

2005-08 ACCESSORIES AND EQUIPMENT

Navigation System - RL

COMPONENT LOCATION INDEX

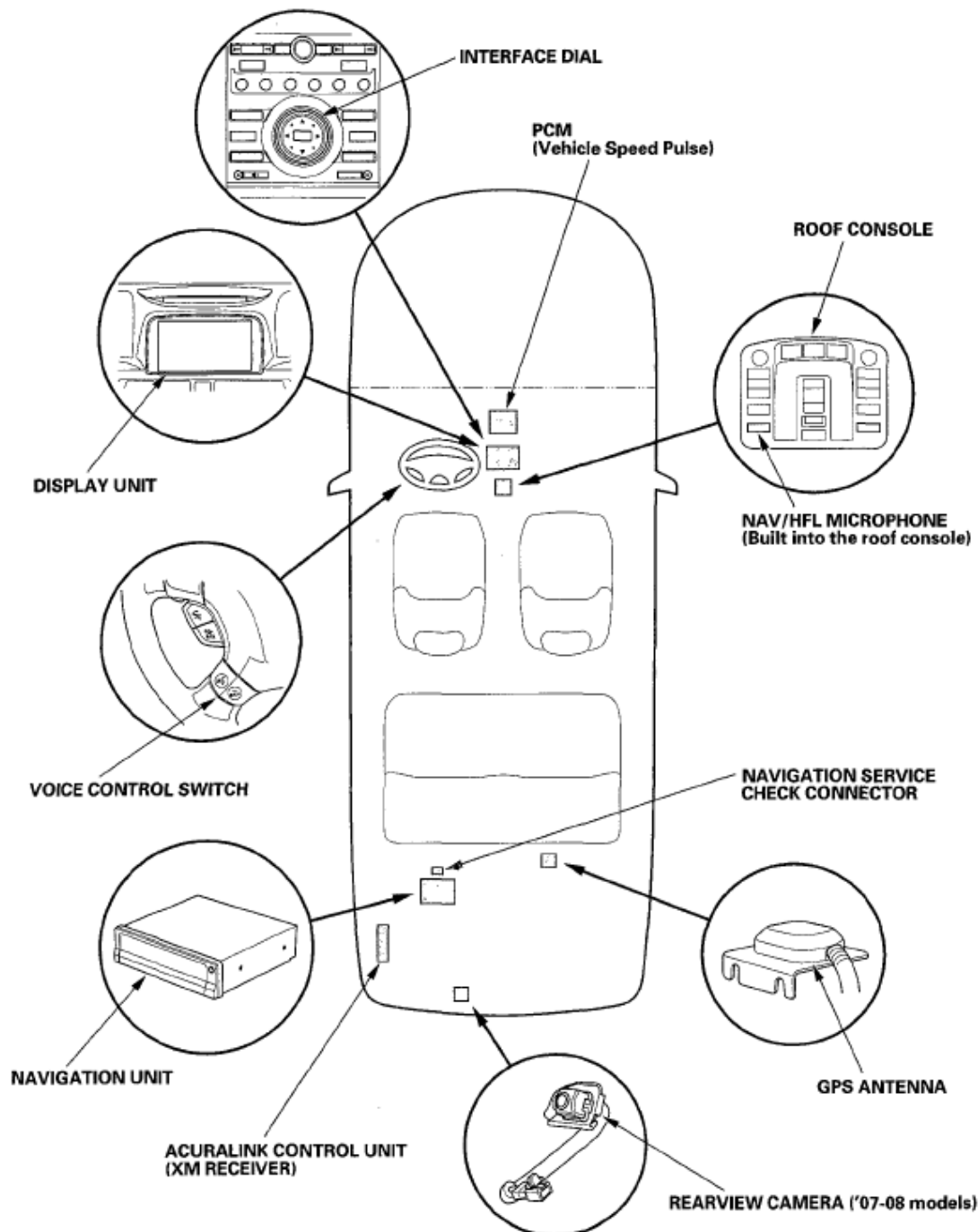


Fig. 1: Identifying Location Of Navigation System Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 codes before:

- Disconnecting the battery.
- Disconnecting the navigation unit 8P connector.
- Removing the No. 7 (10A) fuse from the driver's 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 the Navi ECU diagnostic screen (see **UNIT CHECK**). Also, you can find the serial number on the navigation unit that is stored in the trunk. The serial number is on a label on the bottom of the unit.

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 with the navigation system.

SELF-INERTIAL NAVIGATION LIMITATIONS

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

The following circumstances may cause vehicle positioning errors:

- Moving the vehicle with the engine stopped and the vehicle stopped, such as by ferry or tow truck, or if the vehicle is spun on a turn table.
 - 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 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 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 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 the satellite control centers are experiencing problems.
- 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.

MUTING LOGIC

Whenever the navigation system is giving guidance, all of the 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 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 screen 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.

SYMPTOM DUPLICATION

- When the symptom can be duplicated, verify that it is not a characteristic of the system. Review the navigation manual and compare it to a known-good vehicle (with the same software and database), under the same conditions. If the symptom is not the same as the known-good vehicle, follow the self-diagnostic procedures and the appropriate troubleshooting procedures.
- When the symptom does not reappear or only reappears intermittently, ask the client about the conditions when the symptom occurred.
 - Always ask the client to demonstrate the problem.
 - Try to establish possible user error or misunderstanding of the system.
 - Try to establish if outside interference may have been the cause.
 - Try to duplicate the symptom under the same conditions the client experienced.
 - Vibration, temperature extremes, and moisture (dew, humidity) are factors that are difficult to duplicate.
 - Inspect the vehicle for after-market electronic devices (vehicle locators, amps, radar detectors, etc) that may be hidden.

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 will 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** , audio system and navigation system.
- 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 data (which will be lost when the 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.

Verify map matching.

- Before returning the vehicle, enter the audio system and navigation system 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 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 N 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**

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**

If this is displayed, turn off 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 .**

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 2 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 under go a half a dozen "software only" version up grades 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.**

DVD HANDLING AND CLEANING

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

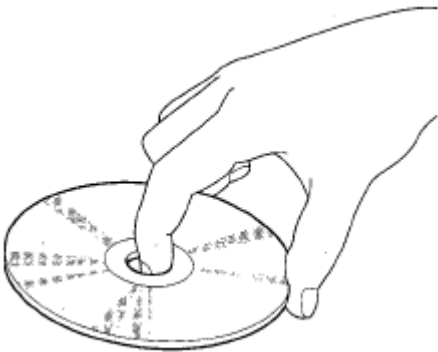


Fig. 2: Identifying DVD Handling

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.

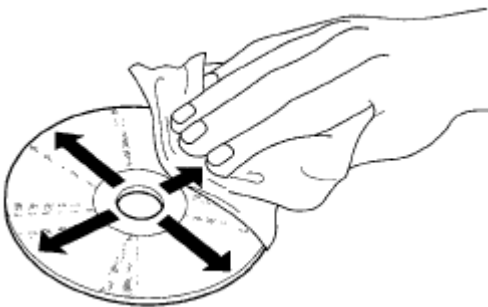


Fig. 3: Identifying DVD Cleaning

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 current accessory may not display properly, and Extension will display instead.

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

- The current street (the street being driven on) 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.
 - Anytime 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 ORDERING A 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 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 ORDERING A 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 may be included in a neighboring township, or under some larger metropolitan city name. If the address is shown in a later year vehicle, but not your client's vehicle, you might 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 ORDERING A DVD).

PRECAUTION ON CLIENT "SNEAK PREVIEWS"

Your client might request a look (or "sneak preview") at features in the latest navigation software. You should never preview a navigation DVD in a client'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 located 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

NOTE: Many problems are caused because the remotes have not been "linked."
When troubleshooting a complaint, make sure the remotes are linked first.

SYMPTOM TROUBLESHOOTING INDEX

Symptom	Diagnostic procedure	Also check for
Navigation system stays on the GPS initialization screen	System Initialization (see <u>GPS INITIALIZATION</u>)	<ul style="list-style-type: none"> • Navigation unit • Wrong colored disc installed • GPS antenna/cable • Harness/fuses/switches
No picture is displayed	Symptom Troubleshooting (see <u>NO PICTURE IS DISPLAYED</u>)	<ul style="list-style-type: none"> • Navigation unit • Aftermarket accessories connected to the system • Display unit • The wrong color DVD is installed • The DVD is damaged or dirty

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		<ul style="list-style-type: none"> • 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, OR IS VERY FAR FROM ACTUAL POSITION</u>)	<ul style="list-style-type: none"> • Navigation unit • GPS antenna/cable • PCM (speed and fuel pulses) • Harness/fuses/switches
Picture is missing a color or tone or is an odd color	Symptom Troubleshooting (see <u>PICTURE IS MISSING A COLOR OR TONE OR IS AN ODD COLOR</u>)	<ul style="list-style-type: none"> • Navigation unit • The wrong color DVD is installed • The DVD is damaged or dirty • Display unit • Harness/fuses/switches • Aftermarket accessories connected to the system
Picture has lines or rolls	Symptom Troubleshooting (see <u>PICTURE HAS LINES OR ROLLS</u>)	<ul style="list-style-type: none"> • Navigation unit • Display unit • Harness/fuses/switches
Interface dial buttons do not work	Symptom Troubleshooting (see <u>INTERFACE DIAL BUTTONS DO NOT WORK</u>)	<ul style="list-style-type: none"> • Navigation unit • Display unit • Interface dial • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
GPS icon is white or not shown	Symptom Troubleshooting (see <u>GPS ICON IS WHITE OR NOT SHOWN</u>)	<ul style="list-style-type: none"> • Navigation unit • Aftermarket accessories connected to the system • GPS antenna/cable • The wrong color DVD is installed • The DVD is damaged or dirty • 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>)	<ul style="list-style-type: none"> • Navigation unit • Volume or Voice feedback settings (see Owner's manual for details) • Audio unit/amplifier • Harness/fuses/switches

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Voice control does not work/respond	Symptom Troubleshooting (see <u>VOICE CONTROL DOES NOT WORK/RESPOND</u>)	<ul style="list-style-type: none"> • Navigation unit • Microphone/voice control switch • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
DVD screen error messages	Symptom Troubleshooting (see <u>DVD SCREEN ERROR MESSAGES</u>)	<ul style="list-style-type: none"> • Navigation unit • Wrong colored disc installed • Damaged DVD • Display unit • The wrong color DVD is installed • The DVD is damaged or dirty
Navigation cannot control HVAC by voice command	Symptom Troubleshooting (see <u>NAVIGATION CANNOT CONTROL HVAC BY VOICE COMMAND</u>)	<ul style="list-style-type: none"> • HVAC control unit • Display unit • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
Display day/night mode does not work	Symptom Troubleshooting (see <u>DISPLAY DAY/NIGHT MODE DOES NOT WORK</u>)	<ul style="list-style-type: none"> • Display unit • HVAC control unit • Display brightness set to "High" • Gauge control module (CAN) • The wrong color DVD is installed • The DVD is damaged or dirty • Harness/fuses/switches
System locks up or freezes constantly	Symptom Troubleshooting (see <u>SYSTEM LOCKS UP OR FREEZES CONSTANTLY</u>)	<ul style="list-style-type: none"> • Navigation unit • Harness/fuses/switches • Wrong colored disc installed • Damaged DVD • The wrong color DVD is installed

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		<ul style="list-style-type: none"> • The DVD is damaged or dirty
Vehicle icon wanders across the map when driving (does not follow a displayed road) or map or vehicle ICON spins	Symptom Troubleshooting (see <u>VEHICLE ICON WANDERS ACROSS THE MAP WHEN DRIVING (DOES NOT FOLLOW A DISPLAYED ROAD) OR MAP OR VEHICLE ICON SPINS</u>)	<ul style="list-style-type: none"> • Navigation unit • GPS antenna/cable • PCM • Wrong colored disc installed
Navigation system will not Map Match	Refer to troubleshooting for vehicle icon wanders across the map when driving (see <u>VEHICLE ICON WANDERS ACROSS THE MAP WHEN DRIVING (DOES NOT FOLLOW A DISPLAYED ROAD) OR MAP OR VEHICLE ICON SPINS</u>).	
Navigation system will not accept security code	Symptom Troubleshooting (see <u>NAVIGATION SYSTEM WILL NOT ACCEPT SECURITY CODE</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>)	<ul style="list-style-type: none"> • Harness/fuses/switches • The wrong color DVD is installed • The DVD is damaged or dirty • Aftermarket accessories connected to the system
Navigation cannot control XM radio	Symptom Troubleshooting (see <u>NAVIGATION CANNOT CONTROL XM RADIO</u>)	<ul style="list-style-type: none"> • Display unit • Wrong colored disc installed • The wrong color DVD is installed • The DVD is damaged or dirty • Harness
Traffic information is not being shown on map screen	Symptom Troubleshooting (see <u>TRAFFIC INFORMATION IS NOT BEING SHOWN ON MAP SCREEN</u>)	<ul style="list-style-type: none"> • AcuraLink (XM) • Navigation unit • Harness
Trip computer-no distance	Symptom Troubleshooting (see <u>TRIP COMPUTER-NO DISTANCE</u>)	<ul style="list-style-type: none"> • PCM (speed and fuel pulses) • Harness/fuses/switches
Trip computer-no fuel information	Symptom Troubleshooting (see <u>TRIP COMPUTER-NO FUEL INFORMATION</u>)	<ul style="list-style-type: none"> • Gauge control module (CAN) • Harness/fuses/switches

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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>)	<ul style="list-style-type: none"> • Software for the latest updates • No backup signal • Wrong disc installed in navigation unit
A POI cannot be found	See "How to answer client questions about navigation coverage" (see <u>HOW TO IDENTIFY NAVIGATION DVD VERSIONS, AND HOW TO INSPECT A DVD FOR DAMAGE</u>)	<ul style="list-style-type: none"> • 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 IDENTIFY NAVIGATION DVD VERSIONS, AND HOW TO INSPECT A DVD FOR DAMAGE</u>)	<ul style="list-style-type: none"> • The DVD is scratched or dirty
Address cannot be found or system gives poor routing	Verify proper operation using the owner's manual	<ul style="list-style-type: none"> • Compare to another like vehicle • Wrong colored disc installed
Navigation frequently asks for anti-theft code and needs GPS initialization	Symptom Troubleshooting (see <u>GPS INITIALIZATION</u>)	<ul style="list-style-type: none"> • Navigation unit • Low battery • Harness/fuses/switches
Previous Destinations button is dim and not selectable in the Enter destination by screen (grayed-out)	The vehicle may be new, or the client deleted the destination. Enter a destination, and allow the system to route to it. After the trip, the Previous Destinations button will be selectable.	
Some set-up and information functions of the navigation system are grayed-out and do not work	Client did not select "OK" from Disclaimer screen. Refer to <u>SYSTEM FUNCTION DIAGRAM</u> .	
System always comes up in in-line diagnostic mode	Symptom Troubleshooting (see <u>FACTORY DIAGNOSTIC SCREEN "IN LINE DIAG"</u>)	
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 " <u>VERSION</u> " Diagnostic Screen (see) for details on coverage differences.	
Time is not correct	Reset Time Adjustment in set-up.	
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.	
	Symptom Troubleshooting (see	

Navigation does not call using the HFL

NAVIGATION DOES NOT CALL USING THE HFL)

The wrong colored DVD or version is installed

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 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 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 Navigation TALK and BACK buttons on the steering wheel activate the voice control. The voice control also allows control of the audio and climate functions.

The illumination signal (headlights ON) 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 is set to night and the brightness control is set to full brightness (hold both "+" and "-" key at the same time), 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 audio and climate control settings directed by the navigation unit.

The "Comm. Bus" connects the HFL, XM (AcuraLink), and navigation units. This bus supports these functions:

- The navigation control unit receives traffic and message information from the AcuraLink Control unit.
- The navigation control 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 HFL 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, and finally to the navigation unit for display.

System Diagram

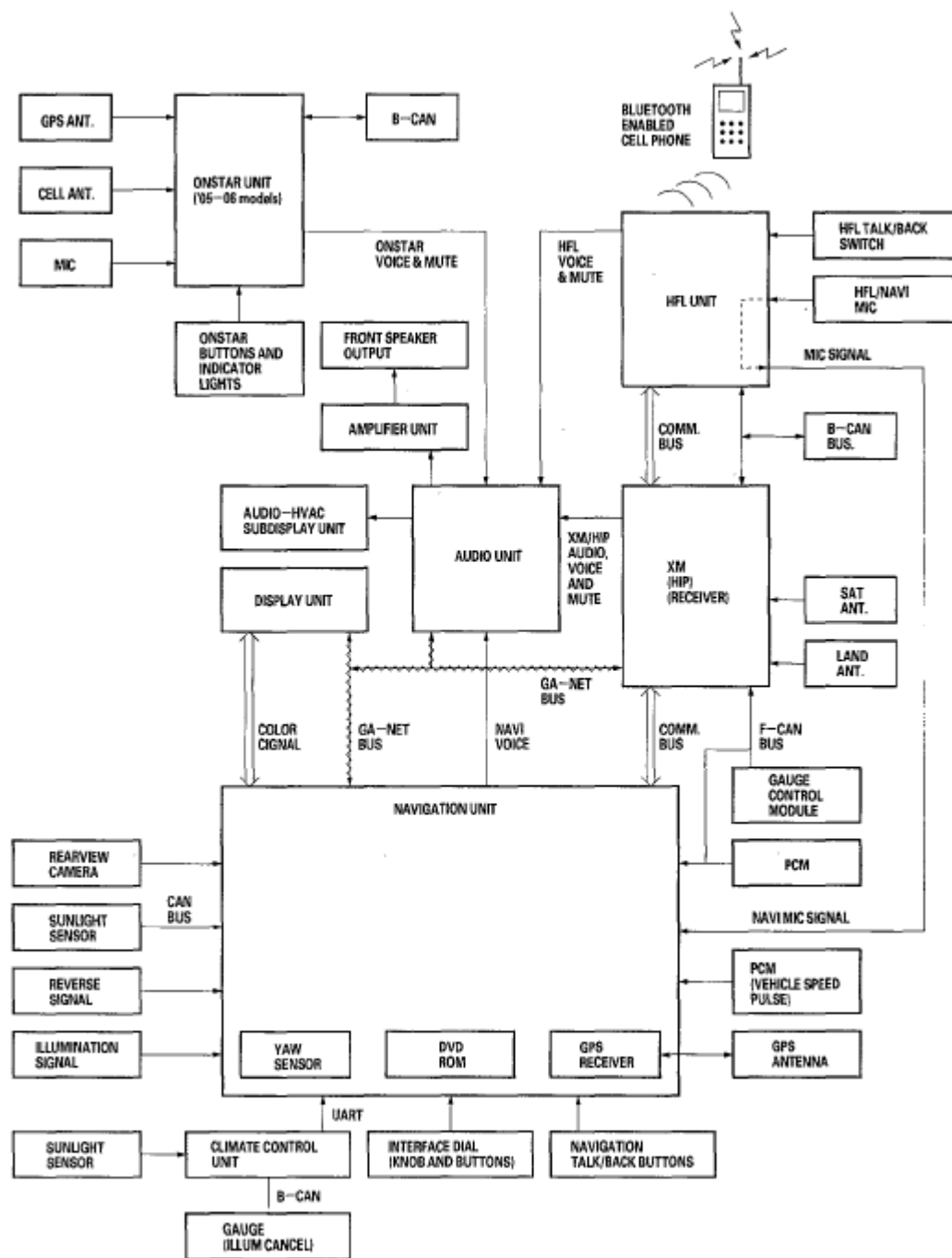


Fig. 4: Navigation System - System Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION FUNCTION

The navigation system is composed of the navigation unit, the PCM (vehicle speed signal), the GPS antenna, the microphone, the voice control switch, the audio unit, the display unit, and the interface dial.

