector

Wire side of male terminals

Fig. 20: Identifying Rearview Camera Connector
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION UNIT INPUTS AND OUTPUTS**NAVIGATION UNIT CONNECTOR A (20P)**

Wire side of female terminals

Fig. 21: Identifying Navigation Unit Inputs And Outputs Connector 20P
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	R SIG (Red signal)	Red color signal	0.2 V AC average	If open: Red color missing (see " RGB COLOR " diagnostic). If short to ground: Red color missing (see " RGB COLOR " diagnostic).
2	RED	G SIG (Green	Green color	0.2 V AC average in RGB color	If open: Green color missing (see " RGB COLOR " diagnostic).

		signal)	signal	diagnostic mode	If short to ground: Green color missing (see " RGB COLOR " diagnostic).
3	GRY/RED (1)	SH SIG (Shield signal)	Shield for terminal No. 1, 2, 11, 12, 13	0 V	If open: No change to display. If short to ground: No change to display.
5	RED/BLK	ILL (+) (Illumination positive)	Parking light on signal	Lights 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 No. 4 (10 A) fuse in under-hood fuse/relay box.
8	WHT	CAN-H (CAN high)	F-CAN bus communication	Pulses 2.5-6 V average 2.5 V (Depends on F-CAN communication traffic)	If open: 1. System Links FI-ECU, and Meter both show "NG". 2. F-CAN diagnostic="NG". 3. Car status CHG (CAN)=0. 4. Functional Setup, Trip into, FUP & Sampled FL=0. If short to ground: Same diagnostic conditions as when open, and also sets the following DTCs. • B1168 Gauge Control Module loss of Comm. (Engine) • B1169 Gauge Control Module loss of Comm. (A/T) • B1178 F-CAN communication Circuit error. • U0073 (F-CAN bus off) • U0155 (F-CAN Gauge control module) • U0121 (F-CAN VSA

					control)
9	GRY ⁽¹⁾	ECU BUS SH (Shield display bus)	Shield for display bus terminal No. 10, 20	0 V	If open: No change to display. If short to ground: No change to display.
10	RED/WHT	ECU BUS (+) (Display bus positive)	Data bus (+) GA-Net	0 V-5 V pulses average 2.5 V depends on bus traffic	If open: Navigation buttons and touch screen do not work. If short to ground: Navigation buttons and touch screen do not work.

(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.

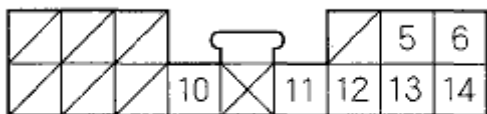
CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
11	YEL	B SIG (Blue signal)	Blue color signal	0.2 V AC average in RGB color diagnostic mode	If open: Blue color missing (see " RGB COLOR " diagnostic). If short to ground: Blue color missing (see " RGB COLOR " diagnostic).
12	BRN	C SIG (Composite signal)	Composite video (vertical/horizontal) Synchronizing signal	0.2 V AC average in RGB color diagnostic mode	If open: Picture rolls horizontally, colors still visible. If short to ground: Picture rolls horizontally, colors still visible.
13	BLU	GND SIG (Ground signal)	Ground for color signal	0 V	If open: No change to display. If short to ground: No change to display.
					If open: - System Links ECM/PCM, and Gauge Control Module both show "NG". - F-CAN diagnostic="NG". - Car status CHG (CAN)=0. - Functional Setup, Trip into, FUP & Sampled FL=0.

18	RED	CAN-L (CAN low)	F-CAN bus communication	Pulses 2.5-6 V 2.5 V average (depends on Bus traffic)	If short to ground: Same diagnostic conditions as when open, and also sets the following DTCs. • B1168 Gauge Control Module loss of Comm. (Engine) • B1169 Gauge Control Module loss of Comm. (A/T) • B1178 F-CAN communication Circuit error. • U0073 (F-CAN bus off) • U0155 (F-CAN Gauge control module) • U0121 (F-CAN VSA control)
20	RED/BLU	ECU BUS (-) (Display bus negative)	Data bus (-) GA-Net	0 --5 V pulses 2.5 V average (depends on Bus traffic)	If open: Navigation buttons and touch screen do not work. If short to ground: Hard and touch buttons work OK.

NAVIGATION UNIT INPUTS AND OUTPUTS

NAVIGATION UNIT CONNECTOR B (14P)



Wire side of female terminals

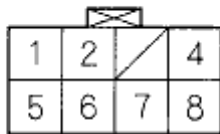
Fig. 22: Identifying Navigation Unit Inputs And Outputs Connector 14P
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
5	WHT	RG L (+) (Route guidance)	Left audio signal of voice guidance, and Voice Recognition	Audio signal 0.004-0.04 V	If open: If voice activated, radio speakers buzz; if voice off, no effect. If short to ground: If voice

		voice left positive)	(VR) prompts		activated, radio speakers buzz; if voice off, no effect.
6	BRN	MIC SIG (+) (Mic signal positive)	Microphone output signal positive	4-5 V (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".
10	BRN	STRG SW (Steering wheel switches)	Steering wheel switch output	4-5 V (Talk button pressed) 2.5-3 V (Back button pressed)	If open: Steering wheel Talk and Back buttons do not work. If short to ground: Steering wheel Talk and Back buttons do not work.
11	LT GRN (1)	SH RG (Shield route guidance)	Shield for terminal No. 5,12	0 V	If open: No effect on voice output. If short to ground: No effect on voice output.
12	BLU/RED	GND RG (Ground route guidance)	Ground for voice guidance, and Voice Recognition (VR) prompts	0 V	If open: No effect on voice output. If short to ground: No effect on voice output.
13	GRY ⁽¹⁾	SH MIC (Shield mic)	Shield for terminal No. 6,14	0 V	If open: No effect on voice control. If short to ground: No effect on voice control.
14	YEL	GND MIC (Ground mic)	Ground for microphone signal	0 V	If open: No microphone signal shown in diagnostics: "Navi System Link" and Functional Setup "Mic Level". If short to ground: No effect on voice recognition.
(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.					

NAVIGATION UNIT INPUTS AND OUTPUTS

NAVIGATION UNIT CONNECTOR C (8P)

Wire side of female terminals

Fig. 23: Identifying Navigation Unit Inputs And Outputs Connector 8P
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

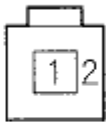
CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT/RED	+B (+B Power source) No. 7 (7.5 A) fuse in the under-dash fuse/relay box	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. 7 (7.5 A) in the under-dash fuse/relay box.
2	YEL/RED	ACC (Accessory) No. 32 (7.5 A) fuse in the under-dash fuse/ relay box	Ignition ON input	Battery voltage at ACC (I)	If open: Display picture goes out (display back light still on). If short to ground: Blows fuse No. 32 (7.5 A) in the under-dash fuse/relay box.
4	BLK	GND (Ground) (G604)	Ground for navigation unit	0 V	If open: No effect on system. If short to ground: No effect on system.
5	GRN	BACK LT (Back light or reverse signal)	Reverse signal of select lever 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 reverse. Diagnostic screen "Car Status", "Back"=0. If short to ground: Blows fuse No. 21 (7.5 A) in the under-dash fuse/relay box.
					If open: No vehicle

6	LT BLU	VSP (Vehicle speed pulse)	Vehicle speed pulse signal from ECM/PCM	Stopped: 10-11 V DC Average 5 V DC, when moving	speed pulses. Diagnostic screen "Car Status", VSP Navi=0. If short to ground: No vehicle speed pulses. Diagnostic screen "Car Status", VSP Navi=0.
7	GRN/RED	DIAG+ (Diagnostic positive)	Service check signal for navigation system	5-6 V	If open: No effect on system. If short to ground: System goes into diagnostic mode at key ON (I and II).
8	GRN/YEL	DIAG- (Diagnostic negative)	Ground for service check signal	0 V	If open: The system will not go into diagnostic mode when using the SCS service connector. If short to ground: No effect on system.

NAVIGATION UNIT INPUTS AND OUTPUTS

NAVIGATION UNIT CONNECTOR E (2P)



Wire side of female terminals

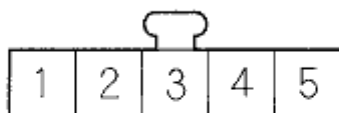
Fig. 24: Identifying Navigation Unit Inputs And Outputs Connector 2P
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	-	GPS	GPS signal	5V	If open: GPS icon on screen is white, system links screen ANT shows "NG". If short to body ground: Same as open.
2	-	GND GPS	Ground for GPS signal	0 V	If open: GPS icon on screen is white, system links screen ANT shows "NG". If short to body around: No effect on system.

NAVIGATION UNIT INPUTS AND OUTPUTS

NAVIGATION UNIT CONNECTOR F (5P)



Wire side of female terminals

Fig. 25: Identifying Navigation Unit Inputs And Outputs Connector 5P
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

USA models

CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	NAV C0MM 3 (HFL/HIP communication 3)	Communication signal for Acura Link and HFL	5 V DC	Solid red XM (HIP) icon and/or HFL icon in Navi System Link
2	BLK	NAV C0MM 4 (HFL/HIP communication 4)	Communication signal for AcuraLink and HFL	4.5 V DC	Solid red XM (HIP) icon and/or HFL icon in Navi System Link
3	RED	NAV C0MM 1 (HFL/HIP communication 1)	Communication signal for AcuraLink and HFL	5 V DC	XM (HIP) icon and/or HFL icon in Navi System Link changes between red and green
4	GRN	NAV C0MM 2 (HFL/HIP communication 2)	Communication signal for AcuraLink and HFL	4.5 V DC	XM (HIP) icon and/or HFL icon in Navi System Link changes between red and green
5	GRY (1)	NAV COMM SH (Shield HFL/HIP)	Shield for terminal No. 1, 2, 3, 4	0 V	-

(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.

Canada models

CONNECTOR TERMINAL REFERENCE CHART

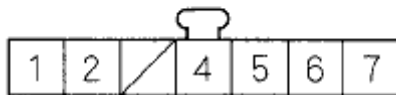
Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	HFL C0MM 3 (HFL communication 3)	Communication signal for HFL	-	Solid red HFL icon in Navi System Link
2	BLK	HFL COMM 4 (HFL communication 4)	Communication signal for HFL	-	Solid red HFL icon in Navi System Link

3	RED	HFL COMM 1 (HFL communication 1)	Communication signal for HFL	-	HFL icon in Navi System Link changes between red and green
4	GRN	HFL COMM 2 (HFL communication 2)	Communication signal for HFL	-	HFL icon in Navi System Link changes between red and green
5	GRY ⁽¹⁾	HFL COMM SH (Shield HFL)	Shield for terminal No. 1, 2, 3, 4	-	-

(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.

NAVIGATION UNIT INPUTS AND OUTPUTS

NAVIGATION UNIT CONNECTOR G (7P)



Wire side of female terminals

Fig. 26: Identifying Navigation Unit Inputs And Outputs Connector 7P
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

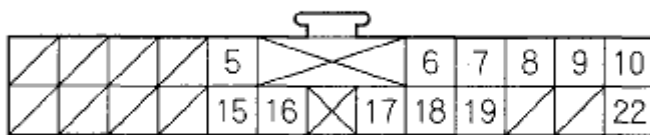
CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
G1	WHT	CAMERA VCC (VCC supply)	Power source for rearview camera	8 V	If open: When put into reverse, the navigation screen goes black (backlight still operation) If short to ground: When put into reverse, the navigation screen goes black (backlight still operative).
G2	RED	CAMERA GND (Ground)	Ground for rearview camera	0 V	If open: No change to rearview camera image. If short to ground: No change to rearview camera image.
G4	YEL	VIDEO GND (Ground camera)	Ground for camera signal	0 V	If open: No change to rearview camera image. If short to ground: No change to rearview camera image.
G5	BLK	VIDEO (Video camera)	Video signal for rearview camera	0.3 V AC	If open: When put into reverse, the navigation screen goes black (backlight still operation) If short to ground: When put into reverse, the navigation screen

					goes black (backlight still operative).
G6	GRY (1)	CAMERA SH (Shield and ground for camera)	Shield for terminal No. 1 to No. 7	0 V	If open: No change to rearview camera image. If short to ground: No change to rearview camera image.
G7	GRN	CAMERA ADPT (Adaptive camera)	Control signal for rearview camera	0 V	If open: Rearview camera is not detected. Navigation system continues to operate normally, but will not switch to rearview mode when reverse is selected. The rearview camera link under the Navi system link is red. If short to ground: No change to rearview camera image.
(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.					

DISPLAY PANEL CONTROL UNIT INPUTS AND OUTPUTS

DISPLAY PANEL CONTROL UNIT CONNECTOR A (22P)



Wire side of female terminals

Fig. 27: Display Panel Control Unit Inputs And Outputs Connector A 22P
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
5	BLK	GND (Ground) (G501)	Ground for display unit	0 V	If open: No change to display. If short to ground: No change to display.
6	RED	ILL (-) (Illumination negative)	Parking light (for bulb) brightness control signal	Lights 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: Parking light is on

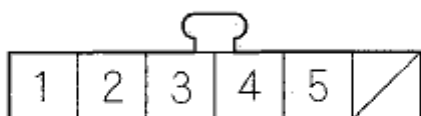
					every time.
7	BLU	AUD BUS (+) (Audio bus positive)	Data bus (+) GA- Net	0-5 V pulses average 2.5 V depends on bus traffic	If open: Navigation buttons and touch screen do not work. If short to ground: Navigation buttons and touch screen do not work.
8	RED/BLK	ILL (+) (Illumination positive)	Parking light on signal	Lights 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 No. 4 (10 A) fuse in under-hood fuse/relay box.
9	YEL/RED	ACC (Accessory) No. 32 (7.5 A) fuse in the under-dash fuse/ relay box	Ignition ON input	Battery voltage at ACC (I)	If open: Display and buttons do not work. If short to ground: Blows No. 32 (7.5 A) fuse in under-dash fuse/relay box.
10	WHT/RED	+B (+B power source) No. 7 (7.5 A) fuse in the under- dash fuse/relay box	Continuous power source	Battery voltage	If open: Screen completely off (no backlight visible). If short to ground: Blows No. 7 (7.5 A) fuse in under-dash fuse/relay box.
15	RED/BLU	ILL (-) (Illumination negative)	Parking light (for LED) brightness control signal	Lights 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: Parking light is on every time.
16	ORN	IMS1	-	-	-
17	BLK	IMS0	-	-	-
18	GRY ⁽¹⁾	SH AUD BUS (Shield audio bus)	Shield for terminal No. 7,19	0 V	If open: No change to display. If short to ground: No change to display.
19	PNK	AUD BUS (-)	Data bus (-) GA-	0-5 V pulses average 2.5	If open: Navigation buttons and touch screen do not work. If short to ground:

		(Audio bus negative)	Net	V depends on bus traffic	Navigation buttons and touch screen work OK.
22	LT BLU	B-CAN (Body CAN)	B-CAN bus communication	-	-

(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.

DISPLAY PANEL CONTROL UNIT INPUTS AND OUTPUTS

DISPLAY PANEL CONTROL UNIT CONNECTOR B (6P)



Wire side of female terminals

Fig. 28: Display Panel Control Unit Inputs And Outputs Connector B 6P
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

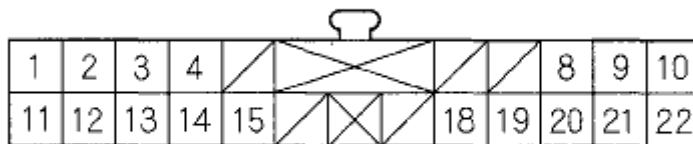
CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	GRN	GND (Ground)	Ground for switch signal (common ground between display panel and A/C)	0 V	If open: No effect; "A/C" link in the navigation diagnose links is GREEN If short: Same as OPEN
2	RED	FR DEF (Front defroster) Front defroster switch momentary ON or OFF signal to the climate control unit	Front defroster switch signal to A/C	5 VDC	If open: Front Defrost button on display panel does not work, but the navigation system can still command front defroster ON and OFF; subdisplay functions normally; "A/C" link in the navigation diagnose links is GREEN If short: Will command the front defrost either ON or OFF depending on the front defroster status before the wire was shorted; A momentary short will cause the Front Defroster to toggle ON and OFF; subdisplay functions normally; "A/C" link in the navigation diagnose links is

					GREEN
3	LT GRN	A/C RX (Air conditioner receive)	Communication signal for climate control unit (UART receive display panel-A/C)	5-6 V AC	If open: All HVAC functions in the subdisplay are inoperative; "A/C" link in the navigation diagnose links is RED; LED in the Front Defrost button is inoperative If short: Same as OPEN
4	BRN	A/C TX (Air conditioner transmit)	Communication signal for climate control unit (UART transmit display panel to A/C)	5-7 V AC	If open: All HVAC functions in the subdisplay are inoperative; navigation system cannot command the HVAC; HVAC system defaults to Front Defrost, blower speed HIGH; Front Defrost button does not operate; "A/C" link in the navigation diagnose links is GREEN
5	WHT	IG2 (Ignition 2)	Power source for switch signal (to inform display panel ignition switch ON (II))	7-9 V DC from climate control unit at ignition switch ON (II)	If open: All HVAC functions in the subdisplay are inoperative; HVAC system defaults to Front Defrost, blower speed HIGH; Front and Rear Defrost buttons do not work

DISPLAY PANEL CONTROL UNIT INPUTS AND OUTPUTS

DISPLAY PANEL CONTROL UNIT CONNECTOR E (22P)



Wire side of female terminals

Fig. 29: Display Panel Control Unit Inputs And Outputs Connector E 22P
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	R SIG (Red signal)	Red color signal	0-1 V	If open: Red color missing (see " RGB COLOR " diagnostic). If short to ground: Red color missing (see " RGB COLOR " diagnostic).

2	RED	G SIG (Green signal)	Green color signal	0-1 V	If open: Green color missing (see " RGB COLOR " diagnostic). If short to ground: Green color missing (see " RGB COLOR " diagnostic).
3	BLU	GND SIG (Ground signal)	Ground for color signal	0 V	If open: No change to display. If short to ground: No change to display.
4	RED/WHT	ECU BUS (+) (Display bus positive)	Data bus (+) GA-Net	0-5 V pulses average 2.5 V depends on bus traffic	If open: Navigation buttons and touch screen do not work. If short to ground: Navigation buttons and touch screen do not work.
8	BRN/BLK (1)	SH GND (Shield ECU bus)	Shield for terminal No. 9, 10, 21, 22	0 V	If open: No change to display. If short to around: No change to display.
9	BLU	CE	Communication signal	0-5 V Data 4-6 V Average	If open: All Audio-HVAC subdisplay unit LCD segments on, backlight on. If short to ground: All Audio-HVAC subdisplay unit LCD segments on, backlight on.
10	BLU/RED	DI	Communication signal	0-5 V Data 4-6 V Average	If open: All Audio-HVAC subdisplay unit LCD segments on, backlight on. If short to ground: All Audio-HVAC subdisplay unit LCD segments on, backlight 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.

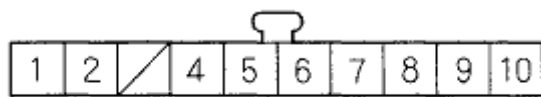
CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
11	YEL	B SIG (Blue signal)	Blue color signal	0-1 V	If open: Blue color missing (see " RGB COLOR " diagnostic). If short to ground: Blue color missing (see " RGB

					COLOR " diagnostic).
12	BRN	C SIG (Composite signal)	Composite video (vertical/horizontal) synchronizing signal	0.3 V	If open: Picture rolls horizontally, colors still visible. If short to ground: Picture rolls horizontally, colors still visible.
13	GRY/RED (1)	SH SIG (Shield signal)	Shield for terminal No. 1, 2, 3, 11, 12	0 V	If open: No change to display. If short to ground: No change to display.
14	RED/BLU	ECU BUS (-) (Display bus negative)	Data bus (-) GA-Net	0-5 V pulses average 2.5 V depends on bus traffic	If open: Navigation buttons and touch screen do not work. If short to ground: Navigation buttons and touch screen do not work.
15	GRY ⁽¹⁾	ECU BUS SH (Shield display bus)	Shield for display bus terminal No. 4, 14	0 V	If open: No change to display. If short to ground: No change to display.
18	PUR	LCD BL (+) (LCD back light +)	Power for LCD back light +	9.5 V	If open: Audio-HVAC subdisplay unit completely blank. If short to ground: Audio-HVAC subdisplay unit completely blank.
19	ORN	LCD BL (-) (LCD backlight-)	Power for LCD backlight-	0-0.2 V	If open: Audio-HVAC subdisplay unit functions normally, but display is very dim. If short to ground: Audio-HVAC subdisplay unit functions normally.
20	BLU/ORN	SD+B	Power source for audio-HVAC subdisplay unit	5 V	If open: All Audio-HVAC subdisplay unit LCD segments show briefly at key on. If short to ground: All Audio-HVAC subdisplay unit LCD segments do not work, Audio-HVAC subdisplay unit backlight on.
21	YEL	CL	Time information signal	0-5 V Data 0.04 V Average	If open: Audio-HVAC subdisplay unit randomly displays some characters, display backlight on. If short to ground: Audio-HVAC subdisplay unit

					randomly displays some characters, display backlight on.
22	YEL/RED	INH	Time set sync signal	5 V	If open: Clock Audio-HVAC subdisplay unit will not set to navigation time (when time offset is applied or when "Reset" touched in Setup "Clock Adjustment" screen). If short to ground: All Audio-HVAC subdisplay unit LCD segments do not work, display backlight 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.					

