

# Modular Vehicle Communication Interface (MVCI)

## User Guide



## Safety Definitions

Follow all DANGER, WARNING, IMPORTANT, and NOTE messages in this User Guide. These safety messages are defined and formatted as follows:




**DANGER** or **WARNING**: Means you risk bodily harm and /or possible loss of life.

**IMPORTANT**: Means the information demands special attention or that you risk damage to the vehicle or the tool.

**NOTE**: *Provides clarity and helpful tips.*

The safety messages cover situations SPX is aware of. SPX cannot know, evaluate or advise you as to all of the possible hazards. You must be certain that any conditions or service procedures encountered do not jeopardize your personal safety.

Consult documentation in the User Guide whenever the DANGER or WARNING symbol (  ) appears on the MVCI. It is important to follow the actions detailed in the User Guide.

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## Disclaimer

All information, illustrations, and specifications contained in this User Guide are based on the latest information available at the time of publication. The right is reserved to make changes at any time without obligation to notify any person or organization of such revisions or changes. Further, SPX shall not be liable for errors contained herein or for incidental or consequential damages (including lost profits) in connection with the furnishing, performance or use of this material.

Screens shown in this manual may vary in appearance due to the product software version at the time of shipment.

## US and Canada Regulatory and Compliance Information

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**NOTE:** *This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.*

In accordance with part 15 of the FCC rules, the user is cautioned that any changes or modifications not expressly approved by SPX Corporation could void the user's authority to operate the equipment.

### Canadian EMC Class A

This Class A digital apparatus complies with Canadian ICES-003.  
Cet appareillage de la classe A est conforme à ICES-003 canadien.

### CE Mark EMC Directive

This MVCI has been marked with the CE mark. This mark indicates compliance with EEC Directives EN61326-1: 2006.

## ANATEL Regulatory and Compliance Information

This equipment operates on a secondary basis and, consequently, must accept harmful interference, including from stations of the same kind, and may not cause harmful interference to systems operating on a primary basis.

# ATTENTION

## PLEASE READ CAREFULLY:

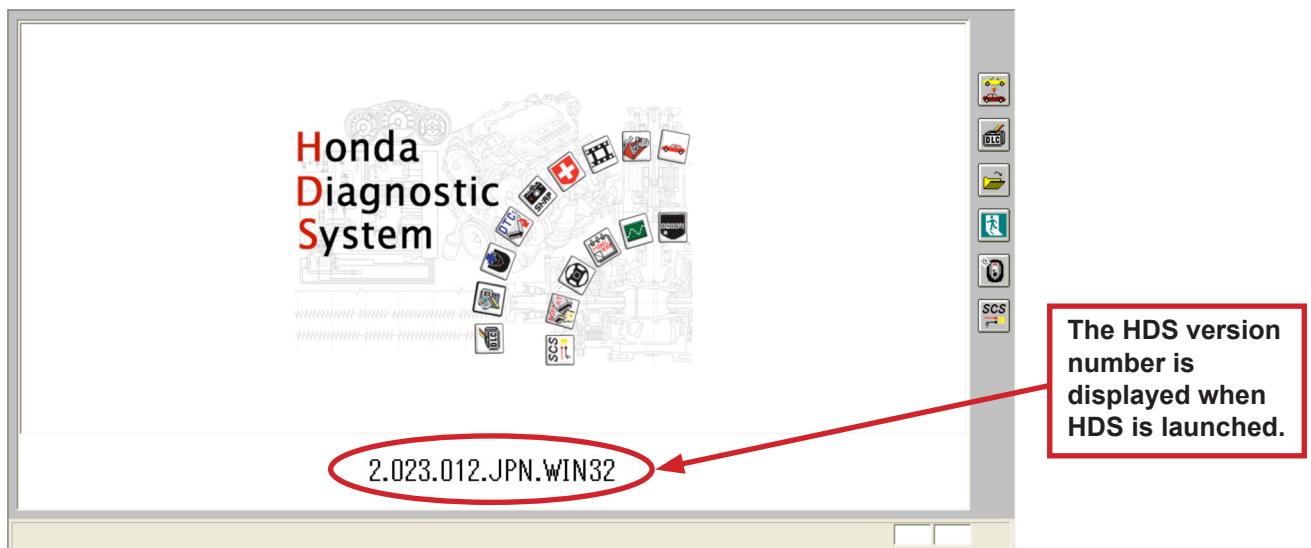
- SPX recommends charging the MVCI for approximately 3 hours before the first use. Use the supplied power adapter.  
**NOTE:** This is not a requirement for using the MVCI.
  - Use the supplied NiMH batteries only in the MVCI.
  - To power ON the MVCI: External power is required to turn the MVCI ON. External power may be provided by the vehicle diagnostic connector or the power adapter (supplied with the MVCI).
  - The MVCI stays ON for approximately 60 seconds after the external power is disconnected (depending on level of the battery charge), then automatically powers OFF.
  - When powered by battery, the MVCI can also be powered OFF by holding down the 'ESC/Power' button for approximately 5 seconds.
  - Refer to the '**MVCI User Guide**' for help with USB, wireless or Ethernet connectivity.
  - To replace the MVCI batteries when needed, use a Phillips screwdriver to open the battery cover.
- 
- **IMPORTANT:** To prevent damage to the MVCI, do not perform an MVCI firmware update if using a Honda Diagnostic System software version lower than 2.023.012 or MVCI firmware version lower than 2.08.77.

### 1. Verify the HDS software version and the MVCI firmware version:

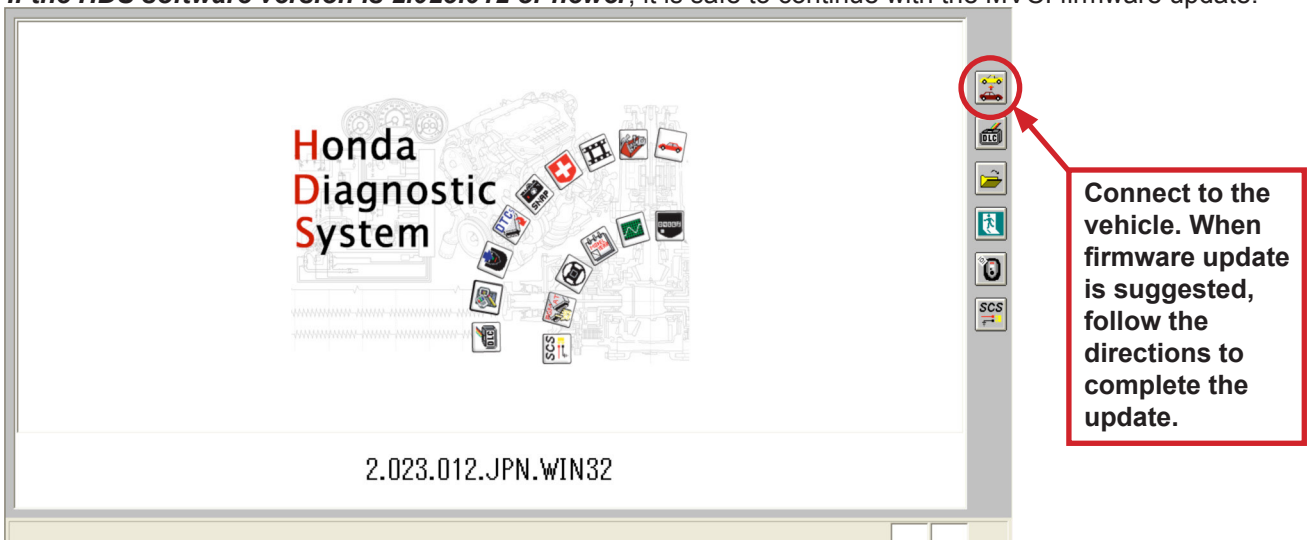
HDS version 2.023.012 or newer must be installed on the PC, and

MVCI firmware version 2.08.77 or newer must be installed on the MVCI.

Do not perform firmware update of the MVCI on a PC with an old HDS version.



### 2. If the HDS software version is 2.023.012 or newer, it is safe to continue with the MVCI firmware update.



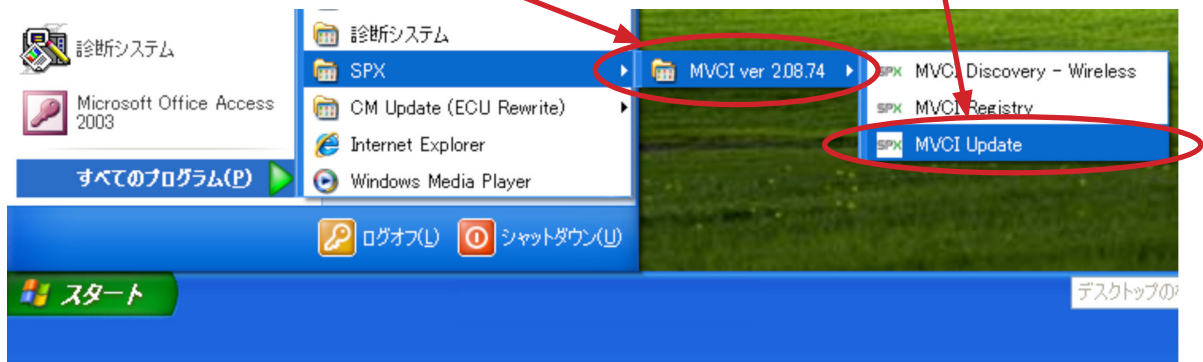
3. **If the HDS software version is older than 2.023.012**, do not perform the following actions:

At the HDS menu:



At the Start menu:

**If the MVCI version number is older than 2.08.77, do NOT run the MVCI update from the Start menu.**



**NOTE:** If the MVCI firmware is updated with an old version, the MVCI must be replaced. Replacement will be done free of charge.



# Contents

<b>Safety Precautions .....</b>	<b>6</b>	<b>MVCI Setup.....</b>	<b>49</b>
<b>General Information .....</b>	<b>6</b>	Clock .....	50
<b>MVCI Component Descriptions.....</b>	<b>7</b>	Contrast Control .....	50
<b>MVCI Screen Icon Descriptions .....</b>	<b>8</b>	Font Size .....	51
Battery Icon Descriptions .....	8	Wireless.....	51
<b>Font Size.....</b>	<b>8</b>	SDMEM Format.....	51
Scroll Type MVCI.....	8	Factory Defaults .....	51
4-way Type MVCI.....	8	<b>User Customize .....</b>	<b>52</b>
<b>Language.....</b>	<b>8</b>	Language .....	52
<b>MVCI LED Descriptions.....</b>	<b>9</b>	Destination .....	52
<b>Keypad Operation.....</b>	<b>9</b>	Beep Menu.....	52
<b>MVCI Software Installation .....</b>	<b>9</b>	<b>CM Update Mode .....</b>	<b>53</b>
Handling Prompted Message When Installing MVCI		Reprogramming.....	53
Firmware .....	9	Display Error.....	53
MVCI Application Installation.....	10	Setting 1 .....	54
MVCI Battery Installation.....	10	Setting 2 .....	54
MVCI Driver Installation.....	10	<b>Network Setup .....</b>	<b>55</b>
<b>Network Connections.....</b>	<b>11</b>	Ethernet.....	55
<b>Honda Diagnostic System (HDS) Setup .....</b>	<b>11</b>	USB Device .....	56
<b>HDS MVCI Firmware Update.....</b>	<b>13</b>	Wireless Profiles.....	56
Automatic Update.....	13	DHCP Server.....	57
Manual Update .....	16	<b>MVCI Status.....</b>	<b>57</b>
<b>Connecting to the Vehicle.....</b>	<b>19</b>	SDIO-1 .....	58
<b>Wireless Network Setup.....</b>	<b>20</b>	SDIO-2 .....	58
Wireless Card Types .....	20	Battery Charger.....	58
Wireless Access Point (Infrastructure Mode) .....	20	Host Status.....	58
MVCI (Adhoc Mode, also called Peer to Peer).....	22	<b>Software Version .....</b>	<b>59</b>
HDS PC.....	22	<b>Hardware Test .....</b>	<b>59</b>
MVCI Wi-Fi Setup.....	23	Beep Test .....	59
Wizard Assisted Setup .....	23	LED Test.....	60
Advanced Setup .....	27	LCD Test .....	60
Set Up PC Communication to MVCI .....	30	Keypad Test .....	60
Windows XP® .....	30	Scroll Test (for units with scroll type keypad only).....	61
Windows 7® / Windows Vista® .....	35	Serial Number .....	61
User Troubleshooting Guide.....	40	Device Loopback Test.....	61
Wi-Fi Time-out.....	40	SDMEM Card Test .....	62
Windows 7® Wired AutoConfig and		<b>Auxiliary PC Applications .....</b>	<b>62</b>
WLAN AutoConfig .....	41	MVCI Firmware Update.....	62
Windows XP® Windows Zero Configuration .....	43	Other Firmware Scenarios .....	64
MVCI Limitations .....	45	MVCI Registry Setting.....	65
Technical Services .....	46	Registry Error Recovery.....	66
<b>MVCI Dashboard Descriptions .....</b>	<b>48</b>	<b>Frequently Asked Questions .....</b>	<b>67</b>
<b>Switch Wireless .....</b>	<b>49</b>	<b>Useful Information.....</b>	<b>69</b>
<b>DLC Voltage .....</b>	<b>49</b>	<b>Specifications .....</b>	<b>70</b>
		<b>Warranty .....</b>	<b>71</b>

## Safety Precautions

### **DANGER:**

When an engine is operating, keep the service area WELL VENTILATED or attach a building exhaust removal system to the engine exhaust system. Engines produce carbon monoxide, an odorless, poisonous gas that causes slower reaction time and can lead to serious personal injury or loss of life.

### **WARNINGS:**

- Wear an American National Standards Institute (ANSI) approved eye shield when testing or repairing vehicles.
- Set the parking brake and block the wheels before testing or repairing a vehicle. It is especially important to block the wheels on front-wheel drive vehicles because the parking brake does not hold the drive wheels.
- Do not drive the vehicle and operate the tool at the same time. Any distractions may cause an accident. Have one person operate the tool as another person drives the vehicle.
- Maintain adequate clearance around moving components or belts during testing. Moving components and belts can catch loose clothing, body parts, or test equipment and cause serious damage or personal injury.
- Refer to the service manual for the vehicle being serviced. Adhere to all diagnostic procedures and precautions. Failure to do so could result in personal injury or otherwise unneeded repairs.
- The MVCI vehicle I/O connector is to be connected to the vehicle Data Link Connector (DLC) only. Signals on these lines are limited to 32V DC (UL 61010-1 Category I), and are never to be connected to AC voltage (UL 61010-1 Category II, III, and IV).
- Replace with rechargeable 2000mAh minimum AA Nickel-metal Hydride (NiMH) batteries only.

### **IMPORTANT:**

- To avoid damaging the tool or generating false data, make sure the vehicle battery is fully charged and the connection to the vehicle DLC is clean and secure.
- Do not place the tool or communication cable on the distributor of a vehicle. Strong electromagnetic interference can damage the tool.
- Never disconnect or reconnect any electrical connector while the ignition is on. Control unit damage may result.
- The MVCI unit is designed to operate within -4°F to 140°F (-20°C to 60°C) ambient temperature range. The surface of the MVCI could appear warm after extended periods of use - this is normal. Users should be careful when holding a unit that has been exposed to very high ambient temperatures, over 104°F (40°C) for example.

## General Information

The SPX Modular Vehicle Communications Interface (MVCI) is an interface box used to connect to a vehicle's data link connector (DLC). The MVCI is used to read information from a vehicle's electronic control units and sends this information to a PC application. The MVCI communicates with the PC through a USB, Ethernet, or wireless card. The PC application software sends commands to the MVCI to read diagnostic trouble codes, read data from the vehicle's ECUs, or performs special device control tests on the vehicle.

The MVCI is typically used in an automotive service garage. It is used in and around the vehicle, including the passenger compartment and/or the engine compartment. Read and understand the Safety Precautions section of this User Guide before using the MVCI on a vehicle.