Function Diagram

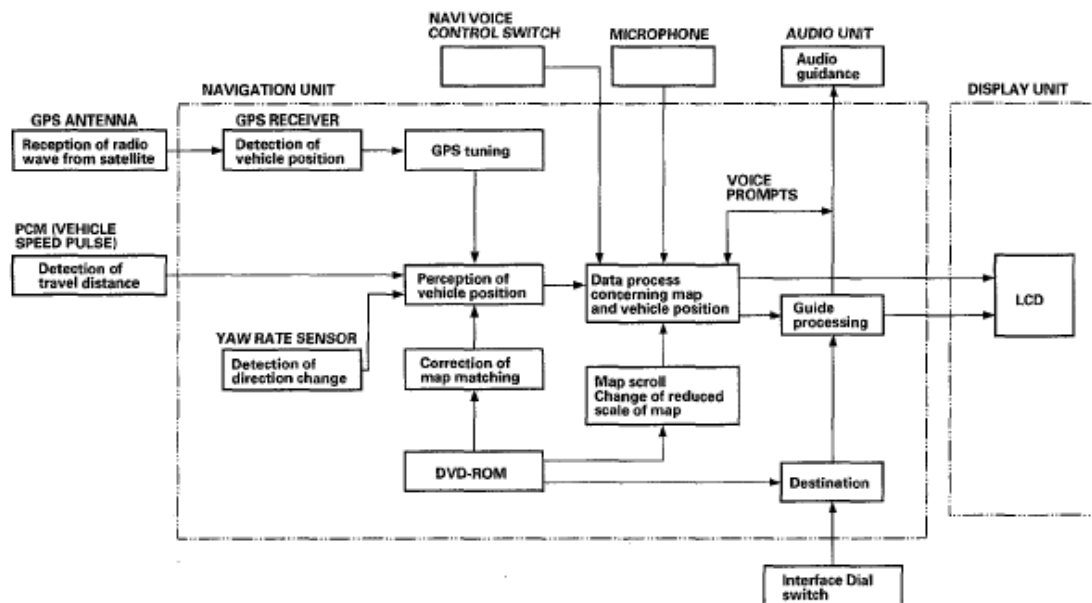


Fig. 5: Navigation System - Function Diagram
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

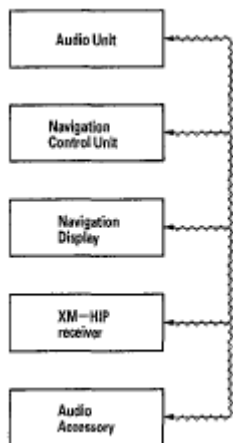


Fig. 6: GA-Net Bus Configuration Diagram
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Vehicle Speed Pulse

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

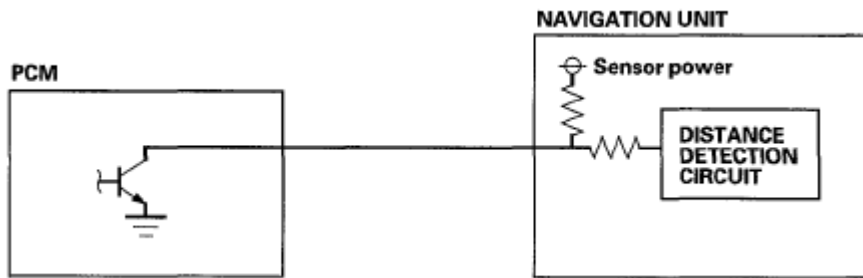


Fig. 7: Vehicle Speed Pulse Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Charge Signal, Navigation Unit Cooling Fan Operation and Trip Computer

The PCM sends a charge signal to the navigation unit via F-CAN. A thermister inside the navigation unit monitors the units internal temperature. This information combined with a charge signal determines the control units internal cooling fan operation. The navigation system displays trip computer information that is calculated by the gauge assembly.

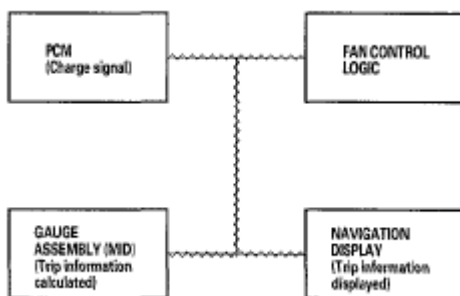


Fig. 8: Charge Signal, Navigation Unit Cooling Fan Operation And Trip Computer Diagram

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.

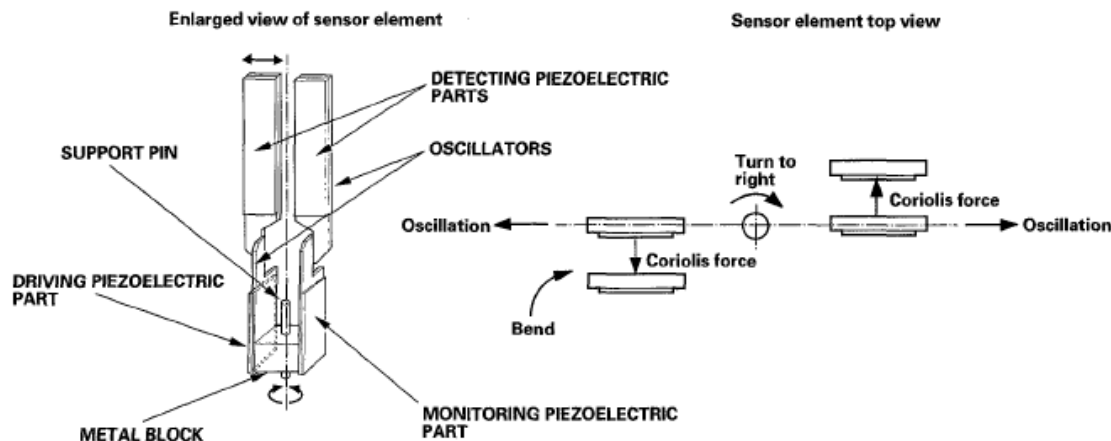
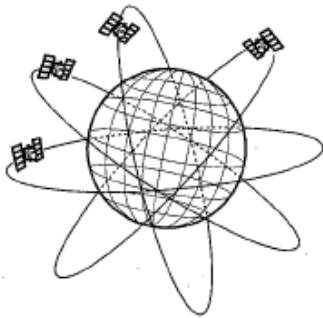


Fig. 9: Enlarged View Of Sensor Element
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

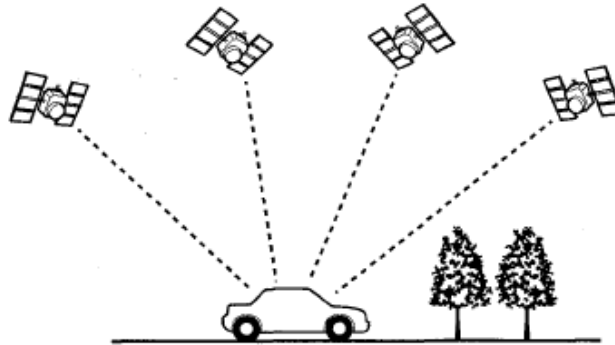


Fig. 10: Identifying Global Positioning System (GPS)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 and shape of the GPS icon shown on the display.

GPS ICON COLOR 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 PCM.

Map Matching Tuning

The map matching occurs when you drive the vehicle along a mapped road until the road name appears of the bottom of the screen. The map data transmitted from the DVD-ROM is checked against the vehicle position data, and the vehicle position is indicated on the nearest road. Map matching tuning does not occur when the vehicle travels on a road not shown on the map, or when the vehicle position is far away from a road on the map.

GPS Tuning

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

Distance Tuning

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

Route Guidance

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

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

Audio Guidance

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

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

control system is being used.**Solar Angle**

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

Off Road Tracking (breadcrumbs)

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

Clock and Time Zone

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

Muting Signal Logic

The audio muting logic is controlled by the audio unit. The audio unit determines what audio source has priority to use the speakers.

The priority of the audio sources is as follows:

On-Star ('05-06 models) has the highest priority, followed by HFL, AcuraLink, navigation, and finally the radio/CD-DVD player. The priority is passed by On-Star ('05-06 models), HFL, and AcuraLink to the audio unit by dedicated mute wires. The navigation mute signal is passed to the audio unit on the GA-Net bus.

The navigation unit temporarily disables the voice control buttons, but allows guidance to be heard. In addition, the audio unit suppresses the output from the radio, XM unit, disc player, or other audio accessories.

When the navigation system sends out a voice route guidance command, the audio front center speaker is muted, and the navigation voice is heard in the front speakers.

When the navigation voice control system is in use, all of the speakers are muted, and the navigation voice prompts are heard from the front speakers.

DVD-ROM

The DVD includes:

- Map Database
- Point of interest (POI) Database
- Navigation software

Audio Unit

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

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

Display Unit

The display 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.

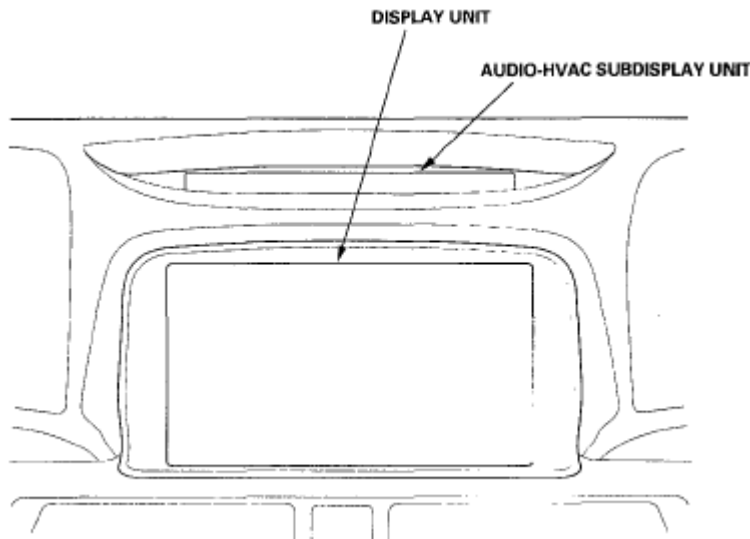


Fig. 11: Identifying Display Unit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Microphone (MIC)

Receives voice commands and transmits them to the navigation unit or HandsFreeLink 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).

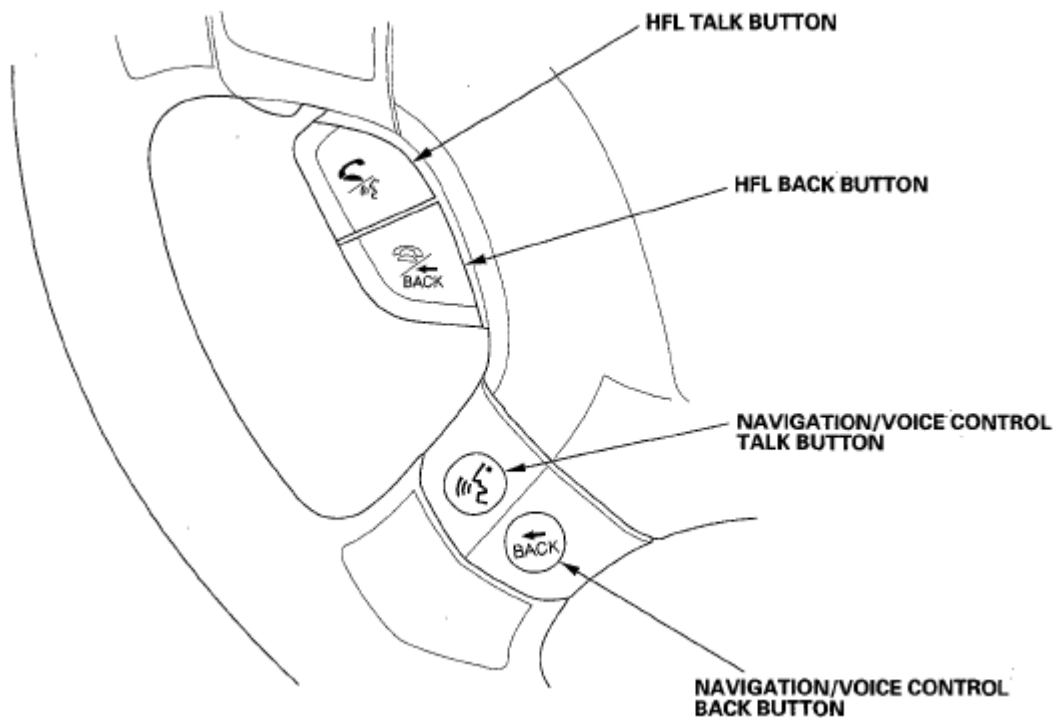


Fig. 12: Identifying Back And Talk Button
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Glossary

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

ITEM DEFINITION CHART

Item	Definition
AcuraLink	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.
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 below)
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 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 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

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	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 client 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 client FAQs, and troubleshooting information.
F-CAN	Fast CAN Bus (see CAN above)
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.
GPS	Global Positioning System. A network of 24 satellites in orbit around the earth. The navigation system can simultaneously receive signals from up to 12 satellites to accurately position the vehicle on the map.
HDS	Honda Diagnostic System. A hand held tablet PC used for diagnosing vehicle problems. This device can be used to obtain DTC codes for diagnosis of the navigation system and CAN related problems.
HIP (AcuraLink)	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.
HFL	HandsFreeLink uses Bluetooth technology as a wireless link between it and a Bluetooth compatible cell phone. See the vehicle Owner's manual or Quick Start Guide for more information.
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.
Interface Dial	This control device consists of a rotating knob and the buttons surrounding it. This device allows control of the navigation, audio, and climate functions displayed on the screen.
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

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	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
MP3 music files	MP3 is an audio coding format. MP3 is a popular audio compression format on the Internet and computers. CDs and PC cards mid three files can be played on some vehicle audio system.
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 Off Road Tracking (Breadcrumbs) .
Off Route	This occurs when the user leaves mapped roads. Off road tracking dots ("breadcrumbs") are displayed if the option is enabled in Setup. 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.
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 client to protect personal information.
POI	Point Of Interest. These are the businesses, schools, etc. found under the "places" option on the main menu.
Polygon	Colored areas on the map screen denoting parks, schools, etc. See the Navigation System Manual "Driving to Your Destination" for a list of the assigned colors.
QWERTY	Keyboard layout resembling the typewriter keys. The keyboard layout can be changed to an alphabetical layout in the Setup mode.
SCS connector	The 2-pin connector used to put the navigation system into the diagnostic mode.
Security Code	Code needed to activate the navigation system. You can obtain 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 control unit.
Tuning	A continual update of internal navigation system scaling factors. See the individual sensor tuning discussions under either " SYSTEM DESCRIPTION " or " SYSTEM DIAGNOSTIC MODE ".
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.

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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 overview for more information.
VSP	Vehicle Speed Pulse. This pulse signal coming from the PCM (via the CSS) is used to update the vehicle position on the map. These pulses do not indicate direction (forward or backward). When in reverse, the navigation receives a signal and directs the VP to move backwards on the map.
WMA music file	Windows media audio file. This is an accepted format for music file to be played on either a CD or PC card.
XM	This device receives information from the XM satellites and passes XM audio information to the audio unit. In addition, traffic information is sent to the navigation unit.
Yaw Sensor	This device is located in the navigation system control unit and senses the side-to-side twisting force generated when the vehicle turns. See <u>Yaw Rate-Lateral Acceleration Sensor</u> .

System Function Diagram

This diagram shows the features of the navigation system starting at the center and working outward in layers. The navigation program starts at "Key ON", and then displays the globe screen. Once the disclaimer screen is acknowledged, the next shaded portions of the diagram become active. However, some functions of the INFO and SET UP buttons, and all functions of the AUDIO and A/C buttons can be accessed immediately after the globe screen (white).

The items above the map screen show various ways to set a destination, such as "Go Home." Once you begin driving to your destination, you are provided with map/voice guidance, routing cautions (in unverified areas), and a directions list. While driving to your destination, use the voice control system as much as possible to interact with the navigation, audio, and climate control systems.

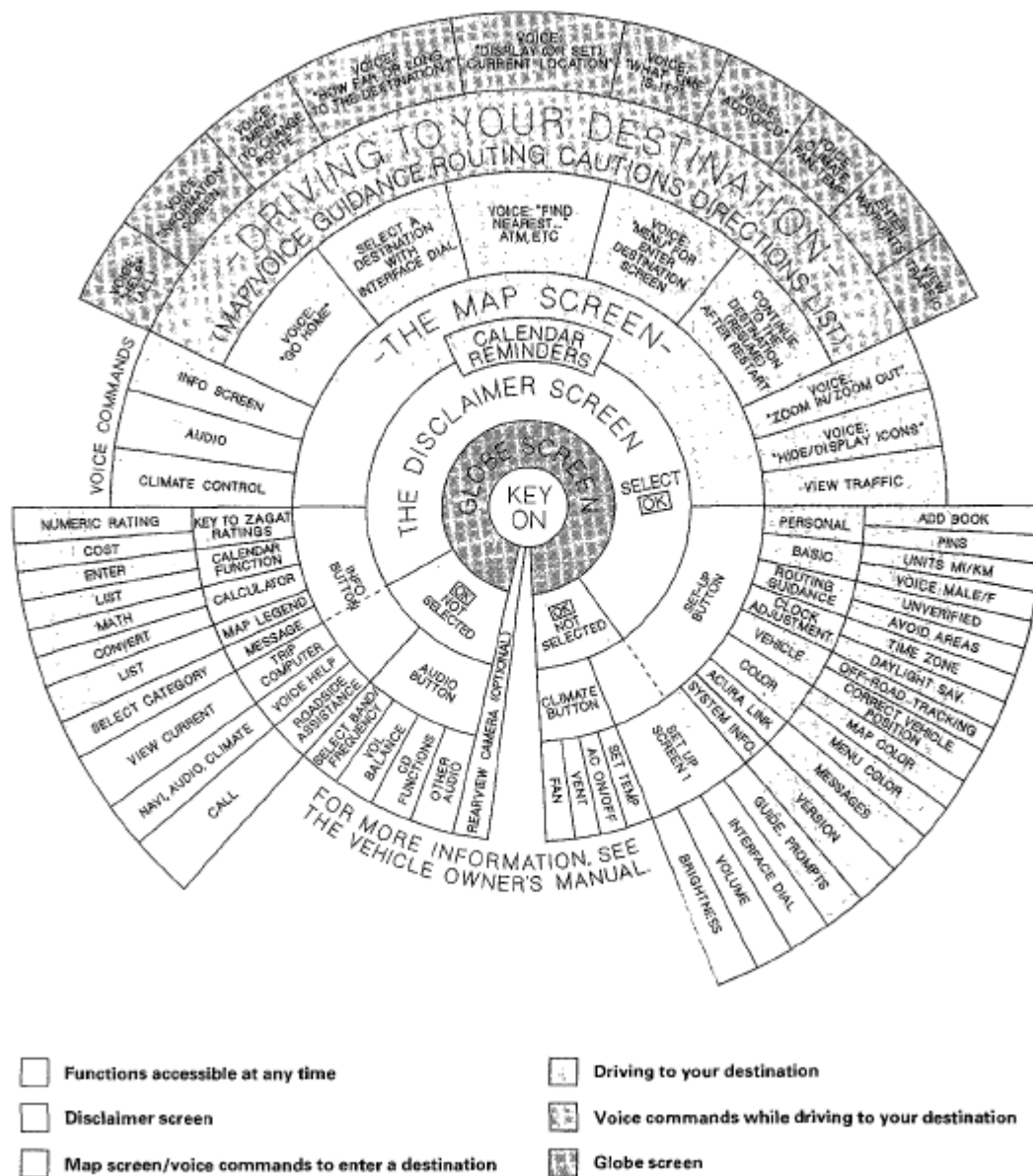


Fig. 13: Navigation System - Function Diagram
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Diagnostic System Diagram

This diagram represents the diagnostic "slice" in the Navigation Functional diagram. The diagram shows an overview 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 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.

If the factory asks you to insert a PCMCIA memory card into the PC Slot, insert the PC, card and the menu options referring to the PC card become available.