AUDIO-HVAC SUBDISPLAY UNIT INPUTS AND OUTPUTS FOR 10P CONNECTOR



Wire side of female terminals

Fig. 30: Identifying Audio-HVAC Subdisplay Unit Inputs And Outputs For 10P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

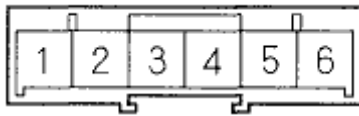
CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	BLK	GND (G503)	Ground for audio-HVAC subdisplay unit	0 V	If open: Audio-HVAC subdisplay unit unaffected If short to ground: Audio-HVAC subdisplay unit unaffected.
2	BLU/ORN	SD+B	Power source for audio-HVAC subdisplay unit	+B	If open: All Audio-HVAC subdisplay unit LCD segments do not work. If short to ground: All Audio-HVAC subdisplay unit LCD segments do not work. Audio-HVAC subdisplay unit backlight on.
					If open: Clock Audio-HVAC subdisplay unit will not set to navigation time (when time offset is applied or when "Reset"

4	YEL/RED	INH	Time set sync signal	0.06 V	touched in Setup "Clock Adjustment" screen). If short to ground: All Audio-HVAC subdisplay unit LCD segments do not work display backlight on.
5	YEL	CL	Time information signal	0-5 V Data 2.5 V Average	If open: Audio-HVAC subdisplay unit randomly displays some characters, display backlight on. If short to ground: Audio-HVAC subdisplay unit randomly displayed characters, display backlight on.
6	BLU/RED	DI	Communication signal	0-5 V Data 11 V Average	If open: All Audio-HVAC subdisplay unit LCD segments do not work, backlight on. If short to ground: All Audio-HVAC subdisplay unit LCD segments do not work, backlight on.
7	BLU	CE	Communication signal	0-5 V Data 6-7 V Average	If open: All Audio-HVAC subdisplay unit LCD segments do not work, backlight on. If short to ground: All Audio-HVAC subdisplay unit LCD segments do not work, backlight on.
8	BRN/BLK (1)	SH GND	Shield for terminal No. 4, 5, 6, 7	0 V	If open: No effect on Audio-HVAC subdisplay unit. If short to ground: No effect on Audio-HVAC subdisplay unit.
9	ORN	LCD BL (-) (LCD backlight-)	Power for LCD backlight-	0-0.2 V	If open: Audio-HVAC subdisplay unit functions normally, but display is very dim. If short to ground: Audio-HVAC subdisplay unit functions normally.
10	PUR	LCD BL (+) (LCD backlight +)	Power for LCD backlight +	9.5 V	If open: Audio-HVAC subdisplay unit completely blank. If short to ground: Audio-HVAC subdisplay unit completely blank.

(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.

REARVIEW CAMERA INPUTS AND OUTPUTS FOR 6P CONNECTOR



Terminal side of male terminals

Fig. 31: Identifying Rearview Camera Inputs And Outputs For 6P Connector
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE CHART

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	GRN	CAMERA ADPT (Adaptive camera)	Control signal for rearview camera	0 V	If open: No rearview camera image. If short to ground: No change to rearview camera image.
2	GRY (1)	CAMERA SH (Shield and ground for camera)	Shield for terminal No. 5	0 V	If open: No change to rearview camera image. If short to ground: No change to rearview camera image.
3	BLU	VIDEO (Video camera)	Video signal for rearview camera	0.3 V	If open: No rearview camera image. If short to ground: When put into reverse, navigation screen goes black (display backlight still operative).
4	YEL	VIDEO GND (Ground camera)	Ground for camera signal	0 V	If open: No change to rearview camera image. If short to ground: No change to rearview camera image.
5	RED	CAMERA GND (Ground)	Ground for rearview camera	0 V	If open: No change to rearview camera image. If short to ground: No change to rearview camera image.
6	WHT	CAMERA VCC (VCC supply)	Power source for rearview camera	8 V	If open: No rearview camera image. If short to ground: When put into reverse, navigation screen goes black (display backlight still operative).
(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.					

CIRCUIT DIAGRAM



Courtesy of AMERICAN HONDA MOTOR CO., INC.

*: 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.
 - - - - - : Shielding

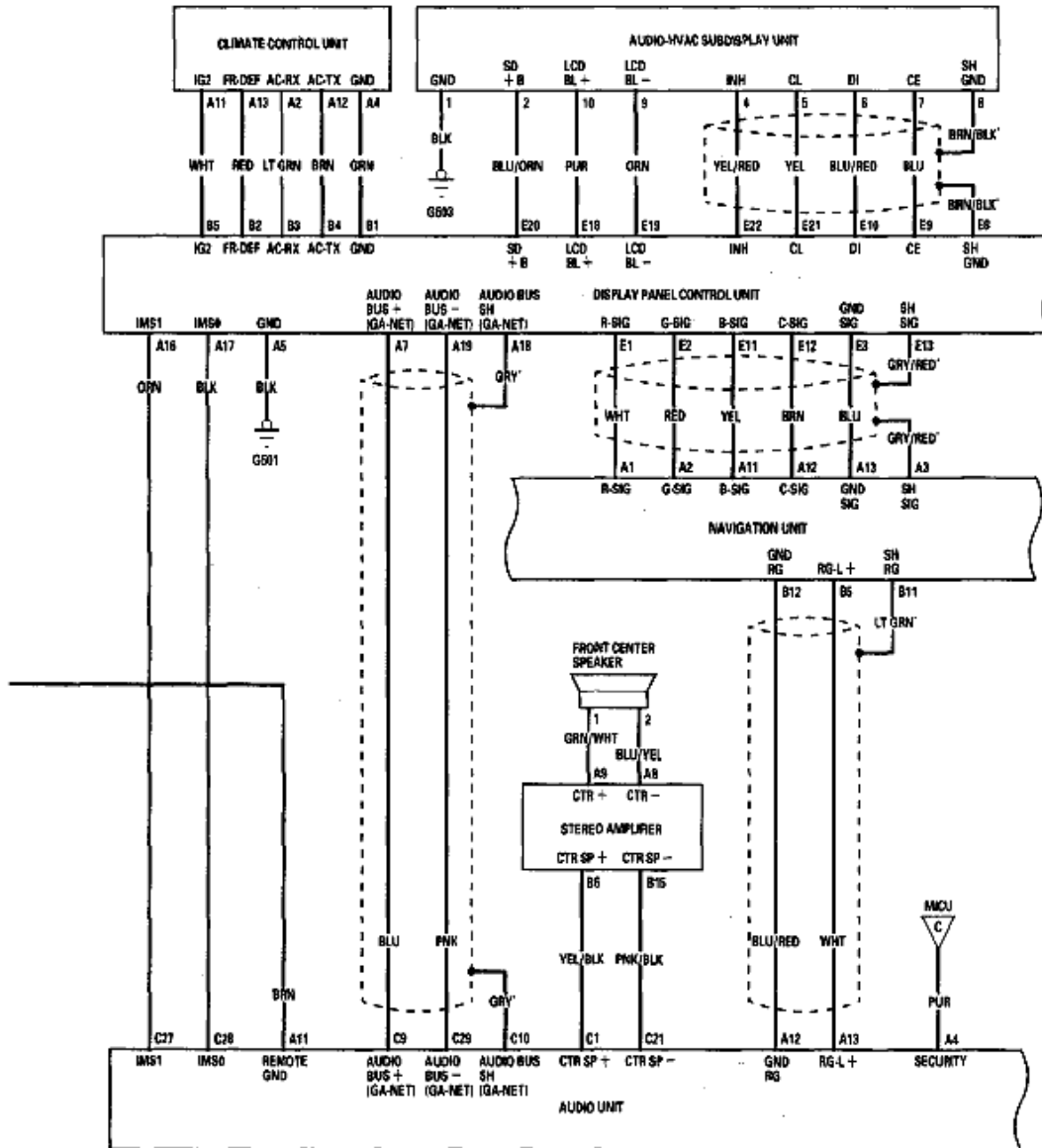


Fig. 33: Navigation System - Circuit Diagram (2 Of 4)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

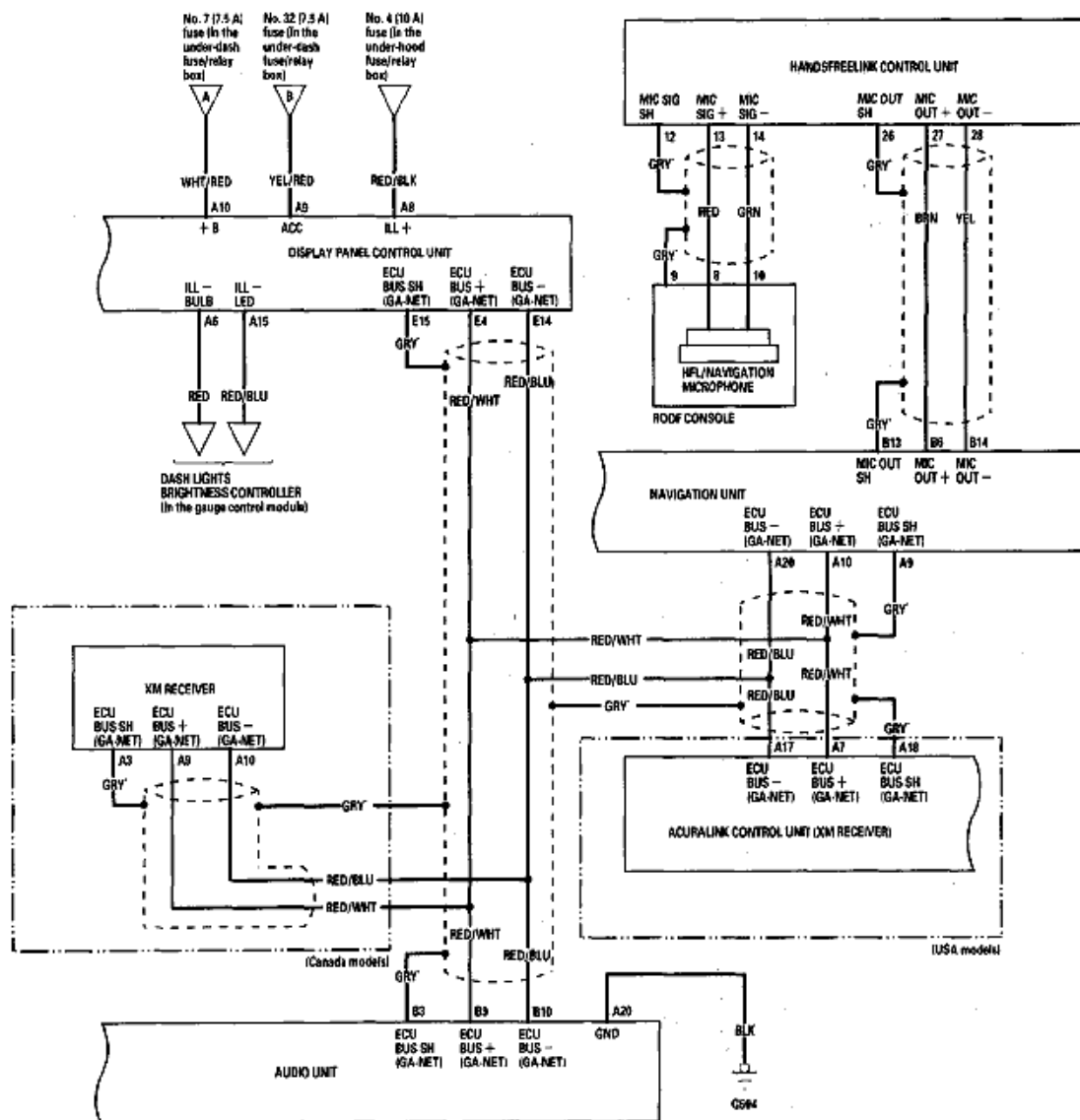


Fig. 34: Navigation System - Circuit Diagram (3 Of 4)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

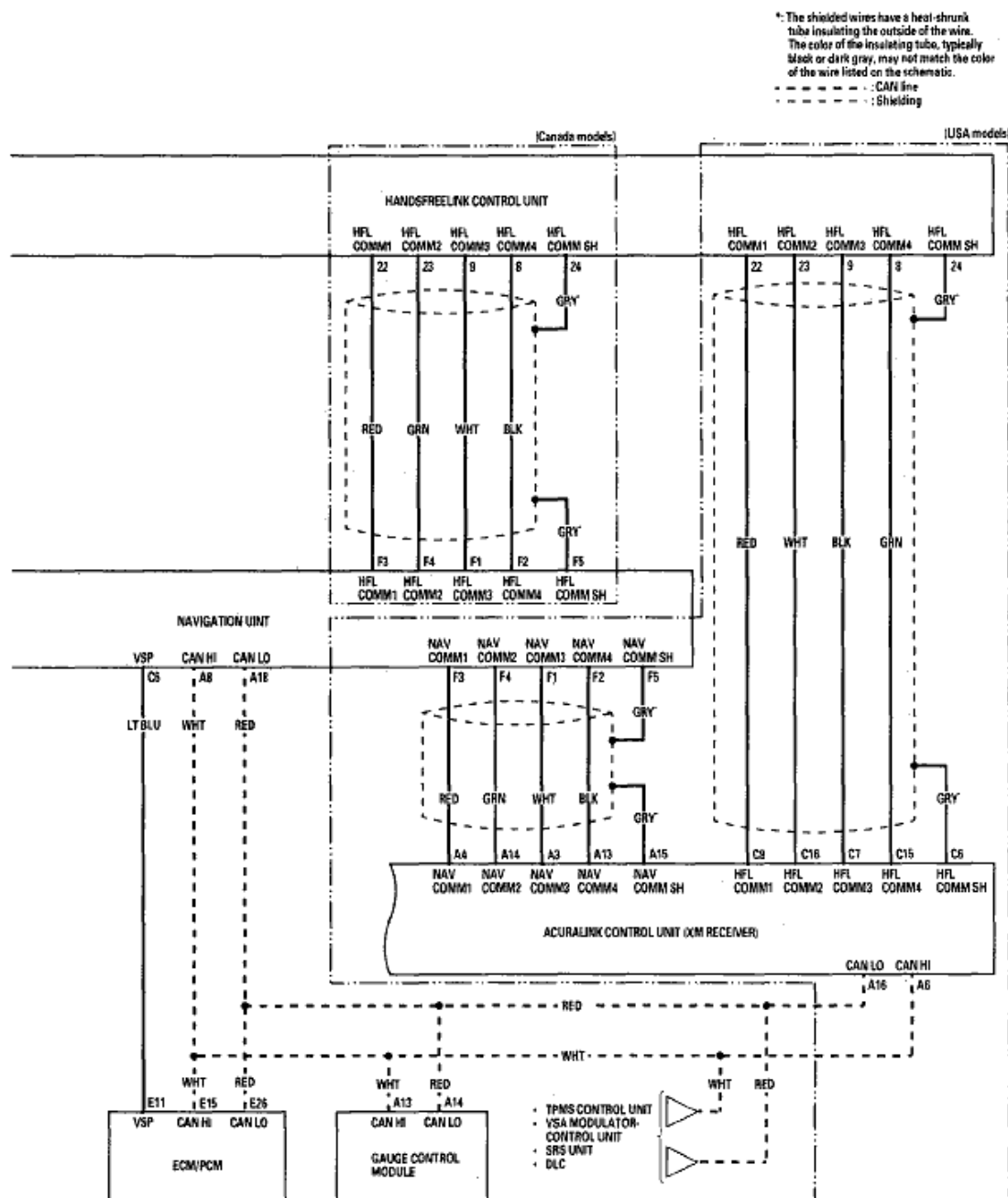


Fig. 35: Navigation System - Circuit Diagram (4 Of 4)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

SYMPTOM TROUBLESHOOTING

NO PICTURE IS DISPLAYED

Diagnostic Test: Navi System Link

NOTE:

- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service web site for more service information

about the navigation system.

- For problems with the rearview camera, do the rearview camera does not come on or work properly troubleshooting.
- 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. 7 (7.5 A) fuse and No. 32 (7.5 A) fuse in the under-dash fuse/relay box, and reinstall the fuses if they are OK.

Are the fuses OK?

YES -Go to step 2.

NO -Replace the fuse and recheck.

2. Turn the ignition switch to ON (II).
3. Turn on the audio unit and check for sound in each mode (AM, FM, XM, and CD).

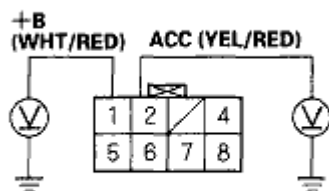
Can you operate the audio?

YES -Go to step 4.

NO -Go to the audio system troubleshooting.

4. Turn the ignition switch to LOCK (0).
5. Remove the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).
6. Turn the ignition switch to ON (II).
7. Measure the voltage between body ground and navigation unit connector C (8P) terminals No. 1 and No. 2 individually.

NAVIGATION UNIT CONNECTOR C (8P)



Wire side of female terminals

Fig. 36: Measuring Voltage Between Body Ground And Navigation Unit Connector C (8P) Terminals No. 1 And 2

Courtesy of AMERICAN HONDA MOTOR CO., INC.

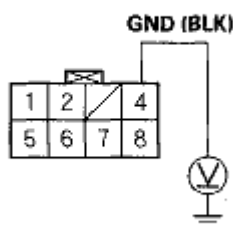
Is there battery voltage?

YES -Go to step 8.

NO -If the +B wire does not have voltage, repair open in the wire between the under-dash fuse/relay box and the navigation unit. If the ACC wire does not have voltage, repair open in the wire between the under-dash fuse/relay box and the navigation unit.

8. Measure the voltage between navigation unit connector C (8P) terminal No. 4 and body ground.

NAVIGATION UNIT CONNECTOR C (8P)



Wire side of female terminals

Fig. 37: Measuring Voltage Between Navigation Unit Connector C (8P) Terminal No. 4 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 0.1 V?

YES -Go to step 9.

NO -Repair open in the wire between the navigation unit and body ground (G604).

9. Turn the ignition switch to LOCK (0).
10. Reinstall the navigation unit.
11. Do the forced starting of the display (see **FORCED STARTING OF DISPLAY**).

Is the diagnosis menu of the picture diagnosis displayed?

YES -Go into the Diagnostic mode and use the "Navi System Link" diagnostic (see **NAVI SYSTEM LINK**) to check the links.

NO -Go to step 12.

12. Turn the ignition switch to ON (II).
13. Shield the display panel from the sun with your hand, and check that the display is back lit (only back light is ON.)

Can you see the back light?

YES -Replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**) and retest. If the problem is still present, replace the display panel control unit (see **DISPLAY PANEL CONTROL UNIT REMOVAL/INSTALLATION**).

NO -Go to step 14.

14. Turn the ignition switch to LOCK (0).
15. Remove the audio-HVAC display module assembly (see **AUDIO-HVAC DISPLAY MODULE ASSEMBLY REMOVAL/INSTALLATION**).

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

16. Turn the ignition switch to ON (II).
17. Measure the voltage between body ground and display panel control unit connector A (22P) terminal No. 9 and No. 10 individually.

