

2007 TL - Navigation System Diagnostic Mode

Start-up procedure and Diagnostic Menu

There are two ways to enter the diagnostic mode:

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

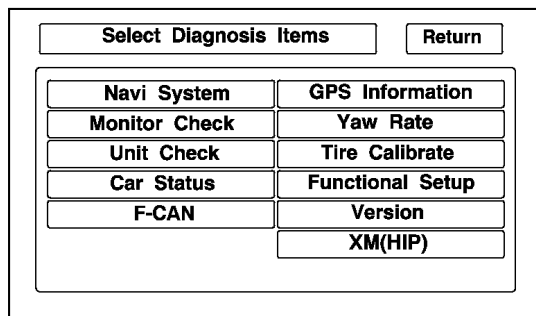
NOTE: When finished troubleshooting, make sure to remove the SCS service connector.

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

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

3. After the display changes to the Select Diagnosis Items menu, select the item you want to check and the diagnostic will start. To return to the previous screen, select RETURN.

- Navi System (Link)
- Monitor Check
- Unit Check
- Car Status
- F-CAN (System link)
- GPS Information
- Yaw Rate
- Tire Calibrate
- Functional Setup
- Version
- XM (HIP)

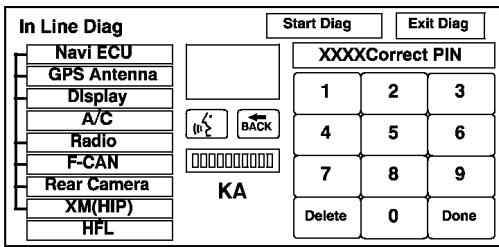


Factory diagnostic screen "In Line Diag"

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

When a navigation control unit is powered up for the first time at the factory, the factory diagnosis screen (In Line Diag) shows up. Normally the factory performs the steps necessary to verify proper operation and terminate the factory diagnostic.

Until the proper confirmation sequence is performed, the screen will show up every time the vehicle is started.



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

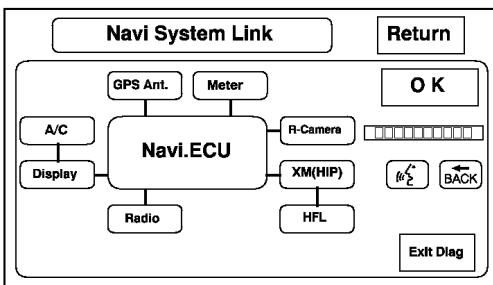
- Hold down the buttons (Menu + Map/Guide + Cancel) for about 5 seconds (the Select Diagnosis items screen will appear).
- Hold down the Map/Guide button for 5-10 seconds (A screen with a "Complete" button, will appear).
- Touch Complete, and then the Return button (the system may re-boot).
- Restart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

Navi System Link

- This diagnostic tests the cables connecting the navigation components. Ensure that the ignition switch is in the ON (II) position. When the diagnostic begins, you hear a bong sound. The system is in a Detecting mode, and is waiting for all items in white to be tested. This includes the navigation voice control (Talk/Back) buttons, and microphone. Press the navigation Talk button on the steering wheel, and in a normal voice, say "testing." The TALK indicator on the screen should turn green, and the voice level indicator should move to at least the 6th bar to pass. Next, press the navigation Back button. The Cancel indicator should turn green.
- If all of the communication lines connecting the system components, and the navigation Talk/Back buttons/microphone check out OK (all block diagram items green), then the OK indicator turns green.
- If there is a problem with the system, the faulty system component item turn red, and the screen will show NG in red. Use the troubleshooting index, and other diagnostic screens to help locate the problem.
- The indication on the screen may not change until you cycle the ignition switch. After repairing the affected cable or system, repeat this diagnostic.

NOTE: Green boxes and green OK indicate that the communications lines (cables) are intact. This diagnostic does not necessarily imply that the individual components are functioning properly. For instance, the GPS antenna wire may be crushed, but still show as green. A road test, or other diagnostic may be necessary to find the problem.

- Select Return to return to the Diagnosis Menu.



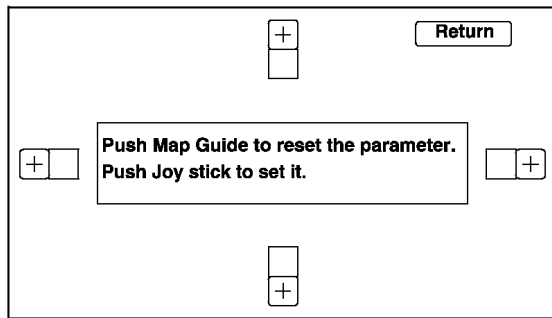
NOTE:

- 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, or see XM (HIP) diagnostic screen.