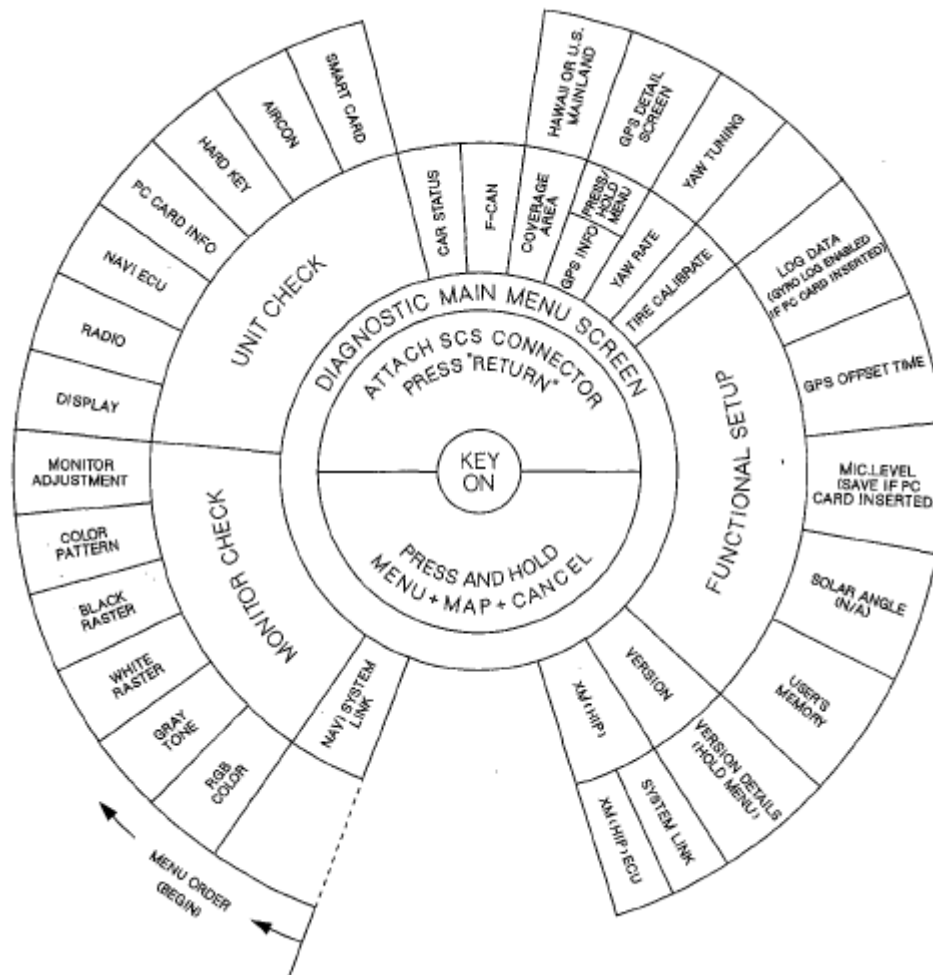


Fig. 14: Navigation Functional Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION UNIT INPUTS AND OUTPUTS

Navigation Unit Connector A (20P)

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

Wire side of female terminals

Fig. 15: Identifying Navigation Unit Connector A (20P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION UNIT CONNECTOR REFERENCE

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Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	RSIG (Red signal)	Red color signal	0.2 VAC Average	If open: Red color missing (see " RGB COLOR " diagnostic). If short to ground: Red color missing (see " RGB COLOR " diagnostic).
2	RED	GSIG (Green signal)	Green color signal	0.2 VAC Average in RGB diagnostic mode	If open: Green color missing (see " RGB COLOR " diagnostic). If short to ground: Green color missing (see " RGB COLOR " diagnostic).
3	GRY (1)	SHSIG (Shield signal)	Shield for No. 1, 2, 11, 12, 13 terminals	0 V	If open: No change to display. If short to ground: No change to display.
4	ORN	A/C-SI (Air conditioner serial in)	Communication signal for climate control unit	-	-
5	GRY	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 (10A) 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: <ol style="list-style-type: none"> 1. System Links FI-ECU, and Meter both show "NG." 2. F-CAN diagnostic = "NG." 3. B-CAN diagnostic = "NG." 4. Car status CHG (CAN) = 0. 5. Functional Setup, Trip info, FUP & Sampled FL = 0. If short to ground: Same diagnostic conditions as when open, and also sets the following DTCs.

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					<ul style="list-style-type: none"> • 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)	SH DISP BUS (Shield display bus)	Shield for display bus No. 10, 20 terminals	0 V	If open: No change to display. If short to ground: No change to display.
10	GRN	DISP BUS (+) (Display bus positive)	Data bus (+) GA-Net	0-5 V pulses average 2.5 V depends on bus traffic	If open: Navigation buttons do not work. If short to ground: Navigation buttons 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.					

Navigation Unit Connector A (20P)

NAVIGATION UNIT CONNECTOR REFERENCE

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
11	YEL	BSIG (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	CSIG (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.

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14	PUR	A/C-SO (Air conditioner serial out)	Communication signal for climate control unit	-	-
15	BRN	A/C-CLK (Air conditioner clock)	Check signal for climate control unit	-	-
17	WHT	JOG (Jog)	Interface dial operation signal	0-5 V pulses	If open: You cannot operate navigation system If short to ground: You cannot operate navigation system
18	BLK	CAN-L (CAN low)	F-CAN bus communication	Pulses 2.5-6 V 2.5 V average (depends on Bus traffic)	<p>If open:</p> <ol style="list-style-type: none"> 1. System Links PCM, and Gauge Control Module both show "NG." 2. F-CAN diagnostic = "NG." 3. B-CAN diagnostic = "NG." 4. Car status CHG (CAN) = 0. 5. Functional Setup, Trip info, FUP & Sampled FL = 0. <p>If short to ground: Same diagnostic conditions as when open, and also sets the following DTCs.</p> <ul style="list-style-type: none"> • 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)
	GRY	SH JOG	Shield for interface		

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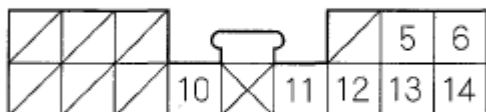
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19	(1)	(Shield jog)	dial signal	-	-
20	RED	DISP BUS(-) (Display bus negative)	Data bus (-) GA-Net	0-5 V pulses 2.5 V average (depends on BUS traffic)	If open: Navigation buttons do not work. If short to ground: Hard buttons work OK.

(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 B (14P)



Wire side of female terminals

Fig. 16: Identifying Navigation Unit Connector B (14P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION UNIT CONNECTOR REFERENCE

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
5	GRN	RGL(+) (Route guidance voice left positive)	Left audio signal of voice guidance, and Voice Recognition (VR) prompts	Audio signal 0.004-0.04 V	If open: If voice activated, the front speakers buzz; if voice off, no effect. If short to ground: If voice activated, the front speakers buzz; if voice off, no effect.
6	GRN	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	PUR	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

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				button pressed)	buttons do not work.
11	GRY (1)	SH RG (Shield route guidance)	Shield for No. 5,12 terminals	0 V	If open: No effect on voice output. If short to ground: No effect on voice output.
12	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)	SHMIC (Shield mic)	Shield for No. 6,14 terminals	0 V	If open: No effect on voice control. If short to ground: No effect on voice control.
14	RED	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. 17: Identifying Navigation Unit Connector C (8P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION UNIT CONNECTOR REFERENCE

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	+B (+B Power	Continuous power	Battery voltage	If open: Display picture goes out (display back light still on). NOTE:

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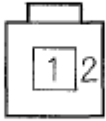
		source)	source		System will reboot to "enter code" screen. If short to ground: Blows fuse No. 7(10A) in the driver's under-dash fuse/relay box.
2	PUR	ACC (Accessory)	Power source for accessories	Battery voltage at ACC (I)	If open: Display picture goes out (display back light still on). If short to ground: Blows fuse No. 32 (10A) in the under-dash fuse/relay box.
4	BLK	GND (Ground)	Ground for navigation unit	0 V	If open: No effect on system. If short to ground: No effect on system.
5	BRN	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 (7.5A) in the driver's under-dash fuse/relay box.
6	BLU	VSP (Vehicle speed pulse)	Vehicle speed pulse signal from PCM	Pulses 0-5 V: 2.5 V average (depends on Bus traffic)	If open: No vehicle speed pulses. Diagnostic screen "Car Status," VSP Navi = 0. If short to ground: No vehicle speed pulses. Diagnostic screen "Car Status," VSP Navi = 0.
7	GRN	DIAG P (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.
8	YEL	DIAG N (Diagnostic negative)	Ground for service check signal	0 V	If open: No effect on system. If short to ground: No effect on system.

NAVIGATION UNIT INPUTS AND OUTPUTS

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Navigation Unit Connector E (2P)



Wire side of female terminals

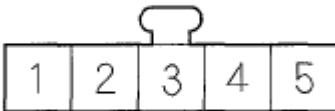
Fig. 18: Identifying Navigation Unit Connector E (2P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION UNIT CONNECTOR REFERENCE

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 ground: No effect on system.

NAVIGATION UNIT INPUTS AND OUTPUTS

Navigation Unit Connector F (5P)



Wire side of female terminals

Fig. 19: Identifying Navigation Unit Connector F (5P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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NAVIGATION UNIT CONNECTOR REFERENCE

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom

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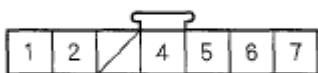
1	WHT	HFL COMM3 (HFL communication 3)	Communication signal for HFL	5 V DC	Solid red HFL icon in Navi System Link
2	RED	HFL COMM4 (HFL communication 4)	Communication signal for HFL	4.5 V DC	Solid red HFL icon in Navi System Link
3	GRN	HFL COMM1 (HFL communication 1)	Communication signal for HFL	5 V DC	HFL icon in Navi System Link changes between red and green
4	BLK	HFL COMM2 (HFL communication 2)	Communication signal for HFL	4.5 V DC	HFL icon in Navi System Link changes between red and green
5	GRY ⁽¹⁾	SH HFL (Shield HFL)	Shield for No. 1, 2, 3, 4 terminals	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.

Without AcuraLink**NAVIGATION UNIT CONNECTOR REFERENCE**

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	GRN	HFL COMM3 (HFL communication 3)	Communication signal for HFL	-	Solid red HFL icon in Navi System Link
2	BLK	HFL COMM4 (HFL communication 4)	Communication signal for HFL	-	Solid red HFL icon in Navi System Link
3	RED	HFL COMM1 (HFL communication 1)	Communication signal for HFL	-	HFL icon in Navi System Link changes between red and green
4	WHT	HFL COMM2 (HFL communication 2)	Communication signal for HFL	-	HFL icon in Navi System Link changes between red and green
5	GRY ⁽¹⁾	SH HFL (Shield HFL)	Shield for No. 1, 2, 3, 4 terminals	-	-

(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

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Fig. 20: Identifying Navigation Unit Connector G (7P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION UNIT CONNECTOR REFERENCE

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
1	WHT	VCC (RC)	Power source for rearview camera	8 V	If open: No rearview camera image in reverse. If short to ground: No rearview camera image in reverse.
2	BLK	GND (RC)	Ground for rearview camera	0 V	If open: No rearview camera image in reverse.
4	RED	VIDEO GND (RC)	Ground for rearview camera video signal	0 V	If open: No rearview camera image in reverse.
5	YEL	VIDEO (RC)	Video signal for rearview camera	0.3 VAC	If open: No rearview camera image in reverse. If short to ground: When put into reverse, navigation screen goes black (display backlight still operative).
6	GRY ⁽¹⁾	SHIELD (RC)	Shield for 1, 2, 4, 5, 7 terminals	-	If open: No rearview camera image in reverse. If short to ground: No rearview camera image in reverse.
7	GRN	SEN (RC)	Control signal for rearview camera	0-1 V	If open: No rearview camera image in reverse. If short to ground: No rearview camera image in reverse.
(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 UNIT INPUTS AND OUTPUTS FOR 20P CONNECTOR



Wire side of female terminals

Fig. 21: Identifying Display Unit 20P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

NAVIGATION UNIT CONNECTOR REFERENCE

Terminal Number	Wire Color	Terminal Name	Description	Voltage (about)	Symptom
					If open: Screen completely off (no

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1	WHT	+B (+B power source)	Continuous power source	Battery voltage	backlight visible). If short to ground: Blows fuse No. 7 (10A) in the driver's under-dash fuse/relay box.
2	PUR	ACC (Accessory)	Power source for accessory	Battery voltage at ACC (I)	If open: Display and buttons do not work. If short to ground: Blows fuse No. 32 (10A) in the driver's under-dash fuse/relay box.
5	GRN	DISP BUS(-f) (Display bus positive)	Data bus (+) GA-Net	0-5 V pulses average 2.5 V depends on bus traffic	If open: Navigation buttons do not work. If short to ground: Navigation buttons do not work.
6	GRN	SCTY(+) (Security positive)	Security signal	0 V	If open: If security system set, it will not trip when screen is removed. If short: If security system set, it will not trip when screen is removed.
8	WHT	RSIG (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).
9	RED	GSIG (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).
10	BLK	GND (Ground)	Ground for display unit	0 V	If open: No change to display. If short to ground: No change to display.
11	LT BLU	ILL(+) (Illumination positive)	Parking light on signal from dash and console light	Lights on: battery voltage, Lights off: 0 V	If open: When brightness "Auto," then night mode for the display is inoperative when lights on. If short to ground: Blows small light relay

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					in under-hood fuse/relay box.
14	GRY (1)	SH DISP BUS (Shield display bus)	Shield for display bus No. 5, 16 terminals	0 V	If open: No change to display. If short to ground: No change to display.
15	RED	DISP BUS(-) (Display bus negative)	Date bus (-) GA-Net	0-5 V pulses average 2.5 V depends on bus traffic	If open: Navigation buttons do not work. If short to ground: Hard buttons work OK.
16	BRN	SCTY(-) (Security negative)	Security signal	0 V	If open: If security system set, it will not trip when screen is removed. If short: If security system set, it will not trip when screen is removed.
17	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.
18	YEL	BSIG (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).
19	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.
20	GRY (1)	SH SIG (Shield signal)	Shield for No. 8, 9, 17, 18, 19 terminals	0 V	If open: No change to display. If short to ground: No change to display.

(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 unit 20P connector

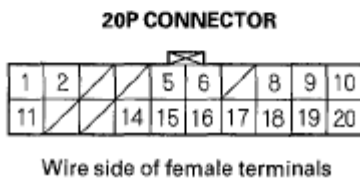
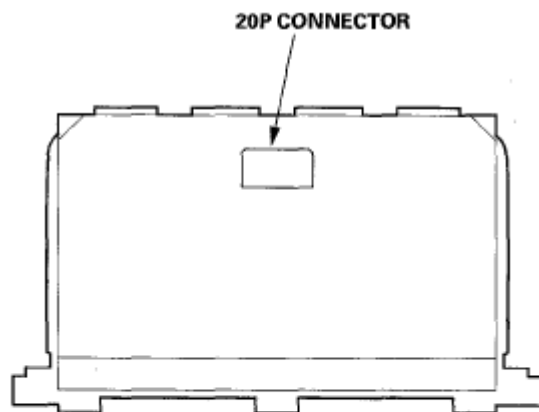


Fig. 22: Identifying Display Unit 20P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Navigation unit connectors

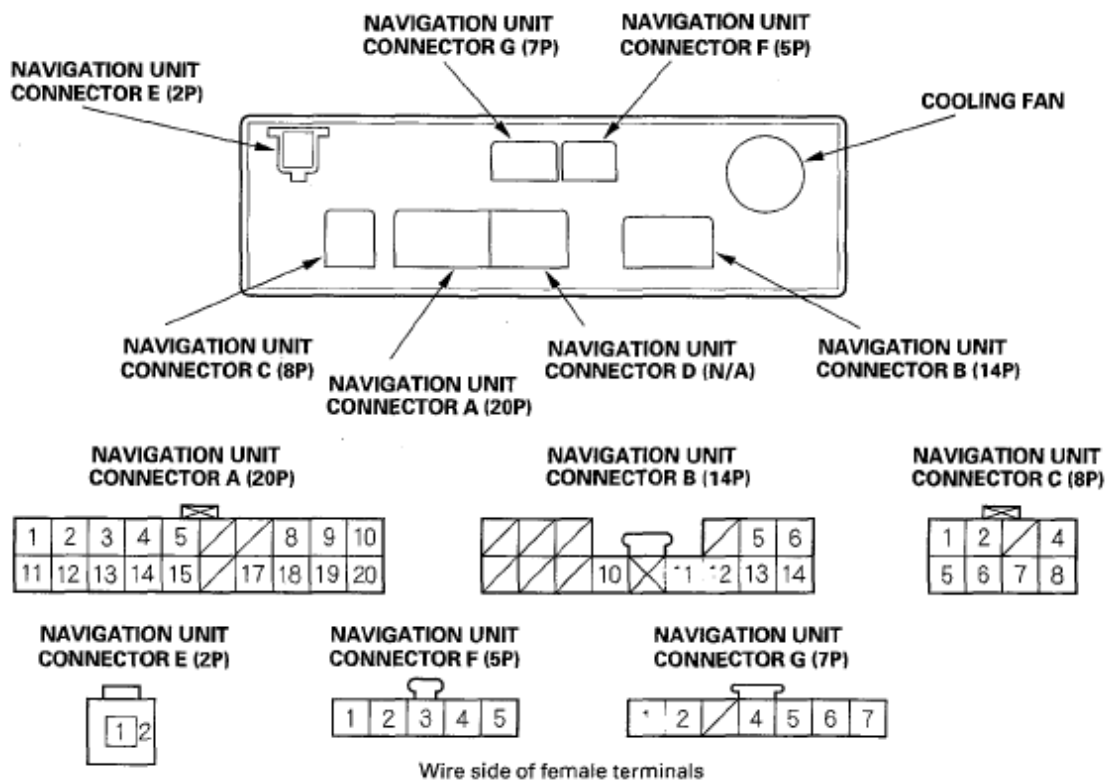


Fig. 23: Identifying Navigation Unit Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM