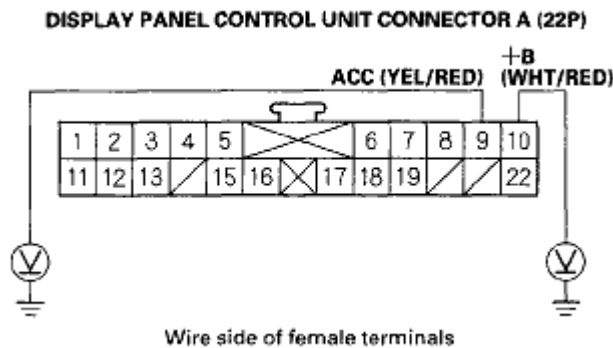


Fig. 38: Measuring Voltage Between Body Ground And Display Panel Control Unit Connector Terminal No. 9 And 10

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 18.

NO -If the +B wire does not have voltage, repair open in the wire between the under-dash fuse/relay box and the display panel control unit connector A (22P). If the ACC wire does not have voltage, repair open in the wire between the under-dash fuse/relay box and the display panel control unit connector A (22P).

18. Measure the voltage between display panel control unit connector A (22P) terminal No. 5 and body ground.

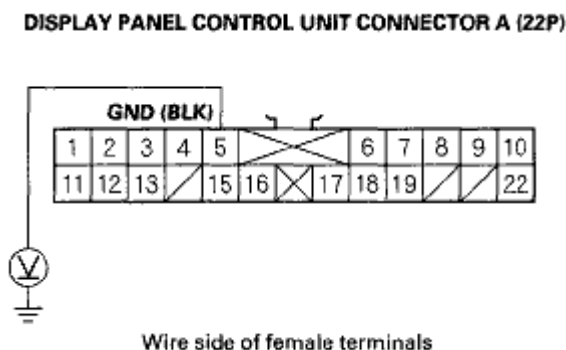


Fig. 39: Measuring Voltage Between Display Panel Control Unit Connector Terminal No. 5 And

Body Ground**Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there less than 0.1 V?*

YES -Substitute a known-good display panel control unit, then reconnect all connector and recheck. If the symptom/indication goes away, replace the original display panel control unit. If symptom/indication is still present, replace the navigation unit.

NO -Repair open or high resistance in the BLK wire between display panel control unit connector A (22P) and body ground (G501).

PICTURE HAS LINES/ROLLS/OTHER ISSUES OR IS AN ODD COLOR**Diagnostic Test: Monitor Check****NOTE:**

- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service web site for more service information about the navigation system.
- For problems with the rearview camera, do the rearview camera does not come on or work properly troubleshooting.
- 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 display unit or 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 **MONITOR CHECK**).

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

YES -Go to step 5.

NO -Intermittent failure. The system is OK at this time.

5. Turn the ignition switch to LOCK (0).
6. Remove the audio-HVAC display module assembly (see **AUDIO-HVAC DISPLAY MODULE ASSEMBLY REMOVAL/INSTALLATION**), and disconnect display panel control unit connector E (22P).

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

7. Disconnect the navigation unit connector A (20P).
8. Check for loose terminals at navigation unit connector A (20P) and display panel control unit connector E (22P).

Are there loose terminals?

YES -Repair the terminal.

NO -Go to step 9.

9. Check for continuity between body ground and navigation unit connector A (20P) terminals No. 1, No. 2, No. 11, and No. 12 individually.

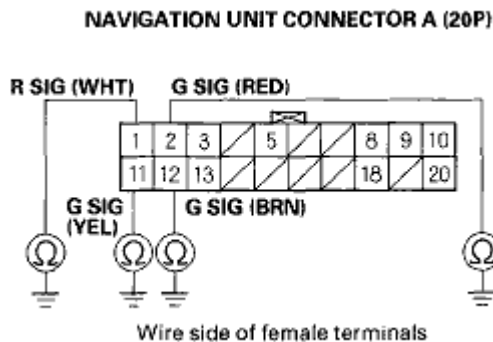


Fig. 40: Checking Continuity Between Body Ground And Navigation Unit Connector Terminals No. 1, 2, 11 And No. 12

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short to body ground in the wire(s) between display panel control unit and navigation unit. Replace the affected shielded harness.

NO -Go to step 10.

10. Check for continuity between navigation unit connector A (20P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

From terminal	To terminals
A1	A2, A3, A11, A12, A13
A2	A3, A11, A12, A13
A3	A11, A12, A13
A11	A12, A13
A12	A13

NAVIGATION UNIT CONNECTOR A (20P)

Wire side of female terminals

Fig. 41: Identifying Navigation Unit Connector A 20P
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity between any of the terminals?

YES -Short in the wire(s) between display panel control unit and navigation unit. Replace the affected shielded harness.

NO -Go to step 11.

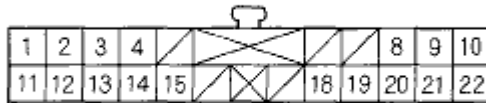
11. Check for continuity between navigation unit connector A (20P) and display panel control unit connector E (22P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Navigation unit connector	Display panel control unit connector	Wire color
A1	E1	WHT
A2	E2	RED
A3	E13	GRY/RED
A11	E11	YEL
A12	E12	GRN
A13	E3	BLU

NAVIGATION UNIT CONNECTOR A (20P)

Wire side of female terminals

DISPLAY PANEL CONTROL UNIT CONNECTOR E (22P)

Wire side of female terminals

Fig. 42: Identifying Display Panel Control Unit Connector E 22P
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good display panel control unit and recheck. if the symptom/indication goes away, replace the original display panel control unit. If the symptom/indication is still present, replace the navigation unit.

NO -Open in the wire(s) between navigation unit and display panel control unit. Replace the affected shielded harness.

DISPLAY PANEL CONTROL UNIT BUTTONS OR TOUCH SCREEN BUTTONS DO NOT WORK OR RESPOND PROPERLY

NOTE:

- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service web site 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 and audio system anti-theft codes.

1. Turn the ignition switch to ON (II).
2. Try several navigation buttons and touch screen buttons.

Do all buttons function properly?

YES -The system is OK at this time.

NO -

- If all navigation hard buttons and touch screen buttons are inoperative, go to step 3.
- If only some navigation buttons operate normally, while others do not, go into the Diagnostic

mode and use Touch Panel diagnostic under Monitor Check (see **MONITOR CHECK**) and if necessary. Hard Key diagnostic under Unit Check (see **UNIT CHECK**).

3. Turn the ignition switch to LOCK (0).
4. Remove the audio-HVAC display module assembly (see **AUDIO-HVAC DISPLAY MODULE ASSEMBLY REMOVAL/INSTALLATION**).

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

5. Measure the voltage between body ground and display panel control unit connector A (22P) terminal No. 9 and No. 10 individually.

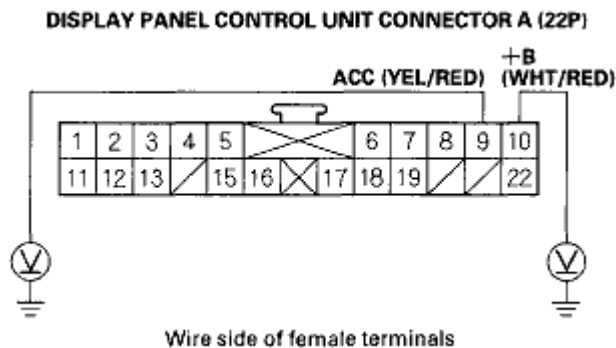


Fig. 43: Measuring Voltage Between Body Ground And Display Panel Control Unit Connector Terminal No. 9 And No. 10

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 6.

NO -If the +B wire does not have voltage, repair open in the wire between the under-dash fuse/relay box and the display panel control unit. If the ACC wire does not have voltage, repair open in the wire between the under-dash fuse/relay box and the display panel control unit.

6. Measure the voltage between display panel control unit connector A (22P) terminal No. 5 and body ground.

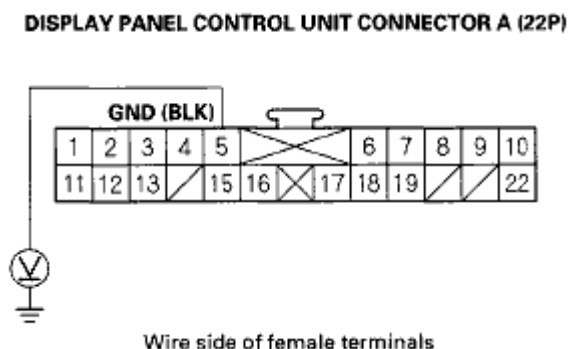


Fig. 44: Measuring Voltage Between Display Panel Control Unit Connector Terminal No. 5 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 0.1 V?

YES -Go to step 7.

NO -Repair open in the wire between the display panel control unit and body ground (G501).

7. Turn the ignition switch to LOCK (0).
8. Disconnect audio unit connectors B (14P).
9. Disconnect AcuraLink control unit (XM receiver) connector A (20P) (USA models) or XM receiver connector A (14P) (Canada models).
10. Disconnect display panel control unit connector A (22P) and E (22P).
11. Disconnect navigation unit connector A (20P).
12. Check for continuity between body ground and display panel control unit connector A (22P) terminal No. 7, No. 19 individually.

DISPLAY PANEL CONTROL UNIT CONNECTOR A (22P)

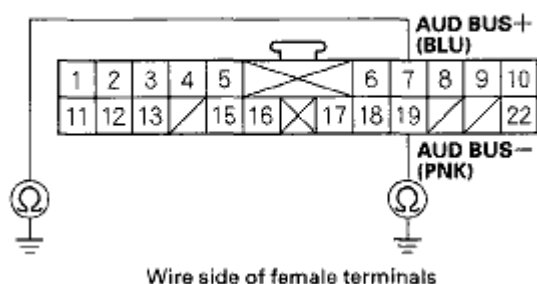


Fig. 45: Checking Continuity Between Body Ground And Display Panel Control Unit Connector A (22P) Terminal No. 7, No. 19

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short to body ground in the wire(s) between the display panel control unit and the audio unit. Replace the affected shielded harness.

NO -Go to step 13.

13. Check for continuity between body ground and display panel control unit connector E (22P) terminal No. 4 and No. 14 individually.

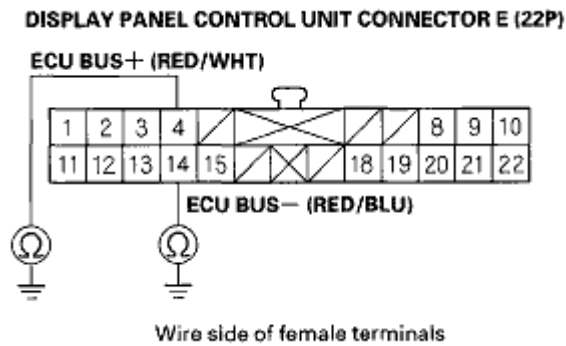


Fig. 46: Checking Continuity Between Body Ground And Display Panel Control Unit Connector A (22P) Terminal No. 7, No. 19

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short to body ground in the wire(s) between the AcuraLink control unit (XM receiver) (USA models) or XM receiver (Canada models), display panel control unit, audio unit and the navigation unit. Replace the affected shielded harness.

NO -Go to step 14.

14. Check for continuity between display panel control unit connector A (22P) terminal No. 18 and terminals No. 7 and No. 19 individually.

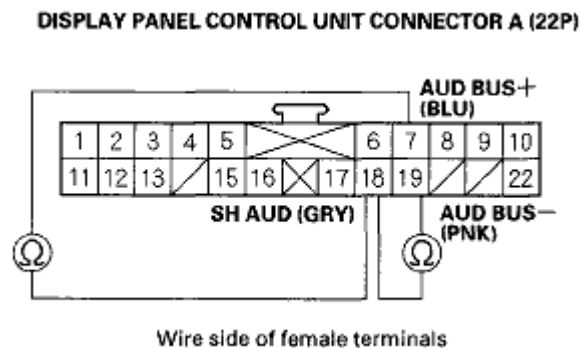


Fig. 47: Checking Continuity Between Display Panel Control Unit Connector A (22P) Terminal No. 18 And Terminals No. 7 And 19

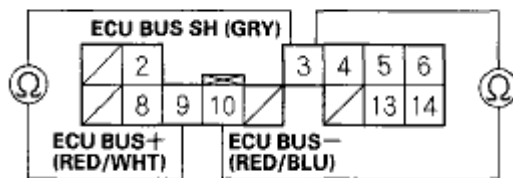
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short in the wire(s) between the display panel control unit and the audio unit. Replace the affected shielded harness.

NO -Go to step 15.

15. Check for continuity between audio unit connector B (14P) terminal No. 3 and terminals No. 9 and No. 10 individually.

AUDIO UNIT CONNECTOR B (14P)

Wire side of female terminals

Fig. 48: Checking Continuity Between Audio Unit Connector B (14P) Terminal No. 3 And Terminals No. 9 And No. 10

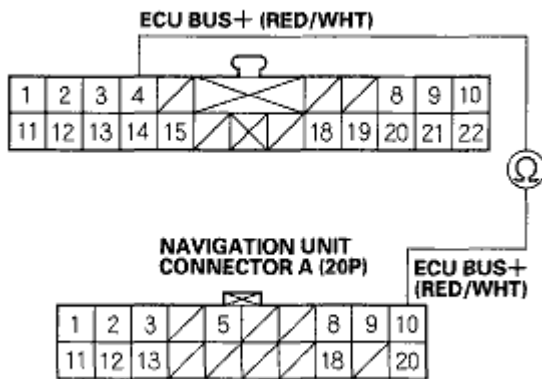
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short in the wire(s) between the audio unit and AcuraLink control unit (XM receiver) (USA models) or XM receiver (Canada models). Also check for short in the wire between the display panel control unit and the navigation unit. Replace the affected shielded harness.

NO -Go to step 16.

16. Check for continuity between display panel control unit connector E (22P) terminal No. 4 and navigation unit connector A (20P) terminal No. 10.

DISPLAY PANEL CONTROL UNIT CONNECTOR E (22P)

Wire side of female terminals

Fig. 49: Checking Continuity Between Display Panel Control Unit Connector E (22P) Terminal No. 4 And Navigation Unit Connector A (20P) Terminal No. 10

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 17.

NO -Open in the wire between the display panel control unit and the navigation unit. Check for poor connections or loose terminals at the display panel control unit and navigation unit. If a poor connection or loose terminal is found, replace the affected shielded harness.

17. Check for continuity between display panel control unit connector E (22P) terminal No. 14 and navigation unit connector A (20P) terminal No. 20.

DISPLAY PANEL CONTROL UNIT CONNECTOR E (22P)

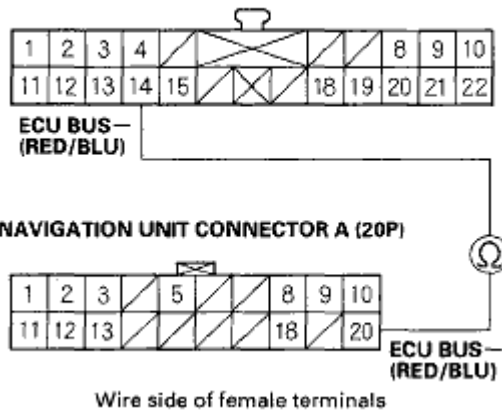


Fig. 50: Checking Continuity Between Display Panel Control Unit Connector Terminal No. 14 And Navigation Unit Connector Terminal No. 20
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 18.

NO -Open in the wire between the display panel control unit and the navigation unit. Check for poor connections or loose terminals at the display panel control unit and navigation unit. If a poor connection or loose terminal is found, replace the affected shielded harness.

18. Check for continuity between display panel control unit connector A (22P) terminal No. 7 and audio unit connector C (40P) terminal No. 9.

DISPLAY PANEL CONTROL UNIT CONNECTOR E (22P)

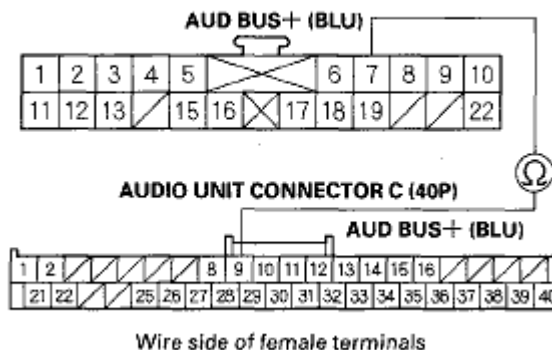


Fig. 51: Checking Continuity Between Display Panel Control Unit Connector A Terminal No. 7 And Audio Unit Connector Terminal No. 9
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 19.

NO -Open in the wire between the display panel control unit and the audio unit. Check for poor connections or loose terminals at the display panel control unit and audio unit. If a poor connection or loose terminal is found, replace the affected shielded harness.

19. Check for continuity between display panel control unit connector A (22P) terminal No. 19 and audio unit connector C (40P) terminal No. 29.

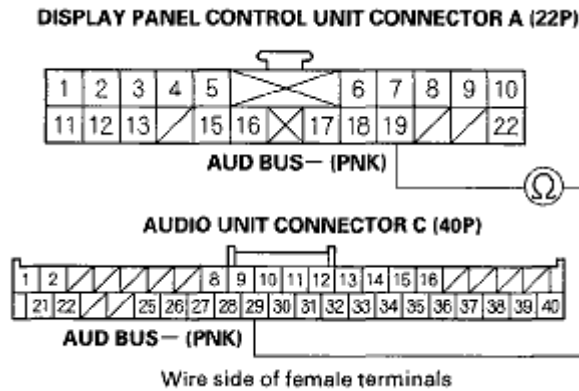


Fig. 52: Checking Continuity Between Display Panel Control Unit Connector Terminal No. 19 And Audio Unit Connector Terminal No. 29

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 20.

NO -Open in the wire between the display panel control unit and the audio unit. Check for poor connections or loose terminals at the display panel control unit and audio unit. If a poor connection or loose terminal is found, replace the affected shielded harness.

20. Check for continuity between display panel control unit connector A (22P) terminals No. 7 and No. 19.

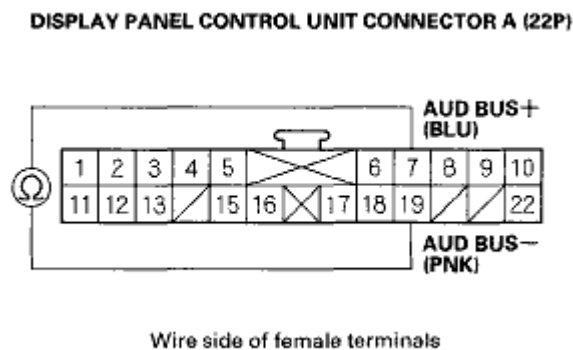


Fig. 53: Checking Continuity Between Display Panel Control Unit Connector A Terminals No. 7 And No. 19

Courtesy of AMERICAN HONDA MOTOR CO., INC.

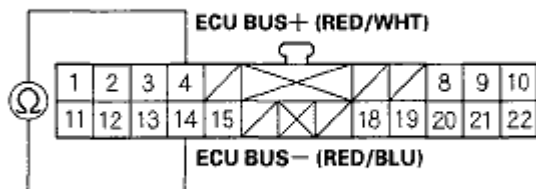
Is there continuity?

YES -Short in the wire(s) between the display panel control unit and the audio unit. Replace the affected shielded harness.

NO -Go to step 21.

21. Check for continuity between display panel control unit connector E (22P) terminals No. 4 and No. 14.

DISPLAY PANEL CONTROL UNIT CONNECTOR E (22P)



Wire side of female terminals

Fig. 54: Checking Continuity Between Display Panel Control Unit Connector E (22P) Terminals No. 4 And No. 14

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short in the wire(s) between the display panel control unit, navigation unit, audio unit and AcuraLink control unit (XM receiver) (USA models) or XM receiver (Canada models). Replace the affected shield harness.

NO -Substitute a known-good navigation unit, then reconnect all of the connectors and recheck. If the symptom/indication goes away, replace the original navigation unit. If the symptom/indication is still present, replace the display panel control unit.

GPS ICON IS WHITE OR NOT SHOWN

Diagnostic Test: Navi System Link

NOTE:

- Make sure the vehicle is parked outside and away from buildings, tall trees, and tension power lines.
- Refer to **GPS Information** (see **GPS INFORMATION**) for real time satellite reception display.
- With good reception, the icon is normally green.