Monitor Check

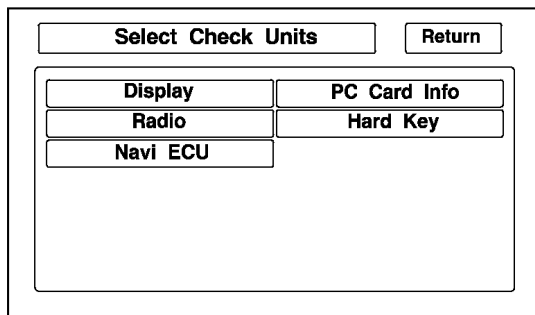
Overview of the display unit

- The display unit communicates with the navigation unit over its own GA-Net bus. Information is sent to the navigation unit whenever the user activates the touch screen, or buttons. 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 the Red, Green, Blue, and Composite Video signals.
- The security system protects the navigation 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.



Unit Check

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

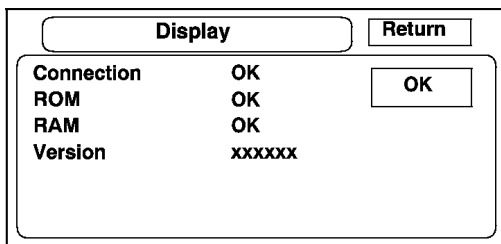


Display

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

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

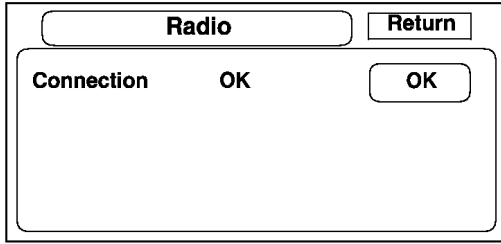
NOTE: When selecting this diagnostic from Unit Check, quickly remove your fingers from the touch-screen to avoid a false detection.



Radio

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

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



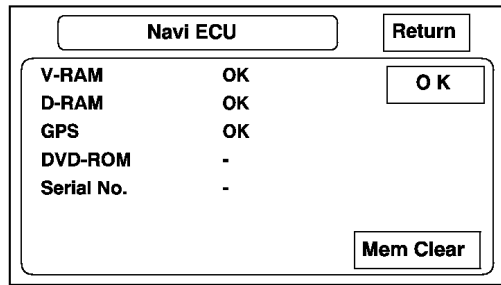
Navi ECU

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

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

- If V-RAM or D-RAM is NG, then replace the navigation unit.
- If GPS indicates NG (ANT), then check the entire GPS antenna wire from the navigation unit to the antenna. If the wire is crushed or damaged, try a known-good GPS antenna. If this diagnostic reads OK, then replace the GPS antenna. If the diagnostic still reads NG (ANT), then replace the navigation unit.
- DVD ROM represents the database version on the DVD. You can also find this information in Setup Screen 4 by selecting system Information.
- Serial No. should be the same as the serial number found on the underside of the navigation unit. You need this number to obtain the security code from the Interactive Network (iN) system.
- The Mem Clear is for factory use and should not be used unless instructed by the factory.

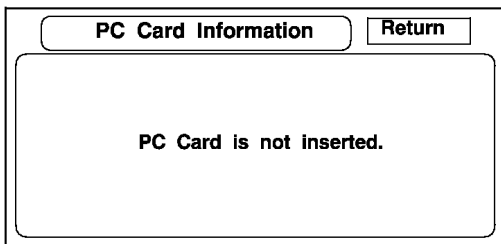
Selecting this will erase the client's settings, personal information, GPS orbital data, and anything else stored in memory.



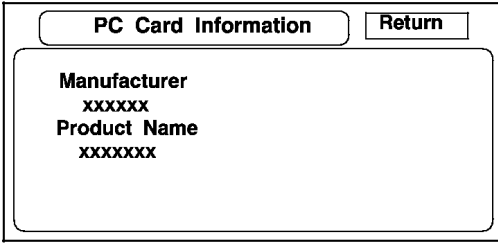
PC Card info.