With AcuraLink

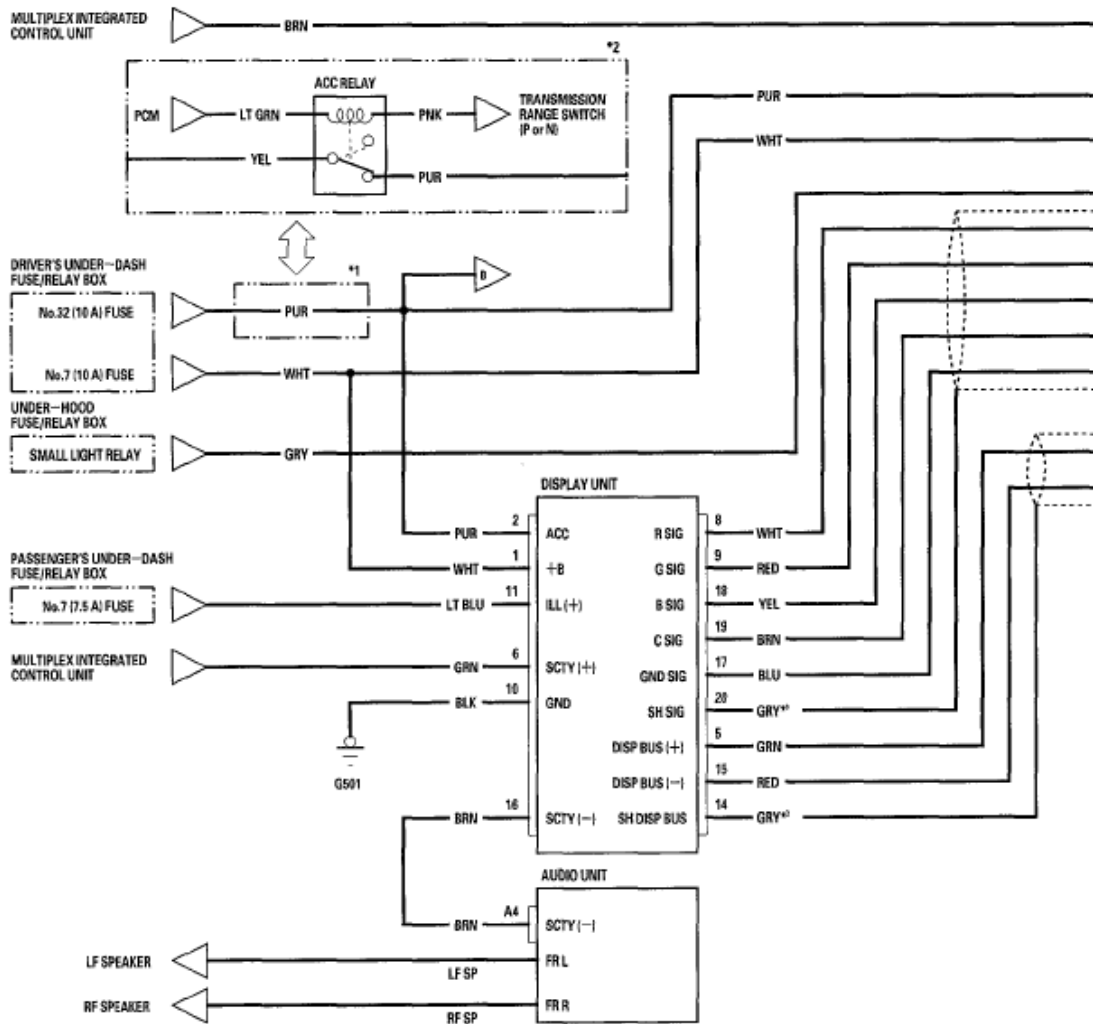


Fig. 24: Navigation System (With AcuraLink) - Circuit Diagram (1 Of 2)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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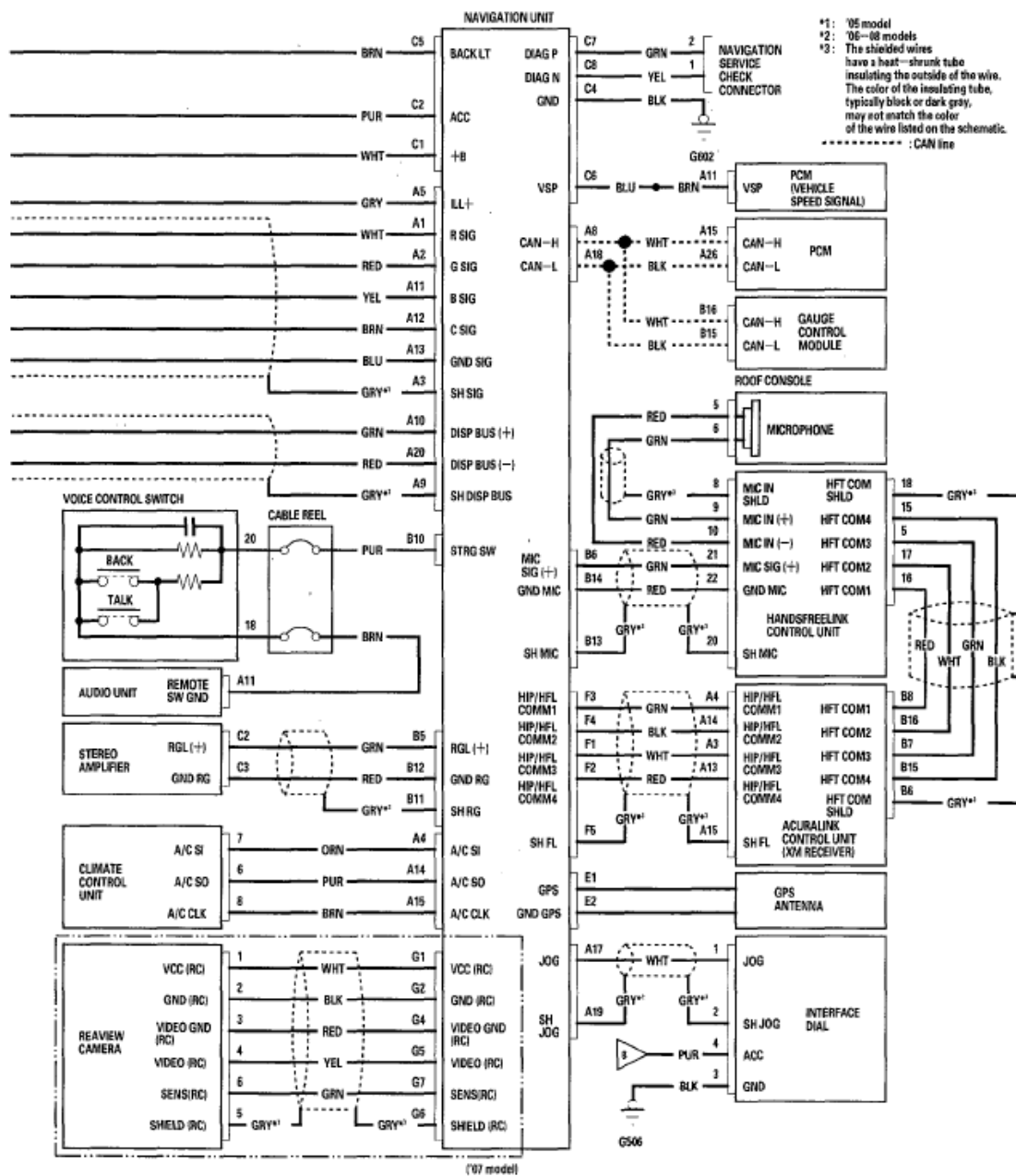


Fig. 25: Navigation System (With Acuralink) - Circuit Diagram (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Without AcuraLink

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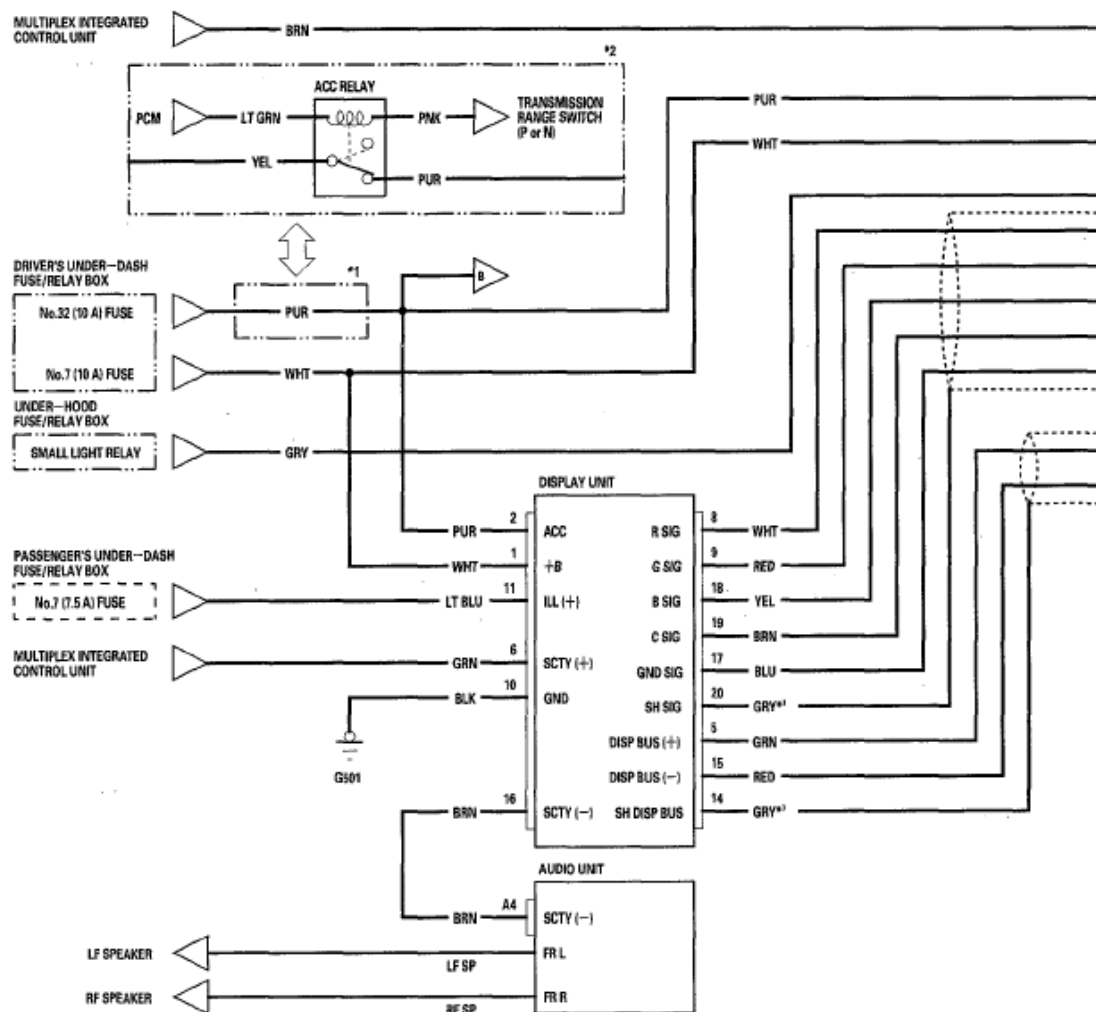


Fig. 26: Navigation System (Without Acuralink) - Circuit Diagram (1 Of 2)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

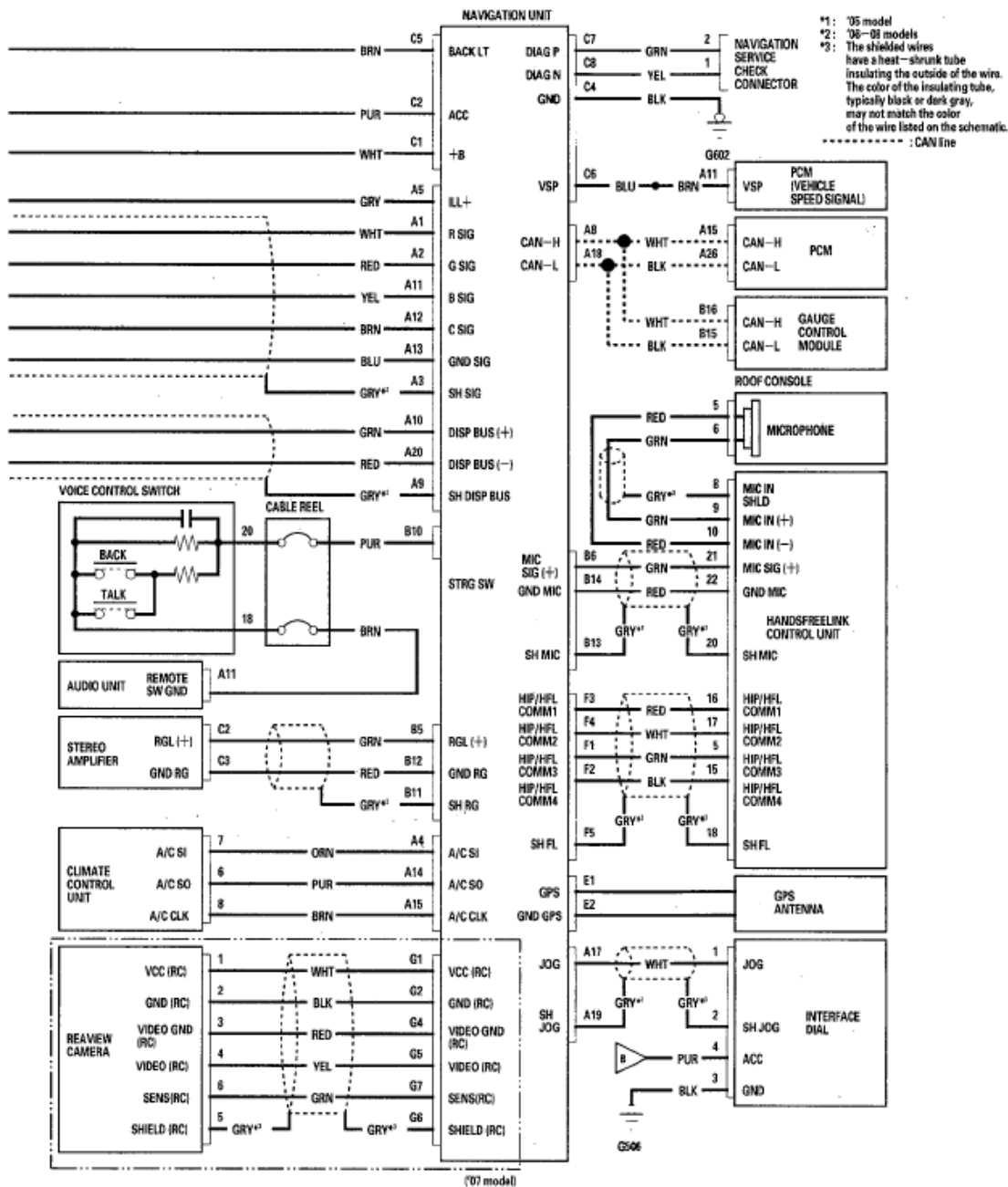


Fig. 27: Navigation System (Without Acuralink) - Circuit Diagram (2 Of 2)

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.
- Always make sure that the correct DVD color and version are installed.
- Inspect the DVD for dirt or damage.

- Check on-line for service bulletins or other service information for the navigation system.
- Always check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the anti-theft code for the audio system and the navigation system.
- Enter the anti-theft codes for the audio system and the navigation system.

1. Check the No. 5 (7.5A), No. 7 (10A) fuse and No. 32 (10A) fuse in the driver's 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 ACC (I).
3. Operate the radio and listen to the audio.

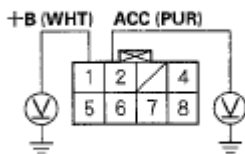
Can you hear the audio?

YES - Go to step 4.

NO - Check the ACC circuit.

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

NAVIGATION UNIT CONNECTOR C (8P)



Wire side of female terminals

Fig. 28: Measuring Voltage Between Body Ground And Navigation Unit Connector C (8P) No. 1, 2 Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

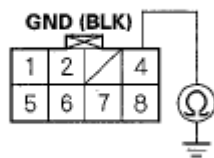
YES - Go to step 6.

NO - If the +B wire does not have voltage, repair open in the wire between the driver's under-dash

fuse relay box and the navigation unit. If the ACC wire does not have voltage, repair open in the wire between the driver's under-dash fuse/relay box and the navigation unit.

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

NAVIGATION UNIT CONNECTOR C (8P)



Wire side of female terminals

Fig. 29: Checking Continuity Between Navigation Unit Connector C (8P) No. 4 Terminal And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 9.

NO - Repair open in the wire between the navigation unit and body ground (G602).

9. Reconnect navigation unit connector C (8P).
10. 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 11.

11. Shield the display unit 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 unit (see **NAVIGATION DISPLAY UNIT REMOVAL/INSTALLATION**).

NO - Go to step 12.

12. Turn the ignition switch ON (II).

13. Measure the voltage between body ground and display unit 20P connector No. 1 and No. 2 terminals individually.

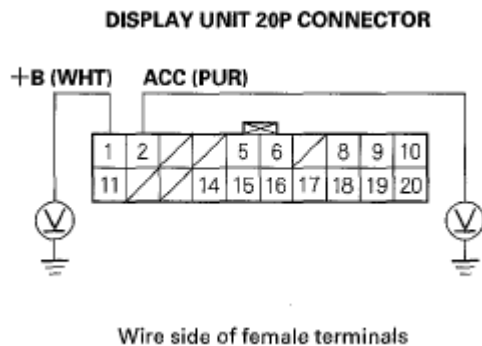


Fig. 30: Measuring Voltage Between Body Ground And Display Unit 20P Connector No. 1, 2 Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Replace the display unit.

NO - If the +B wire does not have voltage, repair an open in the wire between the driver's under-dash fuse relay box and the display unit 2P connector. If the ACC wire does not have voltage, repair an open in the wire between the under-dash fuse/relay box and the display unit 20P connector.

VEHICLE POSITION ICON CONSTANTLY LEAVES ROAD, MOVES ERRATICALLY, OR IS VERY FAR FROM ACTUAL POSITION

NOTE:

- This is not same condition as when driving off-road (or on a fire or logging road). This condition is caused by a loss of map matching from a bad sensor input. Check for after market or other objects that can block the GPS signal. Always perform Map matching (see MAP MATCHING) before proceeding with the troubleshooting.
- Always make sure that the correct DVD color and version are installed.
- Check on-line for service bulletins or other service information for the navigation system.
- Inspect the DVD for dirt or damage.

1. Check the GPS icon on the navigation picture.

Is the GPS icon white?

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 Menu, and use the "Yaw Rate" test (see YAW RATE TUNING) to check the

yaw rate sensor.

3. Go into the Diagnostic Menu, and use the "Car Status" test (see **CAR STATUS**) to check the vehicle speed pulse.

Are the yaw rate sensor and vehicle speed pulse OK?

YES - The problem may be normal. Check to see if the problem occurs in the same place. If it does, the problem could be in the database. Go to step 4.

NO - If the problem is the yaw rate sensor, replace the navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**). If the problem is the vehicle speed pulse, check for an open or short in the wire between the navigation unit and the PCM. If the wire is OK, substitute a known-good navigation unit and recheck. If there is still no VSP signal, replace the ECM/PCM.

4. Substitute a known-good navigation unit, and check to see if the problem occurs in the same place.

Does the problem occur in the same place?

YES - The problem is in the database. Report the problem according to the Navigation System Manual under "Reporting Errors."

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

PICTURE IS MISSING A COLOR OR TONE OR IS AN ODD COLOR

NOTE:

- Always make sure that the correct DVD color and version are installed.
- Inspect the DVD for dirt or damage.
- Check on-line for service bulletins or other service information for the navigation system.
- Always check the navigation screen settings for brightness, contrast, black level and the color screen for map color and menu color.
- Always check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.
- Check the vehicle battery condition first.
- Enter the anti-theft codes for the audio system and the navigation system.

1. Go into the Diagnostic menu, and use "RGB Color" test under Monitor Check (see **MONITOR CHECK**).

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

YES - The system is OK at this time.

NO - Go to step 2.

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2. Turn the ignition switch to OFF.
3. Disconnect navigation unit connector A (20P) and the display unit 20P connector.
4. Check for loose terminals at navigation unit connector A (20P) and the display unit 20P connector.

Are there loose terminals?

YES - Repair the terminal.





NO - Go to step 5.

5. Check for continuity between the appropriate terminals of navigation unit connector A (20P) and the display unit 20P connector based on the missing color(s).

NAVIGATION UNIT CONNECTOR REFERENCE

Missing color	Navigation unit connector A (20P)	Display unit 20P connector	Wire color
Blue	A11	18	YEL
Green	A2	9	RED
Red	A1	8	WHT

NAVIGATION UNIT CONNECTOR A (20P)

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

Wire side of female terminals

Fig. 31: Identifying Navigation Unit Connector A (20P) Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DISPLAY UNIT 20P CONNECTOR



1	2			5	6		8	9	10
11			14	15	16	17	18	19	20

Wire side of female terminals

Fig. 32: Identifying Display Unit Connector (20P) Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 6.

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

6. Check for continuity between the appropriate terminals of navigation unit connector A (20P) and the display unit 20P connector based on the missing color(s).

NAVIGATION UNIT CONNECTOR REFERENCE

Missing color	Navigation unit connector A(12P)	Display unit 20P connector
Blue	A11	10, 20
Green	A2	10, 20
Red	A1	10, 20

NAVIGATION UNIT CONNECTOR A (20P)



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. 33: Identifying Navigation Unit Connector A (20P) Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DISPLAY UNIT 20P CONNECTOR



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. 34: Identifying Display Unit Connector (20P) Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - There is a short to body ground in the circuit between the display unit and the navigation unit. Replace the affected shielded harness.

NO - Replace the navigation unit. If the problem is still unresolved, replace the display unit.

PICTURE HAS LINES OR ROLLS

Diagnostic Test: Monitor Check

NOTE:

- Check the vehicle battery condition first.
- Always check the navigation screen settings for brightness, black level and the color screen for map color and menu color.
- Always check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.
- Always make sure that the correct DVD color and version are installed.
- Inspect the DVD for dirt or damage.
- Check on-line for service bulletins or other service information for the navigation system.
- Enter the anti-theft codes for the audio system and the navigation system.

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. Start up the navigation picture.

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

YES - Check for an open or short to ground in the C SIG wire from navigation unit connector A (20P) No. 12 terminal to display unit 20P connector No. 19 terminal. Also check for a short to ground between display unit 20P connector No. 19 terminal and No. 20 terminal.

NO - Go to step 3.

3. Go into the Diagnostic mode, and use "RGB Color" diagnostic under Monitor Check (see **MONITOR CHECK**).

Is the picture missing a red, green or blue color?

YES - Do troubleshooting for the picture is missing a color or tone or is an odd color (see **PICTURE IS MISSING A COLOR OR TONE OR IS AN ODD COLOR**).

NO - Go to step 4.

4. Turn the ignition switch to LOCK (0).
5. Substitute a known-good display unit (see **NAVIGATION DISPLAY UNIT REMOVAL/INSTALLATION**), and recheck.

Is the picture OK?

YES - Check for loose connections, then replace the original display unit (see **NAVIGATION DISPLAY UNIT REMOVAL/INSTALLATION**).

NO - Check for loose connections and recheck. If a poor connection or loose terminal is found, replace the shielded harness. If no poor or loose terminals are found, substitute a known-good navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**) and recheck. If the problem is gone, replace the original navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

INTERFACE DIAL BUTTONS DO NOT WORK

NOTE:

- **Check the vehicle battery condition first.**
- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.**
- **After troubleshooting, enter the navigation system anti-theft code.**
- **Always make sure that the correct DVD color and version are installed.**
- **Inspect the DVD for dirt or damage.**
- **Enter the anti-theft codes for the audio system and the navigation system.**

1. Turn the ignition switch to ON (II).
2. Go into the Diagnostic mode, and use "Hard Key" test under Unit Check (see **UNIT CHECK**).

Do the buttons work properly?

YES - The system is OK at this time.

NO - Go to step 3.

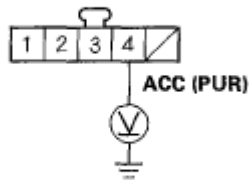
3. Try all the buttons on the navigation system.

Is there a specific row or columns of buttons, set of buttons, or a certain button that does not respond properly (i.e. pressing a button in the lower left corner causes a button in the lower right corner to respond.)?

YES - Replace the interface dial (see **NAVIGATION DISPLAY UNIT REMOVAL/INSTALLATION**).

NO - Go to step 4.

4. Turn the ignition switch to ON (II).
5. Measure the voltage between the interface dial 5P connector No. 4 terminal and body ground.