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. Turn the ignition switch to ON (II).
3. Go into the Diagnostic mode and use the "Navi System Link" diagnostic (see **NAVI SYSTEM LINK**) to check the GPS antenna.

Is the "GPS Ant" icon red?

YES -Check for a kinked, crushed, or disconnected GPS antenna wire. If icon is still red, replace the GPS antenna.

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 and recheck. If the symptom is gone, replace the original navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

VOICE GUIDANCE CANNOT BE HEARD, IS BROKEN UP, OR THERE IS STATIC

Diagnostic Test: Navi System Link

NOTE:

- **Check the vehicle battery condition first.**
- **The navigation system uses the center speaker to communicate the voice prompts. When the center speaker is inoperative, there is little difference in the audio system sound quality or volume, but the navigation system is mute.**
- **Check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, write down the audio presets, and get the audio and navigation system anti-theft codes.**
- **After troubleshooting, enter the audio and navigation system anti-theft codes, and the audio presets.**

1. Turn the ignition switch to ON (II).
2. Press the display unit SET-UP button.
3. Check the volume and voice feedback setting for the navigation system in set-up.

Are the volume and/or voice feedback setting set to OFF?

YES -Set the feedback to ON and select an audible volume level.

NO -Go to step 4.

4. Check the audio operation.

Can you hear the audio?

YES -Go to step 5.

NO -Troubleshoot the audio system.

5. Do the speaker test (see **SELF-DIAGNOSTIC FUNCTION**) to check if the center speaker is operative.

Is the center speaker operative?

YES -Go to step 6.

NO -Do the audio system sound is weak or distorted (see **AUDIO SYSTEM SOUND IS WEAK OR DISTORTED (DISPLAY IS NORMAL)**), or no sound is heard from speaker (see **NO SOUND IS HEARD FROM SPEAKER(S) (DISPLAY IS NORMAL)**).

NOTE: Another speaker or speaker wire in the audio system could have a problem resulting in no output from the center speaker.

6. Go into the Diagnostic mode and use the "Navi System Link" diagnostic (see **NAVI SYSTEM LINK**) to check the radio.

Is the "Radio" icon red?

YES -Troubleshoot the audio system.

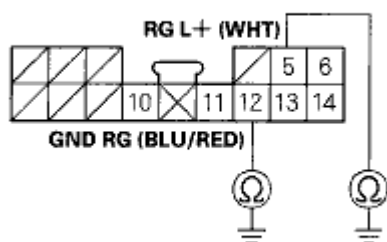
NO -Go to step 6.

7. Turn the ignition switch to LOCK (0).
8. Remove the audio-HVAC display module assembly (see **AUDIO-HVAC DISPLAY MODULE ASSEMBLY REMOVAL/INSTALLATION**), and disconnect audio unit connector A (20P).

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

9. Disconnect navigation unit connector B (14P).
10. Check for continuity between body ground and navigation unit connector B (14P) terminals No. 5, No. 12 individually.

NAVIGATION UNIT CONNECTOR B (14P)

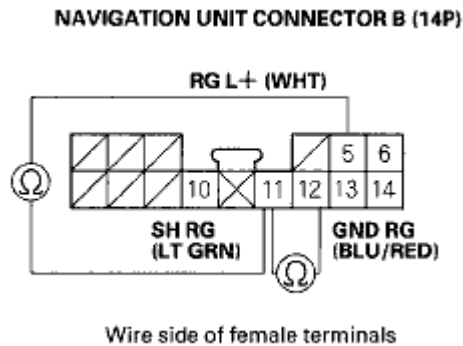


Wire side of female terminals

Fig. 55: Checking Continuity Between Body Ground And Navigation Unit Connector B (14P)

Terminals No. 5, No. 12**Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there continuity?***YES** -Short to body ground in the wire(s) between the navigation unit and audio unit. Replace the affected shielded harness.**NO** -Go to step 11.

11. Check for continuity between navigation unit connector B (14P) terminal No. 11 and terminals No. 5 and No. 12 individually.

**Fig. 56: Checking Continuity Between Navigation Unit Connector B (14P) Terminal No. 11 And Terminals No. 5 And No. 12****Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there continuity?***YES** -Short in the wire(s) between the navigation unit and audio unit. Replace the affected shielded harness.**NO** -Go to step 12.

12. Check for continuity between navigation unit connector B (14P) terminal No. 5 and the audio unit connector A (20P) terminal No. 13.

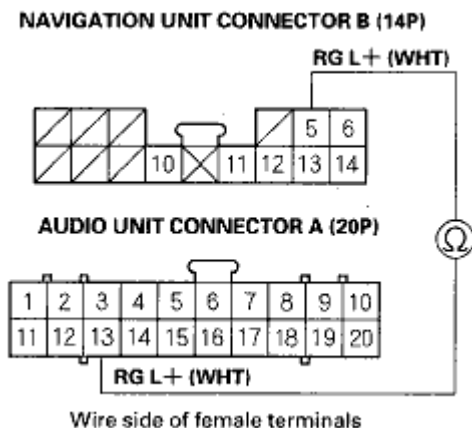


Fig. 57: Checking Continuity Between Navigation Unit Connector B (14P) Terminal No. 5 And Audio Unit Connector Terminal No. 13
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 13.

NO -Open in the wire between the navigation unit and audio unit. Check for poor connections or loose terminals at the audio and navigation units. If a poor connection or loose terminal is found, replace the affected shielded harness.

13. Check for continuity between navigation unit connector B (14P) terminal No. 12 and the audio unit connector A (20P) terminal No. 12.

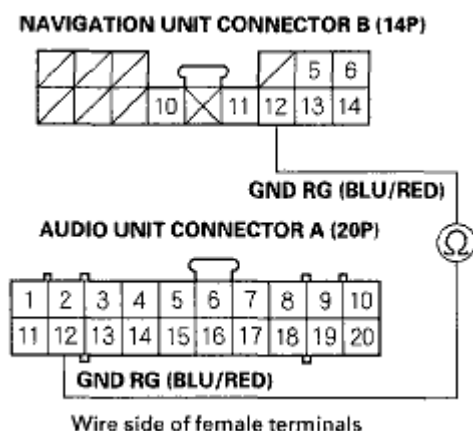


Fig. 58: Checking Continuity Between Navigation Unit Connector Terminal No. 12 And Audio Unit Connector Terminal No. 12
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 14.

NO -There is an open in the circuit between the navigation unit and the audio unit. Check for poor connections or loose terminals at the audio and navigation units. If a poor connection or loose terminal is found, replace the affected shielded harness.

14. Substitute a known-good navigation unit, and recheck.

Is the system OK?

YES -Replace the navigation unit (see NAVIGATION UNIT REMOVAL/INSTALLATION).

NO -Replace the audio unit (see AUDIO UNIT REMOVAL/INSTALLATION).

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 web site for more service information about 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 Map screen. (See the Navigation System manual for a complete list of allowed voice commands for the information being displayed).
 - Close the windows and sunroof.
 - 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 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.
- Check the connectors for poor connections or loose terminals.
- Check for a loose roof console microphone; if it's loose, tighten it.
- Before troubleshooting, write down the audio presets, and get the audio and navigation system anti-theft codes.
- After troubleshooting, enter the audio and navigation system anti-theft codes, and the audio presets.
- Determine if the problem only happens to one person, or everyone who uses the system.
- If the system only has a problem with one person's voice, this should be considered a system limitation.

1. Use the HDS to check for HFL DTCs. Troubleshoot and resolve any HFL problems before continuing.

Are there any HFL DTCs?

YES -Perform the troubleshooting for the DTC indicated.

NO -Go to step 2.

2. Go into the Diagnostic mode and use the "Mic Level" diagnostic the under Functional Setup (see **FUNCTIONAL SETUP**) to check the operation of the Talk and Back buttons.

Are the Talk and Back buttons operational?

YES -Go to step 10.

NO -Go to step 3.

3. Disconnect the cable reel 20P connector.
4. Test the voice control switch (see **VOICE CONTROL SWITCH TEST**).

Does the switch test OK?

YES -Go to step 6.

NO -Replace the HFL/voice control switch.

5. Disconnect HandsFreeLink control unit 28P connector.
6. Check for continuity between cable reel 20P connector terminal No. 10 and HandsFreeLink control unit 28P connector terminal No. 2.

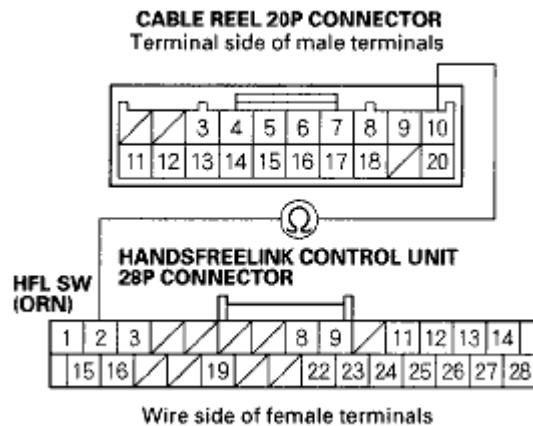


Fig. 59: Checking Continuity Between Cable Reel Connector Terminal No. 10 And HandsFreeLink Control Unit Connector Terminal No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 7.

NO -Repair open in the wire, or replace the cable reel.

7. Disconnect navigation unit connector B (14P).
8. Check for continuity between cable reel 20P connector terminal No. 18 and navigation unit connector B (14P) terminal No. 10.

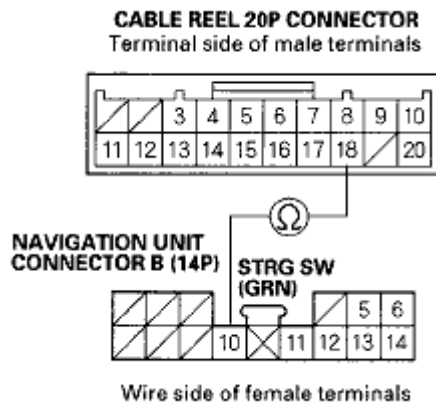


Fig. 60: Checking Continuity Between Cable Reel Connector Terminal No. 18 And Navigation Unit Connector Terminal No. 10

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 9.

NO -Repair open in the wire in the harness, or replace the cable reel.

9. Check for continuity between body ground and cable reel 20P connector terminals No. 10 and No. 18.

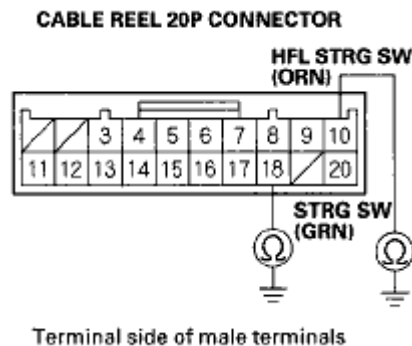


Fig. 61: Checking Continuity Between Body Ground And Cable Reel 20P Connector Terminals No. 10 And No. 18

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair short to body ground in the wire harness, or replace the cable reel.

NO -Replace the navigation unit.

10. Use the "Mic Level" diagnostic under Functional Setup (see **FUNCTIONAL SETUP**) to check the operation of the microphone.

Is the microphone operational?

YES -Check the operation of the voice control system (see the Navigation System Owner's Manual).

NO -Go to step 11.

11. Turn the ignition switch to LOCK (0).
12. Disconnect HandsFreeLink control unit 28P connector and navigation unit connector B (14P).
13. Check for continuity between navigation unit connector B (14P) terminal No. 6 and the HandsFreeLink control unit 28P connector terminal No. 27.

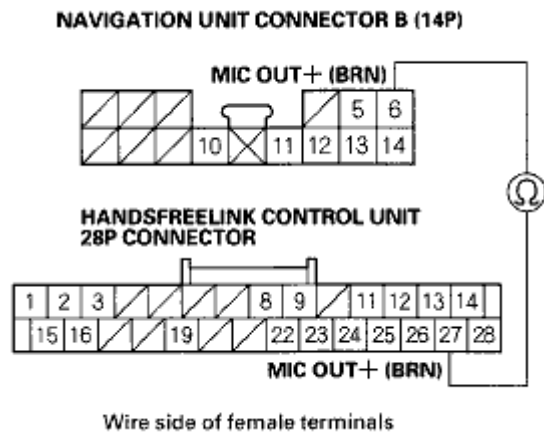


Fig. 62: Checking Continuity Between Navigation Unit Connector Terminal No. 6 And HandsFreeLink Control Unit Connector Terminal No. 27
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 14.

NO -Open in the wire between the navigation unit and HandsFreeLink control unit. Replace the affected shielded harness.

14. Check for continuity between body ground and navigation unit connector B (14P) terminal No. 6.

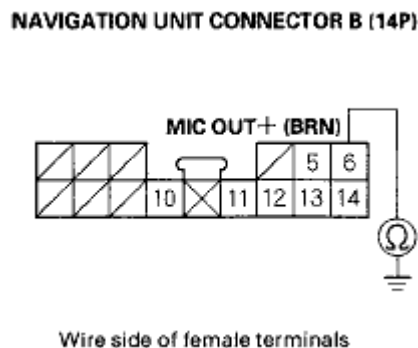


Fig. 63: Checking Continuity Between Body Ground And Navigation Unit Connector B (14P) Terminal No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short to body ground in the wire between the navigation unit and HandsFreeLink control unit.

Replace the affected shielded harness.

NO -Go to step 15.

15. Check for continuity between navigation unit connector B (14P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

From terminal	To terminals
B6	B13, B14
B13	B14

NAVIGATION UNIT CONNECTOR B (14P)



Wire side of female terminals

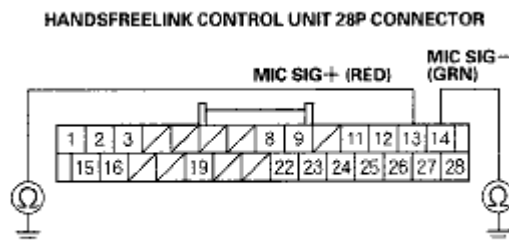
Fig. 64: Identifying Navigation Unit Connector B (14P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity between any of the terminals?

YES -Short in the wire(s) between the navigation unit and HandsFreeLink control unit. Replace the affected shielded harness.

NO -Go to step 16.

16. Disconnect the roof console 20P connector.
17. Check for continuity between the HandsFreeLink control unit 28P connector terminal No. 13 and No. 14 to body ground.



Wire side of female terminals

Fig. 65: Checking Continuity Between HandsFreeLink Control Unit Connector Terminal No. 13 And 14 To Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short in the wire(s) between the HandsFreeLink control unit and HFL/navigation microphone.

Replace the affected shielded harness.

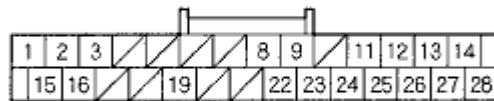
NO -Go to step 18.

18. Check for continuity between HandsFreeLink control unit 28P connector according to the table.

CONNECTOR TERMINAL REFERENCE CHART

From terminal	To terminals
12	13, 14
13	14

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Fig. 66: Identifying HandsFreeLink Control Unit 28P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity between any of the terminals?

YES -Short in the wire(s) between the HandsFreeLink control unit and HFL/navigation microphone.
Replace the affected shielded harness.

NO -Go to step 19.

19. Check for continuity between the appropriate HandsFreeLink control unit 28P connector terminals and the roof console 20P connector terminals.

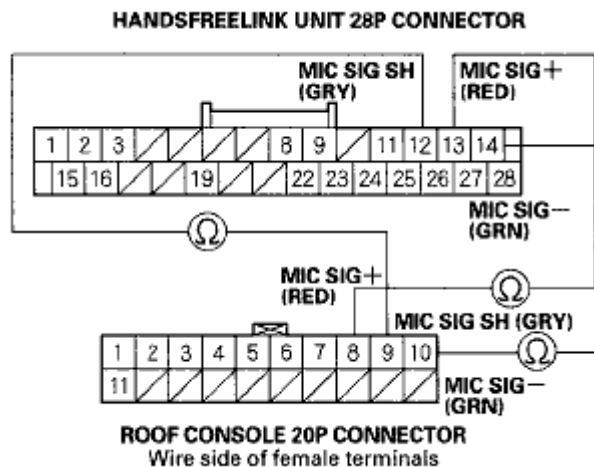


Fig. 67: Checking Continuity Between Appropriate HandsFreeLink Control Unit Connector Terminals And Roof Console Connector Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good HFL/navigation microphone (built into the roof console), then reconnect all of the connectors and recheck. If the symptom/indication goes away, replace the original HFL/navigation microphone. If the symptom/indication is still present, replace the HandsFreeLink control unit.

NO -Open in the wire(s) between the HandsFreeLink control unit and the HFL/navigation microphone. Replace the affected shielded harness.

VEHICLE POSITION ICON CONSTANTLY LEAVES ROAD, MOVES ERRATICALLY, IS VERY FAR FROM ACTUAL POSITION**Diagnostic Test: Yaw Rate and Car status****NOTE:**

- **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 MAP MATCHING) before proceeding with the troubleshooting.**
- **Make sure that the correct DVD color and version are installed.**
- **Check any official Honda service web site for more service information about the navigation system.**

1. Check the GPS icon on the navigation picture.

Is the GPS icon white or missing?

YES -Do the troubleshooting for GPS icon is white or not shown (see **GPS ICON IS WHITE OR NOT SHOWN**).

NO -Go to step 2.

2. Go into the Diagnostic mode and use the Yaw Rate diagnostic (see **YAW RATE**) to check the yaw rate sensor.

Is the yaw rate sensor OK?

YES -Go to step 3.

NO -Replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

3. Go into the Diagnostic mode and use the "Car Status" diagnostic (see **CAR STATUS**) 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. LT BLU wire for open or short. If OK, swap a known-good ECM/PCM. If the problem or symptom goes away, replace the original ECM/PCM.
 - 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 models).
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 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 **NAVIGATION UNIT REMOVAL/INSTALLATION**).

DVD SCREEN ERROR MESSAGES

Diagnostic Test: Car Status

NOTE:

- Refer to the General Troubleshooting for a list of common DVD screen error messages and the probable causes (see **ERROR MESSAGE TABLE**).
- The following Troubleshooting is for the error messages shown on the error message table (see **ERROR MESSAGE TABLE**).

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 **FORCED STARTING OF DISPLAY**).

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 **NAVIGATION UNIT REMOVAL/INSTALLATION**).

NAVIGATION CANNOT CONTROL HVAC BY VOICE COMMAND

NOTE:

- Check the vehicle battery condition first.
- Check for and resolve all CAN DTCs before troubleshooting the navigation system.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, get the navigation system anti-theft codes.
- After troubleshooting, enter the navigation system anti-theft codes.

- **Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode and use Version (see VERSION).**
- **Make sure that the correct DVD color and version are installed.**
- **Check any official Honda service web site for more service information about the navigation system.**

1. Connect the HDS to the DLC (see GENERAL TROUBLESHOOTING INFORMATION).
2. Clear DTCs with the HDS.
3. Turn the ignition switch to LOCK (0), and then back ON (II).
4. Check for B-CAN DTCs in the data list.

Are there any DTCs in the B-CAN systems?

YES -Troubleshoot and repair all CAN related DTCs and retest.

NO -Go to step 5.

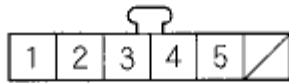
5. Turn the ignition switch to LOCK (0).
6. Remove the audio-HVAC display module assembly (see AUDIO-HVAC DISPLAY MODULE ASSEMBLY REMOVAL/INSTALLATION), and disconnect display panel control unit connector B (5P).

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

7. Disconnect climate control unit connector A (20P).
8. Check for continuity between the display panel control unit connector B (5P) and body ground according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Display panel control unit connector	Wire color
B1	GRN
B2	RED
B3	LT GRN
B4	BRN
B5	WHT

DISPLAY PANEL CONTROL UNIT CONNECTOR B (6P)

Wire side of female terminals

Fig. 68: Identifying Display Panel Control Unit Connector B (6P)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

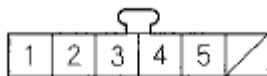
YES -Repair short to body ground in the wire(s) between the display panel control unit and the climate control unit.

NO -Go to step 9.