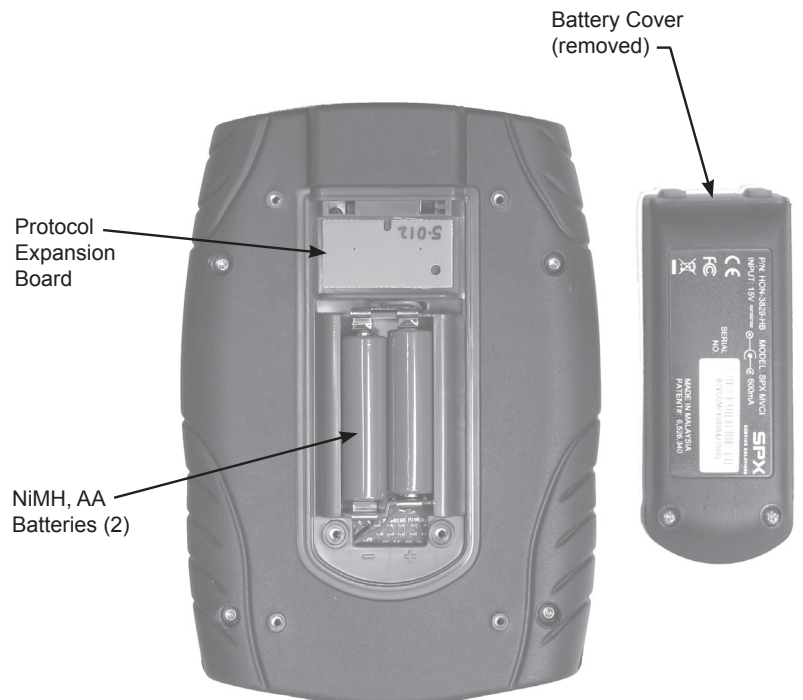
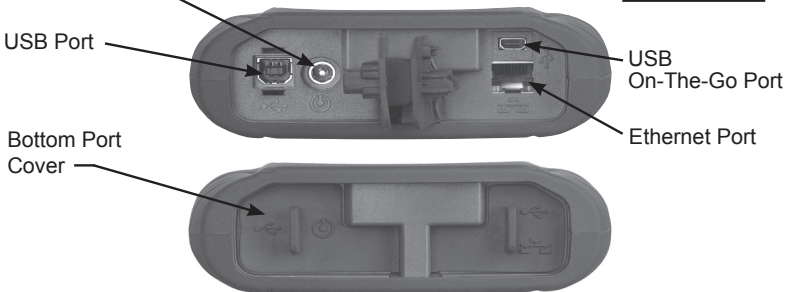
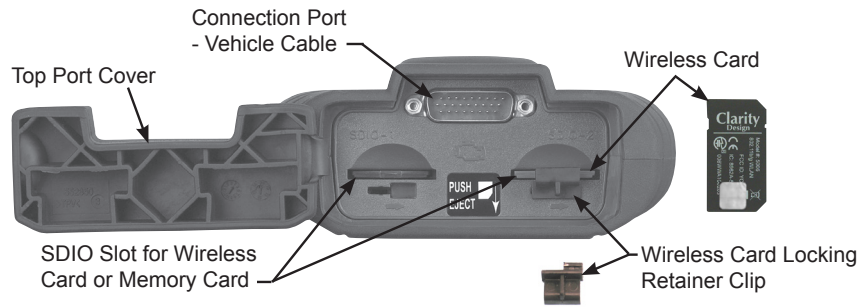
Connect the MVCI to the PC through one of the methods presented above. See the MVCI Software Installation section of this User Guide to determine the best connection method.

Connect the MVCI to the DLC to communicate with the vehicle. See Connecting to the Vehicle section of this User Guide for additional information. The MVCI will require power from the vehicle to operate properly.

The MVCI contains two (2) rechargeable NiMH AA batteries. These batteries are charged whenever power is applied to the MVCI through the vehicle DLC. The internal batteries may also be recharged by supplying power to the MVCI from the Power Adapter Port. Use the supplied AC Power Adapter (SPX replacement P/N H547571) only. If the batteries need to be replaced, replace them with 2000mAh NiMH AA batteries (SPX replacement P/N H550175). See the MVCI Component Descriptions section of this User Guide for battery location information. Ensure the batteries are oriented correctly when installing.

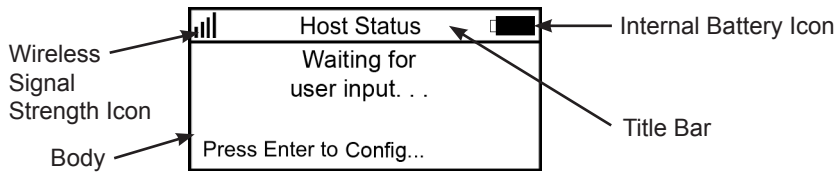
Failure to operate the MVCI as stated in this User Guide may impair the protection mechanisms designed into the MVCI.

# MVCI Component Descriptions



## MVCI Screen Icon Descriptions

**NOTE:** Screens shown in this manual may vary in appearance due to the product software version at the time of shipment.



The LCD screen is divided into two parts, the title bar and the body.

The title bar is divided into three portions:

- Wireless signal strength (left side)
- Current screen being viewed (center)
- Internal battery condition (right side)

The wireless icon appears when a wireless profile is connected.


## Battery Icon Descriptions


When the MVCI is powered by an external power source, the battery icon displays as an internal charging symbol. When the MVCI is connected to a vehicle, the battery icon flashes from component battery to vehicle battery.


**NOTE:** The MVCI battery charger employs temperature-controlled charging algorithm. It is normal to display battery charging animation when the MVCI is powered by external power source even if the batteries are fully charged.

 **Battery Charging Animation**  
The MVCI is charging the internal batteries.

 **Charged Battery Icon**  
The MVCI internal batteries charge cycle is complete.

 **Battery Idle Symbol**  
The MVCI is powered via external adapter or vehicle power and battery charger is turned OFF.

 **Unknown Internal Battery Symbol**  
The MVCI has no batteries and is powered through a USB cable.

 **No Internal Battery Symbol**  
If the MVCI does not have internal batteries installed, the battery icon has an 'X' on it. Refer to the Frequently Asked Questions section of this User Guide for more detail.

## Font Size

The MVCI Display Font Size can be modified to display Large Font or Small Font through the keypad (scroll or 4-way type).

**NOTE:** To modify the Font Size through the MVCI Setup Menu refer to the MVCI Setup section of this User Guide for more detail.

## Scroll Type

- To display Large Font, hold the scroll to the right for 1 second. The MVCI will switch to Large Font.
- To display Small Font, hold the scroll to the left for 1 second. The MVCI will switch back to Small Font.

## 4-way Type

- To display Large Font, press and hold the right arrow button (>>) for 1 second. The MVCI will switch to Large Font.
- To display Small Font, press and hold the left arrow button (<<) for 1 second. The MVCI will switch back to Small Font.

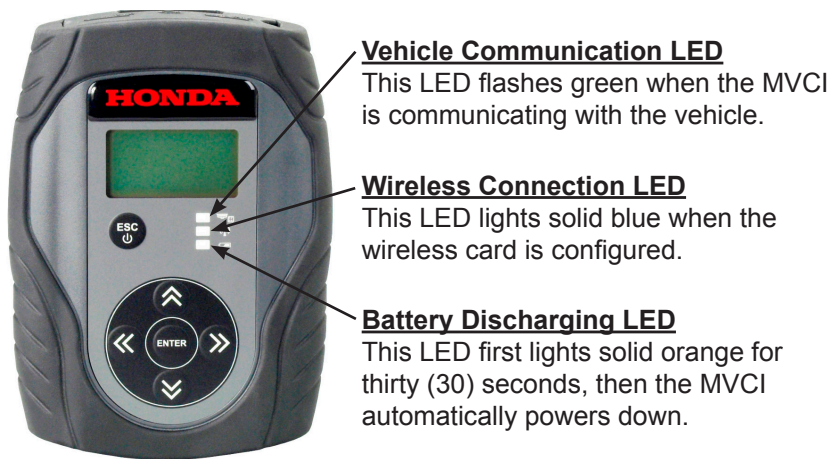
**NOTE:** The Large Font function does not apply to all screens.

## Language

To change the MVCI display language, refer to the MVCI Setup section of this User Guide for details.



## MVCI LED Descriptions



## Keypad Operation

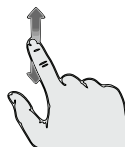
The MVCI has two kinds of keypad, a 4-way type and a scroll type. The 4-way type uses 4 direction buttons, up, down, left, and right. The scroll type uses a circular scroll pad.

**4-way type**

**Scroll type**



Circular motion scrolls Up, Down, Left and Right

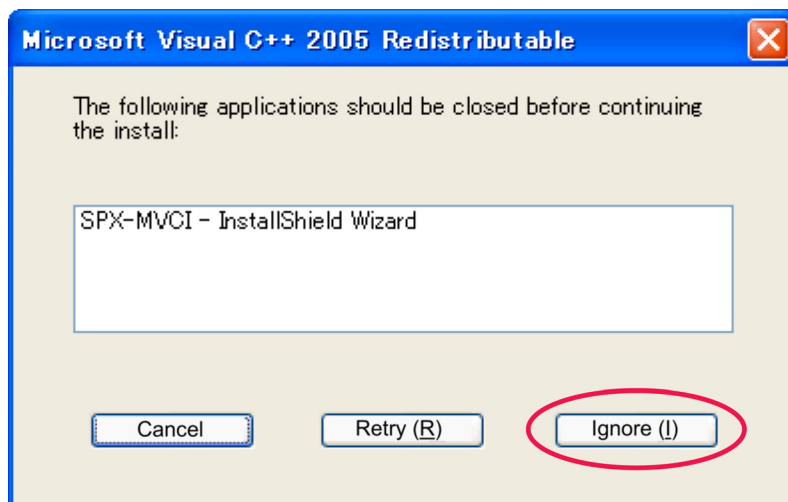


## MVCI Software Installation

**NOTE:** The SPX MVCI Installation will remove all previous SPX MVCI Installation information.

### Handling Prompted Message When Installing MVCI Firmware

When installing HDS X.XXX.XXX, click “Ignore”, if prompted, to continue installation. This prompt rarely occurs.





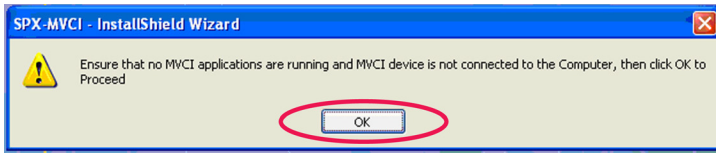
## MVCI Application Installation

Insert the CD into your personal computer (PC) CD-ROM tray.

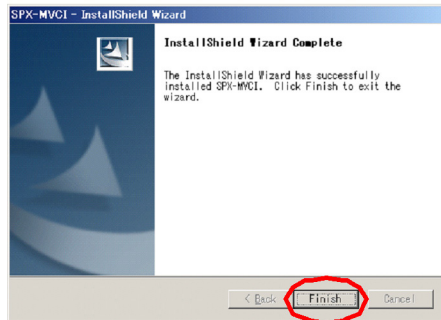
1. The install CD will automatically begin the installation procedure.

**NOTE:** If installation does not automatically begin, go to the **Start Menu (XP) or Windows Logo icon (Vista/7) > My Computer**, and click on the **install CD** under **devices with removable storage**. Double-click the file named **Setup.exe**.

2. Exit all MVCI applications, and confirm that the SPX-MVCI device is disconnected from the PC. Click **OK**.



3. During setup a folder labeled **SPX** is installed on you PC main drive (C:\SPX), and two SPX shortcut icons are placed on your desktop. Click **Finish** and the installation program will automatically exit.



4. Restart the PC if prompted, when installing on Windows Vista or Windows 7.

## MVCI Battery Installation

1. Remove the 2 screws from the battery cover using a Phillips screwdriver.
2. Remove the battery cover and set aside.
3. Insert the supplied (2) pre-charged AA Sanyo Eneloop Batteries (confirm correct orientation).
4. Replace the battery cover and the (2) screws.

## MVCI Driver Installation

**NOTE:** The MVCI Application (see previous page) must be installed before installing the MVCI Driver. The installed folder **SPX** must be on your PC main drive (C:\SPX).

1. With the batteries installed in the MVCI, plug the external power supply into the MVCI to boot it up.
2. Using the USB cable supplied with the MVCI, connect the MVCI to your PC.
3. Windows XP, Vista, or 7.0 will automatically install the MVCI driver software. Observe the status and completion of the installation from your PC desktop.

### Windows XP:



4. a. Installation is now complete. When installing on Windows XP, restart the PC if prompted.

### Windows Vista/7:



4. b. Installation is now complete.

## Network Connections

There are three types of network connections: Ethernet, USB, and Wireless. The MVCI can act as a DHCP server for any of these connections.

- **Ethernet Connection** - If an Ethernet cable is connected to the PC and MVCI (with power to the MVCI), the Ethernet driver will automatically be recognized. Typically, when an Ethernet connection is chosen, setup to the MVCI is not required. If additional setup is required, refer to the **Ethernet** setup in the User Guide.
- **USB Connection** - If the USB cable is connected to the PC and MVCI (with power to the MVCI), the USB driver will be automatically recognized. Typically, when a USB connection is chosen, setup to the MVCI is not required. If additional setup is required, refer to the **USB Device** setup in the User Guide.
- **Wireless Connection** - If Wireless connection is chosen, refer to the **Wireless Network** setup in the User Guide for setup instructions. Testing the Ethernet or USB connection before using the wireless connection is recommended.
- **DHCP Server** - The DHCP server setting controls whether the MVCI will act as a DHCP server for Ethernet and USB operation. For most installations, the factory default settings should be used. This DHCP Server setup is included if you require a unique DHCP Server setup. If additional setup is required, refer to the **DHCP Server** setup in the User Guide.

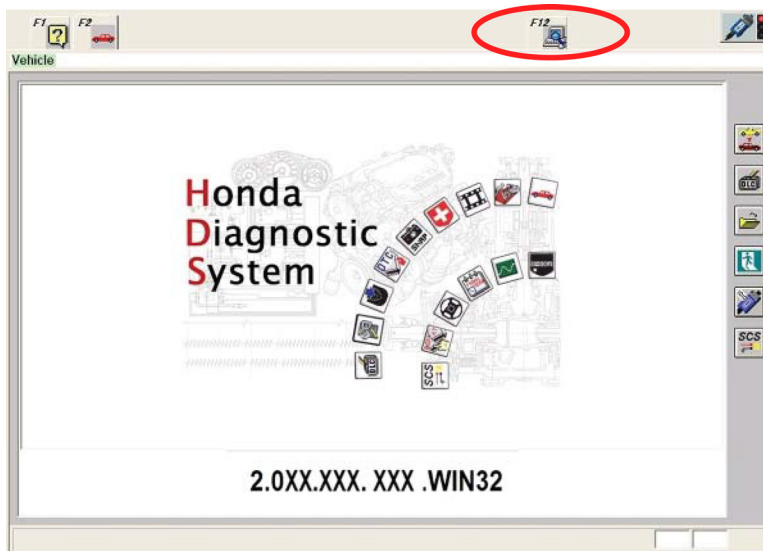
## Honda Diagnostic System (HDS) Setup

The MVCI is used with HDS software.