INTERFACE DIAL 5P CONNECTOR

Wire side of female terminals

Fig. 35: Measuring Voltage Between Interface Dial 5P Connector No. 4 Terminal And Body Ground

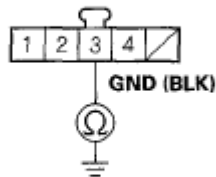
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 6.

NO - Repair open in the wire between the under-dash fuse/relay box and the interface dial.

6. Turn the ignition switch to LOCK (0).
7. Disconnect the interface dial 5P connector.
8. Check for continuity between interface dial 5P connector No. 3 terminal and body ground.

INTERFACE DIAL 5P CONNECTOR

Wire side of female terminals

Fig. 36: Checking Continuity Between Interface Dial 5P Connector No. 3 Terminal And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

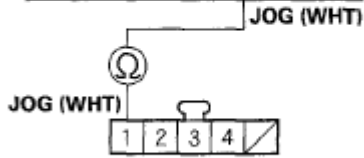
Is there continuity?

YES - Go to step 9.

NO - Repair open in the wire between the interface dial and body ground (G506).

9. Check for continuity between navigation unit connector A (20P) No. 17 terminal and interface dial 5P connector No. 1 terminal.

NAVIGATION UNIT CONNECTOR A (20P)



INTERFACE DIAL 5P CONNECTOR
Wire side of female terminals

Fig. 37: Checking Continuity Between Navigation Unit Connector A (20P) No. 17 Terminal And Interface Dial 5P Connector No. 1 Terminal

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Check for an open in the wire between the navigation unit connector A (20P) No. 19 terminal and the interface dial 5P connector No. 2 terminal. If the wire is OK, go to step 10. If the wire is open, repair the wire.

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

10. Substitute a known-good interface dial (see **NAVIGATION DISPLAY UNIT REMOVAL/INSTALLATION**), and recheck.

Is the system OK?

YES - Replace the original interface dial (see **NAVIGATION DISPLAY UNIT REMOVAL/INSTALLATION**).

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

GPS ICON IS WHITE OR NOT SHOWN

Diagnostic Test: Navi System Link

NOTE:

- Check the vehicle battery condition first.
- Make sure the vehicle is parked outside and away from buildings.
- Refer to **GPS INFORMATION** for realtime 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. 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 rear 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.**
- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.**
- **After troubleshooting, enter the anti-theft codes for the audio system and the navigation system.**
- **Make sure the correct colored DVD and DVD version are installed.**
- **Inspect the DVD for damage.**

1. Press the display unit SET-UP button.
2. Check the volume and voice feedback setting for the navigation system in set-up.

Is either set to OFF?

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

NO - Go to step 3.

3. Check the radio operation.

Can you hear the radio?

YES - Go to step 4.

NO - Troubleshoot the audio system.

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

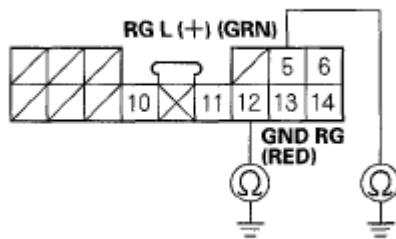
Is the "Radio" icon red?

YES - Troubleshoot the audio system.

NO - Go to step 5.

5. Turn the ignition switch OFF.
6. Disconnect navigation unit connector B (14P) and amplifier unit connector C (23P).
7. Check for continuity between body ground and navigation unit connector B (14P) No. 5 and No. 12 terminals individually.

NAVIGATION UNIT CONNECTOR B (14P)



Wire side of female terminals

Fig. 38: Checking Continuity Between Body Ground And Navigation Unit Connector B (14P) No. 5 And No. 12 Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

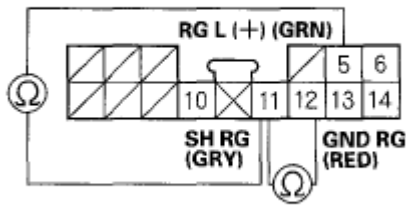
Is there continuity?

YES - Repair short to ground in the harness between the navigation and amplifier units. Replace the affected shielded harness.

NO - Go to step 8.

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

NAVIGATION UNIT CONNECTOR B (14P)



Wire side of female terminals

Fig. 39: Checking Continuity Between Navigation Unit Connector B (14P) No. 11 Terminal And No. 5 And No. 12 Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

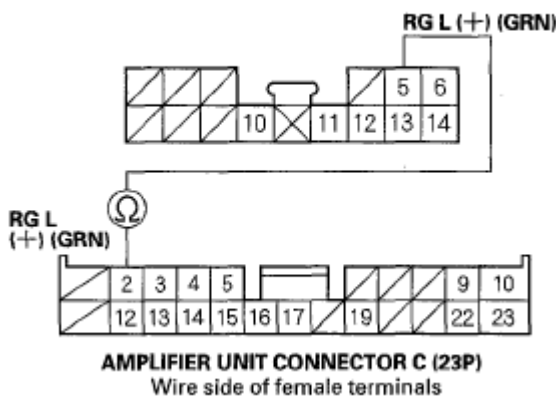
Is there continuity?

YES - Repair short to ground in the harness between the navigation and amplifier units. Replace the affected shielded harness.

NO - Go to step 9.

9. Check for continuity between navigation unit connector B (14P) No. 5 terminal and the amplifier unit connector C (23P) No. 2 terminal.

NAVIGATION UNIT CONNECTOR B (14P)



AMPLIFIER UNIT CONNECTOR C (23P)

Wire side of female terminals

Fig. 40: Checking Continuity Between No. 5 Terminal And Amplifier Unit Connector C (23P) No. 2 Terminal

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

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

10. Check for continuity between navigation unit connector B (14P) No. 12 terminal and amplifier unit

connector C (23P) No. 3 terminal.

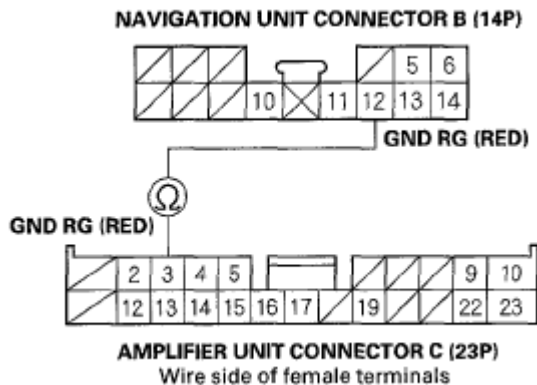


Fig. 41: Checking Continuity Between No. 12 Terminal And Amplifier Unit Connector C (23P) No. 3 Terminal

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

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

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

Is the system OK?

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

NO - Replace the amplifier unit.

VOICE CONTROL DOES NOT WORK/RESPOND

NOTE:

- Always make sure that the correct DVD color and version are installed.
- Check on-line for service bulletins or other service information for the navigation system.
- Before assuming that a voice complaint is hardware related, ensure that the voice control system is being operated correctly.
 - Make sure you are on the correct screen when trying to issue a voice command. For instance, the command "Find the nearest Italian Restaurant" only works on 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.
- Always 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 anti-theft codes for the audio system and the navigation system, 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. Go into the Diagnostic Menu, and use the "Mic Level" test 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 2.

NO - Check for an open or short to ground on navigation unit connector B (14P) No. 10 terminal.

2. Use the "Mic Level" diagnostic under Functional Set-up (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 Manual).

NO - Check for a loose front map light (microphone) assembly. If OK, check for an open or short to ground on navigation unit connector B (14P) No. 6 and No. 14 terminals.

DVD SCREEN ERROR MESSAGES

Diagnostic Test: Car Status

NOTE:

- Refer to General Troubleshooting for a list of common DVD screen error messages and the probable cause (see **ERROR MESSAGE TABLE**).

- **Go into the Diagnostic mode and use the "Car Status" diagnostic (see CAR STATUS) to check the status of the DVD lid.**

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 DVD-ROM/CD-ROM REPLACEMENT).

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:

- **Always check for and resolve all CAN DTCs before troubleshooting the navigation system.**
- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.**
- **After troubleshooting, enter the anti-theft codes for the audio system and the navigation system.**
- **Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode and use Version (see VERSION).**
- **Always make sure that the correct DVD color and version are installed.**
- **Check on-line for service bulletins or other service information for the navigation system.**

1. Connect the HDS to the DLC. Check for B-CAN or F-CAN DTCs in the data list.

Are there any DTCs in the B-CAN or F-CAN system?

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

NO - Go to step 2.

2. Check the navigation system for normal operation.

Does the navigation system function normally in all other operations?

YES - Go to step 3.

NO - Refer to the navigation symptom troubleshooting. Troubleshoot and repair any other problems, then retest.

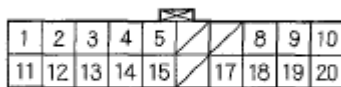
3. Disconnect climate control unit connector (40P) and navigation unit connector A (20P).
4. Check for continuity between climate control unit connector (40P) and navigation unit connector A

2007 Acura RL**2005-08 ACCESSORIES AND EQUIPMENT Navigation System - RL**

(20P) according to the table.

NAVIGATION UNIT CONNECTOR REFERENCE

Climate control unit connector (40P) terminal	Navigation control unit connector A (20P) terminal	Wire color
No. 7	No. 4	ORN
No. 6	No. 14	PUR
No. 8	No. 15	BRN

NAVIGATION UNIT CONNECTOR A (20P)

Wire side of female terminals

Fig. 42: Identifying Navigation Unit Connector A (20P) Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CLIMATE CONTROL UNIT 40P CONNECTOR

Wire side of female terminals

Fig. 43: Identifying Climate Control Unit (40P) Connector Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity on all wires?

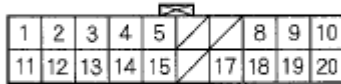
YES - Go to step 5.

NO - Repair open in the affected wire(s) between climate control unit connector (40P) and navigation unit connector A (20P).

5. Check for continuity between each wire in the navigation unit connector (20P) according to the table.

NAVIGATION UNIT CONNECTOR REFERENCE

Navigation control unit connector A (20P) terminal	Wire color
No. 4	ORN
No. 14	PUR
No. 15	BRN

NAVIGATION UNIT CONNECTOR A (20P)

Wire side of female terminals

Fig. 44: Identifying Navigation Unit Connector A (20P) Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity to any other wire?

YES - Repair short in the affected wire(s) between climate control unit connector (40P) and navigation unit connector A (20P).

NO - Go to step 6.

- Check for continuity between navigation unit connector A (20P) and body ground according to the table.

NAVIGATION UNIT CONNECTOR REFERENCE

Navigation control unit connector A (20P) terminal	Wire color
No. 4	ORN
No. 14	PUR
No. 15	BRN

NAVIGATION UNIT CONNECTOR A (20P)

Wire side of female terminals

Fig. 45: Identifying Navigation Unit Connector A (20P) Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

- Turn the ignition switch to ON (II).
- Measure the voltage between navigation unit connector A (20P) No. 4, No. 14, and No. 15 and body ground.

NAVIGATION UNIT CONNECTOR REFERENCE

Navigation control unit connector A (20P) terminal	Wire color

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No. 4	ORN
No. 14	PUR
No. 15	BRN

NAVIGATION UNIT CONNECTOR A (20P)



Wire side of female terminals

Fig. 46: Identifying Navigation Unit Connector A (20P) Wire Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there more than 0.2 V to ground on any wire?

YES - Repair short to power on the affected wire(s).

NO - Go to step 9.

9. Substitute and a known-good climate control unit. Reconnect all connectors and retest.

Does the symptom go away?

YES - Replace the original climate control unit.

NO - Replace the navigation unit.

DISPLAY DAY/NIGHT MODE DOES NOT WORK

NOTE:

- **Make sure the remotes are linked. This is indicated when the MID displays "Welcome Driver 1" or "Welcome Driver 2." If the remotes are not linked, refer to the Owner's manual for more information.**
- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the anti-theft code for the audio system and the navigation system.**
- **After troubleshooting, enter the anti-theft code for the audio system and the navigation system.**
- **Always check for and resolve all CAN DTCs before troubleshooting the navigation system.**
- **Verify that the correct navigation unit is installed for this model.**

Go into the Diagnostic mode and use Version.

- **Always make sure that the correct DVD color and version are installed.**
- **Check on-line for service bulletins or other service information for the navigation system.**

1. Change the day/night mode to auto mode under Set-up, and recheck. Turn the headlights on, and adjust the dash brightness to the middle range.

Does the display change to day and night modes When turning the headlights on and off?

YES - The system is OK at this time.

NO - Go to step 3.

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

Is the "ILL" signal OK?

YES - Go to step 3.

NO - Check the ILL+ circuit for an open or short to ground between the navigation unit and small light relay. If OK, substitute a known-good navigation unit and recheck.

3. Go into the Diagnostic mode and use the Navi System Link diagnostic to check the Air-Con link.

Is the Air-Con link red?

YES - Check the A/C-SI, A/C-SO, and A/C CLK circuits between the HVAC unit and the navigation unit for open or short to ground. If the circuits are OK, substitute a known-good HVAC unit, then the navigation unit until the problem goes away. Replace the original faulty component.

NO - Substitute components in this order until the problem goes away: Navigation unit, HVAC unit, Gauge unit.

SYSTEM LOCKS UP OR FREEZES CONSTANTLY

NOTE:

- **Always check for and resolve all CAN DTCs before troubleshooting the navigation system.**
- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the navigation system anti-theft codes.**
- **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).**

- **Always make sure that the correct DVD color and version are installed.**

- **Check on-line for service bulletins or other service information for the navigation system.**

1. Start the engine, turn the ignition switch OFF, then turn the ignition switch ON (II).

Does the system reboot?

YES - The system is OK at this time.

NO - Check the DVD for scratches or damage and the navigation unit for water damage. If OK, go into the Diagnostic mode and do all of the "Unit Check" diagnostics (see **UNIT CHECK**).

VEHICLE ICON WANDERS ACROSS THE MAP WHEN DRIVING (DOES NOT FOLLOW A DISPLAYED ROAD) OR MAP OR VEHICLE ICON SPINS

NOTE:

- **Always check for and resolve all CAN DTCs before troubleshooting the navigation system.**
- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the navigation system anti-theft codes.**
- **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).**

- **Always make sure that the correct DVD color and version are installed.**
- **Check on-line for service bulletins or other service information for the navigation system.**
- **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 (Yaw rate, GPS, or VSP) 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.**

1. Go into the Diagnostic mode, and do the Navi System Link diagnostic (see **NAVI SYSTEM LINK**), the Navi ECU diagnostic under "Unit Check" (see **UNIT CHECK**), the Car Status check (see **CAR STATUS**), the GPS Information check (see **GPS INFORMATION**), the GPS Detail check (see **GPS DETAIL**), and the Yaw Rate check (see **YAW RATE TUNING**).

Are all the tests OK?

YES - The system is OK at this time.

NO - Repair the affected system. If the problem persists, swap a known-good navigation unit, and monitor the condition.

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

- Check the vehicle battery condition first.
- The system will not operate without the 4-digit security (anti-theft) code. Follow the this procedure. (After 10 consecutive tries, you must cycle the key to continue trying)
- The "Navigation System Diagnosis and Core Return Form" is available on ISIS, under "Job aids" and can be printed out for recording this information. This information will help the remain facility to determine what caused the failure.
- Always check for and resolve all CAN DTCs before troubleshooting the navigation system.
- Always check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.
- Verify that the correct navigation unit is installed for this model.

Go into the Diagnostic mode and use "Version" (see VERSION).

- Always make sure that the correct DVD color and version are installed.
- Check on-line for service bulletins or other service information for the navigation system.
- Enter the anti-theft codes for the audio system and the navigation system.

1. Go into the "System diagnosis menu" (see SYSTEM DIAGNOSTIC MODE), select "Unit check," and then "Navi ECU." A brief diagnostic will run for 20 seconds, and the serial number is then displayed.

Is the serial number displayed?

YES - Go to step 3.

NO - Go to step 2.

2. Check the navigation unit.

Is there a serial number on the label of the underside of the navigation unit?

YES - Go to step 3.

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

3. 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 4.

NO - Call the Warranty Department, the telephone number is listed in the PDI/TQI bulletin, to obtain the code. Then go to step 5.

4. 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 5.

5. Try entering four zeros (0000) in place for the code.

Do the four zeros work to bypass the code screen?

YES - Replace the control unit, and enter "Security code is 0000" in the "problem description field" of the core return form: "Security code is 0000."

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

NAVIGATION DISPLAY STAYS ON WITH IGNITION SWITCH OFF

NOTE:

- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.**
- **After troubleshooting, re-enter the anti-theft code, and re-initialize the navigation system.**
- **The vehicle may have been used for a show event. Check for a short jumper harness in-line with the navigation unit connector C. If a jumper harness is present, remove it and return it to Tech Line.**

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. Check for a short to power on navigation unit connector C (8P) No. 2 terminal.

Is there a short?

YES - Troubleshoot the ACC circuit.

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

NAVIGATION CANNOT CONTROL AUDIO SYSTEM

Diagnostic Test: Navi System Link

NOTE:

- Always check for and resolve all CAN DTCs before troubleshooting the navigation system.
- Always check the connectors for poor connections or loose terminals.
- Before troubleshooting, make sure you have the navigation system anti-theft codes.
- 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).

- Always make sure that the correct DVD color and version are installed.
- Check on-line for service bulletins or other service information for the navigation system.

1. Make sure the anti-theft code for the audio system is entered.
2. Go into the Diagnostic mode, and use the "Navi System Link" diagnostic (see NAVI SYSTEM LINK).

Is the "Radio" icon red?

YES - Do the troubleshooting for the voice guidance cannot be heard (see VOICE GUIDANCE CANNOT BE HEARD, IS BROKEN UP, OR THERE IS STATIC).

NO - Go to step 3.

3. Substitute a known-good navigation unit (see NAVIGATION UNIT REMOVAL/INSTALLATION), and recheck.

Can the navi control audio/disc?

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

NO - Do the audio system troubleshooting.

NAVIGATION CANNOT CONTROL XM RADIO

Diagnostic Test: Navi System Link

NOTE:

- Always make sure that the correct DVD color and version are installed.
- Check on-line for service bulletins or other service information for the navigation system.

1. Make sure the anti-theft code for the audio system is entered.
2. Go into the Diagnostic mode, and use the "Navi System Link" diagnostic (see **NAVI SYSTEM LINK**).

Is the "XM" icon red?

YES - Do the troubleshooting for the voice guidance cannot be heard (see **VOICE GUIDANCE CANNOT BE HEARD, IS BROKEN UP, OR THERE IS STATIC**).

NO - Go to step 3.

3. Substitute a known-good navigation unit (see **NAVIGATION UNIT REMOVAL/INSTALLATION**).

Can the navi control XM radio?

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

NO - Do the audio system troubleshooting.

TRAFFIC INFORMATION IS NOT BEING SHOWN ON MAP SCREEN

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

NOTE:

- Check the vehicle battery condition first.
- Always check for and resolve all CAN DTCs before troubleshooting the navigation system.
- Always 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**).

- Always make sure that the correct DVD color and version are installed.
- Check on-line for service bulletins or other service information for the navigation system.
 - A marginal battery or poorly performing charging system may cause the XM/HIP unit to malfunction.
 - 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 XM/HIP unit 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. Test the battery condition (see **BATTERY TEST**).

Is the battery in good condition?

YES - Go to step 2.

NO - Troubleshoot the battery and/or charging system and recheck.

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

You may have to wait 5 minutes for the traffic display to refresh.

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

YES - Go to step 6.

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.

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

6. Make sure the client's XM NavTraffic account status is active. This account is separate from the regular XM radio subscription, and it has a separate fee.

For the '07 model, real-time traffic is free for the first 3 months. For '05-06 models vehicles, realtime traffic was free for the first 12 months.

To check the XM NavTraffic account status:

- Call XM® Satellite Radio at (800) 852-9696.
- Make sure you have:
 - VIN
 - XM Radio ID (shown on channel 000)
- 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.

Is the XM NavTraffic account status active?

2007 Acura RL

2005-08 ACCESSORIES AND EQUIPMENT Navigation System - RL

YES - Go to step 7.

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, 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 in a clear area with the engine running.
- Turn the audio system on, and tune to an XM radio channel
- Wait 30 minutes.

If the vehicle now receives real-time traffic information, return the vehicle to the client, otherwise go to step 7.

7. Do a VIN status inquiry, and check if the vehicle has any outstanding product updates or service bulletins related to either replacing the AcuraLink control unit ('05 model only) or updating the AcuraLink unit software ('06-08 models).

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 8.

NO - Go to step 8.

8. Verify that you are receiving a signal from XM:
 - Park the vehicle outside with a clear view of the southern sky.
 - Turn on the audio system, and tune to XM channels 000, 001, 174, or 247.