9. Check for continuity between display panel control unit connector B (5P) and climate control unit connector A (20P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Display panel control unit connector	Climate control unit connector	Wire color
B1	A4	GRN
B2	A13	RED
B3	A2	LT GRN
B4	A12	BRN
B5	A11	WHT

DISPLAY PANEL CONTROL UNIT CONNECTOR B (6P)

Wire side of female terminals

CLIMATE CONTROL UNIT CONNECTOR A (20P)

A diagram of a 20-pin connector. It is a 2x10 grid of boxes. The top row is labeled 1 through 10 from left to right. The bottom row is labeled 11 through 20 from left to right. Above the fifth and sixth boxes of the top row, there is a small U-shaped bracket connecting them.

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

Wire side of female terminals

Fig. 69: Identifying Display Panel Control Unit Connector B (6P)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 10.

NO -Repair open in the wire(s) between the display panel control unit and the climate control unit.

10. Reconnect the display panel control unit connector B (5P) and climate control unit connector A (20P).
11. Substitute a known-good climate control unit and recheck the function.

Does the problem go away?

YES -Replace the original climate control unit.

NO -Substitute a known-good display panel control unit and recheck. If the symptom/indication goes away, replace the original display panel control unit. If the symptom/indication is still present, replace the navigation unit.

DISPLAY DAY/NIGHT MODE DOES NOT WORK

NOTE:

- Check the vehicle battery condition first.
- Check for and resolve all CAN DTCs before troubleshooting the navigation system.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, get the navigation system anti-theft codes.
- After troubleshooting, enter the navigation system anti-theft codes.

1. Turn the ignition switch to ON (II).
2. Turn the headlight ON and make sure the instrument panel brightness control is not on full brightness (MAX button pressed).
3. Change the day/night mode to AUTO under Set-up, and recheck.

Does the display change to day and night modes using the headlights?

YES -The system is OK at this time.

NO -Go to step 4.

4. Go into the Diagnostic Mode and use diagnostic the "Car Status" diagnostic to check for an ILL signal (see **CAR STATUS**).

Is the "ILL" signal OK?

YES -The system is OK.

NO -Check the ILL+ circuit for an open or short to ground between navigation unit connector A (20P) terminal No. 5 and under-dash fuse/relay box connector F terminal No. 9 (see **UNDER-DASH FUSE/RELAY BOX**). If OK, substitute a known-good navigation unit and recheck.

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 web site for more service information about the navigation system.

1. Turn the ignition switch to ON (II).
2. Remove the DVD and check the DVD 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 **FORCED STARTING OF DISPLAY**) and recheck.

NO -Go to step 2.

3. Turn the ignition switch to LOCK (0), and then back ON (II).

Does the system reboot?

YES -The system is OK at this time. Go into the Diagnostic mode and use the Unit Check diagnostic (see **UNIT CHECK**) to check the navigation unit and display panel control unit status. If any status are NG, replace the affected units.

NO -Replace the navigation unit.

VEHICLE ICON MOVES BY ITSELF OR SPINS WHEN PARKED**NOTE:**

- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, get the navigation system anti-theft codes.
- After troubleshooting, enter the anti-theft code, and initialize the navigation system.

1. Start the engine.
2. From the main menu, select places, then select any destination, and begin the trip.
3. With the vehicle parked, watch the vehicle icon on the display.

Does the vehicle position icon move by itself?

YES -Go to step 4.

NO -The system is OK at this time.

4. Go into the Diagnostic mode and select Demo Mode, under Functional Setup.

Is Demo Mode set to ON?

YES -Set the Demo mode to OFF.

NO -Replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

NAVIGATION DISPLAY STAYS ON WITH IGNITION SWITCH OFF

NOTE:

- Check for aftermarket accessories.
- Check the connectors for poor connections or loose terminals.
- Before troubleshooting, get the navigation system anti-theft codes.
- After troubleshooting, enter the anti-theft code, and initialize the navigation system.

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. Turn the ignition switch to ON (II).
3. Check the display panel status.

Is there only a dim backlight visible on the display panel with no image?

YES -Go to step 4.

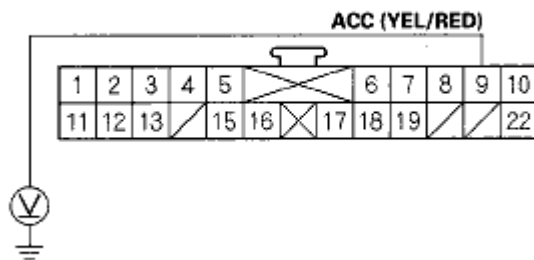
NO -Go to step 7.

4. Turn the ignition switch to LOCK (0).
5. Remove the audio-HVAC display module assembly (see **AUDIO-HVAC DISPLAY MODULE ASSEMBLY REMOVAL/INSTALLATION**), and disconnect display panel control unit connector A (22P).

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

6. Measure the voltage between display panel control unit connector A (22P) terminal No. 9 and body ground.

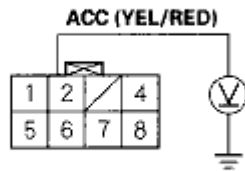
DISPLAY PANEL CONTROL UNIT CONNECTOR A (22P)



Wire side of female terminals

Fig. 70: Measuring Voltage Between Display Panel Control Unit Connector Terminal No. 9 And Body Ground**Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there battery voltage?***YES** -Repair short to power in the wire.**NO** -Replace the display panel control unit.

7. Turn the ignition switch to LOCK (0).
8. Disconnect Navigation unit connector C (8P).
9. Measure the voltage between navigation unit connector C (8P) terminal No. 2 and body ground.

NAVIGATION UNIT CONNECTOR C (8P)

Wire side of female terminals

Fig. 71: Measuring Voltage Between Navigation Unit Connector Terminal No. 2 And Body Ground**Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there battery voltage?***YES** -Repair short to power in the wire.**NO** -Replace the navigation unit.**NAVIGATION CANNOT CONTROL AUDIO SYSTEM****NOTE: Check the vehicle battery condition first.**

1. Turn the ignition switch to ON (II).
2. Turn on the audio unit and check the audio system function.

*Does the audio system function normally using the audio hard buttons and control knobs?***YES** -Go to step 3.**NO** -Refer to the audio system symptom troubleshooting index.

3. Check the navigation system function.

Do all other aspects of the navigation system function normally?

YES -Go to step 4.

NO -Refer to the symptom troubleshooting index for other problems the navigation system displays. Troubleshoot and resolve the other problems first then recheck the navigation systems ability to control the audio system.

4. Turn the ignition switch to LOCK (0).
5. Remove No. 5 (7.5 A) and No. 7 (7.5 A) fuses in the under-dash fuse/relay box for 10 minutes, then reinstall them. If necessary, enter the audio and/or navigation anti-theft code(s), then recheck the function.

Does the problem goes away?

YES -Software malfunction in the audio unit and/ or navigation unit. System is OK at this time.

NO -Substitute a know-good navigation unit with the same software version. If the symptom/ indication goes away, replace the original navigation unit. If the symptom/indication is still present, replace the audio unit.

AUDIO-HVAC SUBDISPLAY UNIT DOES NOT WORK PROPERLY

NOTE:

- **Check the vehicle battery condition first.**
- **Make sure that the correct DVD color and version are installed.**
- **Check any official Honda service web site for more service information about the navigation system.**
- **Check and repair all CAN DTCs before doing this troubleshooting.**

1. Turn the ignition switch to LOCK (0), and then back ON (II), then observe if the navigation system boots up with the Acura Globe Screen or the Honda Globe Screen.

Does the navigation system boot-up with the Acura Globe Screen?

YES -Go to step 2.

NO -The system displays the Honda Globe Screen. See the navigation system symptom troubleshooting index for The Honda Globe Screen appears every time the vehicle is started.

2. Operate the audio system.

Does the audio information display properly?

YES -Go to step 3.

NO -See the audio system symptom troubleshooting index for Audio system information does not display on the display panel or audio-HVAC subdisplay unit.

3. Operate the climate system.

Does the climate information display properly?

YES -Check the connections at the audio-HVAC subdisplay unit, display panel control unit, audio unit and climate control unit. Then recheck the function.

NO -Go to step 4.

4. Turn the ignition switch to LOCK (0).
5. Remove the audio-HVAC display module assembly (see **AUDIO-HVAC DISPLAY MODULE ASSEMBLY REMOVAL/INSTALLATION**), and disconnect display panel control unit connector B (5P).

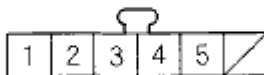
NOTE: Eject all the discs before removing the audio unit to prevent damaging the CD/DVD player's load mechanism.

6. Disconnect climate control unit connector A (20P).
7. Check for continuity between the display panel control unit connector B (5P) and body ground according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Display panel control unit connector	Wire color
B5	WHT
B2	RED
B3	LT GRN
B4	BRN
B1	GRN

DISPLAY PANEL CONTROL UNIT CONNECTOR B (6P)



Wire side of female terminals

Fig. 72: Identifying Display Panel Control Unit Connector B (6P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

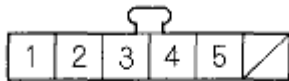
YES -Repair short in the wire(s) between the display panel control unit and the climate control unit.

NO -Go to step 8.

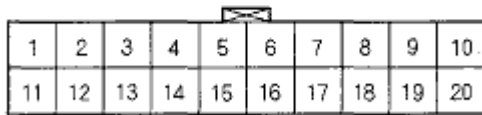
8. Check for continuity between display panel control unit connector B (5P) and climate control unit connector A (20P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Display panel control unit connector	Climate control unit connector	Wire color
B5	A11	WHT
B2	A13	RED
B3	A2	LT GRN
B4	A12	BRN
B1	A4	GRN

DISPLAY PANEL CONTROL UNIT CONNECTOR B (6P)

Wire side of female terminals

CLIMATE CONTROL UNIT CONNECTOR A (20P)

Wire side of female terminals

Fig. 73: Identifying Display Panel Control Unit Connector A (20P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good display panel control unit, then reconnect all of the connectors and recheck. If the symptom/indication goes away, replace the original display panel control unit. If the symptom/indication is still present, replace the climate control unit.

NO -Repair open in the wire(s) between the display panel control unit and climate control unit.

THE HONDA 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 **NAVIGATION UNIT REMOVAL/INSTALLATION**) and verify that the parts 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 parts 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. Turn the ignition switch to ON (II).
4. Remove the navigation DVD (see **FORCED STARTING OF DISPLAY**).
5. Note the software version marked on the DVD label and verify if it is the correct version for the vehicle year/model you are working on by going to any official Honda web site and searching for any related service information about the navigation system and navigation software.

Is the software version marked on the DVD label the correct one for the vehicle year/model you are working on?

YES -Replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

NO -Go to step 6.

6. Obtain the correct version DVD (see **MAP MATCHING**) 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 Honda Globe Screen. Replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

NAVIGATION DOES NOT CALL USING THE HFL

NOTE:

- Always have the client demonstrate their concern. Compare the operation of this feature in a known-good vehicle.
- Review the navigation owners manual for the proper operation of this feature. If the navigation database does not have a phone number listed for the POI you are trying to call (for example, a public park), the navigation system cannot place a call through HFL.
- You must have the client's phone, the phone must be on the list of the HFL approved phones and configured correctly.
- For a current list of HFL approved phones, go to www.acura.com or call the HFL support desk at 888-528-7876

1. Connect the HDS to the DLC (see **GENERAL TROUBLESHOOTING INFORMATION**).
2. Turn the ignition switch to ON (II).
3. Clear the DTCs with the HDS.
4. Turn the ignition switch to LOCK (0), and then back ON (II).
5. Check for B-CAN DTCs in the data list.

Are there any DTCs in the B-CAN systems?

YES -Troubleshoot and repair all CAN related DTCs and retest.

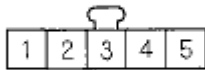
NO -Make sure the cell phone is paired to the HFL (see **PAIRING YOUR CELL PHONE (A ONE TIME PROCEDURE)**) and working properly. Without AcuraLink, go to step 6.

6. Turn the ignition switch to LOCK (0).
7. Disconnect navigation unit connector F (5P) and HandsFreeLink control unit 28P connector.
8. Check for continuity between the navigation unit connector F (5P) and body ground according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Navigation unit connector	Wire color
F1	WHT
F2	BLK
F3	RED
F4	GRN

NAVIGATION UNIT CONNECTOR F (5P)



Wire side of female terminals

Fig. 74: Identifying Navigation Unit Connector F (5P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

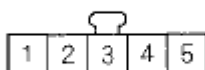
NO -Go to step 9.

9. Check for continuity between the terminals of navigation unit connector F (5P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

From terminal	To terminals
F1	F2, F3, F4, F5
F2	F3, F4, F5
F3	F4, F5
F4	F5

NAVIGATION UNIT CONNECTOR F (5P)



Wire side of female terminals

Fig. 75: Identifying Navigation Unit Connector F (5P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

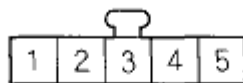
NO -Go to step 10.

10. Check for continuity between navigation unit connector F (5P) and HandsFreeLink control unit 28P connector according to the table.

CONNECTOR TERMINAL REFERENCE CHART

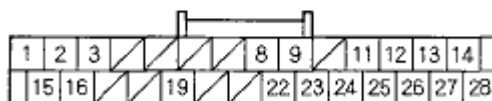
Navigation unit connector	HandsFreeLink control unit connector	Wire color
F1	9	WHT
F2	8	BLK
F3	22	RED
F4	23	GRN
F5	24	GRY

NAVIGATION UNIT CONNECTOR F (5P)



Wire side of female terminals

HANDSFREELINK CONTROL UNIT 28P CONNECTOR



Wire side of female terminals

Fig. 76: Identifying Navigation Unit Connector F (5P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good HandsFreeLink control unit, then reconnect all of the connectors 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.

NO -Open in the wire(s) between the HandsFreeLink control unit and the navigation unit. Replace the affected shielded harness.

NOTE:

- Check the vehicle battery condition first.
- If you can only turn to channels 000, 001, 174, and 247, make sure the audio unit is set to the channel mode (see owners manual), if it is set to channel mode, call XM satellite radio customer support and check the account activation status.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service web site for more service information about the navigation system.

1. Turn the ignition switch to ON (II).
2. Select XM and tune to several channels.

Does the audio system operate normally (can XM be selected with the audio unit buttons and tuned with the knobs)?

YES -Go to step 3.

NO -Go to audio system troubleshooting.

3. Go into the Diagnostic mode and use the Navi System Link diagnosis (see **NAVI SYSTEM LINK**).

Is the XM or XM (HIP) icon red?

YES -

- With AcuraLink: Go to step 4.
- Without AcuraLink: Go to step 8.

NO -Substitute a known-good navigation unit and recheck. If the symptom/indication goes away, replace the original navigation unit. If the symptom/indication is still present, replace the navigation unit.

4. Turn the ignition switch to LOCK (0).
5. Disconnect navigation unit connector A (20P).
6. Disconnect AcuraLink control unit (XM receiver) connector A (20P).
7. Check for continuity between navigation unit connector A (20P) and AcuraLink control unit (XM receiver) connector A (20P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Navigation unit connector	AcuraLink control unit (XM receiver) connector
A9	A18
A10	A7
A20	A17

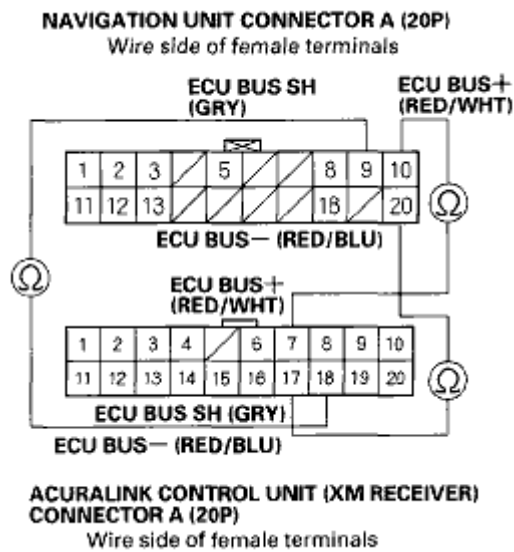


Fig. 77: Checking Continuity Between Navigation Unit Connector And AcuraLink Control Unit Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good navigation unit and recheck. If the symptom/indication goes away, replace the original navigation unit. If the symptom/indication is still present, replace the navigation unit.

NO -Open in the wire(s) between navigation unit and AcuraLink control unit (XM receiver). Replace the affected shielded harness.

8. Turn the ignition switch to LOCK (0).
9. Disconnect navigation unit connector A (20P).
10. Disconnect XM receiver connector A (14P).
11. Check for continuity between navigation unit connector A (20P) and XM receiver connector A (14P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Navigation unit connector	XM receiver connector
A9	A3
A10	A9
A20	A10

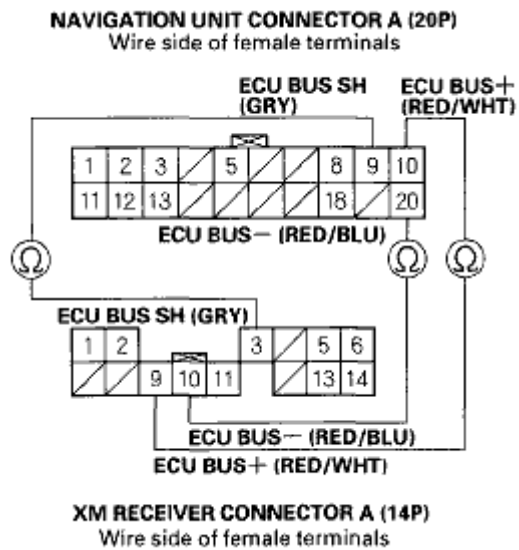


Fig. 78: Checking Continuity Between Navigation Unit Connector A (20P) And XM Receiver Connector A (14P)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Substitute a known-good navigation unit and recheck. If the symptom/indication goes away, replace the original navigation unit. If the symptom/indication is still present, replace the navigation unit.

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

NAVIGATION FREQUENTLY ASKS FOR ANTI-THEFT CODE AND NEEDS GPS INITIALIZATION

NOTE:

- Check the vehicle battery condition first.
- Make sure that the correct DVD color and version are installed.
- Check any official Honda service web site for more service information about the navigation system.

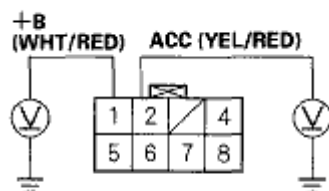
1. Check No. 7 (7.5 A) and No. 32 (7.5 A) fuses in the under-dash fuse/relay box.

Are the fuses OK?

YES -Go to step 2.

NO -Replace the blown fuse(s) and recheck.

2. Turn the ignition switch to ON (II).
3. Measure the voltage between body ground and navigation unit connector C (8P) terminals No. 1 and No. 2 individually.

NAVIGATION UNIT CONNECTOR C (8P)

Wire side of female terminals

Fig. 79: Measuring Voltage Between Body Ground And Navigation Unit Connector C (8P) Terminals No. 1 And 2

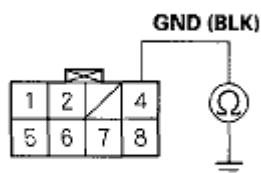
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 4.

NO -If the +B wire does not have voltage, repair open in the wire between the under-dash fuse/relay box and the navigation unit. If the ACC wire does not have voltage repair open in the wire between the under-dash fuse/relay box and the navigation unit.

4. Turn the ignition switch to LOCK (0).
5. Disconnect navigation unit connector C (8P).
6. Check for continuity between navigation unit connector C (8P) terminal No. 4 and body ground.

NAVIGATION UNIT CONNECTOR C (8P)

Wire side of female terminals

Fig. 80: Checking Continuity Between Navigation Unit Connector C (8P) Terminal No. 4 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Replace the navigation unit.

NO -Repair open in the wire between the navigation unit and body ground (G604).

NAVIGATION SYSTEM WILL NOT ACCEPT SECURITY CODE**NOTE:**

- 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 on ISIS, under "Job aids" and can be printed out for recording this information. This information will help the remain facility determine what caused the failure.

1. Turn the ignition switch to ON (II).
2. Check the display panel operation by selecting various menu options on the display.

Does the navigation system respond to touch?

YES -Go to step 3.

NO -Do the display panel control unit buttons or touch screen buttons do not work or respond properly troubleshooting.

3. Go into the Diagnostic mode and use the "Navi ECU" under the "Unit Check" diagnosis (see **UNIT CHECK**). A brief diagnostic will run for 20 seconds, and the serial number is then displayed.

Is the serial number displayed?