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

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



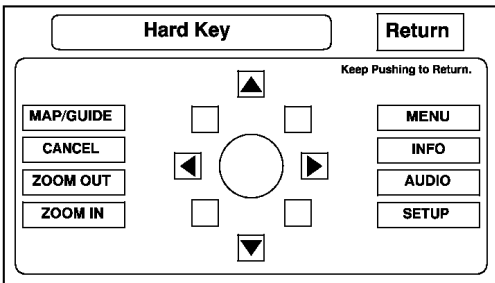
If the factory provides a PC card and instructs you to insert the card, then the screen displays the Manufacturer, and Product Name as shown in the following screen.



Hard Key

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

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



Car Status

Use this screen to confirm that navigation unit is properly receiving input signals. Signals equal to (0) are OFF, and signals equal to (1) are ON. If the value on the display does not match the actual vehicle status, then check the wire carrying the signal.

- VSP-Vehicle Speed Pulse from ECM/PCM (Pin 6 of navigation unit C-connector)
 - a) OFF (0) when vehicle is not moving
 - b) ON (1) when vehicle is moving

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

- BACK-Reverse indication from multiplex integrated control unit (A/T) or back-up light switch (M/T) (Pin 5 of navigation unit C-connector)
 - a) OFF (0) when shift lever is in any position other than reverse
 - b) ON (1) when shift lever is in reverse

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

- ILL CANCEL This item detects whether the illumination cancel function is in use.
 - a) OFF (0) if illumination cancel is not selected
 - b) ON (1) if illumination cancel is activated

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

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

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

Car Status		Return	
VSP	[0]	ILL	[0]
BACK	[0]		
ILL CANCEL	[0]		

F-CAN System Link

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

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

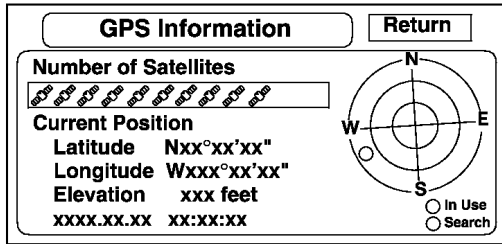
F-CAN System Link		Return
F-CAN	ERROR ACTIVE	OK
UNIT	ID	
METER	[1F4]	

GPS Information

This screen shows the current status of GPS reception. The circular diagram shows the current location of the GPS satellites (yellow numbers) as they would appear in the sky. The outer circle represents the horizon (0 degrees elevation). The middle and inner circles represents 30 and 60 degrees respectively. The very center of the diagram (90 degrees elevation) is directly overhead. Nearby obstructions, like tall buildings will block satellites in that direction. That is why it is necessary to be in an open area to troubleshoot GPS reception issues in an open area. The satellite numbers shown on the diagram correspond to the PRN number in the GPS Details screen. There are always at least 24 active GPS satellites in orbit. Because satellites fail, and have to be removed from service, spares are always parked in orbit, ready to be activated. This is why the PRN (satellite ID number) can be greater than 24.

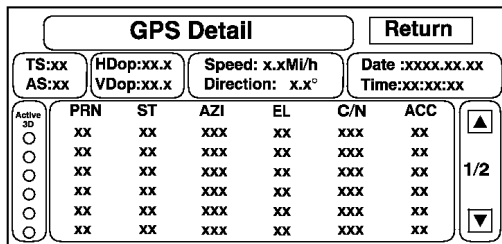
NOTE: To use this screen for troubleshooting, the vehicle should be out side away from buildings, tall trees, and high-tension wires for at least 10 minutes with the engine running.

- The Number of Satellites box shows the number of acquired satellites (maximum of 12). It should contain 4 or more icons. If not, troubleshoot for GPS icon is white or not shown.
- The Current Position shows latitude, longitude, and elevation (in feet). If there are less than 4 satellites, the elevation can be grossly inaccurate.
- The Date/Time field shows the current date, and also a time that includes daylight savings and other offsets entered by the client in Setup screen 4 Adjust Time Zone/Clock.