1. Double-click the **HDS** shortcut icon on the desktop to start the HDS.

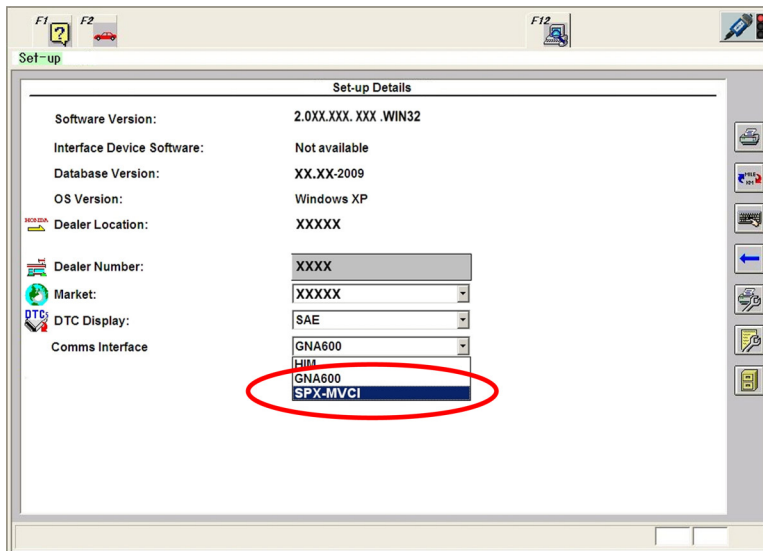


2. On the HDS Welcome screen, click the **F12** tab

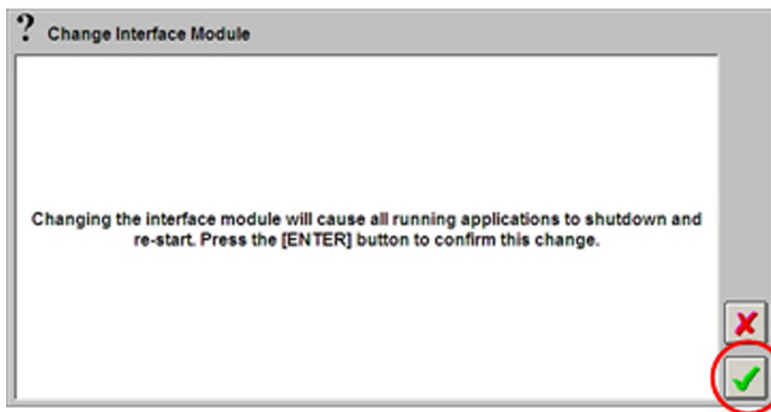


**NOTE:** Install the latest version of HDS.

3. On the Set-up Details screen, select **SPX-MVCI** in the drop down selection under **Comms Interface**.

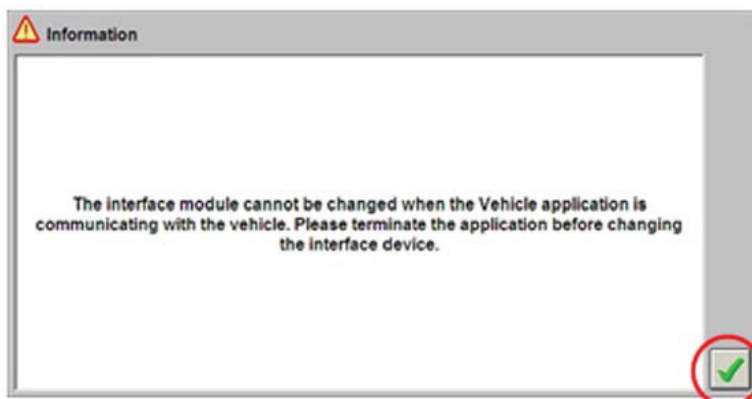


4. The Change Interface Module screen is displayed when SPX-MVCI is selected. Press **Enter** on your keyboard or click the green check mark located in the lower right corner.



The HDS software will automatically restart and returns to the HDS Welcome screen.

**NOTE:** If the following warning screen appears, press **Enter** on your keyboard or click the green check mark and try again after HDS terminates communication.



## HDS MVCI Firmware Update

**IMPORTANT:** Before connecting the MVCI to a vehicle, verify that HDS software version is 2.023.012 or newer is installed on the PC and MVCI firmware version 2.08.77 or newer is installed on the MVCI. If connecting to a PC with an older version, do NOT proceed with an MVCI firmware update. This will damage the MVCI and require that it be replaced.

The MVCI software can be updated automatically or manually. If the MVCI does not have the latest software installed, HDS will take you to the MVCI reprogramming screen. Please refer to “Automatic Update” steps 1-7.

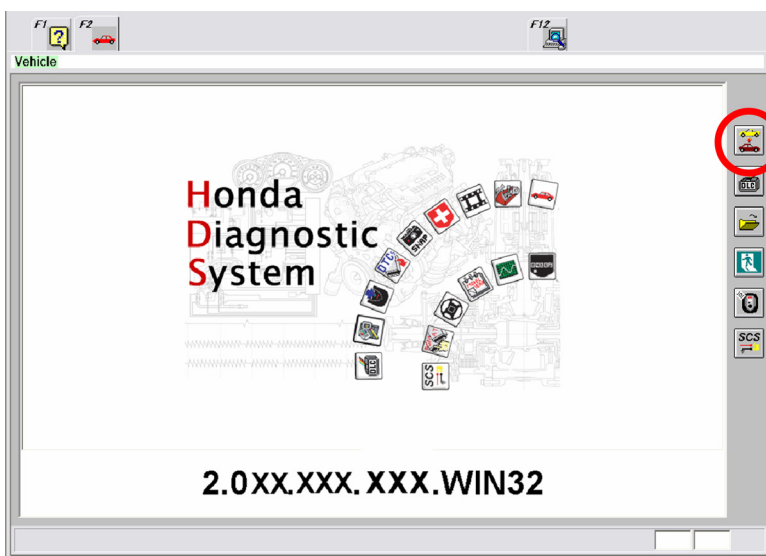
To manually start the MVCI reprogramming, click the “**Program the SPX-MVCI**” button on the HDS Welcome screen. See steps 7-12 in the “Manual Update”.

**IMPORTANT:** Do not remove power or disconnect the USB cable while the MVCI is being reprogrammed. Interruption of reprogramming could damage the MVCI.

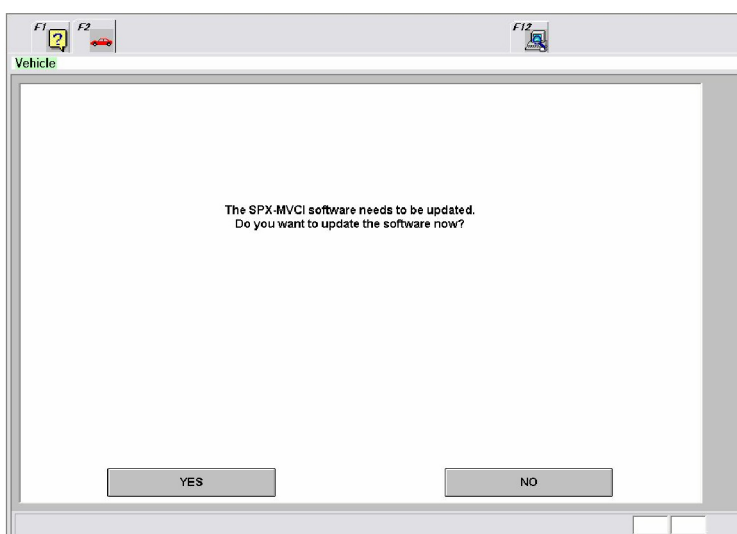
The entire update process takes approximately 3 minutes to complete depending on the software content.

### Automatic Update

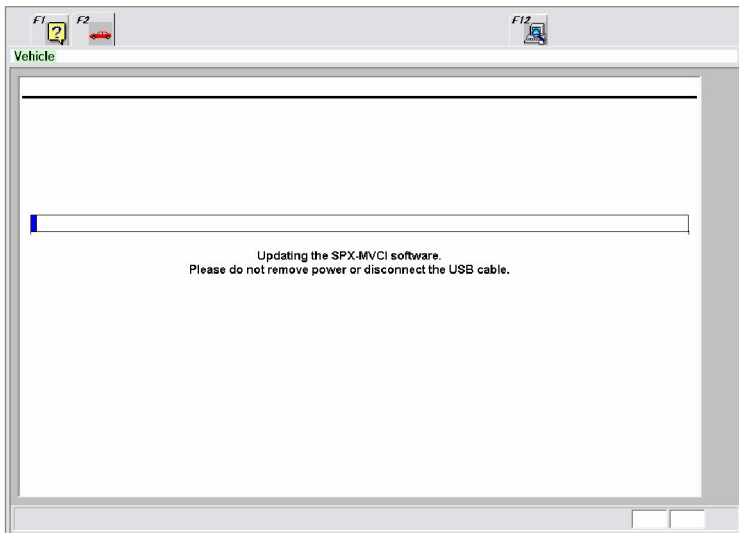
1. To start a new vehicle diagnostic session, click the “**Select a new vehicle**” button.



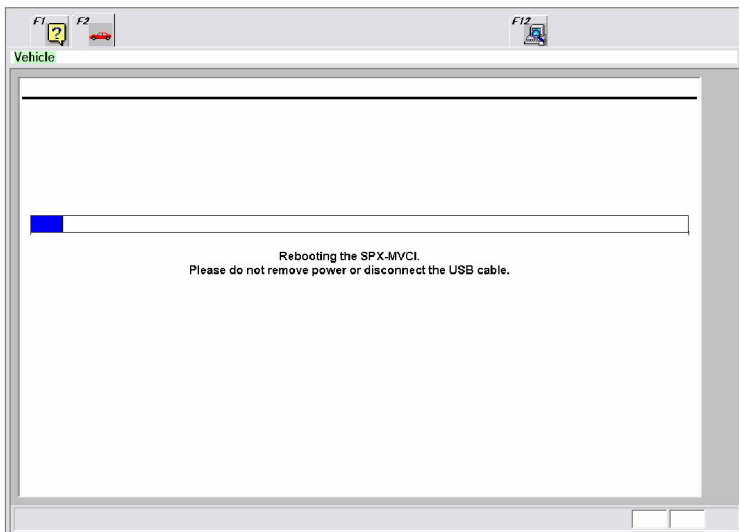
2. The following screen appears when the MVCI needs updating. Click **YES** to continue or click **NO** to close the dialog box and return to the HDS Welcome screen. If the MVCI has the latest software installed, this screen won't display.



3. Ensure the MVCI is powered through the vehicle DLC or the AC/DC power adapter. Connect the MVCI to the PC via the USB cable. MVCI firmware update begins.



5. The MVCI automatically reboots. Follow directions on the screen. Do not remove power or disconnect the MVCI.



After rebooting, the MVCI displays the following messages of what files are being upgraded.

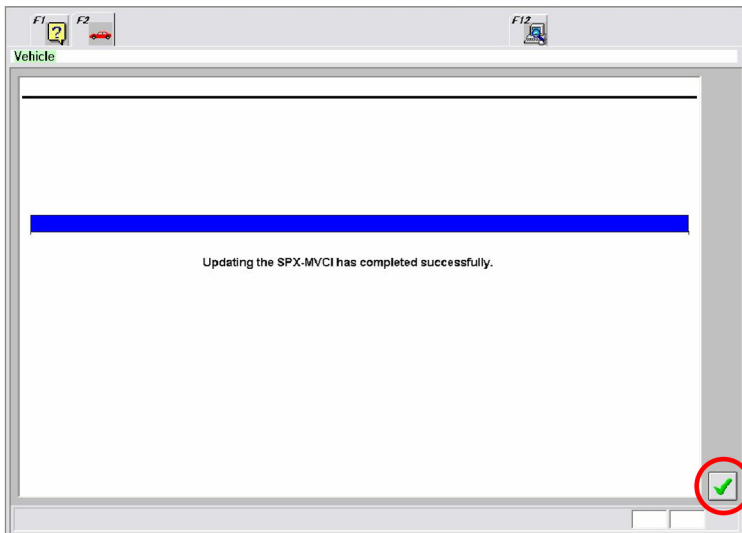
Upgrade	Upgrade	Upgrade
Verifying MD5SUM . .	MD5SUM success . .	Upgrading *****
Do not power off MVCI	Do not power off MVCI	Do not power off MVCI

After the MVCI firmware update is complete, the MVCI restarts through its normal sequence and displays the Host Status screen.

Host Status
Waiting for user input. . .
Press Enter to Config...



6. When the MVCI firmware update is complete, the screen below is displayed. Press **Enter** on your keyboard or click the green check mark located in the lower right corner.

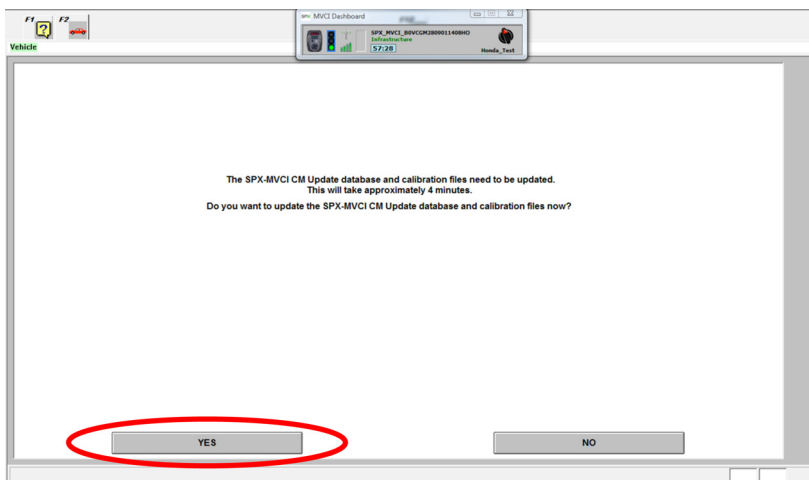


**NOTE:** The update sequence will vary by the software content.

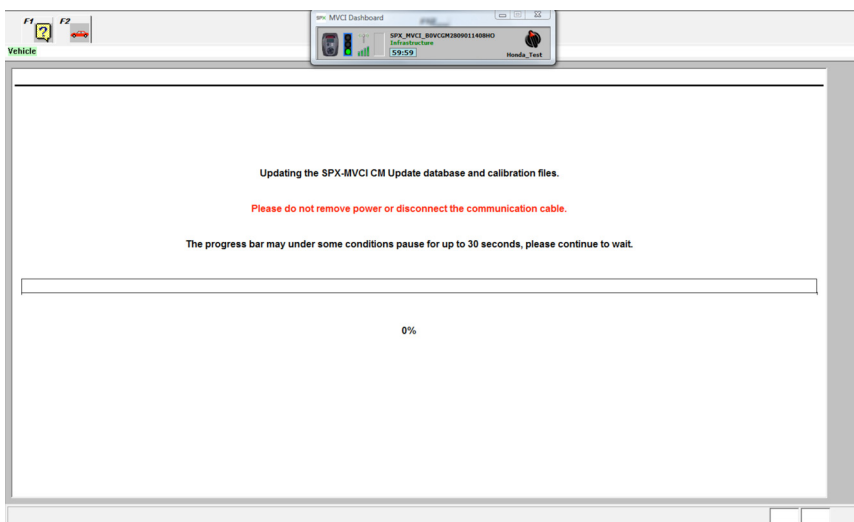
7. Update the SPX-MVCI CM Update database and calibration files.

**NOTE:** CM Update automatically begins at the close of the MVCI firmware update. This occurs whether the MVCI firmware update is performed automatically or manually.

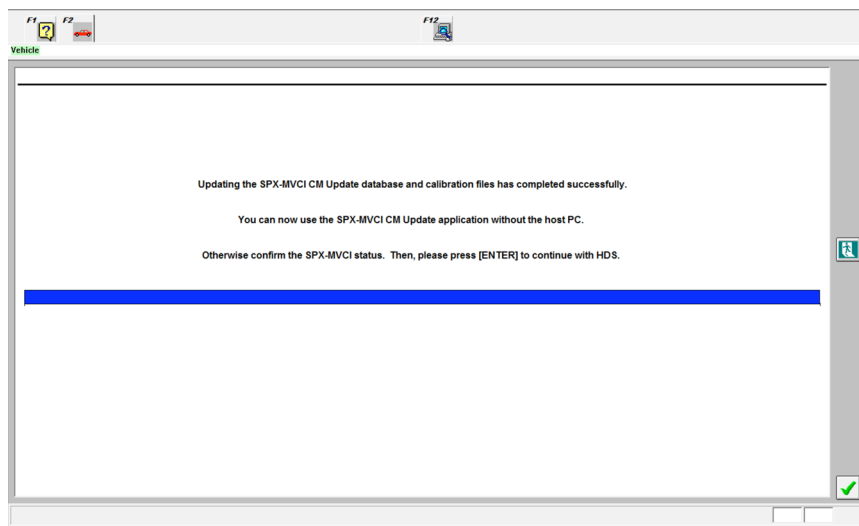
The following screen displays. Click **YES** to begin CM Update.



The update progress bar displays and could pause for up to 30 seconds under some conditions. Wait as the update progresses and do not remove power or disconnect the communication cable during this time.



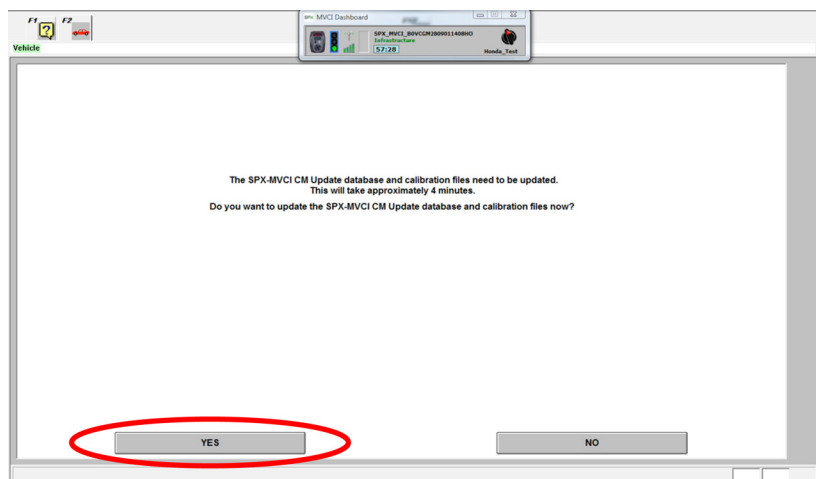
Successful completion of the update results in the following display.