YES -Go to step 9.

NO -Go to step 4.

4. Turn the ignition switch to LOCK (0).
5. Remove the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).
6. Check the serial number on the label of the underside of the navigation unit.

Is the serial number confirmed on the underside of the navigation unit?

YES -Go to step 7.

NO -Replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

7. Reinstall the navigation unit.
8. Turn the ignition switch to ON (II).
9. 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 10.

NO -Call the Warranty Department, the telephone number is listed in the POI/TQI bulletin, to obtain the code. Then go to step 10.

10. 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 car to the client and give them the anti-theft code.

NO -Go to step 11.

11. 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 in the "problem description field" of the core return form: "Security code is 0000."

NO -Replace the navigation unit, and enter in the "problem description field" of the core return form: "Won't take security code" (as proof, enclose the sticker that contains the Serial number and the Code).

REARVIEW CAMERA IMAGE DOES NOT COME ON OR WORK PROPERLY

NOTE:

- **Check the vehicle battery condition first.**
- **Check for the correct color DVD (white) and software version. The wrong DVD or software version may affect the rearview camera function.**
- **Make sure the battery is fully charged.**
- **A short in the wiring to the rearview camera can permanently damage the navigation unit.**

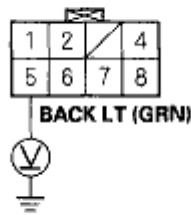
1. Set the parking brake.
2. Turn the ignition switch to ON (II).
3. Go into the system diagnostic menu and check the reverse signal in the car status test.

Does the back-up signal go from OFF (0) to ON (I) when shifter is moved from the park to the reverse positions?

YES -Go to step 9.

NO -Go to step 4.

4. Turn the ignition switch to LOCK (0).
5. Disconnect navigation unit connector C (8P).
6. Turn the ignition switch to ON (II).
7. Measure the voltage between navigation unit connector C (8P) terminal No. 5 and body ground with the shifter in the reverse position.

NAVIGATION UNIT CONNECTOR C (8P)

Wire side of female terminals

Fig. 81: Measuring Voltage Between Navigation Unit Connector C (8P) Terminal No. 5 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

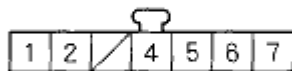
YES -Go to step 8.

NO -There is no back-up signal voltage from the back-up light circuit. Place the shifter back into the park position (A/T) or neutral (M/T) and troubleshoot the open or short in the back-up light circuit.

8. Place the shifter back into the park position (A/T) or neutral
9. Turn the ignition switch to LOCK (0).
10. Disconnect the navigation unit connector G (7P).
11. Disconnect the rearview camera 6P connector.
12. Check for continuity between the navigation unit connector G (7P) and body ground according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Navigation unit connector	Wire color
G7	GRN
G5	BLK
G4	YEL
G2	RED
G1	WHT

NAVIGATION UNIT CONNECTOR G (7P)

Wire side of female terminals

Fig. 82: Checking Continuity Between Navigation Unit Connector G (7P) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Short to body ground in the wire(s) between navigation unit and rearview camera. Replace the affected shielded harness.

NO -Go to step 13.

13. Check for continuity between the terminals of navigation unit connector G (7P) according to the table.

CONNECTOR TERMINAL REFERENCE CHART

From terminal	To terminals
G1	G2, G4, G5, G6, G7
G2	G4, G5, G6, G7
G4	G5, G6, G7
G5	G6, G7
G6	G7

NAVIGATION UNIT CONNECTOR G (7P)



Wire side of female terminals

Fig. 83: Identifying Navigation Unit Connector G (7P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity between any of the terminals?

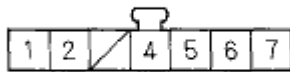
YES -Short in the wire(s) between navigation unit and rearview camera. Replace the affected shielded harness.

NO -Go to step 14.

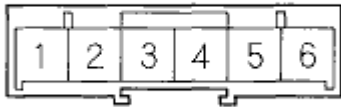
14. Check for continuity between navigation unit connector G (7P) and rearview camera 6P connector according to the table.

CONNECTOR TERMINAL REFERENCE CHART

Navigation unit connector	Rearview camera connector	Wire color
G7	1	GRN
G5	3	BLK or BLU
G4	4	YEL
G2	5	RED
G1	6	WHT
G6	2	GRY

NAVIGATION UNIT CONNECTOR G (7P)

Wire side of female terminals

REARVIEW CAMERA 6P CONNECTOR

Wire side of male terminals

Fig. 84: Checking Continuity Between Navigation Unit Connector G (7P) And Rearview Camera 6P Connector**Courtesy of AMERICAN HONDA MOTOR CO., INC.***Is there continuity?*

YES -Substitute a known-good rearview camera and recheck. If the symptom/indication goes away, replace the original rearview camera. If the symptom/indication is still present, replace the navigation unit.

NO -Open in the wire(s) between navigation unit and rearview camera. Replace the affected shielded harness.

NAVIGATION UNIT WILL NOT EJECT OR ACCEPT THE NAVIGATION DVD**NOTE: Check the vehicle battery condition first.**

1. Check No. 7 (7.5 A) and No. 32 (7.5 A) fuses in the under-dash fuse/relay box.

*Are the fuses OK?***YES** -Go to step 2.**NO** -Replace the blown fuse(s) and recheck.

2. Turn the ignition switch to ON (II).
3. Eject the DVD from the navigation unit (see **FORCED STARTING OF DISPLAY**).

*Does the navigation DVD eject?***YES** -Go to step 4.**NO** -Go to step 5.

4. Reinsert the navigation DVD into the navigation unit.

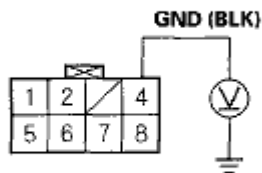
Does the navigation unit accept the navigation DVD?

YES -No problems at this time, the system is normal. Inspect for loose or poor connections at terminals No. 1, No. 2 and No. 4 of navigation unit connector C (8P).

NO -Replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

5. Measure the voltage between navigation unit connector C (8P) terminal No. 4 and body ground.

NAVIGATION UNIT CONNECTOR C (8P)



Wire side of female terminals

Fig. 85: Measuring Voltage Between Navigation Unit Connector C (8P) Terminal No. 4 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

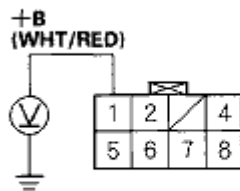
Is there less than 0.1 V?

YES -Go to step 6.

NO -Repair open or high resistance in the BLK wire between navigation unit connector C (8P) and body ground (G604).

6. Measure the voltage between navigation unit connector C (8P) terminal No. 1 and body ground.

NAVIGATION UNIT CONNECTOR C (8P)



Wire side of female terminals

Fig. 86: Measuring Voltage Between Navigation Unit Connector C (8P) Terminal No. 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Replace the navigation unit.

NO -Repair open in the YEL/RED wire between navigation unit connector C (8P) terminal No. 2 and the No. 32 (7.5 A) fuse in the under-dash fuse/relay box.

TRAFFIC INFORMATION IS NOT BEING SHOWN ON MAP SCREEN

If your client complains that traffic is not being displayed, it could be because a traffic setting is not correct.

NOTE:

- **Check the vehicle battery condition first. A marginal battery poorly performing charging system may cause the XM/HIP.**
- **Check for and resolve all CAN DTCs before troubleshooting the navigation system.**
- **Check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, get the navigation system anti-theft codes.**
- **After troubleshooting, enter the navigation system anti-theft codes.**
- **Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode and use Version (see VERSION).**
- **Make sure that the correct DVD color and version are installed.**
- **Check any official Honda service web site for more service information about the navigation system.**
- **The vehicle is equipped with an auto start feature that keeps the starter motor engaged, even when you release the ignition switch. Due to the ignition design, if a client releases the ignition switch before the engine starts, the AcuraLink control unit (XM receiver) may receive unusually low voltage. This may cause the XM/HIP to malfunction. When starting the vehicle, hold the ignition switch in the START (III) position until the motor starts.**

1. Park a known-good vehicle outside where you have a clear view of the southern sky.
2. Turn the ignition switch to LOCK (0).
3. Start the engine by holding the ignition switch in the START (III) position until the engine starts to over-ride the auto-start feature.
4. Check the real-time traffic display of known-good vehicle to make sure that the XM Nav Traffic is being broadcast in your area. You may have to wait 5 minutes for the traffic display to refresh.

NOTE: **Some cities feature incident icons only. A temporary lack of incident icons may give the impression that the system is not working properly.**

Is real-time traffic shown on the map of a known-good vehicle?

YES -Go to step 5.

NO -Call Acura Client Services at (800) 382-2238, and check to see if there are any traffic system outages or blackouts in your area.

5. Park the client vehicle outside where you have a clear view of the southern sky.

6. Turn the ignition switch to ON (II).
7. Turn on the audio system, and tune to XM channels 000, 001, 174, or 247 and verify that you are receiving a signal from XM.

Can you tune XM channels 000, 001, 174, or 247?

YES -Go to step 8.

NO -Refer to the applicable service manual, troubleshoot the XM radio and retest. If real-time traffic does not work, go to step 8.

8. Turn the ignition switch to LOCK (0).
9. Make sure the client's XM Nav Traffic account status is active. This account is separate from the regular XM radio subscription, and it has separate fee. For the '07-08 models, real-time traffic is free for the first 3 months. For '05-06 models, real-time traffic was free for the first 12 months. To check the MX Nav Traffic account status:
 - Call XM Satellite Radio at (800) 852-9696.
 - Make sure you have;
 - VIN
 - XM Radio ID (shown on channel 00)
 - From the automated phone menu, select tech support.
 - Inform the agent that you are working on an Acura vehicle, and ask them to check the XM NavTraffic account status. It is possible the client owns more than one vehicle capable of displaying real-time traffic. Have the agent confirm that the XM NavTraffic subscription applies to the vehicle VIN you are working on.

If the XM NavTraffic account status active?

YES -Go to step 11.

NO -If the free trial period is expired, return the vehicle to the client, and inform them how to renew their XM NavTraffic subscription by calling XM Radio at (800) 852-9696. If the free trial period has not expired, go to step 10.

10. Call XM Radio at (800) 852-9696 and reactivate the account for the remainder of the free trial period, then request a rapid refresh. To do a rapid refresh:
 - Park the vehicle outside where you have a clear view of the southern sky.
 - Start the engine
 - Turn the audio system on, and tune to an XM radio channel.
 - Wait for about 30 minutes.

Does the vehicle now receives real-time traffic information?

YES -Return the vehicle to the client and explain the rapid refresh.

NO -Go to step 11.

11. Do a VIN status inquiry, and check if the vehicle has any outstanding product updates or service bulletins related to updating the AcuraLink control unit (XM receiver) software.

Are there any applicable product updates or service bulletins?

YES -Do the applicable product updates and service bulletins, then retest the vehicle. If real-time traffic does not work, go to step 12.

NO -Go to step 12.

12. Turn the ignition switch to ON (II).
13. Make sure the navigation map is set to either the 1/2, 1, 2, or 5 mile scale. If the scale (A) is not set to one of these values, use the zoom button to adjust the map to proper scale.

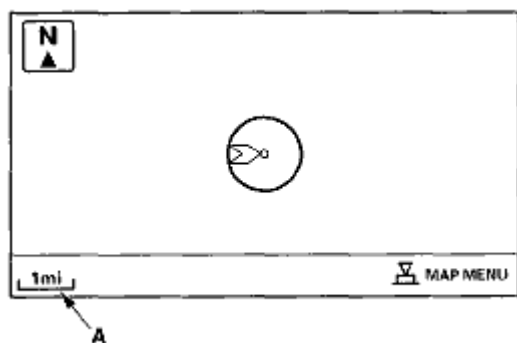


Fig. 87: Identifying Navigation Map Menu Scale
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Do you see real-time traffic on the navigation display?

YES -Return the vehicle to the client, and explain the proper settings.

NO -Go to step 14.

14. Make sure the real-time traffic settings are correct. To check the setting:
 - Select the icon button on the lower left hand corner of the map screen.
 - Select the Traffic icon. The icon should turn solid blue. If it does not turn solid blue, go to step 15.
 - Select the Icon Options icon.
 - Select the Traffic icon choice from the Select category for icon settings screen.
 - Select both Traffic speeds and Traffic Icons from the Select traffic info screen. Both icons must be solid blue and indicate On Map.
 - Select Done to exit and return to the map.

Do you see real-time traffic on the navigation display?

YES -Return the vehicle to the client, and explain the proper settings.

NO -Go to step 15.

15. Go into Diagnostic mode and use the Navi System Link diagnosis (see **NAVI SYSTEM LINK**).

Are any link/icon red?

YES -Go to affected system troubleshooting.

NO -Go to step 16.

16. Go into Diagnostic mode and use the XM (HIP) System Link diagnosis (see **VERSION**).

Are any link/icon red?

YES -Go to AcuraLink self-diagnostic mode.

NO -Go to step 17.

17. Go into Diagnostic mode and use Traffic channel under the XM (HIP) ECU diagnosis (see **VERSION**).

NOTE: **Do not touch or select the Data Reset icon.**

18. Confirm the following values in the Traffic channel diagnosis.

VALUE CHART

SID	255
APP ID	8

Are all the values within specifications?

YES -Go to step 24.

NO -Adjust for the proper setting, then go to step 17.

19. Exit the diagnostic mode.
 20. Turn the ignition switch to LOCK (0). Wait for 20 seconds, then start the engine.
 21. Park the vehicle outside with a clear view of the southern sky.
 22. Turn on the audio system, and tune to XM channels 000, 001, 174, or 247 and verify that you are receiving a signal from XM.
 23. Go into the navigation map screen, select one of the traffic scales (1/2, 1, 2, 5 miles).

Do you see real-time traffic on the display?

YES -System is OK. Return the vehicle to the client.

NO -Go to step 24.

24. Turn the ignition switch to LOCK (0).
 25. Reset the AcuraLink control unit (XM receiver):

- Make sure you have the anti-theft codes for the audio and navigation system.
 - Remove the No. 7 (7.5 A) fuse in the under-dash fuse/relay box. Wait 2 minutes, then re-install the fuse.
 - Start the engine.
 - Enter the anti-theft codes for the audio and navigation system.
26. Park the vehicle outside with a clear view of the southern sky.
 27. Turn on the audio system, and tune to XM channels 000, 001, 174, or 247 and verify that you are receiving a signal from XM.
 28. Go into the navigation map screen, select one of the traffic scales (1/2, 1, 2, 5 miles).

Do you see real-time traffic on the display?

YES -System is OK. Return the vehicle to the client.

NO -Go to step 29.

29. Turn the ignition switch to LOCK (0).
30. Substitute a known-good AcuraLink control unit (see **ACURALINK CONTROL UNIT (XM RECEIVER) REMOVAL/INSTALLATION**).
31. Start the engine.
32. Park the vehicle outside with a clear view of the southern sky.
33. Turn on the audio system, and tune to XM channels 000, 001, 174, or 247 and verify that you are receiving a signal from XM.
34. Go into the navigation map screen, select one of the traffic scales (1/2, 1, 2, 5 miles).

Do you see real-time traffic on the display?

YES -Replace the original AcuraLink control unit.

NO -Substitute a known-good navigation unit. If the problem goes away, replace the original navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

SYSTEM DIAGNOSTIC MODE

START-UP PROCEDURE AND DIAGNOSTIC MENU

There are two ways to enter the diagnostic mode:

1. Connect the SCS service connector (see **FORCED STARTING OF DISPLAY**) to the navigation service connector located in the trunk. Turn the ignition switch to ON (II). The display will go directly to the diagnostic menu screen.

NOTE: **When finished troubleshooting, make sure to remove the SCS service connector.**

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

Use the navigation display hard buttons, press and hold the 3 buttons (Menu, Map/Guide, and Cancel), and keep them pressed for about 5 seconds. The display screen will go directly to the "Select Diagnosis Items" menu.

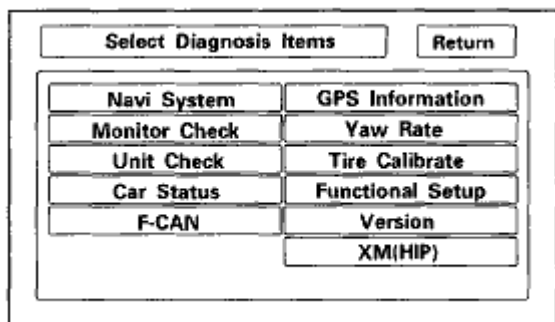


Fig. 88: Diagnostic Menu Screen Display - Start-Up Procedure
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. After the display changes to the Select Diagnosis Items menu, select the item you want to check and the diagnostic will start. To return to the previous screen, select "RETURN".
 - Navi System (Link)
 - Monitor Check
 - Unit Check
 - Car Status
 - F-CAN (System link)
 - GPS Information
 - Yaw Rate
 - Tire Calibrate
 - Functional Setup
 - Version
 - XM (HIP)

FACTORY DIAGNOSTIC SCREEN "IN LINE DIAG"

NOTE: If the vehicle left the factory in the factory diagnosis mode, you will see this screen every time you turn on the ignition.

When a navigation control unit is powered up for the first time at the factory, the "factory diagnosis" screen (In Line Diag) shows up. 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 show up every time the vehicle is started.

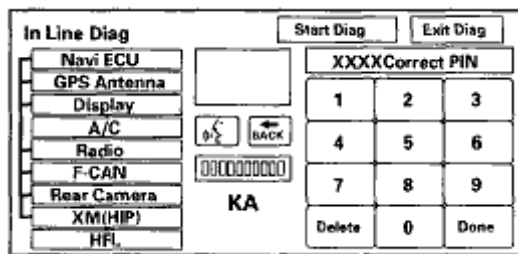


Fig. 89: Diagnostic Menu Screen Display - In Line Diag
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Follow the steps below to prevent the screen from showing up in the future:

- Hold down the buttons (Menu + Map/Guide + Cancel) for about 5 seconds (the "Select Diagnosis items" screen will appear).
- Hold down the Map/Guide button for 5-10 seconds (A screen with a "Complete" button, will appear).
- Touch "Complete", and then the "Return" button (the system may re-boot).
- Restart the vehicle, and confirm normal operation by completing the "TQI of the Navigation System" Service Bulletin.

NAVI SYSTEM LINK

- This diagnostic tests the cables connecting the navigation components. Ensure that the ignition switch is in the ON (II) position. When the diagnostic begins, you hear a "bong" sound. The system is in a "Detecting" mode, and is waiting for all items in white to be tested. This includes the navigation voice control (Talk/Back) buttons, and 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 turn green.
- If there is a problem with the system, the faulty system component item turn red, and the screen will show "NG" in red. Use the troubleshooting index, and other diagnostic screens to help locate the problem.
- The indication 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 Diagnosis Menu.

properly. The three primary colors should all be shown without distortion. The combination of all three should produce a central white section. If any of the colors are missing, troubleshoot for the color signal (see **PICTURE HAS LINES/ROLLS/OTHER ISSUES OR IS AN ODD COLOR**). If the picture has lines in it or scrolls horizontally, or vertically, troubleshoot for a Composite sync problem (see **DVD SCREEN ERROR MESSAGES**).

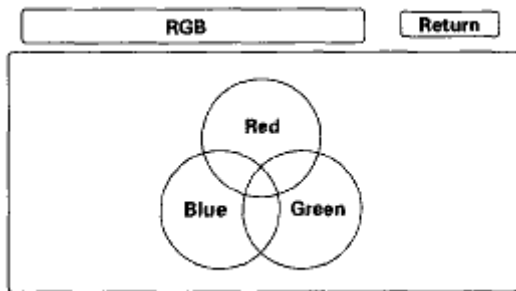


Fig. 92: Diagnostic Menu Screen Display - RGB Color
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Gray Tone

This screen diagnosis problems with contrast. You should be able to see the changes from bar to bar across the scale. It is normal for the 2 bars on either side to appear the same. If you can't see the shade changes from bar to bar, replace the navigation unit.

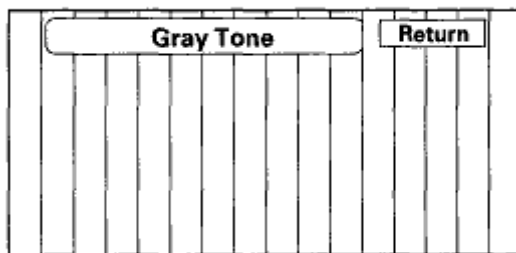


Fig. 93: Diagnostic Menu Screen Display - Gray Tone
Courtesy of AMERICAN HONDA MOTOR CO., INC.