GPS Detail

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

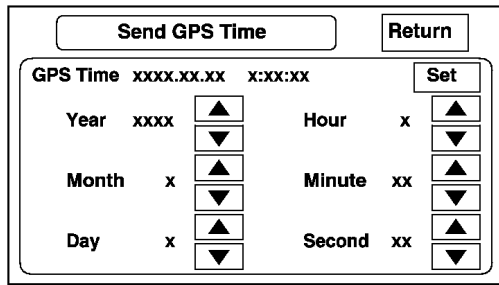


- The box TS/AS and HDop/VDop is for factory use.
- The Speed and Direction information is updated in real time when driving.
- The Date/Time Information is the same as in Setup screen 2 Adjust Time Zone/Clock.
- If the 3D icon is shown above the yellow dots, this implies that at least 4 satellites are available for map positioning, and the GPS indicator on the map screen will be green. See the Global Positioning System detailed explanation in the System Description.
- If the row of data in the table below begins with a yellow dot, the AZI and EL fields can be used to locate each satellite on the circular GPS diagram (see prior screen).

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:

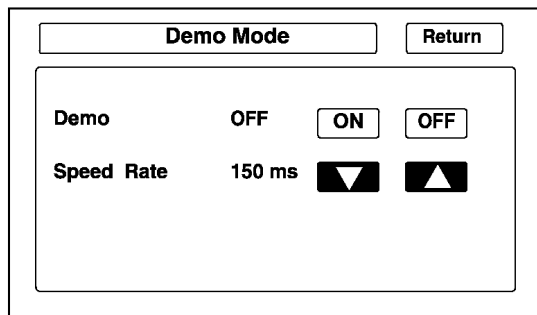
Column	Description	Problem indication
Active	Active satellites (Yellow Dot)	If 3D or 2D is missing when the vehicle is parked outside, follow GPS icon is white or not shown troubleshooting.
PRN	The satellite ID number	
ST	The status: 0 = cannot view or searching, 2 = acquiring	If all 0, then, follow GPS icon is white or not shown troubleshooting.
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	



Demo Mode

This screen allows the navigation system to drive a route, when the vehicle is stationary. Typical applications include auto shows, and other events. This feature allow visitors to enter a destination, and see the system drive to the destination. No speed signal is needed.

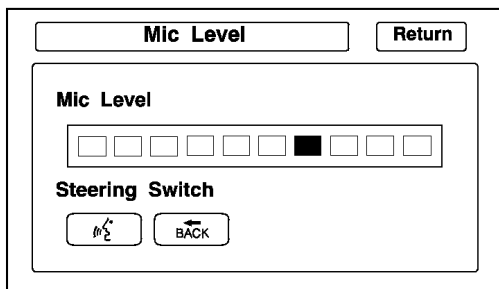
- To initiate the mode select ON
- Changing the speed rate in the ms (milliseconds) is optional, and represents the time between updates of the VP (vehicle position) movement.
 - When you increase the rate, the VP slows down, because it is updated (moved) at a slower rate.
 - When you decrease the rate, the VP is faster, because it is updated (moved) more frequently.
 - 1500 ms is VP at its slowest in demo mode.
 - 150 ms is VP at its fastest in demo mode (Default).
- At key off, the setting automatically returns to the default of Off.



Mic Level

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

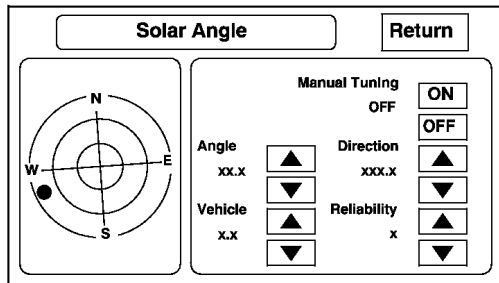
- Press the Talk button on the steering wheel, and in a normal voice say "testing". The TALK indicator on the screen should momentarily turn green, and the text "Now Recording..." should appear in yellow. If the mic level indicator on the screen does not briefly turn green, then check the wiring from the steering wheel Talk button to the navigation unit. If there is no Mic Level movement when you speak, then you should check the wires running from the microphone in the roof console to the HFL control unit and the navigation unit. If the wires are OK, the microphone must be faulty; replace the roof console.
- Press the Back button on the steering wheel. This should cause the BACK indicator on the screen to momentarily turn green. If it does not briefly turn green, then check the wiring from the steering wheel Back button to the navigation unit.