Confirm the MVCI status and press **ENTER** to continue with HDS.

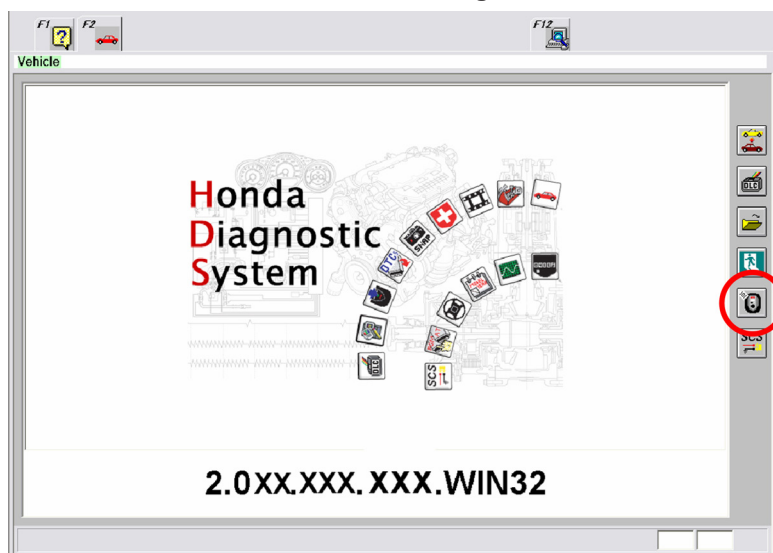
**NOTE:** The following screen can occur at any time if the connection has been interrupted. Remove all cables from the interface device and reconnect them. Ensure the cables are connected correctly.

Click **YES** to retry the updating process again.

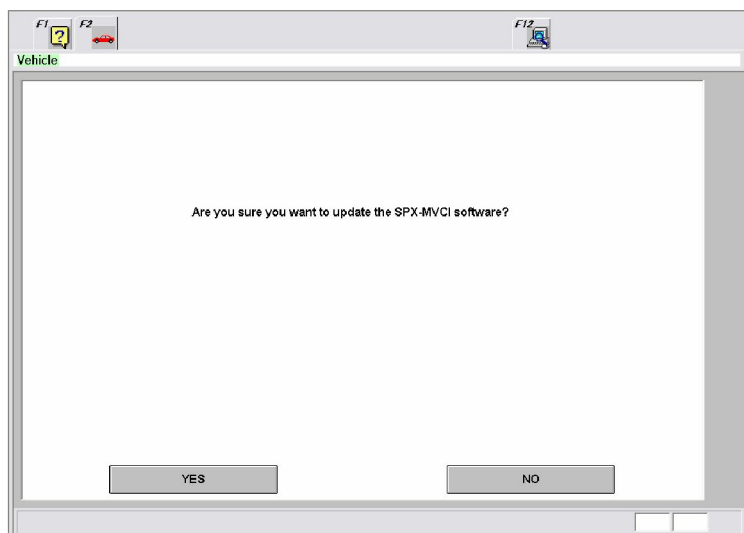


## Manual Update

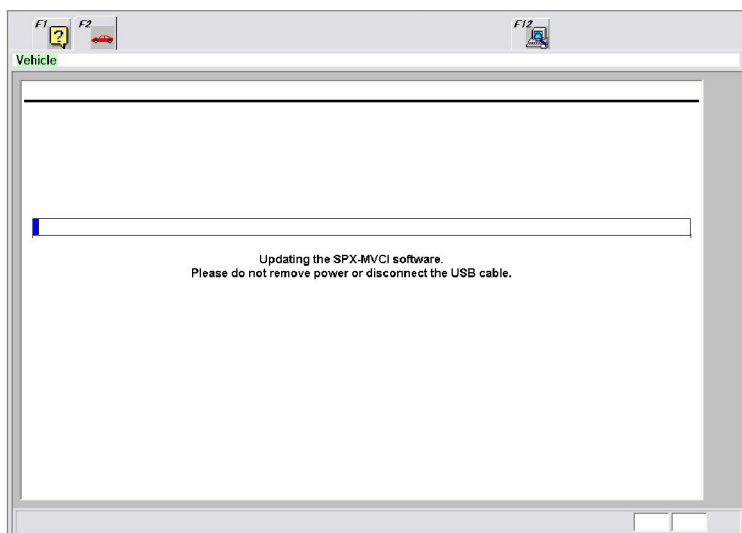
8. On the HDS Welcome screen, click "**Program the SPX-MVCI**" button.



9. The following screen appears. Click **YES** to continue or click **NO** to close the dialog box and return to the HDS Welcome screen.



10. Ensure the MVCI is powered through the vehicle DLC or the AC/DC power adapter. Connect the MVCI to the PC via the USB cable. MVCI firmware update begins.



11. The MVCI automatically reboots. Follow directions on the screen. Do not remove power or disconnect the MVCI.



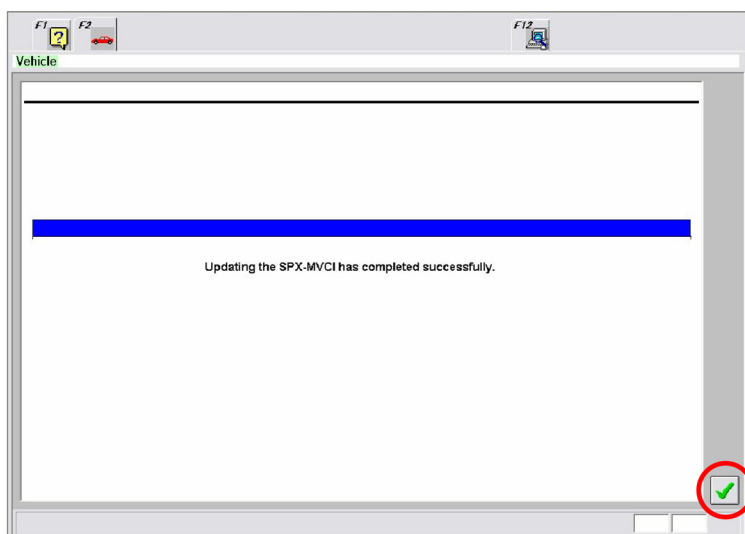
After rebooting, the MVCI displays the following messages of what files are being upgraded.

Upgrade	→ Upgrade	→ Upgrade
Verifying MD5SUM . .	MD5SUM success . .	Upgrading *****
Do not power off MVCI	Do not power off MVCI	Do not power off MVCI

After the MVCI firmware update is complete, the MVCI restarts through its normal sequence and displays the Host Status screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

12. When the MVCI firmware update is complete, the screen below is displayed. Press **Enter** on your keyboard or click the green check mark located in the lower right corner. HDS will return to the HDS Welcome screen.



**NOTE:** The update sequence will vary by the software content.

13. Update the SPX-MVCI CM Update database and calibration files. Refer to step 7 in the Automatic Update portion of HDS MVCI Firmware Update section of this User Guide.

**NOTE:** CM Update automatically begins at the close of the MVCI firmware update. This occurs whether the MVCI firmware update is performed automatically or manually.

## Connecting to the Vehicle

1. Connect the Vehicle Cable to the MVCI and to the Data Link Connector (DLC) on the vehicle.
2. The MVCI will power on automatically when power is received through the vehicle DLC.
3. Turn off the MVCI by disconnecting the vehicle DLC and pressing **ESC** for 5 seconds. The MVCI also powers off automatically after 30 seconds when disconnected from an external power source.

**NOTE:** To reset the MVCI, press **ESC** until the MVCI restarts (approximately 6 seconds) while the MVCI is connected to any external power source.








## Wireless Network Setup

**Note:** Before proceeding, the following information is needed for wireless setup of the MVCI. To ensure your environment is suitable and the wireless setup is successful, read the limitations of the MVCI on page 45.

### Wireless Card Types

The type of wireless card being used in the MVCI determines the recommended settings on the Access point.

Card Name	Picture	Description	Length of Card	Access Point Recommendations
P300		The P300 card is blue with a white label stating serial number and bar code.	1.57 inches (4 centimeters)	Channel 1, 7 or 8 should be used.
Clarity		The Clarity card is black with "Clarity Design" in white letters.	1.78 inches (4.5 centimeters)	Optimal channel for the work area should be used.
Memory Card		The memory card is blue with "Transcend" in white letters.	1.25 inches (3.2 centimeters)	N/A- This card is not used for Wi-Fi.

### Wireless Access Point (Infrastructure Mode)

In infrastructure mode, the MVCI will communicate through the dealer network. The following items need to be checked on the dealer network Access point and, depending on the situation, may require the settings to be modified.

**Note:** Changing Access point settings may adversely affect access to the dealer network. Before changing any of these settings consult your IT specialist to confirm the changes being made will not interrupt dealer network access.

1. **SSID** - Name which the Access point broadcasts wirelessly. See the limitations section beginning on page 45 for more information.
2. **Security/Encryption** - Supported Security types on the Access point.
  - **WEP 64 or WEP 128**
    - **Open**
      - Open/WEP64 (with direct entry of HEX characters [not passphrase])
      - Open/WEP128 (with direct entry of HEX characters [not passphrase])
    - **Shared**
      - Shared/WEP64 (with direct entry of HEX characters [not passphrase])
      - Shared/WEP128 (with direct entry of HEX characters [not passphrase])

- **WPA or WPA2**
    - WPA-PSK/TKIP (Personal)
    - WPA-TKIP Personal may be used on the MVCI when AP is set to “WPA-TKIP + WPA-AES Personal” encryption. If it does not work, the AP has to be changed to “WPA2-AES Personal or WPA-TKIP Personal”
    - WPA2-PSK/AES (Personal)
    - See the Limitations section beginning on page 45 for more information.
3. **Channel** - Wireless channel the Access point is currently using. See “Wireless Card Types” on page 20 for recommendations.
  4. **Network Key** - Security/Encryption used on the Access point.
    - See the Limitations section beginning on page 45.
  5. **IP Address** - The IP Address configuration determines if assistance is needed from an IT specialist.
    - Determine if the Access point uses DHCP IP Address configuration, where the IP Address is auto assigned, or if it is using a static IP address from another network source.
    - If the IP address has the same first six numbers as 192.168.100.1, the router assigns the IP address and IT assistance should not be needed.
    - If the network uses a Proxy Server, Static IP Address, or multiple Access points, bridges or repeaters, it is recommended an IT specialist setup the network. The IT specialist will have to configure the network, PC and the MVCI for the MVCI to be used in infrastructure mode.
  6. **Access point power level** - Set the Access point to a maximum of 15dBm.
  7. **Access point type** - Use of Wireless Access points supporting carrier class multipath / diversity antenna is recommended.
  8. **Wireless Range** - The Access point should be located within a 70 feet (21 meters) radius of line of sight in the work area.
    - The Wireless range for the MVCI is 70 feet (21 meters), which is shorter than the wireless range of a typical PC. In some cases the PC may be able to communicate with the Access point but the MVCI may not. In such cases, move the MVCI closer to the Access point.
    - The recommended location for Access points is along the centerline of the shop, equally spaced, ceiling mounted, and away from lights and metal obstructions.
    - The MVCI should be located a maximum of 70 feet (21 meters) from the PC and a maximum of 70 feet (21 meters) from the Access point.
  9. **802.11 G** - Verify all Access points are capable of running Wi-Fi “G” at 54 Mbps. Some Access points use G+ version with higher speeds but the MVCI will not be fully compatible with these Access points. See the Limitations section on recommended Access point speeds on page 45.
  10. **Interference** - The MVCI Wi-Fi is susceptible to interference like all Wi-Fi devices. A list of known devices in a repair shop that can cause interference are:
    - Alignment machines
    - Cordless phones operating on the 2.4 GHz and 5 GHz frequency ranges
    - Bluetooth devices such as cell phones
    - Microwave ovens
    - Analog security cameras

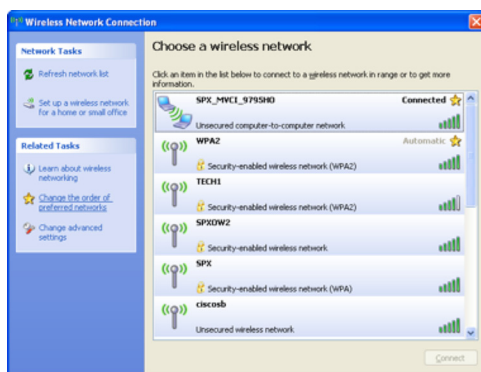
## MVCI (Adhoc Mode, also called Peer to Peer)

1. **Serial Number** - Printed on the back of the MVCI.
2. **Channel** - Choose a channel different from the channel the Access point/router is currently set up on.
3. **Security** - Supported security types for the Adhoc network.
  - **WEP 64 or WEP 128**
  - **Open**
  - Open/WEP64 (with direct entry of HEX characters [not passphrase])
  - Open/WEP128 (with direct entry of HEX characters [not passphrase])
  - **Shared**
  - Shared/WEP64 (with direct entry of HEX characters [not passphrase])
  - Shared/WEP128 (with direct entry of HEX characters [not passphrase])
  - See the Limitations section beginning on page 45 for more information.
4. **SSID** - Name the MVCI broadcasts wirelessly.
  - Choose a different SSID for each MVCI.

## HDS PC

1. Locate the software that currently controls the wireless connection on the PC.
  - The MVCI can only be used with Windows wireless utilities. Other software controls are not compatible. See the examples below for Windows XP® and Windows 7® /Windows Vista® wireless utilities. If the wireless utility appearance differs, the PC is not using the Windows wireless utility.

Windows XP®



Windows® 7 / Windows Vista®



**Note: Changing how the existing network is accessed can result in preventing access to the wireless network.**

- If the PC cannot be changed to use the Windows utility, the MVCI will have to use the communication cable (USB, Ethernet crossover, or USB to Ethernet adapter).

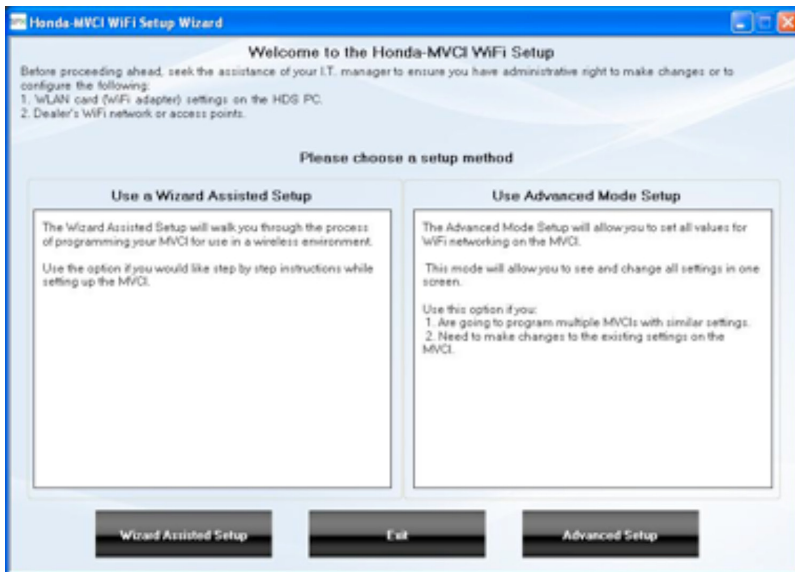
## MVCI Wi-Fi Setup

Before setting up the MVCI for Wi-Fi, confirm the PC is connected to the Access point that will be used with the MVCI. See **Set Up PC Communication to MVCI** steps on page 30 for Windows XP® users, or page 35 for Windows® 7 / Windows Vista® users.

1. Connect the MVCI to the PC via USB cable and power it on using the supplied power adapter.



2. Double-click on the Wi-Fi Setup Wizard desktop icon.
3. A Welcome to the Honda-MVCI Wi-Fi Setup screen appears. Read to determine the appropriate setup method to use.