White Raster

The entire display must be white. This diagnostic screen checks for pixels that may be dead (off). If there are dead pixels, replace the navigation unit.

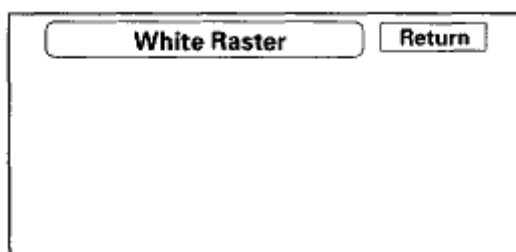


Fig. 94: Diagnostic Menu Screen Display - White Raster
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.



Fig. 95: Diagnostic Menu Screen Display - Black Raster
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Color Pattern

This is for factory use only. To check the color signal use the RGB Color diagnostic found under the Monitor Check.

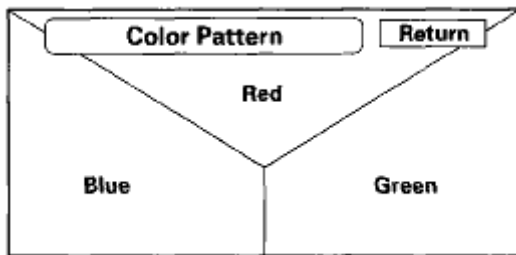


Fig. 96: Diagnostic Menu Screen Display - Color Pattern
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 will reset the display position to factory specifications.

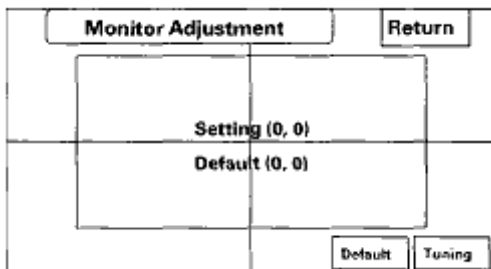


Fig. 97: Diagnostic Menu Screen Display - Monitor Adjustment
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 an almost infinite number of touch locations. However, to be compatible with earlier systems, the software only senses the locations shown on the diagnostic screen below. Every possible touch button position is shown on this diagnostic screen. Touching one of these areas should cause its color to reverse, and sound a "beep". If the touch locations are off slightly (by less than one touch location), use the "Touch Panel Calibration" diagnostic to re-align the touch "zones" with the screen image. If any areas of the screen either don't respond, or respond at some other location when touched, then replace the display unit.

NOTE: Unlike earlier screens that used infrared sensors, direct sunlight will not affect this test.

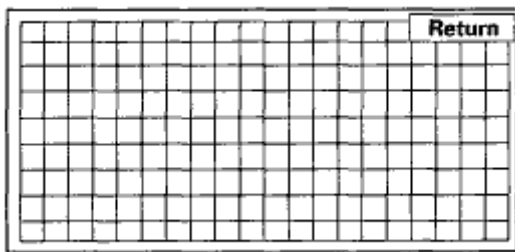


Fig. 98: Diagnostic Menu Screen Display - Touch Panel Calibration
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TOUCH PANEL CALIBRATION

The display screen uses a touch sensitive membrane instead of fixed infrared "beams". This means that every location of the entire surface of the display is touch sensitive.

For the display to be compatible with earlier navi systems, the system software creates "touch zones" emulating the touch "switches" created by the intersections of 20 vertical and 9 horizontal infrared beams. This diagnostic allows alignment of these artificially created "zones" with the location of the button images on the screen.

Normally this should never need adjustment, and it 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 four test areas consisting of a "+" button and an adjacent box with a black border. Touch the four "+" buttons to verify alignment. If when you touch a "+" button, and the adjacent box becomes yellow, then do the following. Continue to hold the "+" button, and simultaneously move the joystick to shift the screen slightly from side to side or up and down. The adjustment is complete when you can touch all four "+" boxes and none of the adjacent boxes becomes yellow.
- To store any changes you make, push in the joystick.
- To reset the touch zones to the factory default touch the MAP/GUIDE button.
- Press Return to exit the diagnostic.

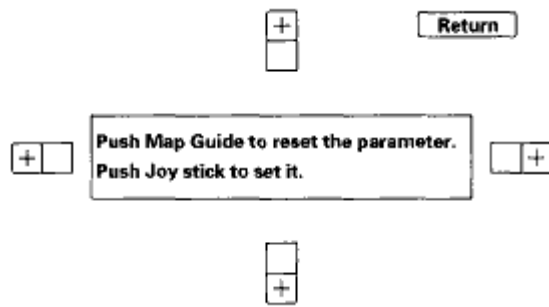


Fig. 99: Diagnostic Menu Screen Display - Touch Panel Calibration
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

UNIT CHECK

To start the test, select the item you want to check.

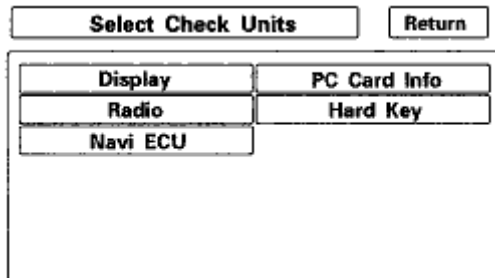


Fig. 100: Diagnostic Menu Screen Display - Unit Check
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Display

This diagnostic performs additional checks on the communication bus between the control unit and the display. In addition, the internal electronics and touch screen functionality are confirmed.

- When the connection is NG, first check for loose terminals at the navigation unit and the display unit connections. Next check for an open or short in the communication line between the navigation unit and the display unit. If you find the line to have an open or short, replace the affected shielded harness.
- If the ROM or RAM is NG, replace the display unit.
- The version represents the software version in the display.

NOTE: When selecting this diagnostic from "Unit Check," quickly remove your fingers from the touchscreen to avoid a false detection.

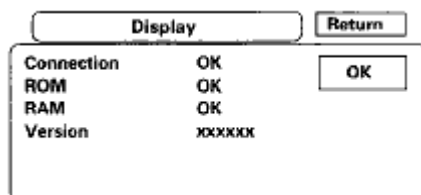


Fig. 101: Diagnostic Menu Screen Display - Display
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Radio

If the NG is indicated, check for loose audio unit connector.

NOTE: If the XM link was displayed red, but the radio link was displayed green in the navigation system link, refer to the audio system error codes list (see ERROR CODES).

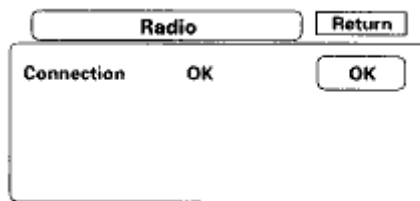


Fig. 102: Diagnostic Menu Screen Display - Radio
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Navi ECU

This screen looks for problems the navigation unit. When you initiate this diagnostic, the navigation unit may 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 will reboot.

- If "V-RAM" or "D-RAM" is NG, then replace the navigation unit.
- If "GPS" indicates "NG (ANT)", then check the entire GPS antenna wire from the navigation unit to the antenna. If the wire is crushed or damaged, try a known-good GPS antenna. If this diagnostic reads OK, then replace the GPS antenna. If the diagnostic still reads NG (ANT), then replace the navigation unit.
- "DVD ROM" represents the database version on the DVD. You can also find this information in Setup Screen 4 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 (iN) system.
- The "Mem Clear" is for factory use and should not be used unless instructed by the factory.

Selecting this will erase the client's settings, personal information, GPS orbital data, and anything else stored in memory.

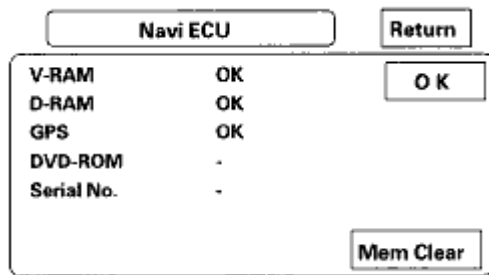


Fig. 103: Diagnostic Menu Screen Display - Navi ECU
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

PC Card info.

There is no PC Card in the PC card slot, and the screen should say, "PC Card is not inserted".

NOTE: Do not insert any card or object into the slot.

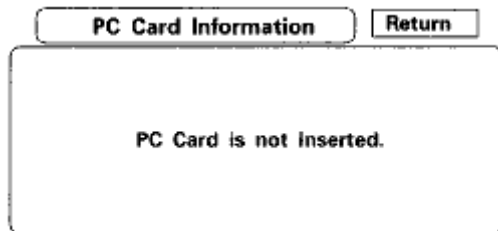


Fig. 104: Diagnostic Menu Screen Display - PC Card Info.
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

If the factory provides a PC card and instructs you to insert the card, then the screen displays the Manufacturer, and Product Name as shown in the following screen.

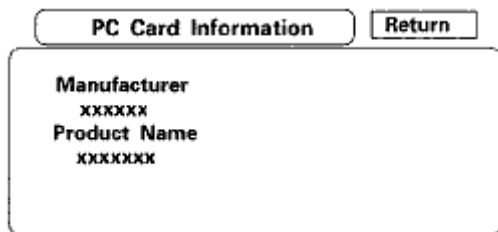


Fig. 105: Diagnostic Menu Screen Display - PC Card Info.
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Hard Key

This diagnostic tests the joystick, and the buttons that surround it. For this model, the joystick and buttons do not use the GA-Net bus for communications.

To complete the test, touch each button or the vehicle's control panel, and move the joystick to each indicated position. As you test each function, the corresponding button on the display should highlight. To exit, push in and hold the selector knob.

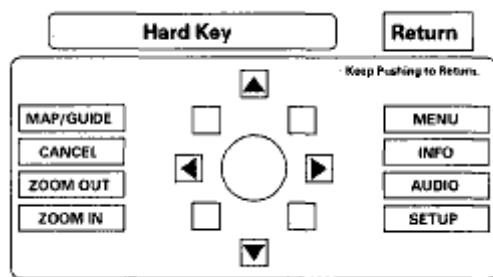


Fig. 106: Diagnostic Menu Screen Display - Hard Key
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 (Pin 6 of navigation unit C-connector)
 - 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 multiplex integrated control unit (A/T) or back-up light switch (M/T) (Pin 5 of navigation unit C-connector)
 - 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. This signal is needed because the Speed Pulse has no direction indication.

- ILL CANCEL

This item detects whether the "illumination cancel" function is in use.

- a. OFF (0) if illumination cancel is not selected
- b. ON (1) if illumination cancel is activated

The illumination cancel function is activated by increasing the dash brightness to "MAX" using the "+" button. The CAN bus passes this information from the gauge control module to the navigation unit.

- ILL-Illumination Indication (Pin 5 of navigation unit A-connector)
 - a. OFF (0) when parking lights, or headlights are off
 - b. ON (1) when parking lights, or headlights are on

This signal is used by the navigation unit to determine whether to put the navigation screen into the Day or Night brightness mode. (Setup screen 1)

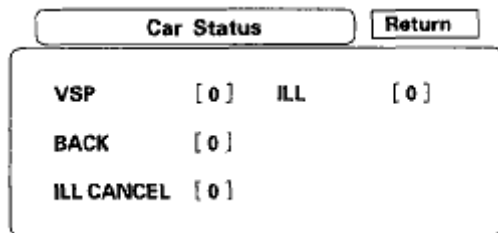


Fig. 107: Diagnostic Menu Screen Display - Car Status
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

F-CAN SYSTEM LINK

F-CAN (Fast Controller Area Network) passes information between processors on the network. For example, the F-CAN network is used to pass charging system signals between the PCM and the navigation unit for the trip computer cooling fan function. The F-CAN network uses a communication protocol that transmits data at 500 Kbps.

- If the diagnostic screen below reads NG with the ignition switch ON (II), then diagnostic trouble codes (DTCs) for the F-CAN can be retrieved with the HDS (Honda Diagnostic System). The data displayed in the ID boxes is irrelevant.
- For more details on troubleshooting the F-CAN, refer to the multiplex system.

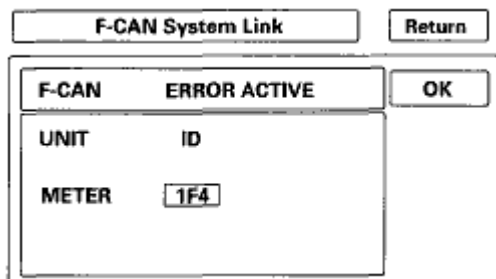


Fig. 108: Diagnostic Menu Screen Display - F-CAN System Link
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 troubleshoot GPS reception issues in an open area. 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: To use this screen for troubleshooting, the vehicle should be out side 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 4 or more icons. If not, troubleshoot for "GPS icon is white or not shown" (see **GPS ICON IS WHITE OR NOT SHOWN**).
- The "Current Position" shows latitude, longitude, and elevation (in feet). 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 screen 4 "Adjust Time Zone/Clock".

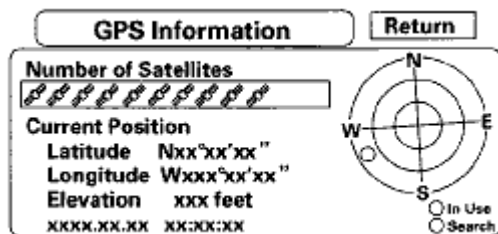


Fig. 109: Diagnostic Menu Screen Display - GPS Information
Courtesy of AMERICAN HONDA MOTOR CO., INC.

GPS DETAIL

By pressing and holding the MENU button for 10 seconds on the GPS Information screen, a GPS Detail screen is 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.

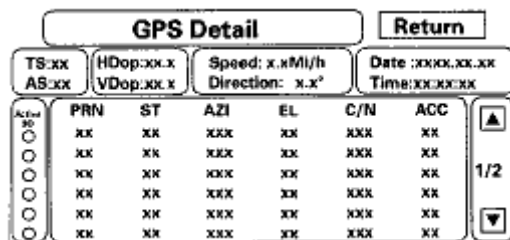


Fig. 110: Diagnostic Menu Screen Display - GPS Detail
Courtesy of AMERICAN HONDA MOTOR CO., INC.

- The box TS/AS and HDop/VDop 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 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".
- 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 **Fig. 109**).

NOTE: The data shown in the GPS Detail screen is an example only.

The table of values shown on the screen below has the following columns:

VALUE CHART

Column	Description	Problem indication
Active	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 <u>GPS ICON IS WHITE OR NOT SHOWN</u>).
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 <u>GPS ICON IS WHITE OR NOT SHOWN</u>).
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	
1/2 or 2/2	Shows view of all satellites in two screen views 1/2 or 2/2	

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".

- "Sensor" indicates the voltage output from the yaw rate sensor. It should indicate about 2.500 V when stopped.
- "Offset" is the reference voltage or standard within the yaw rate sensor. It also should indicate about 2.500 V when 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 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 stopped. The sensor value should change relative to the offset as the car is turned while driving. If not, replace the navigation unit.

Example: Car stopped

VOLTAGE SPECIFICATION CHART

Normal		Abnormal	
Offset	2.526 V	Offset	2.526 V

Sensor	2.516-2.536 V	Sensor	2.623 V
--------	---------------	--------	---------

Example: Car turning

VOLTAGE SPECIFICATION CHART

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)

The settings "CCW Cal Factor", "CW Cal Factor", and "Set" are for factory use only. THIS SHOULD NEVER BE ADJUSTED.

Touch "Tuning" to view small but gradual yaw rate problems.

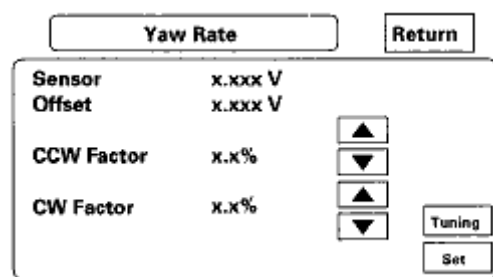


Fig. 111: Diagnostic Menu Screen Display - Yaw Rate Tuning
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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**). When the sensor is normal, 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 gross 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 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."

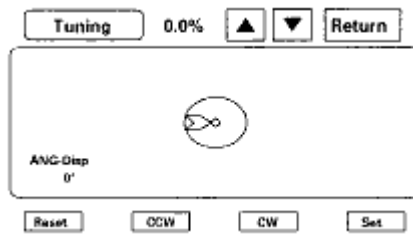


Fig. 112: Diagnostic Menu Screen Display - Tuning Button
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TIRE CALIBRATE

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.

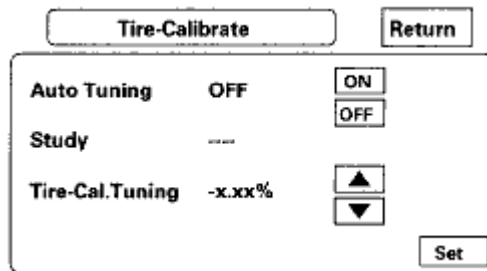


Fig. 113: Diagnostic Menu Screen Display - Tire Calibrate
Courtesy of AMERICAN HONDA MOTOR CO., INC.

FUNCTIONAL SETUP

Select the item you want to check.

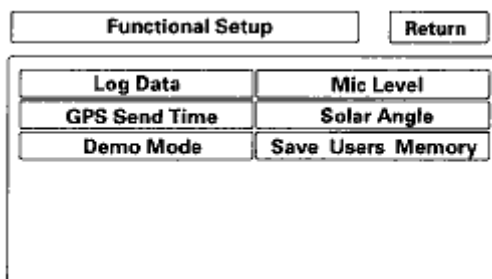


Fig. 114: Diagnostic Menu Screen Display - Functional Setup
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Log Data

This screen allows the factory to select log data to troubleshoot navigation system issues.

- Normally there is no card in the "PC Card Slot," and the PC slot door should always be closed. The screen should appear as shown.



Fig. 115: Diagnostic Menu Screen Display - Log Data
Courtesy of AMERICAN HONDA MOTOR CO., INC.

- However, if the factory provides a PC card and instructs you to insert it into the card slot (label side up). If instructed by the factory, select "Logging VP data Logs ON." Follow the factory procedure for gathering test data, and properly ending the test.

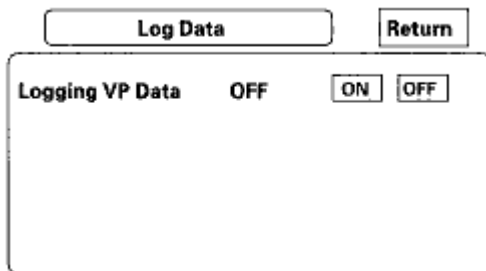


Fig. 116: Diagnostic Menu Screen Display - Log Data
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

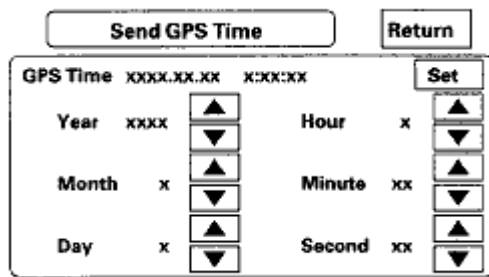


Fig. 117: Diagnostic Menu Screen Display - GPS Send Time
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 allow visitors 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 the 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, the 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".

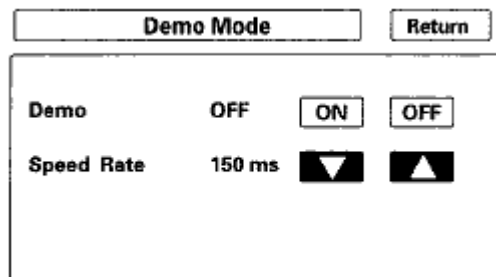


Fig. 118: Diagnostic Menu Screen Display - Demo Mode
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Mic Level

This diagnostic allows you to independently test the microphone and the Talk and Back buttons. They are used to activate the voice control and HFL system. The microphone is located near the map light in the roof console. It is directional, and works best with the voice coming from the driver's seat.

- Press the Talk button on the steering wheel, 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 mic level indicator on the screen does not briefly turn green, then check the wiring from the steering wheel 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 HFL

control unit and the navigation unit. If the wires are OK, the microphone must be faulty; replace the roof console (see step 2 on **HEADLINER REMOVAL/INSTALLATION**).