Solar Angle

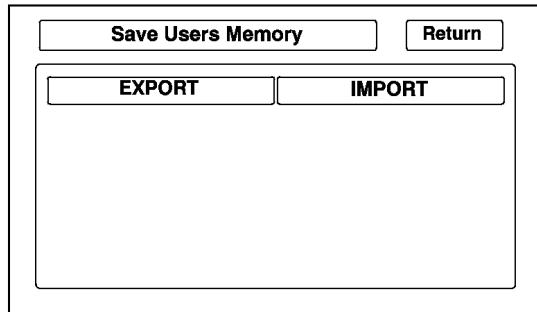
This screen graphically displays the sun's position as determined by GPS. The climate control system uses the navigation systems sun angle, along with the sunlight sensor to control the driver/passenger A/C air flow. The heat that the climate control unit removes varies, depending on the angle of the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

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



Save Users Memory

When replacing the navigation unit, this function allows the dealer to transfer the client's personal data to the new navigation unit. The transferred information includes their Setup settings, and personal addresses. The dealer inserts a PC card to the navigation unit, and then selects the Save Users Memory function. The two functions in this diagnostic screen are EXPORT and IMPORT. EXPORT saves the client's data to the PC card, and IMPORT moves the PC card files to the new navigation unit.

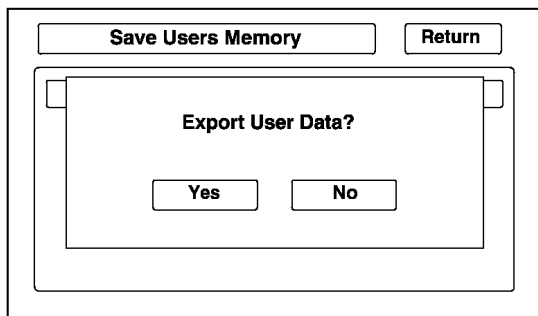


Before starting this function, see the PC Card FAQs for information regarding PC cards, and the use of this function.

1. Select EXPORT button to move the client's data from the original navigation unit to the PC card. Select YES on the Export User Data Confirmation screen. The process takes only a couple of seconds. The system stores two files on the card.

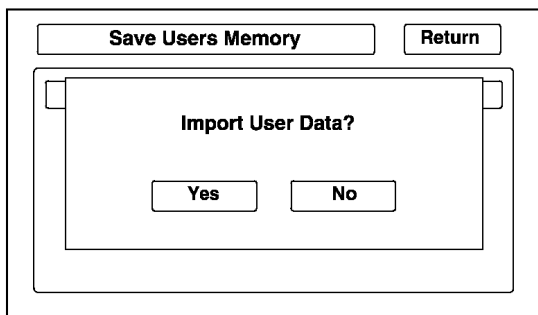
NOTE: If the EXPORT button is grayed out, check the PC card's edge connector, and the pins inside the navigation unit (with a flashlight) for damage.

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



3. Select IMPORT button to move the two files stored by the Export process from the PC card to the new navigation unit. Select YES on the Import User Data Confirmation screen. When the transfer is finished (a few seconds) the system will automatically reboot. After the system reboots, remove the PC card from the PC slot.

NOTE: If the IMPORT button is grayed out, check if the Model and the Program Flash shown on the Version screen are the same.

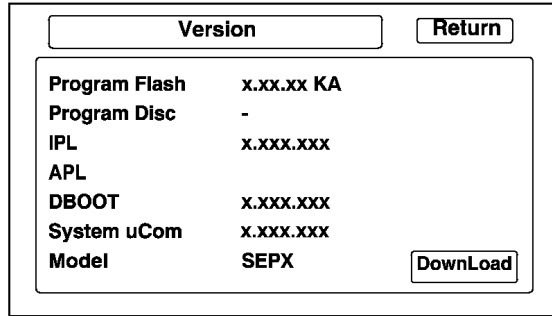


PC Card FAQs

Question	Answer
Where do we buy the flash memory or adaptors, and what do we ask for?	You need a PCMCIA type II adaptor and a flash memory chip. They can be purchased at a computer, or office supply store. The card will have the same size and shape as the PC card in the HDS. Adaptors that accept multiple flash types are not recommended.
What memory flash chips will work with what adaptors?	The flash memory devices that have been tested include Compact Flash (CF), and ATA style (like the card in the HDS). Other card types and flash memory chips may work, but have not been tested.
What capacity card do I need for this function?	A memory chip with capacity of 64 MB to 2 GB will work. The two files moved to the PC card during export are less than a Megabyte in size.
Should the dealer have a dedicated PC card for the Export and Import navigation function?	Yes, treat the PC card as a dedicated special tool that should be used anytime the owner of an '07 or later vehicle needs their navigation personal files transferred to a new navigation unit.
What device can I use to maintain the PC card, and delete files?	Any computer store sells USB style card readers that accept the PC card, and allow you to perform file maintenance on your PC card. Most laptops will also accept the PC card.
Can we move the client's data to different models?	No, the files are model specific and will only load into a navigation unit with the same part number.
Can we move the client's data to the	The client's files can only be transferred to a new navigation unit, if the Model