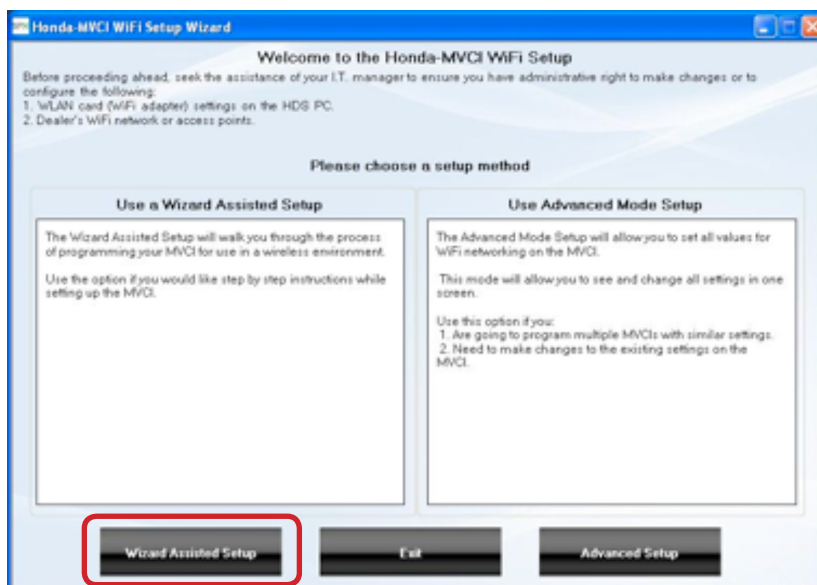
Follow steps A through J, if guidance is needed (Wizard Assisted Setup)

Or,

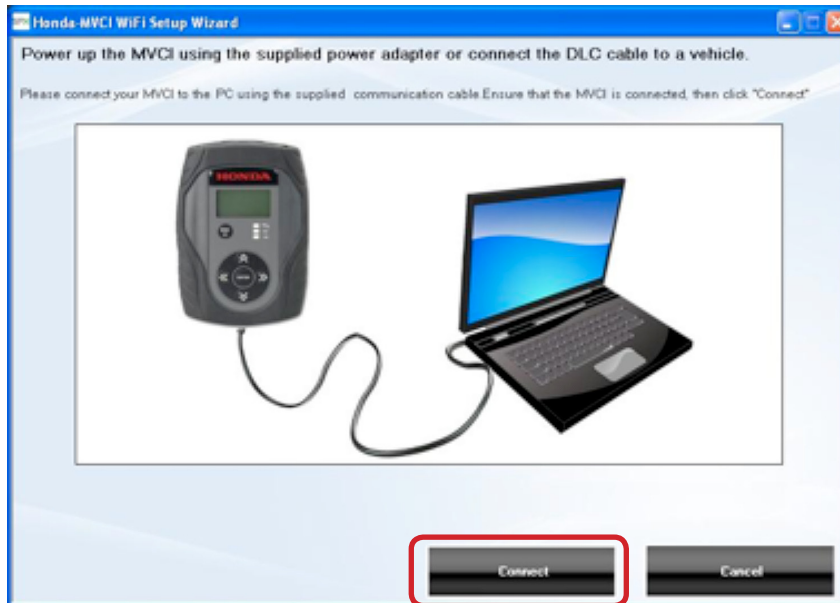
Follow steps 1 through 6, if familiar with the Wi-Fi networks (Advance Setup)

### Wizard Assisted Setup

- A. Click on **Wizard Assisted Setup**.



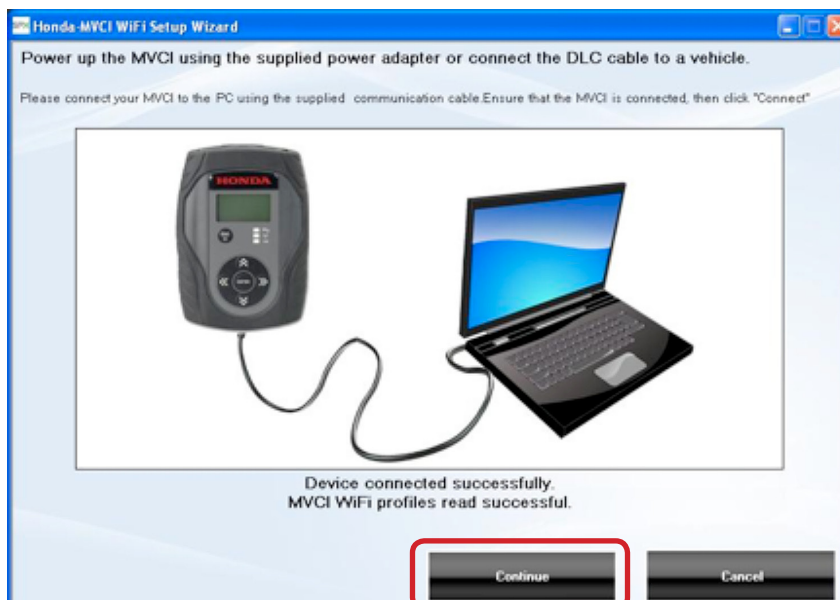
B. Follow the connection instructions, and click **Connect**.



C. Wait while the connection between the PC and MVCI is checked.



D. When prompted the device connected successfully, click **Continue**.





E. A setup screen for Infrastructure (Access point) opens. There are two radio button options:

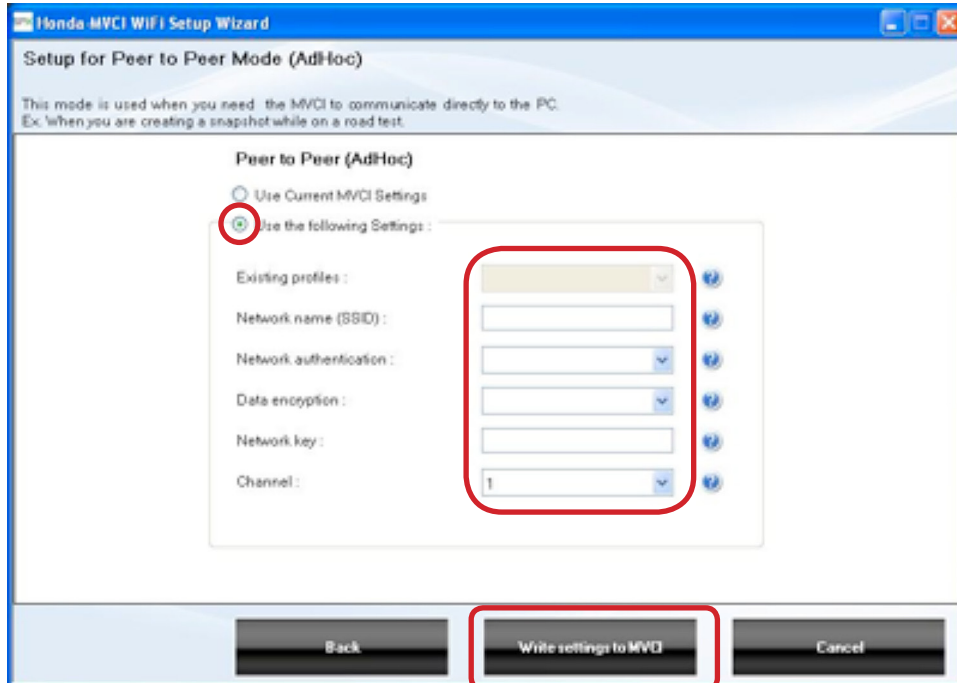
1. Select **Use Current MVCI Settings** (if the MVCI has been setup previously) and click **Continue** (skip to page 30).
2. Select **Use the following Settings** and enter new Infrastructure (Access point) settings of your own by filling in the **Network name (SSID)**, **Network authentication**, **Data encryption**, and **Network key** information from your Access point. See the **Wireless Access point (Infrastructure Mode)** section on page 20 for definitions and the **MVCI Limitations** section on page 45 for further information.
3. Network IP Address configuration needs to be determined.
  - i. If the IP address from the Access point has the same first six numbers as 192.168.100.1, the router assigns the IP address and IT assistance is not needed. Select the **Obtain an IP address automatically** option.
  - ii. If the IP address is not similar to the example, assistance from your IT specialist is needed to setup the network, PC and the MVCI. Select the **Use the following IP address** option.
  - iii. If the network uses a Proxy Server, Static IP Address, or multiple Access points, bridges or repeaters, it is recommended an IT specialist setup the network. The IT specialist will have to configure the network, PC and the MVCI for the MVCI to be used in infrastructure mode.

When all information is complete, click **Write Settings to MVCI**. Click **Continue**.

F. A setup screen for Peer to Peer (Adhoc) opens. There are two options:

1. Select **Use Current MVCI Settings** (if it has been setup previously) and click **Continue** (skip to section G.)
2. Select **Use the following Settings** and enter new Peer to Peer settings of your own that you want to use when connecting directly to the MVCI. Fill in the **Network name (SSID)**, **Network authentication**, **Data encryption**, **Network key** and **Channel**. See the section **MVCI (Adhoc Mode, also called Peer to Peer)** on page 22 for definitions and the **MVCI Limitations** on page 45 for further information.

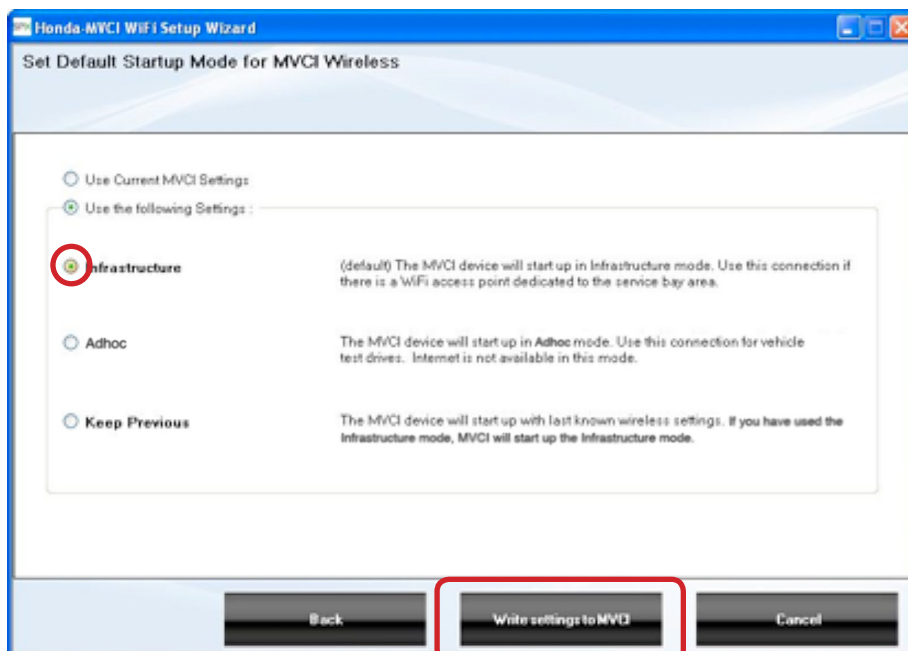
When all the information is complete, click **Write Settings to MVCI**. Click **Continue**.



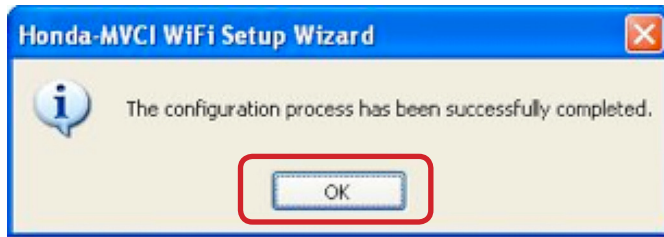
G. The Set Default Startup Mode for MVCI Wireless screen opens. Select **Use Current MVCI Settings**, OR select **Use the following Settings** to enter your own default selection.

- i. **Infrastructure** - MVCI automatically connects to the Access point on boot up.
- ii. **Peer to Peer** - MVCI boots up in peer to peer mode (Adhoc).
- iii. **Keep Previous** - MVCI boots up in the mode it was last in at shutdown.

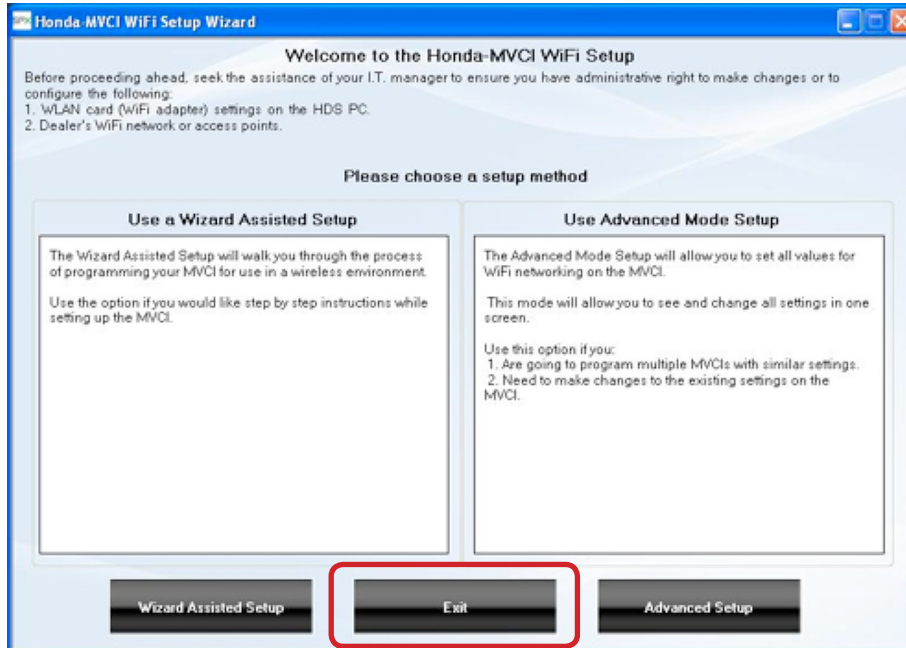
Click **Write settings to MVCI**. Click **Finish**.



- H. A message appears stating the configuration process was successful. Click **OK** to return to the Wi-Fi setup welcome screen.



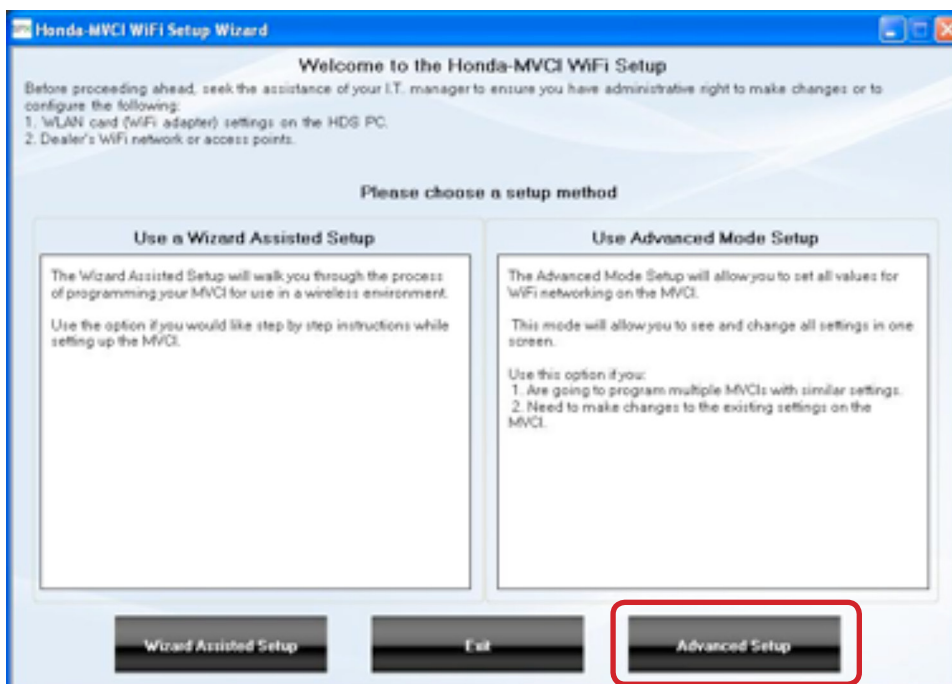
- I. Click **Exit** to return to the desktop. Wireless Setup for the MVCI is complete.



- J. Continue to page 30 to configure the PC.