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

YES - Go to step 9.

NO - Refer to **AUDIO SYSTEM** article, troubleshoot the XM radio, and retest. If real-time traffic does not work, go to step 9.

9. Make sure the navigation map is set to either the 1/2, 1, 2, or 5 mile scale. If the scale is not set to one of these values, either rotate the interface dial knob, or use the zoom in/zoom out buttons to adjust the map to proper scale.

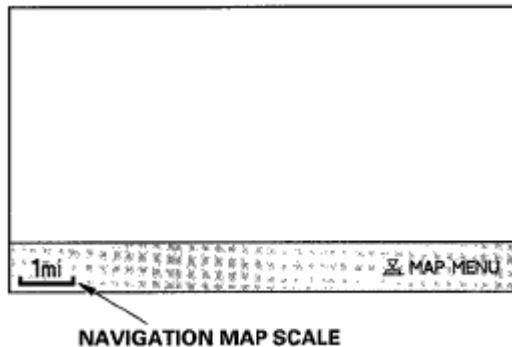


Fig. 47: Locating Navigation MAP Scale
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 10.

10. Make sure the real-time traffic settings are correct.

- Press the map/guide button, then select the map menu by pressing in the selector button.
- Select Show Icon on Map by turning the interface dial, then pressing in the selector button.
- Select the Traffic icon from the icon selection bar at the bottom of the navigation display. The icon should turn solid blue when you select it. If it does not turn solid blue, go to step 11.
- Select icon options by pushing the selector to the right.
- From the Select category for icon settings menu, select the Traffic choice.
- Select traffic speeds by pressing in the selector on the Select Traffic info screen. It should turn solid blue. Turn the interface dial to select Traffic icons, and press in the selector in again. Both Traffic speeds and Traffic Icons must be solid blue. Push the selector to the right (DONE) to complete the process.

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 11.

11. Do the diagnostic mode checks:

- Start the vehicle, and enter the navigation diagnostic mode by pressing and holding the Menu, Map/Guide, and Cancel buttons.
- Select Navi System from the Navigation Diagnosis Items menu, and verify that all the icons are green. If any links/icons are red, refer to the applicable service manual for repair information, then go to step 12.
- Return to the main Navigation Diagnosis Items menu and select XM (HIP), then select XM (HIP) system Link, and verify that the links/icons are green. If any links/icons are red, refer to the applicable service article for repair information, then go to step 12.

12. Confirm the Traffic Channel settings of the AcuraLink unit ('07-08 models).

- Return to the XM (HIP) diagnostic menu.
- Select the XM (HIP) ECU choice.
- Select the Traffic channel choice.

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

- **Confirm the settings:**
 - **SID=225**
 - **APPID=8**
- **Adjust the setting(s) if necessary as any other setting will prevent real-time traffic from displaying. Press the cancel button twice to return to the XM (HIP) diagnostic menu. Select the on-screen Return button to fully exit the diagnostic mode.**
- **Turn the vehicle off. Wait 20 seconds, and start the vehicle.**
- **Park the vehicle outside with a clear view of the southern sky, and verify you are receiving an XM radio signal (see step 8).**

Do you see real-time traffic on the display?

YES - Return the vehicle to the client.

NO - Go to step 13.

13. Reset the AcuraLink unit:

- Make sure you have the anti-theft codes for the audio and navigation system.
- Turn the ignition switch to LOCK (0), then pull the back-up fuse from the under-hood fuse/relay box. For under-hood fuse/relay box location, refer to **UNDER-HOOD FUSE/RELAY BOX** article. Wait 2 minutes, then re-install the fuse.
- Start the vehicle.
- Enter the anti-theft codes for the audio and navigation system.
- Left the navigation system boot, then select one of the traffic scales (1/2, 1, 2, or 5 miles).
- Park the vehicle outside with a clear view of the southern sky, and verify you are receiving an XM radio signal (see step 8).

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

YES - Return the vehicle to the client.

NO - Go to step 14.

14. Substitute a known-good AcuraLink control unit, and retest the vehicle.

Park the vehicle outside with a clear view of the southern sky, and verify you are receiving an XM radio signal (see step 8).

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

YES - Replace the original AcuraLink control unit. Refer to **ACURALINK** article. Register the new AcuraLink control unit with XM radio and Acura Client Services. Return the vehicle to the client.

NO - Substitute a known-good navigation control unit. If the problem goes away, replace the original navigation control unit.

TRIP COMPUTER-NO DISTANCE

Diagnostic Test: Car Status

NOTE:

- **Check the vehicle battery condition first.**
- **Always check for and resolve all CAN DTCs before troubleshooting the navigation system.**
- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.**
- **After troubleshooting, enter the anti-theft codes for the audio system and the navigation system.**
- **Verify that the correct navigation unit is installed for this model. Go into the Diagnostic mode and use "Version" (see **VERSION**).**
- **Always make sure that the correct DVD color and version are installed.**
- **Check on-line for service bulletins or other service information for the navigation system.**

1. Go into the diagnostic mode and use "Car Status" diagnostic (see **CAR STATUS**) to check for a vehicle speed pulse (VSP).

Is there a VSP when the vehicle is moving?

YES - Check the CAN bus wires for an open or short to ground between navigation unit connector A (20P) No. 8 and No. 18 terminals and PCM connector E (31P) No. 15 and No. 26 terminals. If OK, replace the navigation unit.

NO - Check the VSP wire for an open or short to ground between navigation unit connector C (8P) terminal No. 6 and PCM connector E (31P) No. 11 terminal.

TRIP COMPUTER-NO FUEL INFORMATION

Diagnostic Test: Navi System Link

NOTE:

- **Check the vehicle battery condition first.**
- **Always check for and resolve all CAN DTCs before troubleshooting the navigation system.**
- **Always check the connectors for poor connections or loose terminals.**
- **Before troubleshooting, make sure you have the anti-theft codes for the audio system and the navigation system.**

- **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).**
- **Always make sure that the correct DVD color and version are installed.**
- **Check on-line for service bulletins or other service information for the navigation system.**

Perform the "Navi System Link" check (see NAVI SYSTEM LINK) to check the communication line between the PCM (FI-ECU) and the navigation unit.

1. Start the engine.
2. Go into the diagnostic mode and use "Trip Information" diagnostic under Functional Setup (see FUNCTIONAL SETUP).

Are the values greater than zero?

YES - The system is OK.

NO - Check for B or F-CAN DTCs, then troubleshoot them.

REARVIEW CAMERA IMAGE DOES NOT COME ON OR WORK PROPERLY

1. Turn the ignition switch ON (II), and start the engine.

Does the Navigation screen come on and show an image when the vehicle is started?

YES - Go to step 2.

NO - Go to troubleshooting for "**NO PICTURE IS DISPLAYED**" .

2. Go into the diagnostic menu and use the "Navi System Link" test (see NAVI SYSTEM LINK) to check the connection between the navigation unit and the rearview camera. (If there is no "R-camera" link in the "Navi System Link" test, go to step 11).

Is the "R-camera" link red on the screen?

YES - Go to step 3.

NO - Go to step 10.

3. Check the connections between navigation unit connector G (7P) and the rearview camera connector (6P).

Are the connections OK?

YES - Go to step 4.

NO - Reconnect the connectors.

4. Disconnect navigation unit connector G (7P) and rearview camera connector (6P).

NAVIGATION UNIT CONNECTOR REFERENCE

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

NAVIGATION UNIT CONNECTOR G (7P)



REARVIEW CAMERA CONNECTOR (6P)

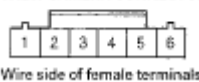


Fig. 48: Checking Connections Between Navigation Unit Connector G (7P) And Rearview Camera Connector (6P)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 5.

NO - Repair open in the wire between navigation unit connector D (7P) and rearview camera connector (6P).

5. Check for continuity between navigation unit connector G (7P) and body ground according to the table. Then check for continuity between navigation unit connector G (7P) No. 6 terminal, rearview camera 6P connector No. 5 terminal and same terminals.

NAVIGATION UNIT CONNECTOR REFERENCE

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

Is there continuity?

YES - Repair short in the wire between navigation unit and the rearview camera, or replace the appropriate shielded harness.

NO - Go to step 6.

6. Turn the ignition switch ON (II), and measure the voltage between navigation unit connector G (7P) and body ground according to the table.

NAVIGATION UNIT CONNECTOR REFERENCE

Navigation unit connector	Wire color
G1	WHT
G2	BLK
G4	RED
G5	YEL
G7	GRN
G6	GRY

Is there 0.1 V or more?

YES - Repair short in the wire between the navigation unit and the rearview camera, or replace the appropriate shielded harness.

NO - Go to step 7.

7. Turn the ignition switch OFF.
8. Reconnect the rearview camera connector (6P).
9. Substitute and connect a known-good navigation unit and check the rearview camera image in reverse.

Is the rearview image OK?

YES - Replace the original navigation unit.

NO - Replace the rearview camera.

10. Select the "Return" in the upper right corner of the screen to return the main menu, then go to "**VERSION**".
11. Check the model code that is displayed.

Is the correct navigation unit model code displayed for this vehicle?

YES - Go to step 12.

NO - The wrong navigation unit is installed. Replace the navigation unit with the correct part.

12. Remove the DVD disc from the navigation unit and check the label color of the DVD disc.

Is the DVD disc label white (or possibly gray for Canada)?

YES - Reinsert the DVD disc, and go to step 4.

NO - Replace the DVD disc with the correct color. See the Obtaining a Navigation DVD in the "General Troubleshooting Information" (see **GENERAL TROUBLESHOOTING**

INFORMATION).**NAVIGATION DOES NOT CALL USING THE HFL****NOTE:**

- Always have the client demonstrate there concern. Compare the operation of this feature in a known-good vehicle.
- Review the navigation owner's 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. Clear the 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 - Make sure the cell phone is paired to the HFL (see **CLEARING THE HFL SYSTEM**) and working properly. Without AcuraLink, go to step 5.

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

NAVIGATION UNIT CONNECTOR REFERENCE

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

Is there continuity?

YES - Go to step 8.

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

8. Check for continuity between the navigation unit connector F (5P) and body ground according to the table.

DISPLAY PANEL CONTROL UNIT CONNECTOR REFERENCE

Display panel control unit connector	Wire color
F1	WHT
F2	BLK
F3	RED
F4	GRN

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.

CONTINUITY CHART

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

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 - 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.

SYSTEM DIAGNOSTIC MODE

START-UP PROCEDURE AND DIAGNOSTIC MENU

There are two ways to enter the diagnostic mode:

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

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

2. Turn the ignition switch ON (II). Use the navigation display hard buttons as described below:

Make sure the battery is connected then press and hold the three buttons (Menu, Map/Guide, and Cancel), and keep them pressed for approximately 5 seconds. The display screen will go directly to the "Select Diagnosis Items" menu shown below.

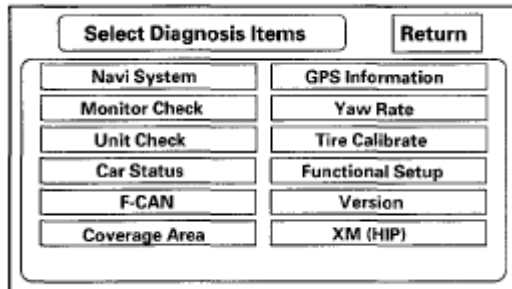


Fig. 49: Screen Display - Select Diagnosis Items
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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)
 - Coverage area
 - GPS Information
 - Yaw Rate
 - Tire Calibrate
 - Functional Setup
 - Version
 - XM (HIP)

FACTORY DIAGNOSTIC SCREEN "IN LINE DIAG"

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.

Map type

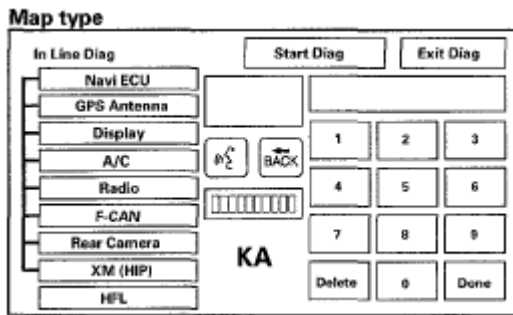


Fig. 50: Screen Display - Map Type
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Compass type

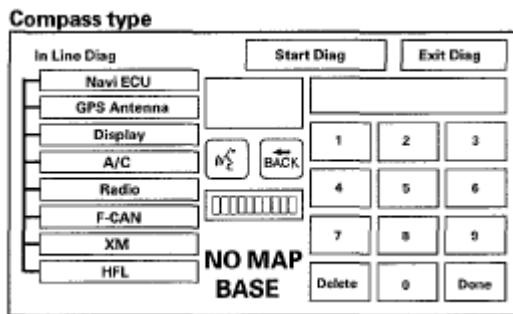


Fig. 51: Screen Display - Compass Type
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 appears).
- Hold down the Map/Guide button for 5-10 seconds (a screen with a "Complete" button, appears).
- Touch "Complete", and then the "Return" button (the system may re-boot).
- Restart the vehicle, and confirm normal operation by completing the "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 turns green.
- If there is a problem with the system, the faulty system component item turns to 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.
 - Compass type is not equipped with TALK/BACK buttons and the microphone.
- Select "Return" to return to the Diagnosis Menu.

Map type

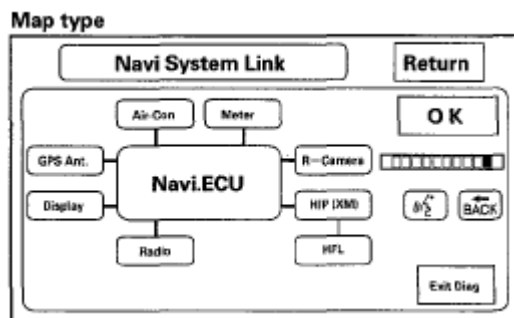


Fig. 52: Screen Display - Map Type

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Compass type

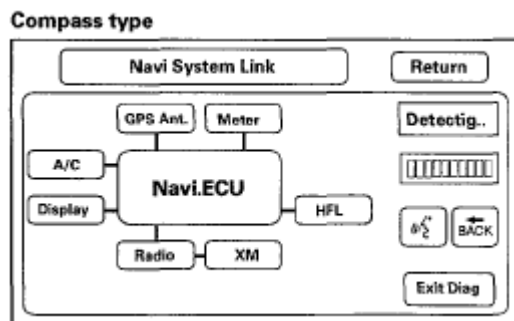


Fig. 53: Screen Display - Compass Type

Courtesy of AMERICAN HONDA MOTOR CO., INC.

NOTE:

- The mic level indicator must reach the 6th bar or greater to pass the test.
- If the XM link is red or flashing red, go to audio system symptom

troubleshooting (see SYMPTOM TROUBLESHOOTING), or see XM (HIP) diagnostic screen.

MONITOR CHECK

Overview of display unit

- The display unit communicates with the navigation unit over its own GA-Net bus. Information sent by the navigation unit to the display unit includes commands to control the LCD back light.
- The navigation unit also sends navigation and rear camera video information to the screen using Red, Green, Blue and Composite Video signals.
- The security system protects the display by daisy-chaining the security signal through it, and then passing the signal to the audio unit.
- The illumination input from the gauge brightness control provides back lighting for the buttons surrounding the screen.

These screens allow you to troubleshoot the display unit. Select the item you want to troubleshoot, and follow the diagnostic instructions.

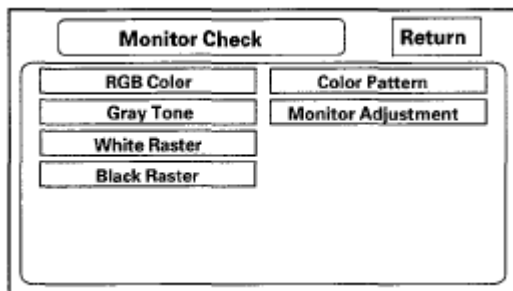


Fig. 54: Screen Display - Monitor Check

Courtesy of AMERICAN HONDA MOTOR CO., INC.

RGB Color

This screen verifies that the display unit is receiving the video (R, G, B and Composite sync) signals properly. The three primary colors should all 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 IS MISSING A COLOR OR TONE OR IS AN ODD COLOR**). If the picture has lines in it or scrolls horizontally, or vertically, troubleshoot for a Composite sync problem (see **PICTURE HAS LINES OR ROLLS**).

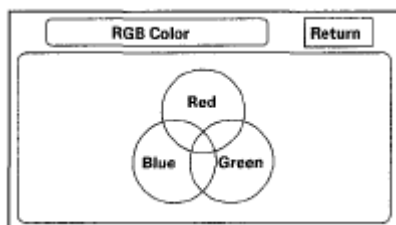


Fig. 55: Screen Display - RGB Color

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Gray Tone

This screen diagnoses problems with contrast. You should be able to see the changes from bar to bar across the scale. It is normal for the two bars on either side to appear the same.

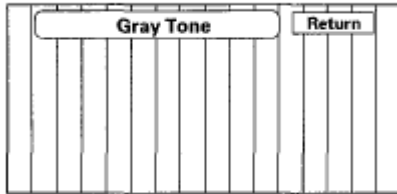


Fig. 56: Screen Display - Gray Tone

Courtesy of AMERICAN HONDA MOTOR CO., INC.

White Raster

The entire display must be white.

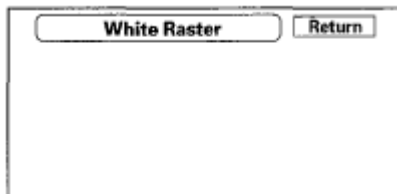


Fig. 57: Screen Display - White Raster

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Black Raster

The entire display must be black.

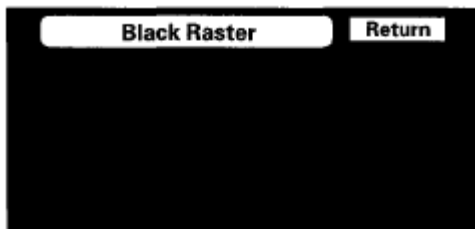


Fig. 58: Screen Display - Black Raster

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Color Pattern

The chart below shows the colors being used for the map and menu screens. This is for factory use only. To check the color signal use the "RGB Color" diagnostic found under the Monitor Check.

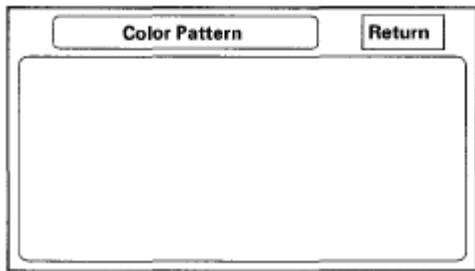


Fig. 59: Screen Display - Color Pattern
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

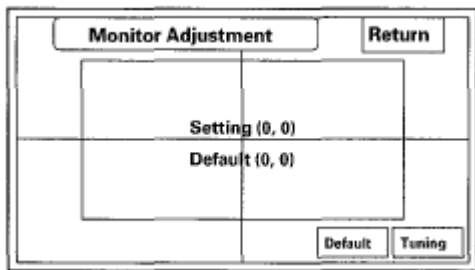


Fig. 60: Screen Display - Monitor Adjustment
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

UNIT CHECK

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

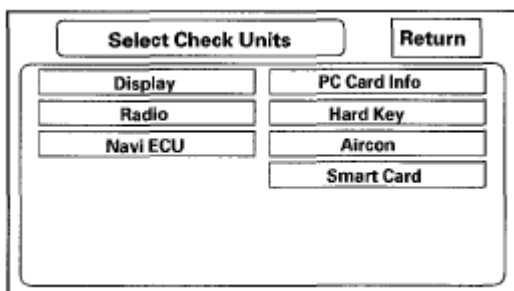


Fig. 61: Screen Display - Unit Check
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Display

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

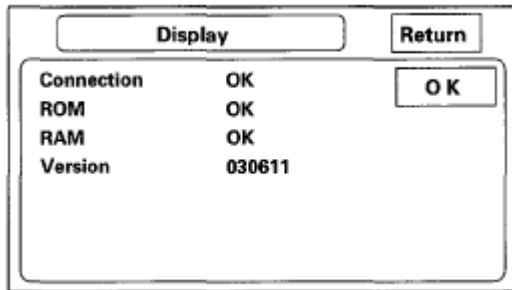


Fig. 62: Screen Display - Display
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Radio

This diagnostic checks the audio connections. If not OK, do the troubleshooting for the audio system.