INTERACTIVE NETWORK

- Program Flash: Displays the version of the navi software in memory.
- Program Disc: If displayed, this value represents the version of the navi software on the navi DVD. NOTE: The last two letters of the Program Flash or DVD fields indicate which DVD is installed in the unit. The letters KA imply that a United States DVD is installed. If the letters are KC, then a Canada DVD is installed. (See coverage discussion below.)
- IPL, APL, DBOOT, and System uCom, are all for factory use.
- Model: For this model, the field should begin with SEP.
- Download: Do not touch, unless instructed by the factory.

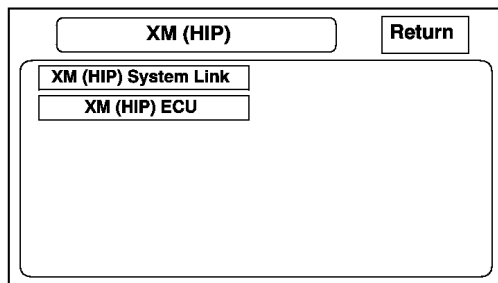


There are two navigation DVDs produced for this model.

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

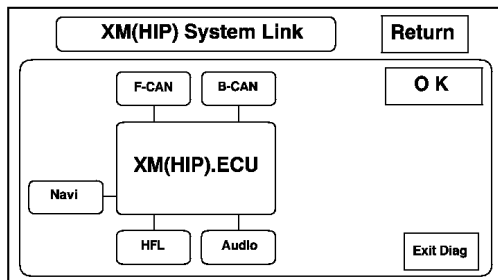
XM (HIP)

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



XM (HIP) System Link

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



Diagnostic Info	
1	<input type="checkbox"/> SIDE AIRBAG OFF:
2	<input type="checkbox"/> Pass. Airbag Off:
3	<input type="checkbox"/> Vehicle Stability Assist: 61
4	Airbag System:
5	
6	

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.

<p>Confirmation</p> <p>AcuraLink system will be cleared. Restarting AcuraLink will require activation. Are you sure?</p> <p><input type="button" value="Yes"/> <input type="button" value="No"/></p>
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NOTE: Selecting DATA RESET will clear the AcuraLink registration, and the AcuraLink service will reset to the factory default. If the vehicle was already registered for the AcuraLink service, it will have to be reactivated by calling Acura Client Services before all features will be available. The reactivation will cause the Feature Guide to start over at the first message, which will result in the client getting repeated messages.

Traffic Channel

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

Select an item to change:	
SID : 255 App ID : 8	
1	SID
2	App ID
3	
4	

Error Message Table

Screen Error Message	Solution
Navigation system is unable to acquire a proper GPS signal.	Make sure there is nothing on the rear package tray blocking the GPS antenna.

	<p>If not, move the vehicle to an open space away from tall buildings, trees, etc.</p> <p>Rear window tinting and after-market devices can affect the GPS reception.</p>
No DVD disc installed. Please check system.	<p>Make sure the navigation DVD is installed with the label side up and the navigation unit door is fully snapped closed.</p> <p>Make sure that the sliding door for the PC card is fully closed.</p>
No DVD disc, please check system.	Check that the navigation DVD is installed with the label side up.
Display temp is too high. System will shut down until display cools down.	This message will appear briefly when the display temperature is too high, and then the display will turn off until the temperature cools down. The system will turn back on when the display cools down.
Outside temperature is low, system will take a while to start up.	The temperature is below -22 °F (-30 °C) and the navigation unit has difficulties reading the DVD. The system will start up when the temperature warms up.
DVD disc reading error (unformatted), please consult your dealer.	Check the DVD surface for deep scratches or other damage. Make sure you are using an official Honda navigation DVD (orange in color). The system cannot read other mapping databases or video DVDs. Check any official Honda service website for more service information about updating the navigation system.
Route has not been completed. Please try again from a different location.	Routing to or from a place (new area) that is not in the database. Try planning a different route to or from a different location.
No alternate route found. Original route will be guided.	No alternate route method was found. The original route method will be used.
This destination cannot be found in database.	The destination was not found in the database. Try another destination nearby, or select the destination with the joystick.