## Advanced Setup

1. At the Welcome to the Honda-MVCI WiFi Setup screen, click on **Advanced Setup**.



2. A setup screen for both Access Point and Peer to Peer settings opens. Select **Use Current MVCI Settings** (if it has been setup previously), OR select **Use the following Settings** to enter new settings of your own by using the following instructions:

a. Infrastructure

- i. If the PC is already connected to the Access point, click **Read the Current Connected WiFi Settings from the PC**. *Note: This option works only if the PC has a stored profile in the Windows Wireless utility.*
- ii. If the PC is not connected, fill in the **Network name (SSID)**, **Network authentication**, **Data encryption** and **Network key**, from your Access point.
- iii. Select **Obtain an IP address automatically** if your Access point is configured for DHCP at the Access point. If the Access point uses a static IP, select **Use the following IP address** and fill in information obtained from an IT specialist.

The screenshot shows the Honda-MVCI WiFi Setup Wizard. The 'Infrastructure (Access Point)' tab is active. Under 'Use the following Settings:', the 'Obtain an IP address automatically' option is selected. The 'Update MVCI' button at the bottom is highlighted with a red box.

b. Peer to Peer (Adhoc)

- i. Fill in the **Network name SSID** and, if security for Adhoc is desired, fill in the **Network authentication**, **Data encryption** and **Network key**. If security is not desired, select **Open or Disabled** for these options from the drop down menus.
- ii. Select one of the Default Wireless Mode options to determine the boot up mode of the MVCI.
  1. **Infrastructure** - MVCI automatically connects to the Access point on boot up.
  2. **Peer to Peer**- MVCI boots up in peer to peer mode (Adhoc).
  3. **Keep Previous** - MVCI boots up in the mode it was last shutdown in.

3. When all information is complete, click **Update MVCI**.

Honda-MVCI WiFi Setup Wizard

**Infrastructure (Access Point)**

☐ Use Current MVCI Settings

☒ Use the following Settings :

Existing profiles :

Network name (SSID) :

Network authentication :

Data encryption :

Network key :

☒ Obtain an IP address automatically

☐ Use the following IP address :

IP address :

Subnet mask :

**Peer to Peer (AdHoc)**

☐ Use Current MVCI Settings

☒ Use the following Settings :

Existing profiles :

Network name (SSID) :

Network authentication :

Data encryption :

Network key :

Channel :

**Default Wireless Mode**

Select Startup Network :

☒ Infrastructure

☐ Peer to Peer

☐ Keep Previous

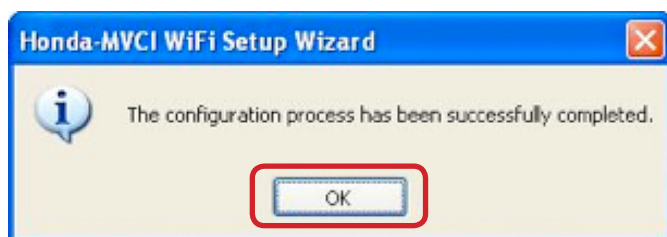
Read Settings from MVCI

Read the Current Connected WiFi Settings from the PC

Update MVCI

Close

4. A message appears to say the configuration process was successful. Click **OK** to return to the WiFi setup welcome screen.



5. Click **Close** to return to the Welcome to the Honda-MVCI Setup Wizard screen. Click **Exit** to return to the desktop.
6. Continue to page 30 to configure the PC.

## Set Up PC Communication to MVCI

The following steps connect the PC to your Access point and your designated MVCI.

**NOTE:** • Your PC must have an internal wireless capability or an active external wireless card.

- Your wireless radio must be enabled on your PC. Many laptop PCs have a software or hardware switch to enable or disable the wireless radio to allow use of a PC in a radio sensitive environment such as an airplane. If your wireless adapter cannot detect or connect with any other wireless device in the environment, refer to the PC documentation to resolve to enable the wireless radio.

If you are running Windows XP®, begin your setup with Step 1 on page 30:

If you are running Windows 7® / Windows Vista®, begin your setup with Step 1 on page 35:

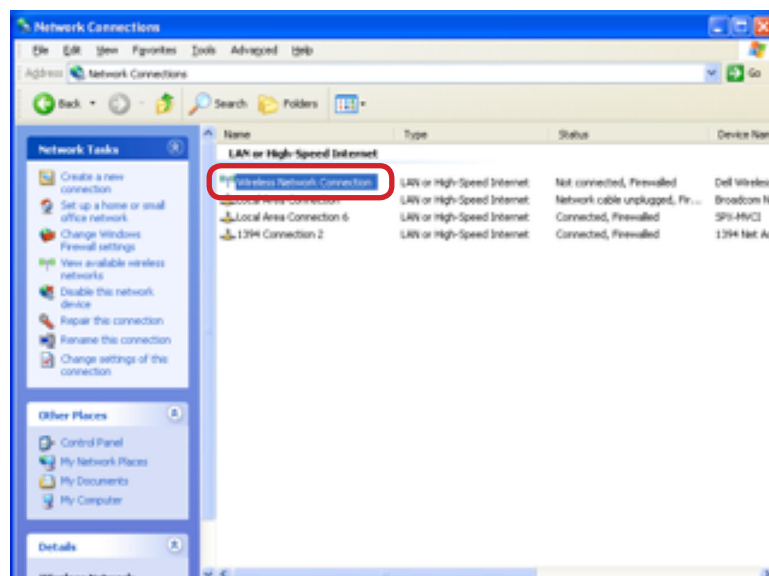
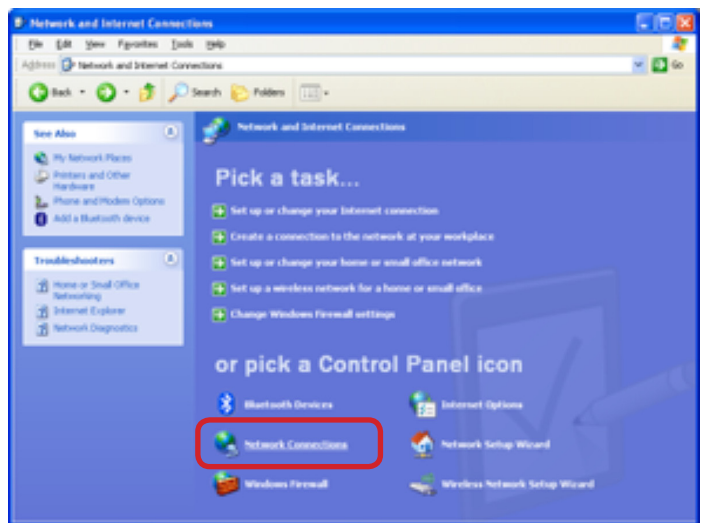
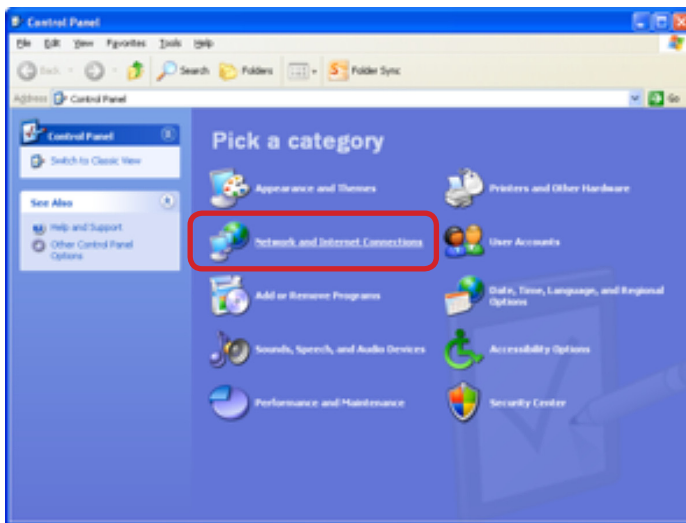
### Windows XP®

#### Infrastructure (Access Point)

1. Open the Windows wireless utility by one of two ways:

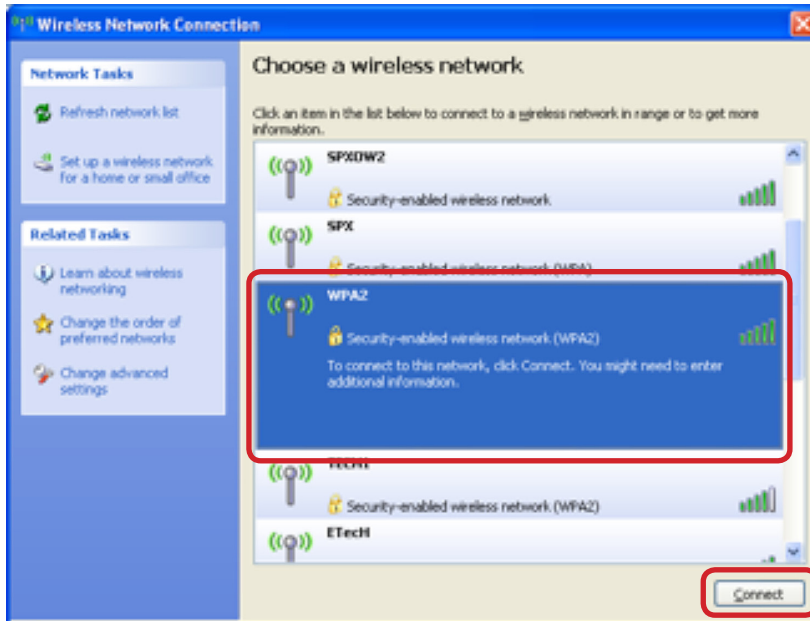


- i. **Task bar Icon** - Double-click the lower right task bar icon
- ii. **Control Panel** - Click the **Start Button**, select the **Control Panel**, click **Network and Internet Connections**, click **Internet Connections**, and click **Wireless Network Connection**.

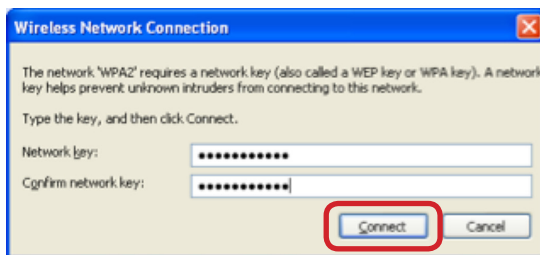




2. The Wireless Network Connection window opens. If an Access point is already setup, skip to Adhoc (peer to peer). If it has not been previously setup, scroll through the list and select you Access point. Click **Connect**.

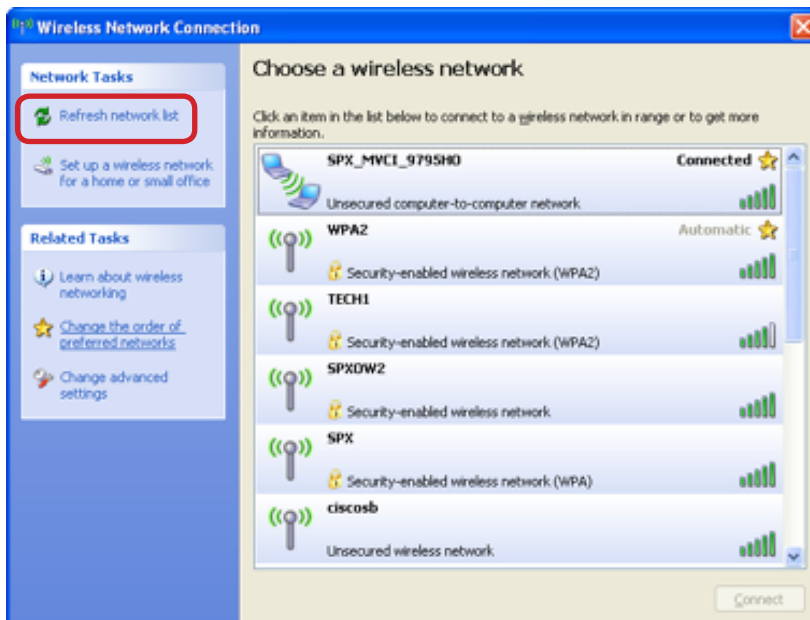


3. Enter the **Network key** for the Access point and click **Connect**. The Access point is now configured.

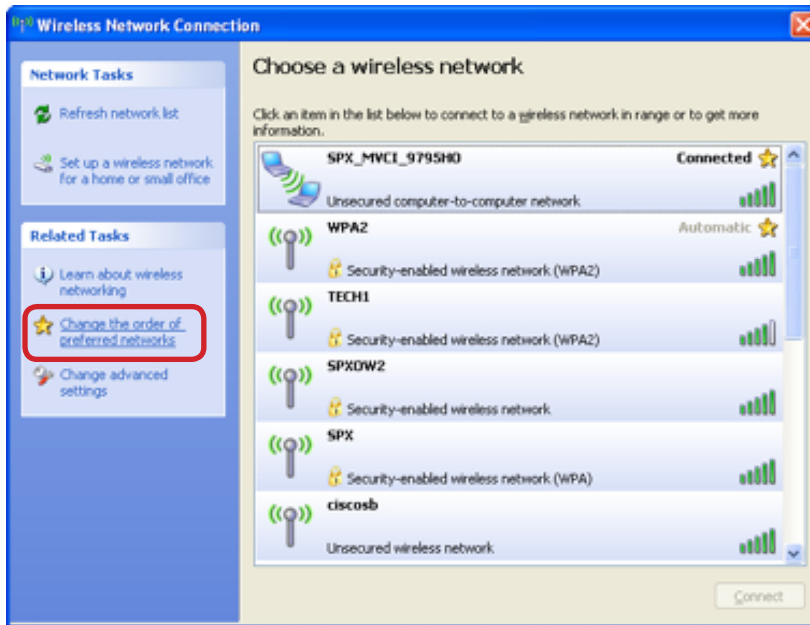


## Adhoc (peer to peer)

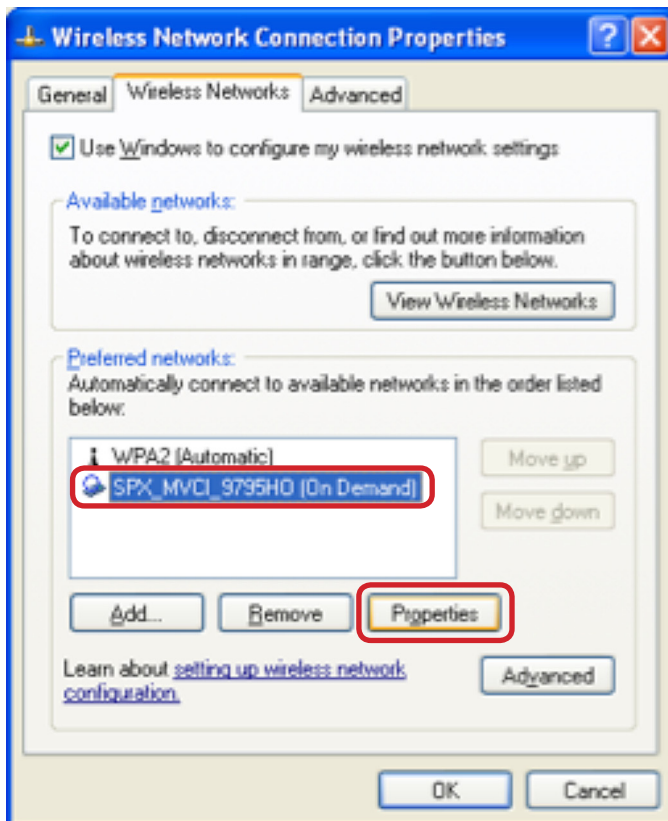
1. Verify the MVCI is in Adhoc (peer to peer) mode.
  - a. Press the **ENTER** button on the MVCI. Verify **Switch Wireless** is highlighted, and press **ENTER**. The MVCI displays its current mode. Press **ENTER** button if it is not already in Adhoc mode (refer to page 49 for illustrations).
2. Select the MVCI in the network list and click **Connect**. The MVCI will connect, and the Access point will be listed below it. *Note: If the MVCI is not listed, click the **Refresh network list** from the Network Tasks list on the top left of the screen. It may take several seconds for the MVCI to switch networks.*



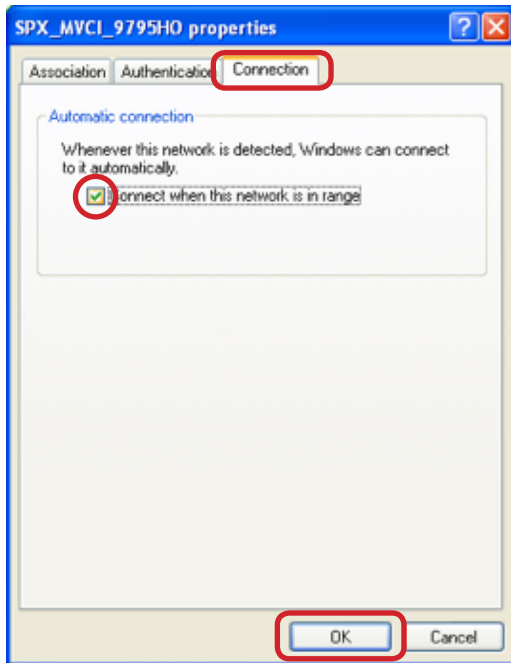
3. To configure the connection for the MVCI, click **Change the order of preferred networks** from the Related Tasks list on the left of the screen.