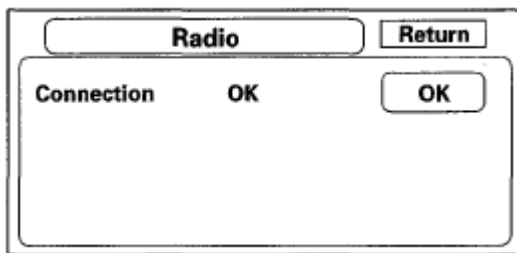


Fig. 63: Screen Display - Radio
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Navi ECU

This screen looks for problems with the navigation unit. When you initiate this diagnostic, the navigation unit may delay up to a minute while the diagnostic runs.

NOTE: Do not try to end this diagnostic by pressing "OK" or "Mem clear" before it finishes, otherwise the system may reboot.

- If "V-RAM" or "D-RAM" is NG, 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 antenna. If this diagnostic reads OK, then order a new 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 find this information either in the Setup Screen "Version," or in the Diagnostic Screen "Version."

- "Serial No." should be the same as the serial number found on the underside of the navigation unit. You need this number to obtain the security code from the Interactive Network (iN) system.
- The Mem Clr is for factory use and should not be used unless instructed by the factory.

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

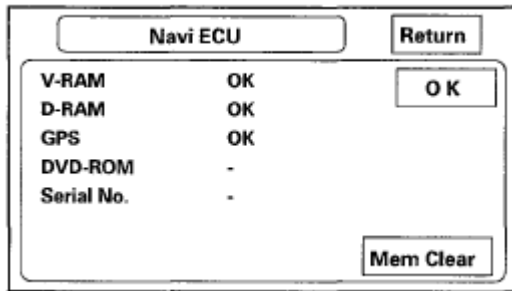


Fig. 64: Screen Display - Navi ECU

Courtesy of AMERICAN HONDA MOTOR CO., INC.

PC Card info.

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

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

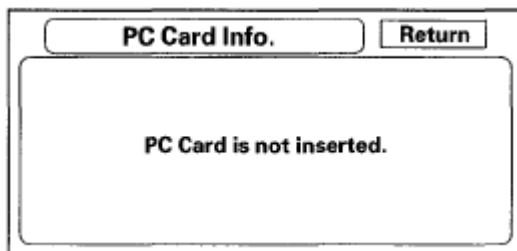


Fig. 65: Screen Display - PC Card Info

Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

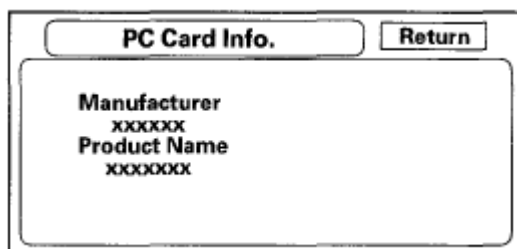


Fig. 66: Screen Display - PC Card Info

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Hard Key

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

To complete the test, touch each button on the vehicle's control panel, and move the interface dial 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.

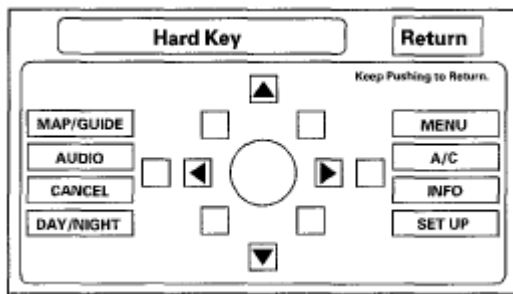


Fig. 67: Screen Display - Hard Key
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Aircon Diag

Indicates received data from the climate control unit after running the climate control self-diagnostic function (see **HOW TO USE THE SELF-DIAGNOSTIC FUNCTION WITHOUT HDS**).

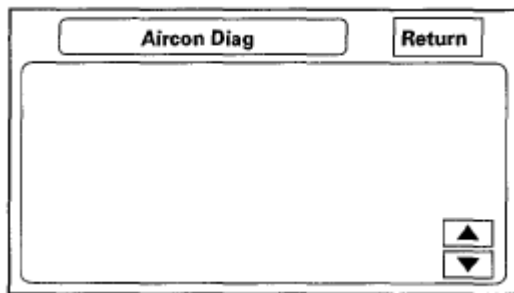


Fig. 68: Screen Display - Aircon Diag
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Smart Card

If the smart card is being used, you can check the card condition.

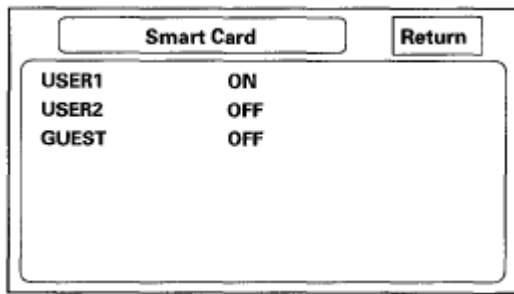


Fig. 69: Screen Display - Smart Card
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

CAR STATUS

Use this screen to confirm that the navigation unit is properly receiving input signals. Signals equal to (0) are OFF, and signals equal to (Dare 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 PCM (Pin 6 of C-connector)
 - a. OFF (0) when vehicle is not moving
 - b. ON (1) when vehicle is moving

The VSP comes from the PCM as a dedicated signal. Internally, the navigation unit compares the actual VP on the map against street data to adjust the pulse to speed scaling factor. As this scaling factor becomes more accurate, the "Level" gradually increases from 0 to 10 (see the **TIRE CALIBRATE** diagnostic screen).

- BACK-Reverse indication from taillight relay (Pin 5 of C-connector)
 - a. OFF (0) when the shift lever is in any position other than reverse
 - b. ON (1) when the shift lever is in reverse

The Back signal is used by the navigation unit to allow the map screen to show the VP moving backwards when in reverse. This signal is needed because the Speed Pulse has no direction indication.

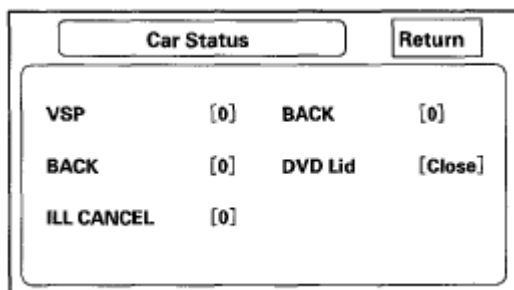


Fig. 70: Screen Display - Car Status
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 control unit.

NOTE: This setting is unaffected by the "display mode" hard button located below and to the left of the interface dial.

- 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).

- DVD Lid-senses if DVD door is open
 - a. (Close) when door is closed
 - b. (Open) when door is open

The navigation unit has a micro switch to detect this. If open is indicated when the door is closed, replace the navigation unit.

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 you can use the HDS (Honda Diagnostic System) to retrieve the diagnostic trouble codes (DTC) from the F-CAN. The data displayed in the ID boxes is irrelevant.
- For more details on troubleshooting the F-CAN, refer to **MULTIPLEX INTEGRATED CONTROL SYSTEM** article.

F-CAN System Link			Return
F-CAN ERROR ACTIVE		OK	
UNIT	ID	ID	
METER	1F4	2E4	
METER	2E7		

Fig. 71: Screen Display - F-CAN System Link
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

COVERAGE AREA

This screen allows the dealer to select the area that applies to their location. The choice is US (continental) or Hawaii. The default is "US." Select the choice (the system may reboot), exit the diagnostic mode, and restart the vehicle.

NOTE: This function is designed to operate only when the vehicle is physically located in the coverage area you select.

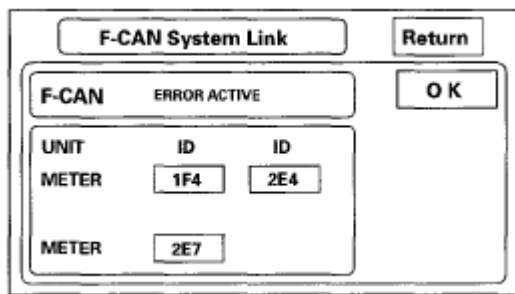


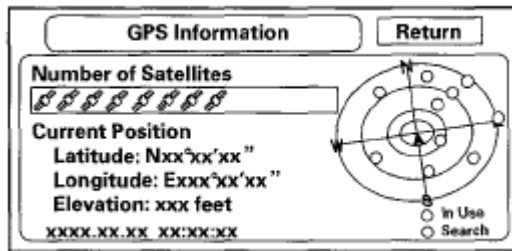
Fig. 72: Screen Display - Coverage Area
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 effectively troubleshoot GPS reception issues. The satellite numbers shown on the diagram correspond to the "PRN" number in the "GPS Details" screen. There are always at least 24 "active" GPS satellites in orbit. Because satellites fail, and have to be removed from service, spares are always parked in orbit, ready to be activated. This is why the PRN (satellite ID number) can be greater than 24.

NOTE: 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 four 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 four satellites, the elevation can be grossly inaccurate.
- The Date/Time field shows the current date, and also a time that includes daylight savings and other offsets entered by the client in Setup screen 2 "Adjust Time Zone/Clock."

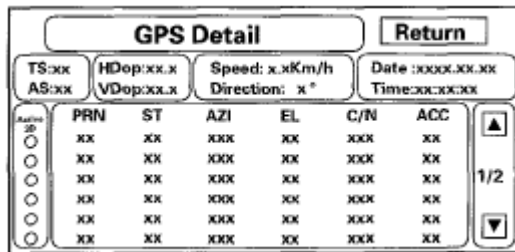
**Fig. 73: Screen Display - GPS Information**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

NOTE: Pressing the "map guide" button displays the satellite number on each circle.

GPS DETAIL

By pressing and holding the MENU button for 10 seconds, a GPS Detail screen appears. This screen displays real time incoming satellite positional data when the vehicle is outside in the open. The information shown on this screen is for factory use.

**Fig. 74: Screen Display - GPS Detail**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

- The box TS/AS and H Dop/V Dop is for factory use.
- The Speed and Direction information is updated in real time when driving.
- The Date/Time Information is the same as in Setup screen 2 "Adjust Time Zone/Clock."
- If the "3D" icon is shown above the yellow dots, this implies that at least four satellites are available for map positioning, and the "GPS" indicator on the map screen will be green. See the "**GLOBAL POSITIONING SYSTEM**" detailed explanation in the "System Description".
- If the row of data in the table below begins with a "yellow dot", the AZI and EL fields can be used to locate each satellite on the circular GPS diagram (see prior screen, refer to **Fig. 73**).

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:

COLUMN DESCRIPTION

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

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		GPS ICON IS WHITE OR NOT SHOWN).
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 GPS ICON IS WHITE OR NOT SHOWN).
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" (see **YAW RATE-LATERAL ACCELERATION SENSOR**).

- "Sensor" indicates the voltage output from the yaw rate sensor. It should indicate about 2.500 volts when stopped.
- "Offset" is the reference voltage or standard within the yaw rate sensor. It also should indicate about 2.500 volts 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 volts when stopped. If either reads zero, or 5.000 volts, 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.

NAVIGATION UNIT SPECIFICATIONS

Example: Car stopped			
Normal		Abnormal	
Offset	2.526 V	Offset	2.526 V
Sensor	2.516-2.536 V	Sensor	2.623 V

NAVIGATION UNIT SPECIFICATIONS

Example: Car turning			
Normal		Abnormal	

Offset	2.526 V	Offset	2.526 V
Sensor	2.678 V (left turn) 2.478 V (right turn)	Sensor	2.623 V (no change on turns)

- "Sensitivity study" represents the status of the internal tuning function. At initialization, this value starts at 6 and increases to # 10 as the internal correction values become more accurate.
- The settings "CCW Cal Factor," "CW Cal Factor," and "Set" are for factory use only. **THIS SHOULD NEVER BE ADJUSTED.**
- For detailed analysis of the yaw rate select "tuning."

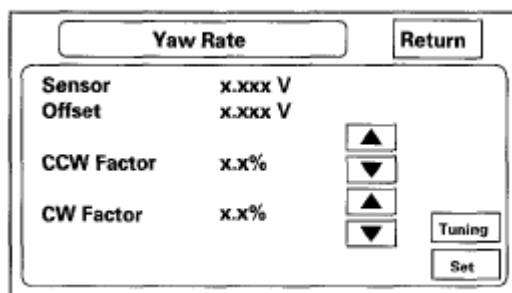


Fig. 75: Screen Display - Yaw Rate
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 diagnostic, refer to **YAW RATE**) . When the sensor is working properly, the random changes in these two voltages generally cancels out, so the value is 0. However if one voltage is consistently higher than the other, then the "ANG-Disp" value accumulates the constant change.
- The "Reset" button temporarily clears the angular accumulation (ANG-Disp), and clears the display dots.
- Do not touch the "CCW," "CW," or "Set" buttons. These are used for factory setup only.

Two tests are explained below. For 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 control 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 control 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."

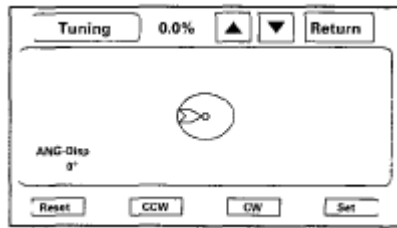


Fig. 76: Screen Display - Yaw Rate Tuning
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

TIRE CALIBRATE

As the vehicle moves, the navigation system receives speed pulses from the 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 "Study" 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.

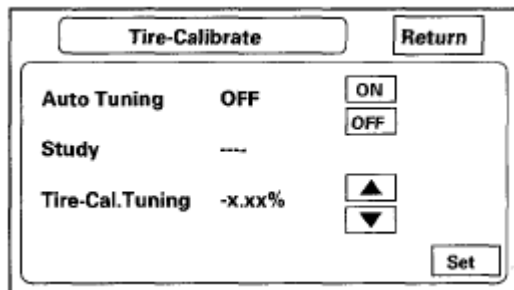


Fig. 77: Screen Display - Tire Calibrate
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

FUNCTIONAL SETUP

Select the item you want to check.

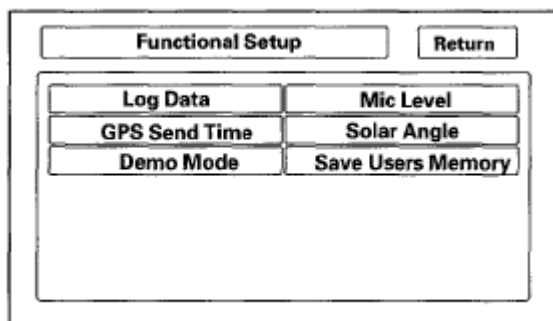


Fig. 78: Screen Display - Functional Setup

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Solar Angle

This screen graphically displays the sun's position as determined by the GPS. The navigation system uses the sun's angle, along with the sunlight sensor to control the driver/passenger A/C air flow. The heat that the A/C 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.

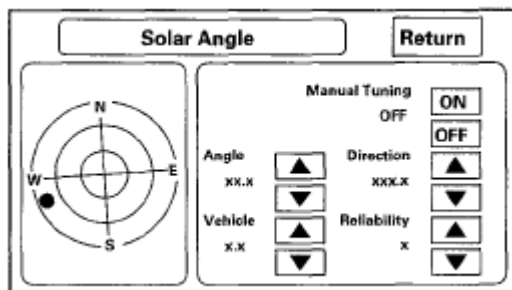


Fig. 79: Screen Display - Solar Angle
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

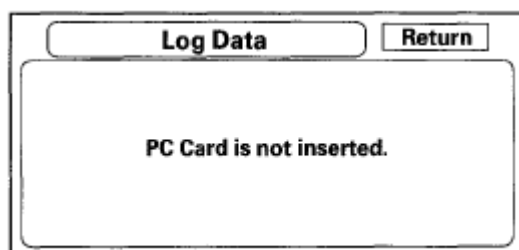


Fig. 80: Screen Display - Log Data

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 "Gyro. Sensor Logs ON." Follow the factory procedure for gathering test data, and properly ending the test.

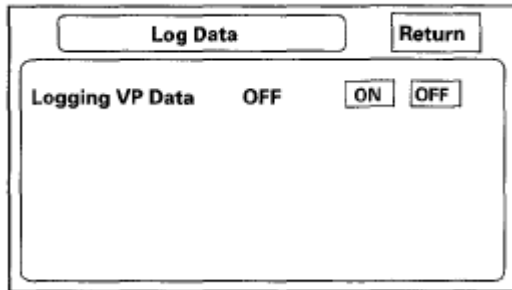


Fig. 81: Screen Display - Log Data

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Send GPS Time

This screen is for factory use only. It allows adjustment of the GPS time. This display updates in realtime.

- "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.

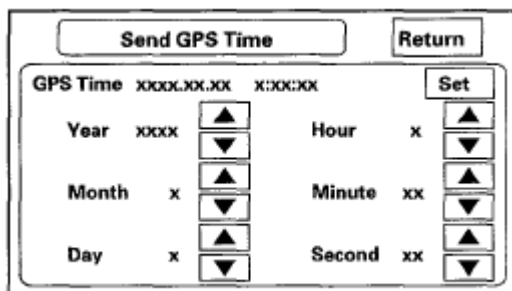


Fig. 82: Screen Display - Send GPS Time

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Demo Mode ('06-07 models)

This screen is for factory use only, and should always be set to "OFF." Occasionally "DEMO" setting is turned "ON" when vehicles are being used at Auto Shows or similar events. Turning this feature on, allows the navigation system to automatically follow a route to destination when the vehicle is stationary. The "Speed" can change the speed of the demo mode.

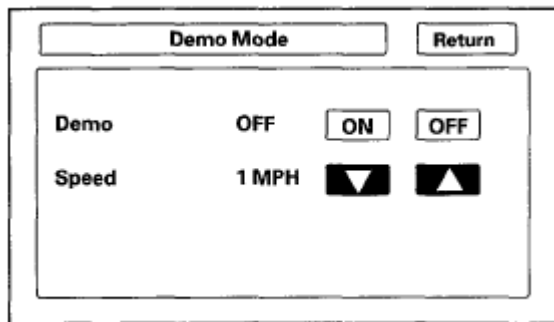


Fig. 83: Screen Display - Demo Mode
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Mic Level

This diagnostic allows you to independently test the microphone and the NAVI TALK and BACK buttons. They are used to activate the voice control system. The microphone is located near the map light in the roof console. It is directional, and works best with the voice coming from the drivers 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 unit and the navigation unit. If the wires are OK, the microphone must be faulty; replace the roof console (see **ROOF CONSOLE REPLACEMENT**).
- Press the BACK button on the steering wheel. The Cancel indicator on the screen should momentarily turn green. If it does not briefly turn green, then check the wiring from the steering wheel BACK button to the navigation unit.

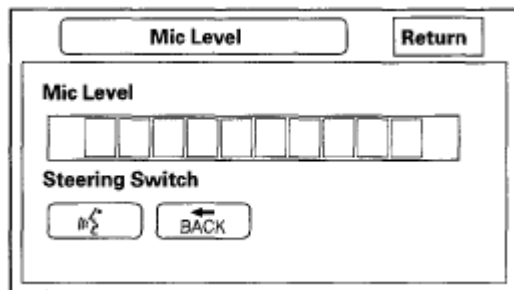


Fig. 84: Screen Display - Mic Level
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

SAVE USERS MEMORY

When replacing the navigation unit, this function allows the dealer to transfer the client's personal data to the new navigation unit.

This is similar to saving and entering the client's audio presets when replacing an audio core. The transferred information includes their Setup settings, and personal addresses. The dealer inserts a PC card (like the PC card in the HDS), 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 core.

See the FAQs below for information regarding PC cards, and the use of this function.

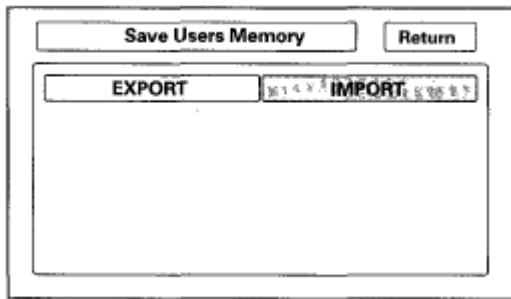


Fig. 85: Screen Display - Save Users Memory
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Export

Select this button to move the client's data from the original navi ECU 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 small files on the card.

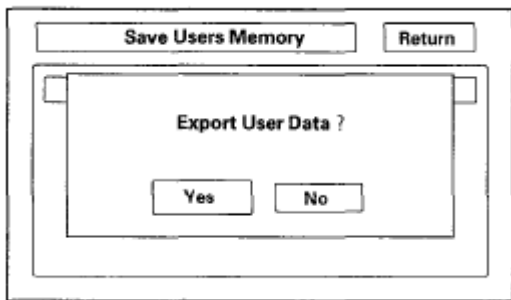


Fig. 86: Screen Display - Save Users Memory
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Import

After installing the client's original DVD in the new core, allow the system to boot up. Insert the PC card in the new core and enter the navigation diagnostic mode.