- Press the Back button on the steering wheel. This should cause the BACK indicator on the screen to momentarily turn green. If it does not briefly turn green, then check the wiring from the steering wheel Back button to the navigation unit.

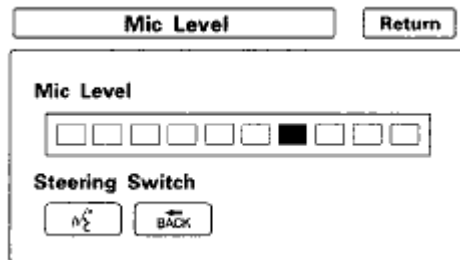


Fig. 119: Diagnostic Menu Screen Display - Mic Level
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Solar Angle

This screen graphically displays the sun's position as determined by GPS. The climate control system uses the navigation systems sun angle, along with the sunlight sensor to control the driver/passenger A/C air flow. The heat that the climate control unit removes varies, depending on the angle of the sun entering the vehicle. This screen is for factory use only, and should not be adjusted.

- The screen shows a circular diagram of the sky oriented in the direction that the vehicle is pointing. During daylight hours a red dot is shown, representing the direction and elevation of the sun. The outer circle represents the horizon (0 degrees elevation). The middle circle is 30 degrees, the center circle is 60 degrees, and the very center is directly overhead (90 degrees).
- The "manual tuning" button should always be "OFF."
- The "Angle" is the angle that the sun (shown with 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 sun's position.
- The reliability ranges from 1 to 3, and represents the accuracy of the Vehicle Position relative to the sun.

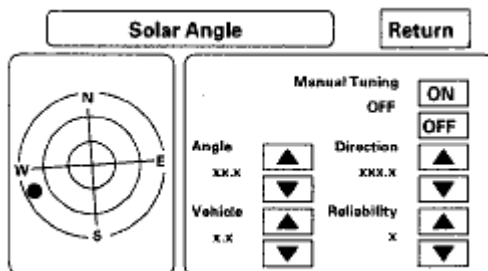


Fig. 120: Diagnostic Menu Screen Display - Solar Angle
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

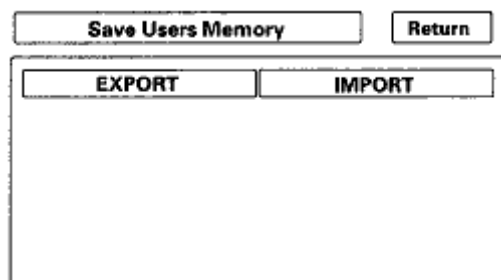


Fig. 121: Diagnostic Menu Screen Display - Save Users Memory
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Before starting this function, see the PC Card FAQs for information regarding PC cards, and the use of 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.

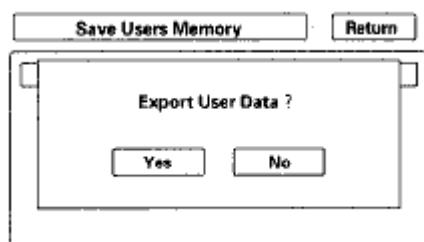


Fig. 122: Diagnostic Menu Screen Display - EXPORT Button
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 will automatically reboot. 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.

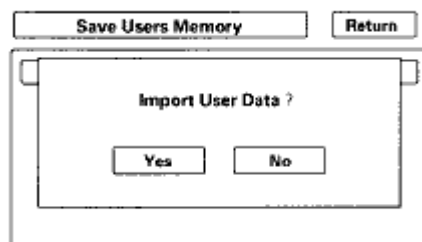


Fig. 123: Diagnostic Menu Screen Display - IMPORT Button
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

PC CARD FAQs

PC CARD FAQs REFERENCE

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. They can be purchased at a computer, or office supply store. The card will have 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 should be used anytime the owner of an '07 or later vehicle needs their navigation personal files transferred to a new navigation unit.
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 perform 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?	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, if 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 client's data?	After the transfer of client data to the new navigation unit, the files remain on the PC card. Since this is confidential information, we recommend that you delete these files after each use. Please note that each time you export navigation files of the same model and version, the files are overwritten. If you do not delete the files after use, over time the PC card will accumulate two files for each version of the 8 or so Honda navigation models.
What format should be	

used if the PC card needs reformatting?	It is unlikely that the PC card will ever need formatting, however the FAT file system should be used.
I can't enter the navigation diagnostic mode to do the Export/Import function. How can I transfer the client's data?	Some internal navigation unit ECU failures may make it impossible to use the Export/Import function.

PC CARD FAQs REFERENCE

Question	Answer
Why won't 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 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 navigation "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 be preventing a known-good PC card from playing. 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 attempting to use 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 client's original DVD is loaded into the new navigation unit and working properly.

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 navi 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. The letters "KA" imply that a "United States" DVD is installed. If the letters are KC, then a "Canada" DVD is installed. (See coverage discussion below.)

- IPL, APL, DBOOT, and System uCom, are all for factory use.
- Model: For this model, the field should begin with "SEP."
- Download: Do not touch, unless instructed by the factory.

Version		Return
Program Flash	x.xx.xx KA	Download
Program Disc	-	
IPL	x.xxx.xxx	
APL		
DBOOT	x.xxx.xxx	
System uCom	x.xxx.xxx	
Model	SEPX	

Fig. 124: Diagnostic Menu Screen Display - Version
Courtesy of AMERICAN HONDA MOTOR CO., INC.

There are two navigation DVDs produced for this model.

- The white DVD labeled "United States" is for the US market and contains maps for the contiguous 48 US states, and some southern portions of Canada. Clients wanting additional northern coverage in Canada, can purchase a "Canada," DVD by contacting the DVD fulfillment desk.
- The gray DVD labeled "Canada," is for the Canada market, and contains maps for all of Canada, plus some of the northern US states. If customers with this DVD require full US coverage (including states like Florida and Texas), they may purchase a "United States" DVD by contacting the DVD fulfillment desk.

XM (HIP)

These screens allow troubleshooting on XM or HIP (AcuraLink) problems. Select the item you want to troubleshoot, and follow the diagnostic instructions.

XM (HIP)	Return
XM (HIP) System Link	
XM (HIP) ECU	

Fig. 125: Diagnostic Menu Screen Display - XM (HIP)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

XM (HIP) System Link

This diagnostic tests the cables connecting the XM (HIP) components. If any of the links are red, do the troubleshooting for the AcuraLink (see **GENERAL TROUBLESHOOTING INFORMATION**).

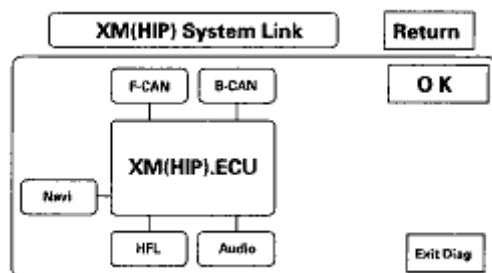


Fig. 126: Diagnostic Menu Screen Display - XM (HIP) System Link
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

XM (HIP) ECU

Select the item you want to troubleshoot, and follow the diagnostic instructions. If items 2 (DTC log data), 3 (Diagnostic Info), or 4 (Recalls/Campaigns) cannot be selected, then there are no messages for these items.

Select a diagnosis item:

1	AcuraLink self-diagnosis
2	DTC logdata
3	Diagnostic Info
4	Recalls / Campaigns
5	Data reset
6	Traffic channel

Fig. 127: Diagnostic Menu Screen Display - XM (HIP) ECU
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Telematics Self-Diagnosis

This screen shows the software version information for the AcuraLink control unit (XM receiver). Toggle the joystick left to exit the screen.

AcuraLink self-diagnosis

```

Camelot: xxxxxx.xx.xxxx
V850: xxxxxxxx.xx.xx
IPL: xxxxxxxx.xx
PLD: xx
Voltage: xx.xx
Hours: xxxxx.xx
  
```

Fig. 128: Diagnostic Menu Screen Display - Telematics Self-Diagnosis

Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC Log Data

This screen displays DTCs stored in the AcuraLink control unit. Use the HDS to clear the codes. Additional details about listed DTCs can be viewed by selecting each listed item.

Select the DTC logdata

1	DTC logdata #1	▲
2	DTC logdata #2	
3	DTC logdata #3	
4	DTC logdata #4	
5	DTC logdata #5	
6	DTC logdata #6	▼

Fig. 129: Diagnostic Menu Screen Display

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Diagnostic Info

This screen lists messages that were displayed to the client. The client can clear the messages that are shown with an "envelope" symbol.

Diagnostic Info

1	 SIDE AIRBAG OFF:
2	 Pass. Airbag Off:
3	 Vehicle Stability Assist: 61
4	Airbag System:
5	
6	

Fig. 130: Diagnostic Menu Screen Display - Diagnostic Info

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Data Reset

This menu choice resets the AcuraLink control unit (XM receiver), and should not be selected. Only select "DATA RESET" if instructed to do so by the factory. If chosen accidentally, a confirmation screen appears to prevent accidental erasure. Select "No" to exit the screen.

Confirmation

AcuraLink system will be cleared.

Restarting AcuraLink will require activation. Are you sure ?

Yes
No

Fig. 131: Diagnostic Menu Screen Display - Data Reset

Courtesy of AMERICAN HONDA MOTOR CO., INC.

NOTE: Selecting "DATA RESET" will clear the AcuraLink registration, and the AcuraLink service will reset to the factory default. If the vehicle was already registered for the AcuraLink service, it will have to be reactivated by calling Acura Client Services before all features will be available. The reactivation will cause the Feature Guide to start over at the first message, which will result in the client getting repeated messages.

Traffic Channel

If the menu choice is available, never adjust the settings. Changing the settings will cause traffic flow and traffic icon information to stop displaying on the map screen. The only appropriate setting is shown. If the setting is changed accidentally, choose a SID value of 255, and an App ID of 8.

Select an item to change:

SID : 255 App ID : 8	
1	SID
2	App ID
3	
4	

Fig. 132: Diagnostic Menu Screen Display - Traffic Channel

Courtesy of AMERICAN HONDA MOTOR CO., INC.

ERROR MESSAGE TABLE

ERROR MESSAGE CHART

Screen Error Message	Solution
Navigation system is unable to acquire a proper GPS signal.	Make sure there is nothing on the rear package tray blocking the GPS antenna. If not, move the vehicle to an open space away from tall buildings, trees, etc. Rear window tinting and after-market devices can affect the GPS reception.
No DVD disc installed. Please check system.	Make sure the navigation DVD is installed with the label side up and the navigation unit door is fully snapped closed. Make sure that the sliding door for the PC card is 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 will appear briefly when the display temperature is too high, and then the display will turn off until the temperature cools down. The system will turn back on when the display cools down.
Outside temperature is low, system will take a while to start up.	The temperature is below -22 °F (-30 °C) and the navigation unit has difficulties reading the DVD. The system will start up when the temperature warms up.
DVD disc reading error (unformatted), please consult your dealer.	Check the DVD surface for deep scratches or other damage. Make sure you are using an official Honda navigation DVD (orange in color). The system cannot read other mapping databases or video DVDs. Check any official Honda service web site for more service information about

	updating 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 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 joystick.

FORCED STARTING OF DISPLAY

Special Tools Required

SCS Service Connector 07PAZ-0010100

1. Remove the right trunk side trim panel (see **TRIM REMOVAL/INSTALLATION - TRUNK AREA**).
2. Turn the ignition switch to LOCK (0), and connect the SCS service connector (A) to the navigation service check connector (B) located upper of the navigation unit.

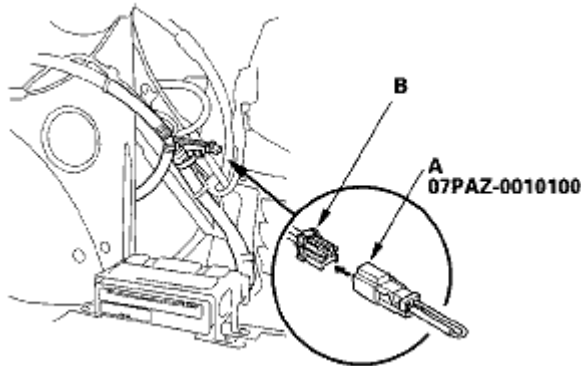


Fig. 133: Identifying SCS Service Connector
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Turn the ignition switch to ON (II), and check that the diagnosis menu for the picture diagnosis starts up, and then changes to the system link menu.

NOTE: If the display fails to display the Navi System Link screen, refer to no picture is displayed troubleshooting (see **NO PICTURE IS DISPLAYED**).

DVD-ROM REPLACEMENT

NOTE: Check any official Honda service web site for more service information about the navigation system.

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

- Open the cover (A) on the right side of the trunk to gain access to the navigation unit.

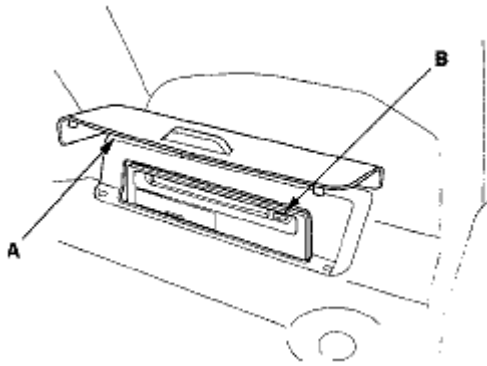


Fig. 134: Identifying Navigation Unit Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

- Press the EJECT button (B), then remove the DVD-ROM.
- Insert the new DVD-ROM with the white label facing up.
- Close the front cover. Do not turn the ignition switch to LOCK (0); watch the navigation screen until the data is down loaded to the navigation unit.
- Do the Map Matching (see **MAP MATCHING**).

NOTE: After servicing, the front cover and PC card slot door must be closed.

NAVIGATION UNIT REMOVAL/INSTALLATION

- NOTE:**
- Before replacing the navigation unit, back-up the client data using system diagnostic mode "save users memory" under the functional set up (see **FUNCTIONAL SETUP**).
 - If the navigation unit is replaced or disconnected, a Map Matching must be done (see **MAP MATCHING**).

- Turn the ignition switch to ON (II).
- Eject the DVD from the original navigation unit (see **FORCED STARTING OF DISPLAY**). To avoid scratching or damaging the DVD, temporarily place the DVD in a jewel case.

NOTE: If the DVD will not eject, refer to symptom troubleshooting "Navigation unit will not eject or accept the navigation DVD" (see **NAVIGATION UNIT WILL NOT EJECT OR ACCEPT THE NAVIGATION DVD**).

- Turn the ignition switch to LOCK (0).
- Remove the right trunk side trim panel (see **TRIM REMOVAL/INSTALLATION - TRUNK AREA**).
- Remove the four screws (A) from the bracket (B) located in the trunk.

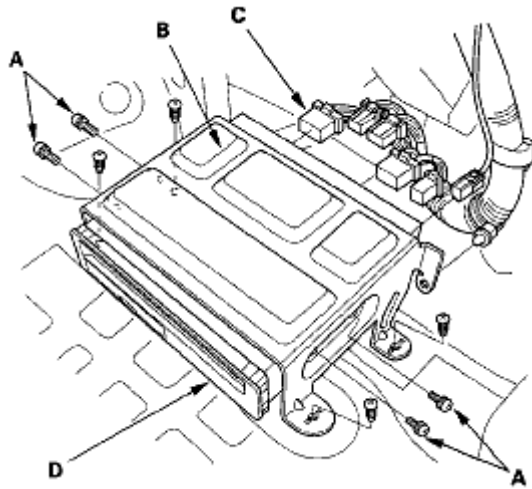


Fig. 135: Identifying Screws And Bracket

Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Disconnect the navigation unit connectors (C).
7. Remove the navigation unit (D).
8. Install in the reverse order of removal.
9. Turn the ignition switch to ON (II), then reinstall the client's original DVD, verifying that the DVD is free of scratches or smudges.
10. Check online for any service publications prescribing patches for the navigation system, and if any should be applied to the new navigation unit.

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.

11. Enter the new navigation anti-theft code.
12. Park the vehicle outside, and do the GPS initialization (see **GPS INITIALIZATION**).
13. Give the new navigation anti-theft code to the client.

GPS ANTENNA REMOVAL/INSTALLATION

1. Remove the rear shelf (see **TRIM REMOVAL/INSTALLATION - REAR SHELF AREA**).
2. Remove the right trunk side trim panel (see **TRIM REMOVAL/INSTALLATION - TRUNK AREA**).
3. Remove the rear seat-back (see **REAR SEAT REMOVAL/INSTALLATION**).
4. Disconnect the GPS antenna connector (A) from the navigation unit.

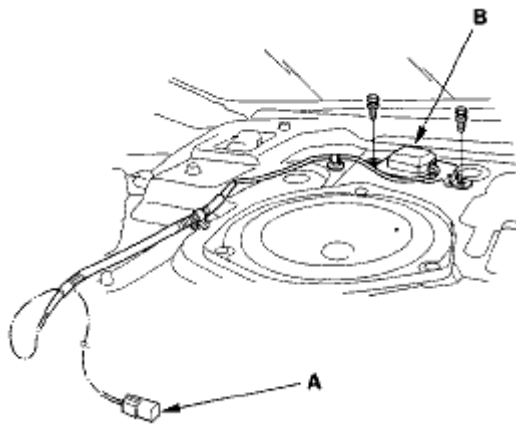


Fig. 136: Identifying GPS Antenna Connector
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the GPS antenna (B).
6. Install in the reverse order of removal.

VOICE CONTROL SWITCH TEST

1. Remove the driver's airbag assembly (see **DRIVER'S AIRBAG REPLACEMENT**).
2. Remove the 20P connector from the cable reel.

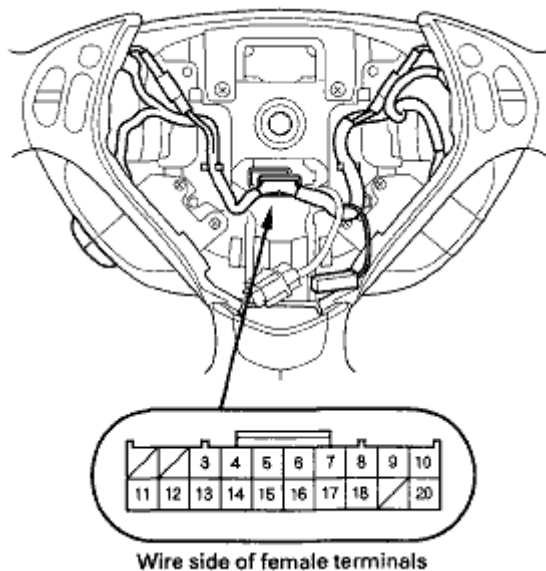


Fig. 137: Identifying 20P Connector From Cable Reel
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Measure the resistance between the No. 10 and No. 18 terminals in each switch position according to the table.

RESISTANCE CHART

Position	Resistance
OFF	About 10 kohms

Talk button pressed	About 2.2 kohms
Back button pressed	About 650 kohms

4. If the resistance is not as specified, replace the voice control switch (see **STEERING WHEEL DISASSEMBLY/REASSEMBLY**).

REARVIEW CAMERA REMOVAL/INSTALLATION

1. Remove the rear license trim (see **REAR LICENSE TRIM REPLACEMENT**).
2. Inside the trunk lid, disconnect the connector (A), then remove the grommet (B) from the trunk lid and push the connector through the hole in the trunk lid.

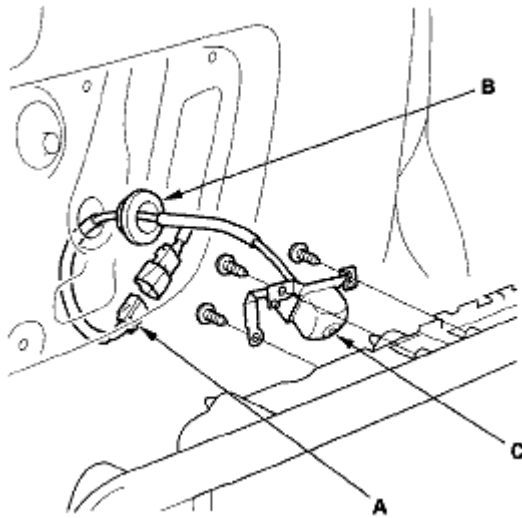


Fig. 138: Identifying Trunk Lid Connector And Grommet
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the screws and rearview camera (C).
4. Install the camera in the reverse order of removal.