4. Click on the MVCI listed in Preferred networks, and click **Properties**.



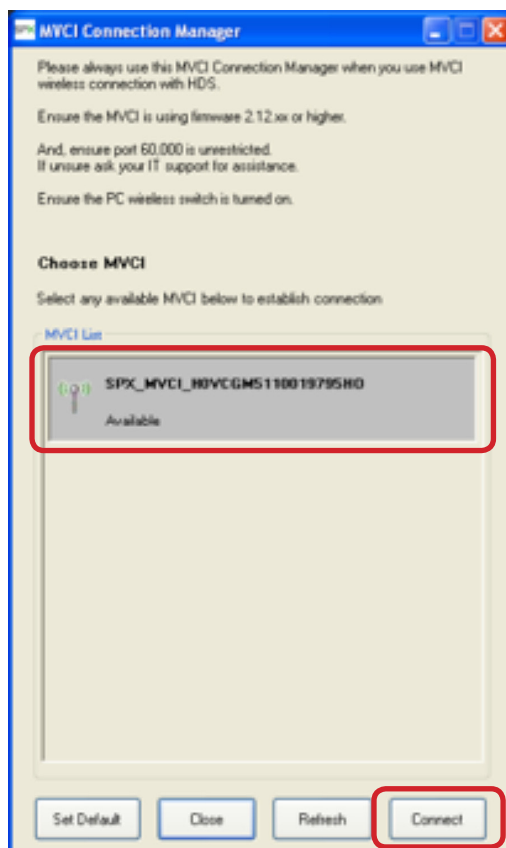
5. Select the **Connection** tab, and check the box **Connect when this network is in range**. Click **OK**.  
The Adhoc network is now configured.



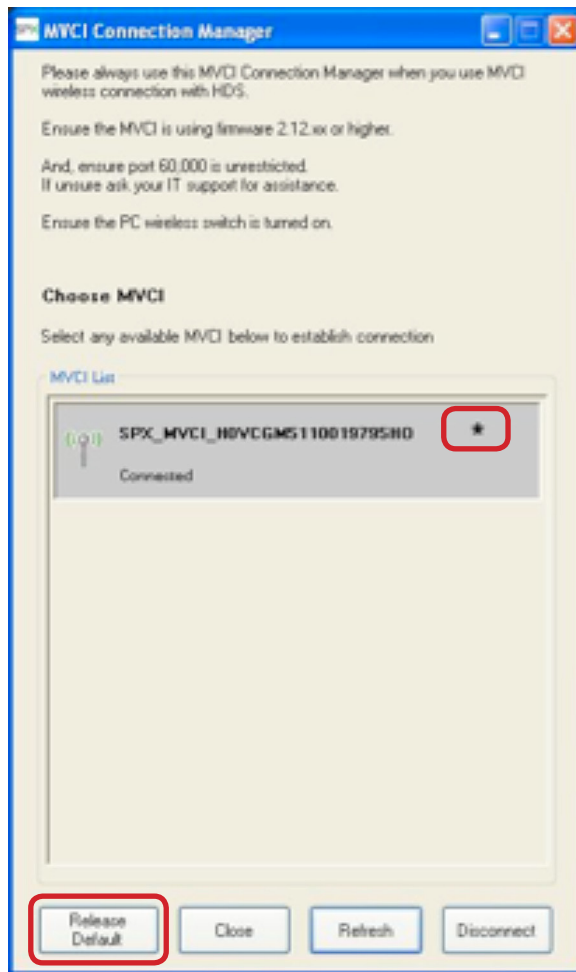
## MVCI WiFi Function Verification Windows XP®



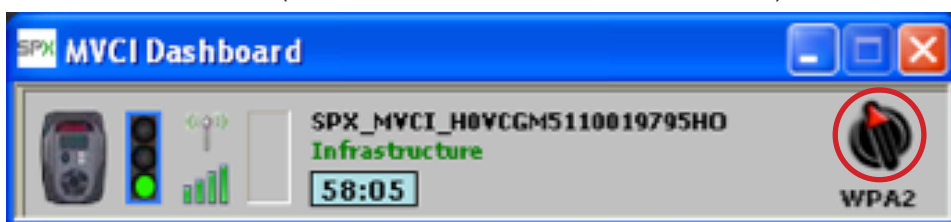
1. Open the MVCI Wireless Connection Manager by double-clicking on the desktop icon.
2. Locate and highlight the MVCI to connect to. *Note: The PC and the MVCI must both be connected to the same wireless mode (i.e. both Adhoc and connected, or both infrastructure and connected). Click **Connect** OR **Set Default** (see below).*
  - a. If the MVCI does not appear in the Connection Manager and clicking "**Refresh**" does not make the MVCI appear, verify **WindowsXP® Windows Zero Configuration** on page 43.



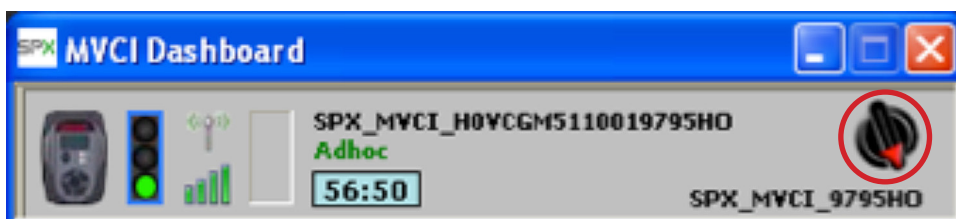
- b. **Set Default** can also be used to connect the MVCI. This will set the selected MVCI to automatically connect each time the MVCI Connection Manager is opened (if the MVCI is available). An asterisk (\*) will appear next to the MVCI that is set to default.
- c. To release the default selection, click **Release Default** in the MVCI Connection Manager. The user will now have to select the MVCI every time the MVCI Connection Manager is opened.



3. When connected, the MVCI Dashboard appears. Select the switch on the right side of the dashboard to switch wireless modes (between Infrastructure and Adhoc modes).



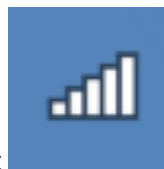
4. The Dashboard will switch profiles to the other network.  
*Note: This initial switch could take up to 2 minutes for the PC to create profiles.*



5. The MVCI is now configured on the PC and wireless setup is complete.

See the MVCI Dashboard Descriptions on page 48 for more information about the Dashboard.

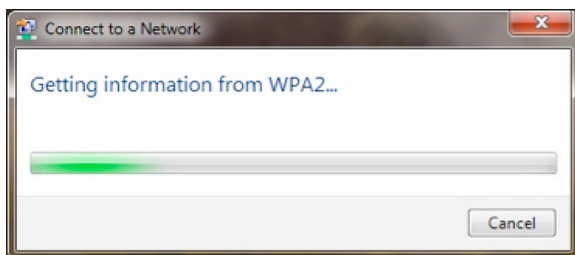
## Infrastructure (Access Point)



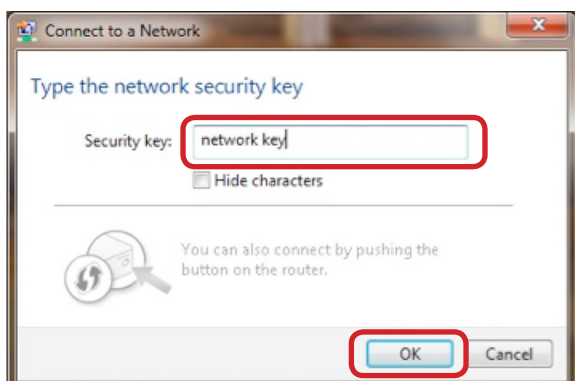
1. Click on Windows Wireless utility from the task bar to open it.
2. If an Access point is already setup, skip to Adhoc (peer to peer). If it has not been previously setup, scroll through the list and click once on your Access point. Verify **Connect automatically** is selected, and click **Connect**.



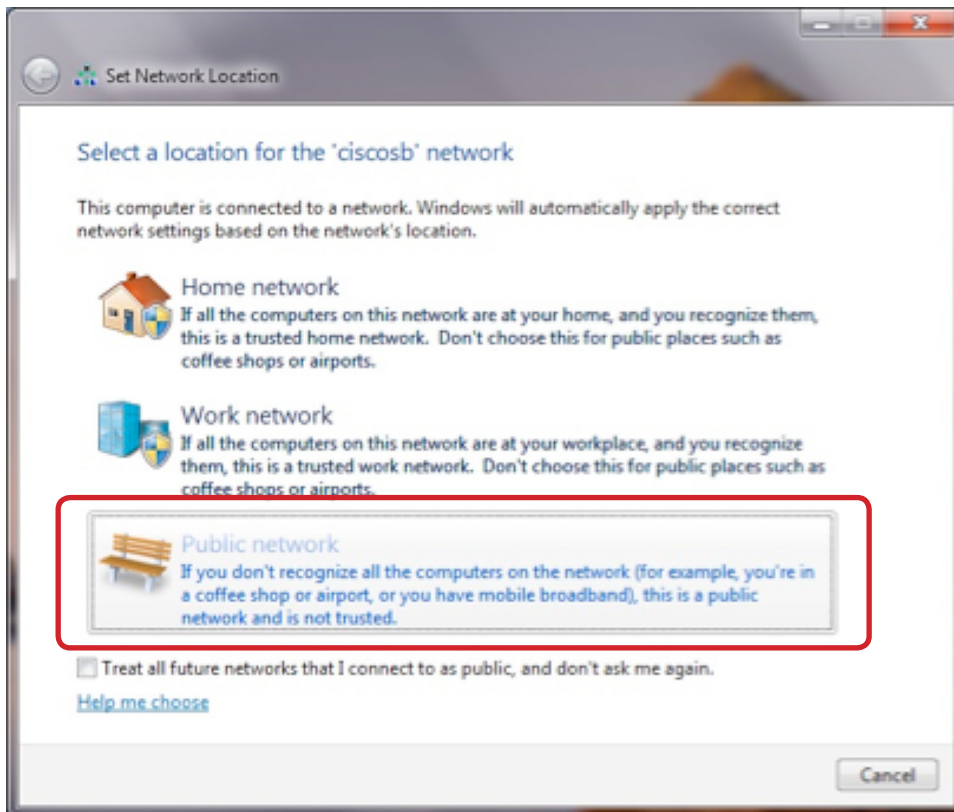
3. Wait while the PC gets information from the Access point.



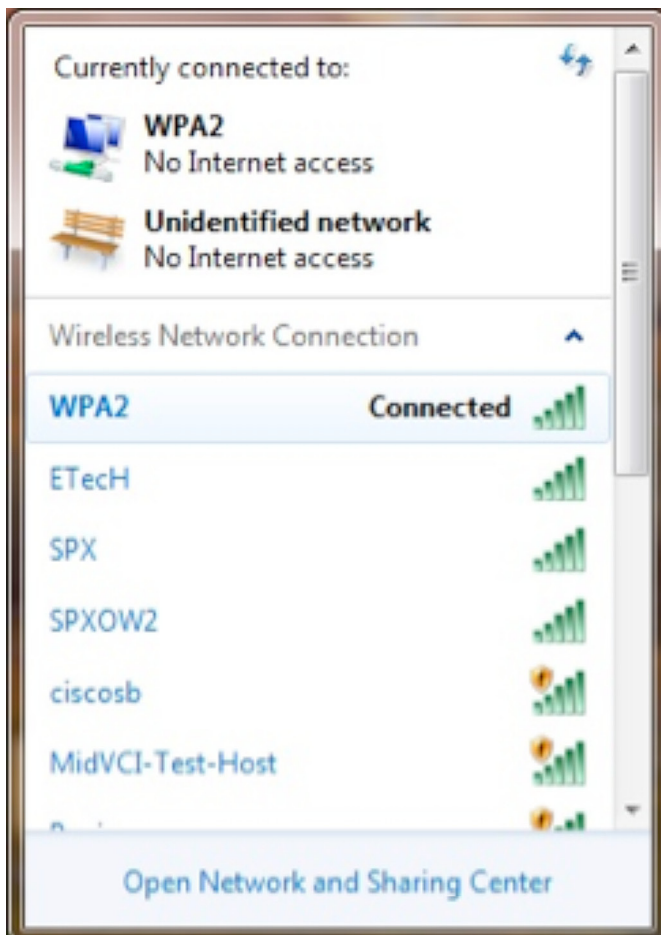
4. If the Access point has security protection, a screen for the network security key will open. Type in your network security key and click **OK**. *Note: If you do not know your network security key, consult your IT specialist.*



5. If the PC has not connected to the network before, the following screen appears. Click **Public Network**.



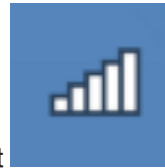
6. The Access point is now connected and configured for the PC.





## Adhoc (peer to peer)

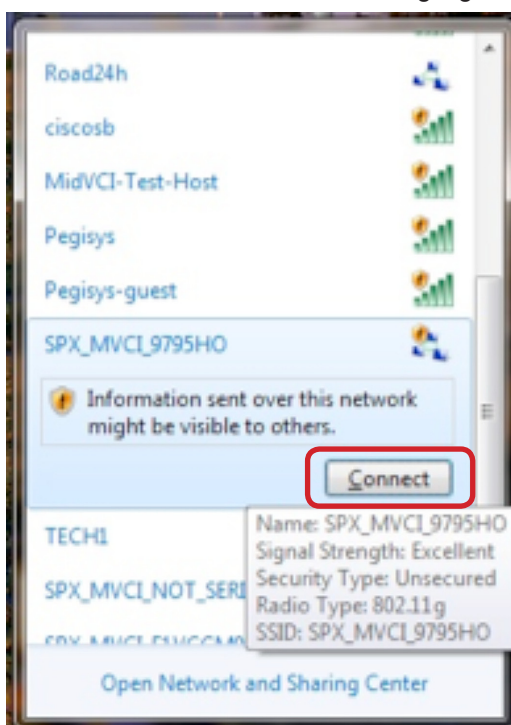
1. Verify the MVCI is in Adhoc (peer to peer) mode.
  - a. Press the **ENTER** button on the MVCI. Verify **Switch Wireless** is highlighted, and press **ENTER**. The MVCI displays its current mode. Press **ENTER** button if it is not already in Adhoc mode (refer to page 49 for illustrations).



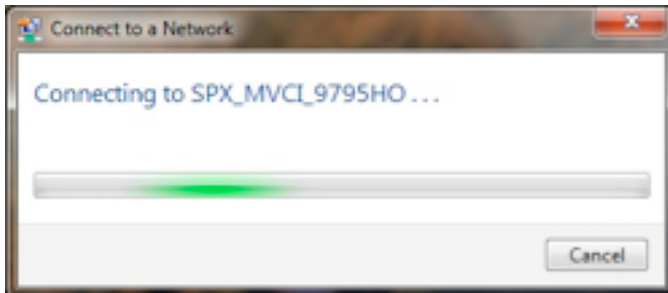
2. Click on Windows Wireless utility from the task bar to open it.
3. Scroll through the list to find the name of the desired MVCI.
  - a. If the MVCI does not appear, use the refresh button in the network screen. *Note: It may take the MVCI several seconds to switch networks.*



4. Click on the MVCI name once to highlight it. Click **Connect**.



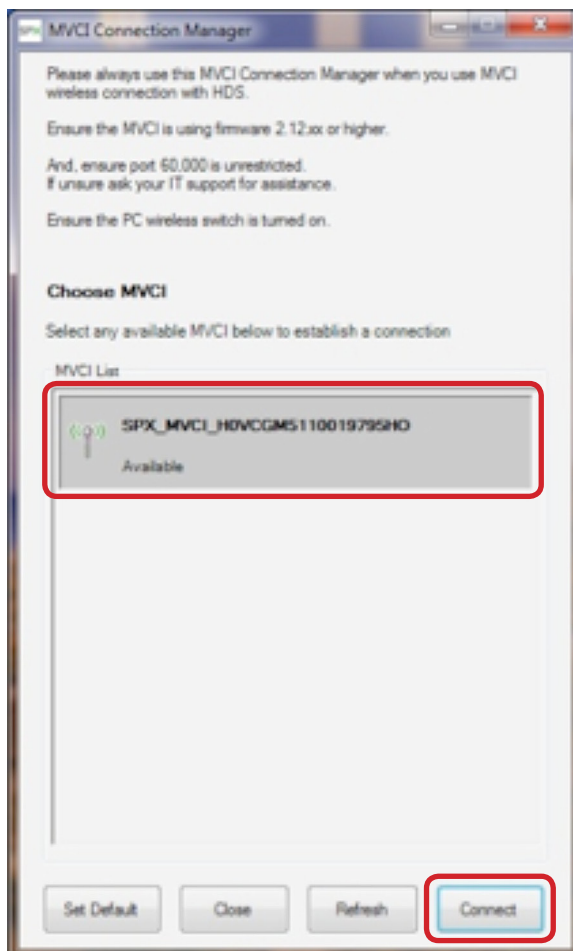
5. Wait while the PC gets information from the MVCI. When this finishes, the Adhoc network is complete.