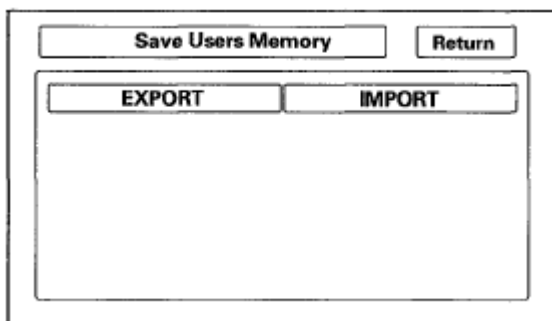


Fig. 87: Screen Display - Save Users Memory
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Select "YES" on the "Import Confirmation" screen.

Import moves the two files stored by the Export process from the PC card to the new navi ECU. 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.

If the Import button is grayed out, follow the troubleshooting in the FAQs below. The client's files can only be transferred to a new core if the "Model" and the "Program Flash" shown on the "Version" screen are the same. So files cannot be transferred from Civic to Accord, or from a Civic with version 1.07.00 to a Civic with version 1.32.00.

PC Card FAQs

PC CARD FAQs CHART

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 (see below for memory chip types). 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 card during "export" are less than a Megabyte in size. An adaptor and flash memory can be obtained for less than 50 dollars.
Should the dealer have a dedicated card for the Export and Import navigation function?	Yes, treat the card as a dedicated "special tool" that should be used anytime your '07 or later client needs their navi personal files transferred to a new ECU core.
What device can I use to maintain the card, and delete files?	Any computer store sells USB style PC card readers that accept the card, and allow you to perform file maintenance on your card. Most laptops will also accept the card.
Can we move the client's data to different models (like moving Civic navi data to a Pilot)?	No, the files are model specific and will only load into a navi ECU with the same part number.
Can we move the client's data to the same vehicle with a different software version (Like moving version 4.51)?	The client's files can only be transferred to a new core, if the "Model" and the "Program Flash" shown on the "Version" screen are the same. Files cannot be transferred from Civic to Civic Hybrid (different model code), or '07 Civic to '08 Civic (different versions).
The "Export" button is "grayed out" Why?	<ul style="list-style-type: none"> • A PC card with its media memory chip is not inserted properly. • Check the card's edge connector, and the pins inside the navigation unit (with a flashlight) for damage.

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The "Import" button is "grayed out". Why is this?	<ul style="list-style-type: none"> • A PC card with it's media memory chip is not inserted. • The model code of the files stored during export do not match the model code of the new navi ECU. • The version of the files from the original navi ECU are not the same as the version in the new ECU.
Will other files on the 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 core when performing the Import function. However, if the card is full, the "Export" function won't work correctly.
Do I have to delete the files on the card after each transfer of the client's data?	After the transfer of client data to the new core, the files remain on the card. Since this is confidential information, we recommend that you delete these files after each use. Please note that each time you export navi files of the same model and version, the files are overwritten. Over time the card will accumulate two files for each version of the 8 or so Honda navi models.
What format should be used if the card needs reformatting?	It is unlikely that the card will ever need formatting, however the FAT file system should be used.
I can't enter the navi diagnostic mode to do the Export/Import function. How can I transfer the client's data?	Some internal navi ECU failures may make it impossible to use the Export/Import function.
Why wont the Export or Import functions work? What do I check as part of troubleshooting?	<ul style="list-style-type: none"> • The card may not be fully inserted into the slot. Eject the card, and inspect for warping or damage to the edge connector. Never use excessive force to insert a card. This can result in damage to the pins in the rear of the slot. • The card may not contain files that are recognized by the new core. Navi data can only be transferred between cores with the same "Model code", and with the same navi "Program flash" version. • The flash memory chip type may not be accepted by the system. Only Compact Flash and ATA cards have been tested. • The card's PCMCIA adaptor may be preventing a known good 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 card. • There may not be any files on the card. If the 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 card should be reformatted using the FAT format. • The 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

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	<p>system and can overheat or quit functioning, particularly in a hot vehicle. They are not recommended.</p> <ul style="list-style-type: none">• Before performing the Import function, ensure that the client's original DVD is loaded into the new core and working properly.
Are there any error messages to tell me what is wrong?	There are no error messages associated with the Import/Export feature. Follow the troubleshooting steps.

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 "SJA."
- Download: Do not touch, unless instructed by the factory.

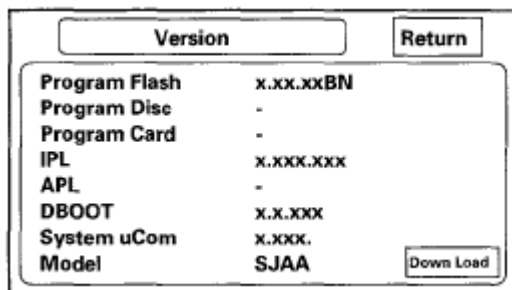


Fig. 88: Screen Display - Version
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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, Hawaii, 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 clients 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.

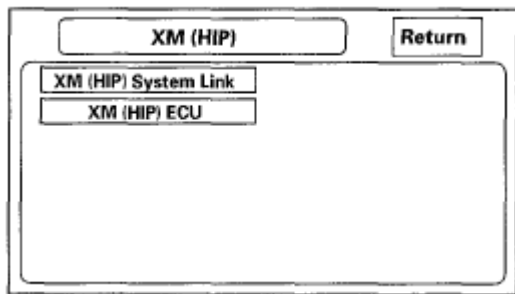


Fig. 89: Screen Display - XM (HIP)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

XM (HIP) System Link

This diagnostic tests the wires connecting the XM (HIP) components.

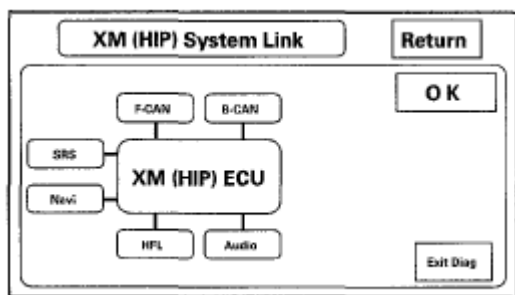


Fig. 90: Screen Display - XM (HIP) System Link
Courtesy of AMERICAN HONDA MOTOR CO., INC.

XM (HIP) ECU

Select the item you want to troubleshoot, and follow the diagnostic instructions.

NOTE: Only select "DATA RESET" when instructed. 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 and asking for the activation 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.

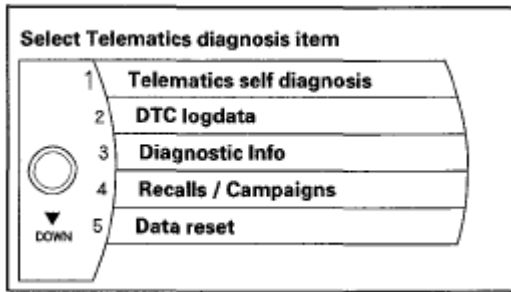


Fig. 91: Screen Display - XM (HIP) ECU
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Telematics Self-Diagnosis

This screen used to do self-diagnosis for the XM (HIP).

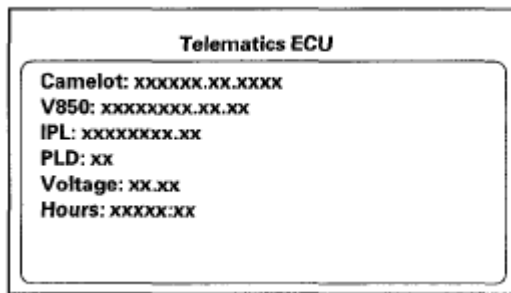


Fig. 92: Screen Display - Telematics Self-Diagnosis
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC Log Data

You can check the DTC log data in this screen.

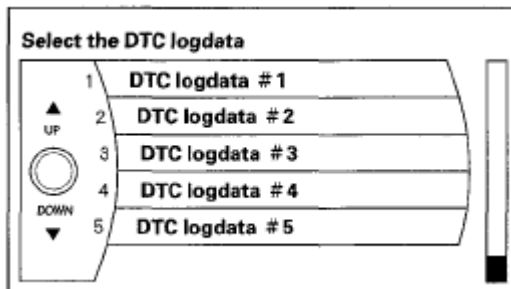


Fig. 93: Screen Display - DTC Log Data
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

NOTE: When DTC B2200-B2249 is displayed. It is an engineering mode and is not for trouble diagnosis.

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.

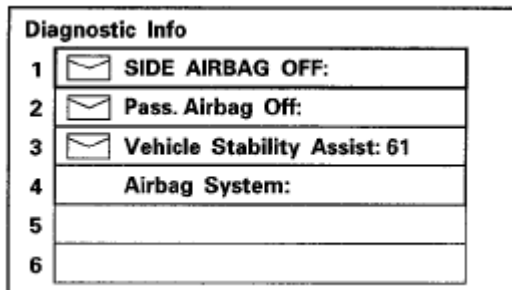


Fig. 94: Screen Display - Diagnostic Info
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

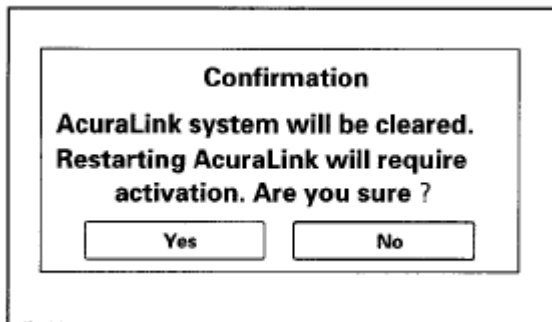


Fig. 95: Screen Display - Data Reset
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

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 shelf 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.

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Navigation unit door is open or 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 snapped fully closed.
PC card slot door is open. Please check system.	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 source for deep scratches or other damage. Make sure you are using an official Honda navigation DVD (white in color). The system cannot read other mapping databases or video DVDs. If the problem persists, see your dealer. Check on-line for any service publications prescribing patches for 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 trunk trim (see **TRIM REMOVAL/INSTALLATION - TRUNK AREA**).
2. Turn the ignition switch OFF.
3. Connect the SCS service connector (A) to the navigation service connector (B) located behind the navigation unit.

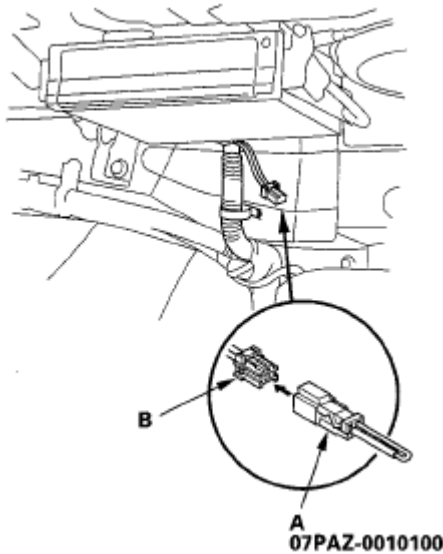


Fig. 96: Identifying SCS Service Connector And Navigation Service Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Turn the ignition switch ON (II).
5. 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 system link screen, refer to **NO PICTURE IS DISPLAYED** .

DVD-ROM/CD-ROM REPLACEMENT

NOTE: Go on-line and check for any service bulletins or other service information about the navigation system.

1. Turn the ignition switch ON (II).
2. Push the open button (A) of the navigation unit located on the left side of the trunk.

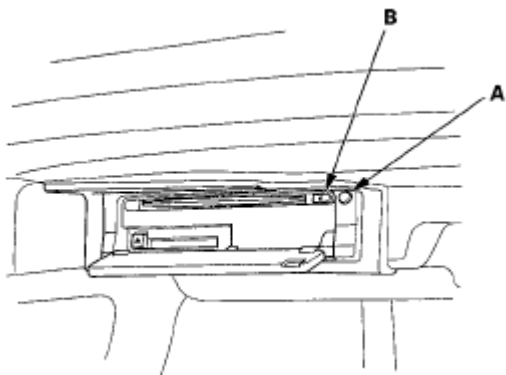


Fig. 97: Identifying Open Button And EJECT Button
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Press the EJECT button (B).
4. Remove the DVD-ROM/CD-ROM.
5. Insert the new DVD-ROM/CD-ROM with the white label facing up.
6. Close the front cover. Do not turn the ignition switch OFF; watch the navigation screen until the data is downloaded to the navigation unit.
7. 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 you replace the navigation unit, back-up the client data using system diagnostic mode "save users memory" ('07 and later) 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**).

1. Turn the ignition switch to ON (II).
2. Eject the DVD from the original navigation unit (see **DVD-ROM/CD-ROM REPLACEMENT**). To avoid scratching or damaging the DVD, temporarily place the DVD in a jewel case.
3. Turn the ignition switch to LOCK (0).
4. Remove the trunk trim lining (see **TRIM REMOVAL/INSTALLATION - TRUNK AREA**).
5. Remove the four screws (A) from the navigation unit brackets (B).

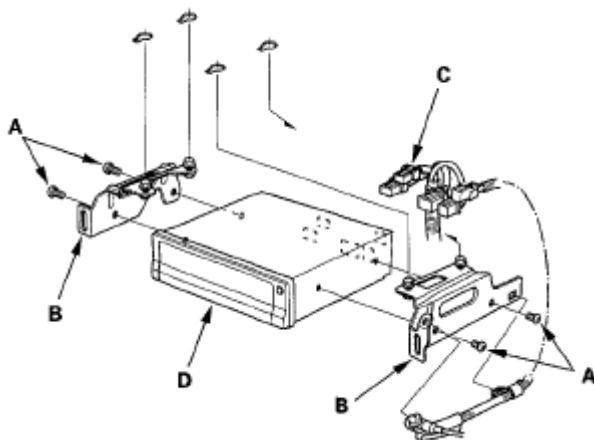


Fig. 98: Identifying Screws, Navigation Unit Brackets And Navigation Unit Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 trunk trim (see TRIM REMOVAL/INSTALLATION - TRUNK AREA).
3. Disconnect the GPS antenna connector (A), and remove the bolt (B).

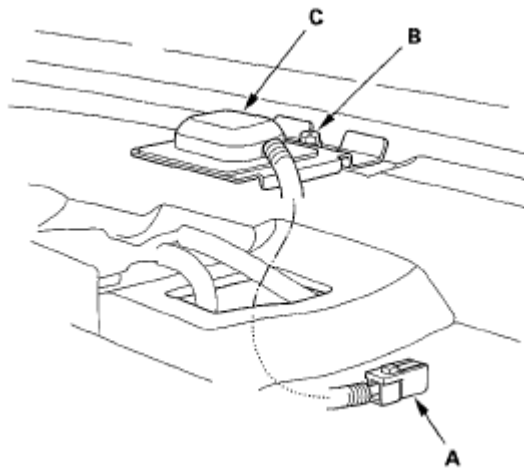


Fig. 99: Identifying GPS Antenna Connector, Bolt And GPS Antenna
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the GPS antenna (C).
5. Install the antenna in the reverse order of removal.

NAVIGATION DISPLAY UNIT REMOVAL/INSTALLATION

1. Remove the dashboard upper visor (see FRONT CENTER SPEAKER).
2. Remove the three screws (A, B), then remove the display unit (C). The forward screw (B) can be seen through the windshield or with a mirror.

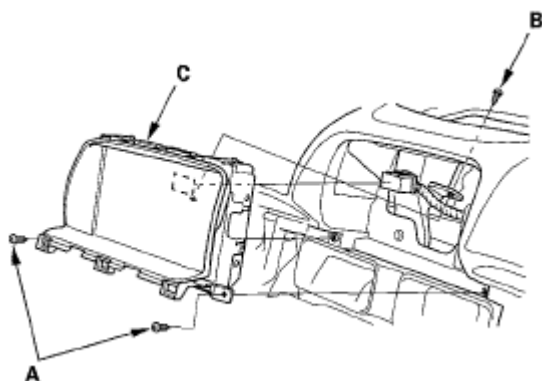


Fig. 100: Identifying Screws, Display Unit And Forward Screw
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the unit in the reverse order of removal. Be careful not to drop the forward screw behind the dashboard.

INTERFACE DIAL REMOVAL/INSTALLATION

1. Remove the audio unit (see **AUDIO UNIT REMOVAL/INSTALLATION**).
2. Remove the harness cover (A).

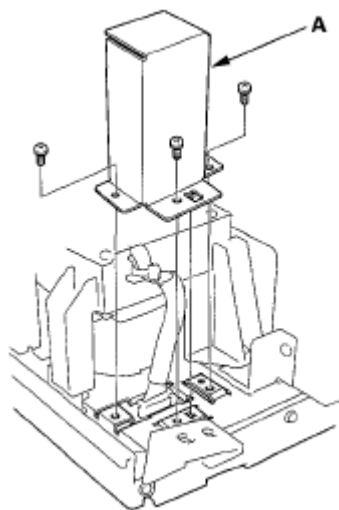


Fig. 101: Identifying Harness Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the interface dial (B).

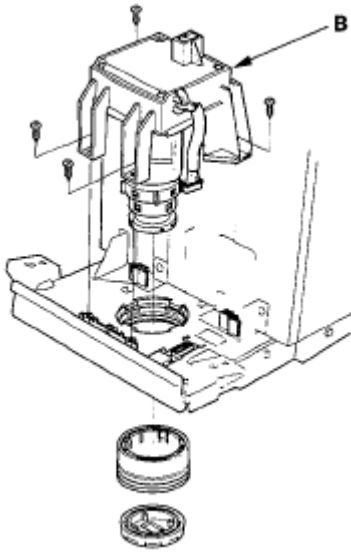


Fig. 102: Identifying Interface Dial
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the dial in 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.

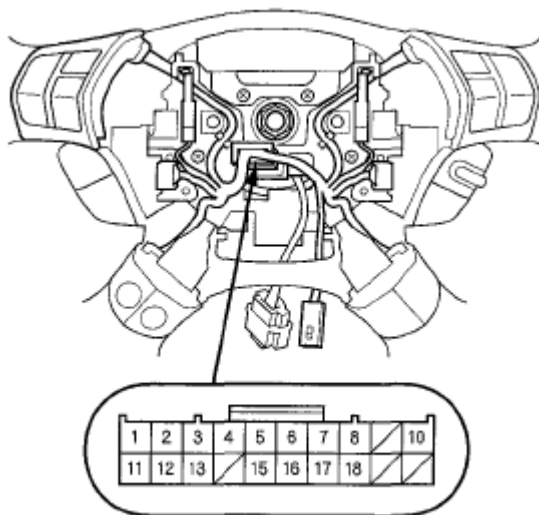


Fig. 103: Identifying 20P Connector At Cable Reel
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 1 kohms
Talk button pressed	About 697 ohms
Back button pressed	About 529 ohms

- If the resistance is not as specified, replace the remote switch (see **STEERING WHEEL DISASSEMBLY/REASSEMBLY**), and replace the voice control switch (see **STEERING WHEEL DISASSEMBLY/REASSEMBLY**).
- Use a diode tester between the terminals in each switch position as shown.

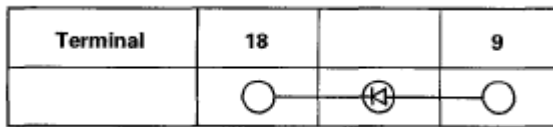


Fig. 104: Testing Remote Switch Using Diode Tester Between Terminals As Shown
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

- If the diode test is not as specified, replace the remote switch (see **STEERING WHEEL DISASSEMBLY/REASSEMBLY**), and replace the voice control switch (see **STEERING WHEEL DISASSEMBLY/REASSEMBLY**).

REARVIEW CAMERA REMOVAL/INSTALLATION

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- Remove the trunk lid trim (see **TRIM REMOVAL/INSTALLATION - TRUNK LID**).
- Disconnect the 6P connector (A) from the rearview camera (B).

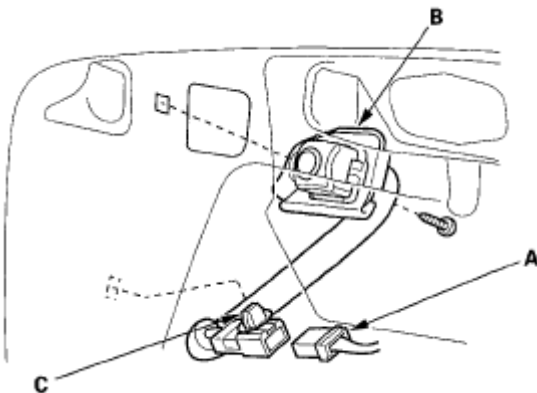


Fig. 105: Identifying 6P Connector, Rearview Camera And Clip
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

- Remove the clip (C).
- Remove the mounting bolt or nut, then remove the rearview camera.
- Install in the reverse order of removal.