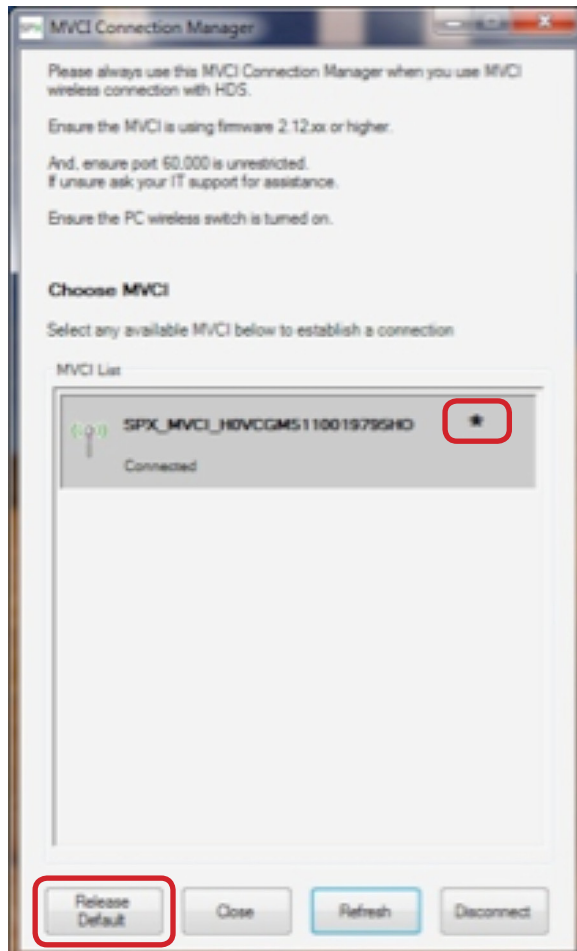
## MVCI Wi-Fi Function Verification Windows Vista® / Windows 7®



1. Open the MVCI Wireless Connection Manager by double-clicking on the desktop icon
2. Locate and highlight the MVCI to connect to. *Note: The PC and the MVCI must both be connected to the same wireless mode (i.e. both Adhoc and connected, or both infrastructure and connected). Click **Connect** OR **Set Default** (see below).*
  - a. If the MVCI does not appear in the Connection Manager and clicking “**Refresh**” does not make the MVCI appear, verify **Windows 7 Wired AutoConfig** and **WLAN AutoConfig** on page 41.

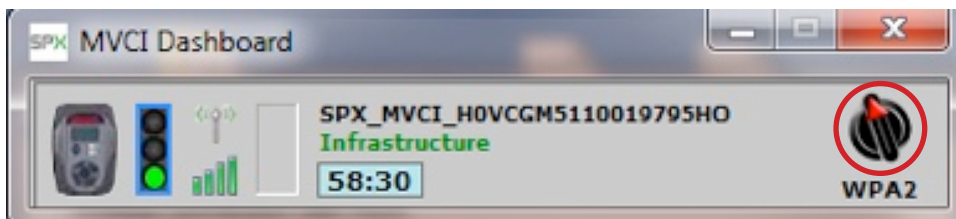


- b. **Set Default** can also be used to connect the MVCI. This will set the selected MVCI to automatically connect each time the MVCI Connection Manager is opened (if the MVCI is available). An asterisk (\*) will appear next to the MVCI that is set to default.



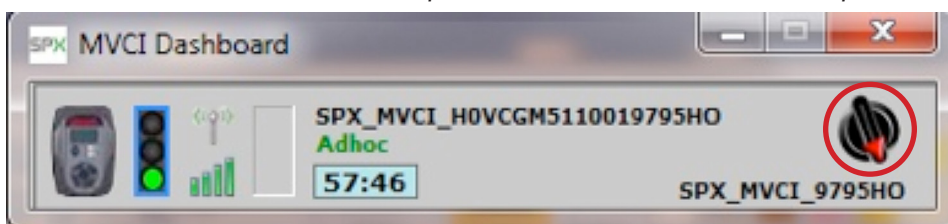
- c. To release the default selection, click **Release Default** in the MVCI Connection Manager. The user will now have to select the MVCI every time the MVCI Connection Manager is opened.

3. When connected, the MVCI Dashboard appears. Select the switch on the right side of the dashboard to switch wireless modes (between Infrastructure and Adhoc modes).



4. Select the switch again. The Dashboard switches modes and creates a wireless profile on the PC for the Adhoc network to the MVCI.

*Note: This initial switch could take up to 2 minutes for the PC to create profiles.*



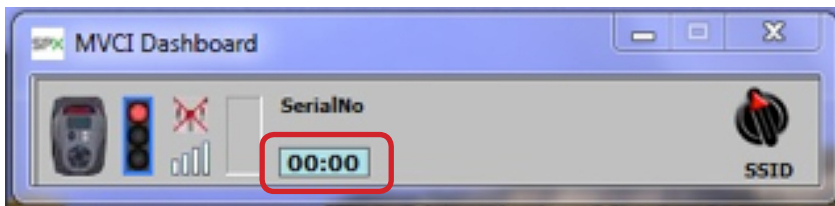
5. The MVCI is now configured on the PC and wireless setup is complete.

See the MVCI Dashboard Descriptions on page 48 for more information about the Dashboard.

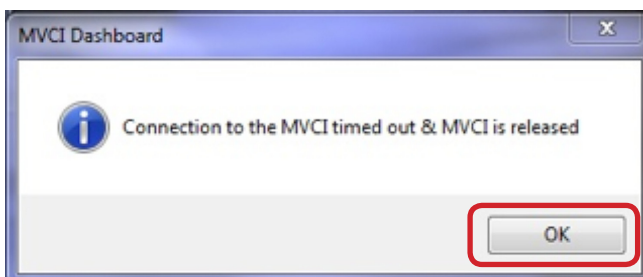
## User Troubleshooting Guide

### Wi-Fi Time Out

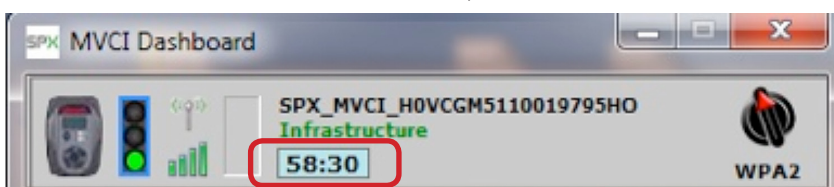
1. The MVCI has a 60-minute time out for an inactive wireless connection. The MVCI automatically disconnects at this time out. This timer is a lock timer for exclusive use. The timer value decreases if the PC does not communicate with the MVCI and the lock expires when the timer reaches 00:00. Another user would then be able to connect to the MVCI.



2. When this occurs, click **OK** and select **Refresh** in the MVCI Connection Manager screen. Click **Connect** when the desired MVCI is highlighted.



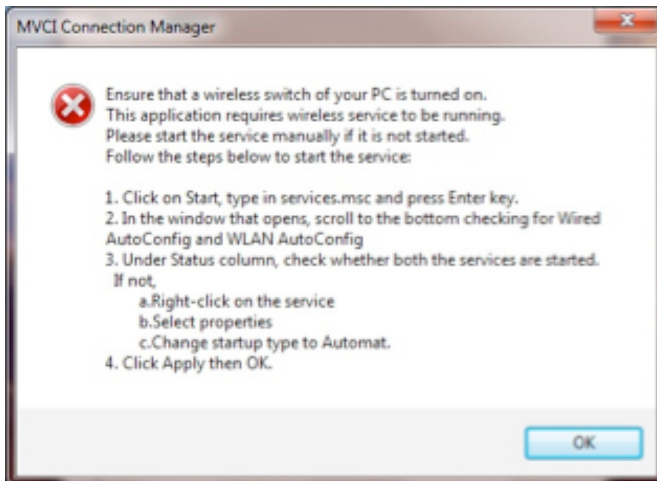
3. To set the time out clock back to 59:59, double-click the time section of the MVCI Dashboard.



## Windows 7® Wired AutoConfig and WLAN AutoConfig

Before completing these setup procedures, consult your IT specialist to verify your current wireless network can run with **Windows Wired AutoConfig** and **WLAN AutoConfig** services. For users currently using a third party wireless network manager utility, this operation could affect the existing network connection. **Note: Use this procedure with caution.** This procedure will start using the Windows AutoConfig services for wireless.

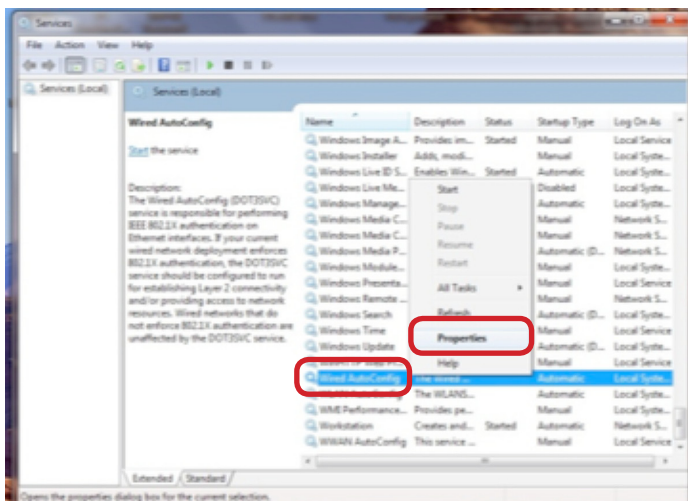
1. If the following screen appears on Windows 7® after selecting the **Refresh** button on the MVCI Connection Manager, the Wired AutoConfig and WLAN AutoConfig services must be set.



2. Open the **Start Menu** from the desktop and type in **"services.msc"**. Double-click **services** to open.

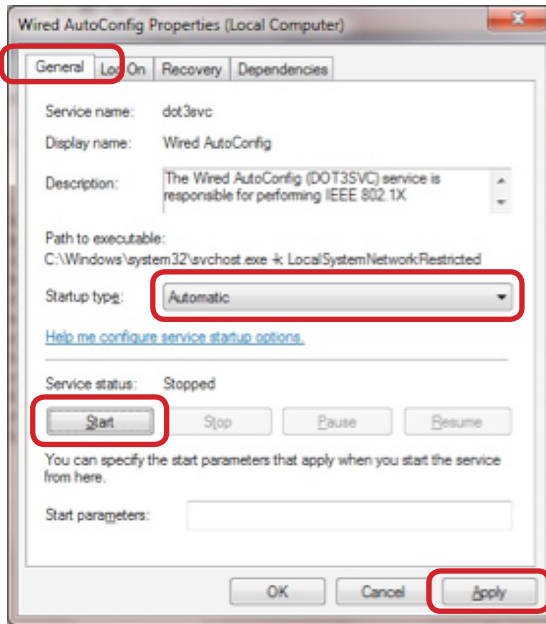


3. Scroll to the bottom of the screen and right-click on **Wired AutoConfig**. Select **Properties**. *Note: Not all languages use the same Services names. Look for 802.1X in the description.*

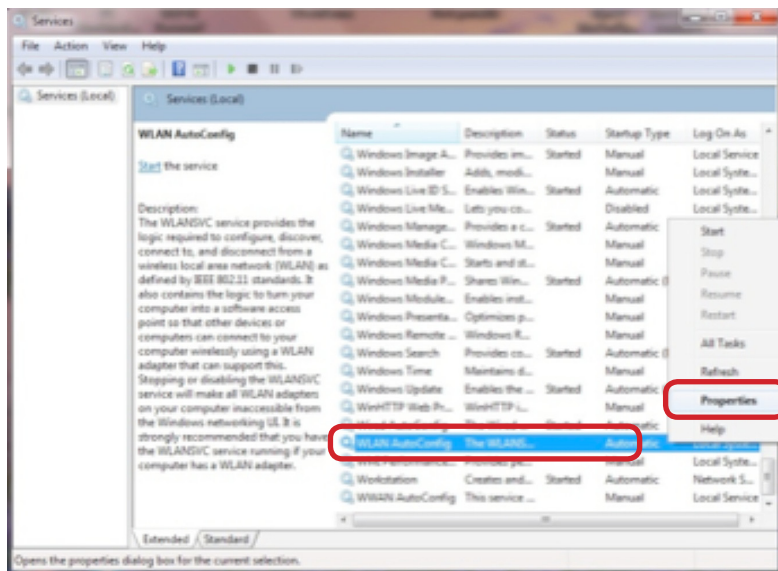




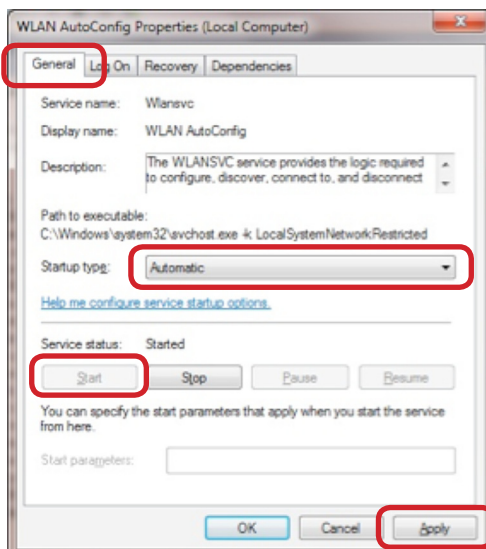
4. In the **General** tab, change the **Startup type** to **Automatic**. For **Service Status**, select **Start**. Click **Apply**.



5. On the Services window, right-click **WLAN AutoConfig** and select **Properties**.  
*Note: Not all languages use the same Services names. Look for 802.11 in the description.*



6. On the **General** tab, change the **Startup type** to **Automatic**. For **Service Status**, select **Start**. Click **Apply**.



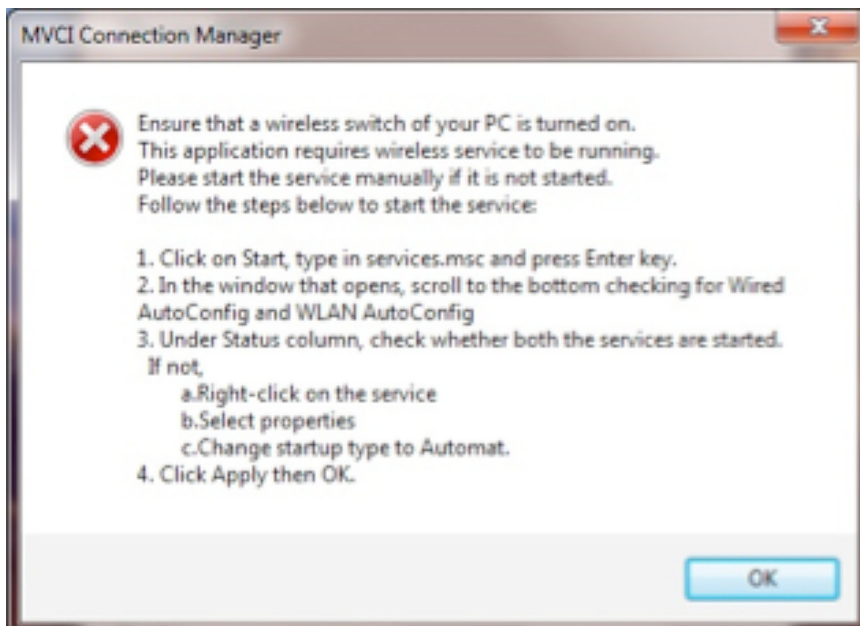
7. Reboot the PC. The Windows services will now be used for wireless on the PC.



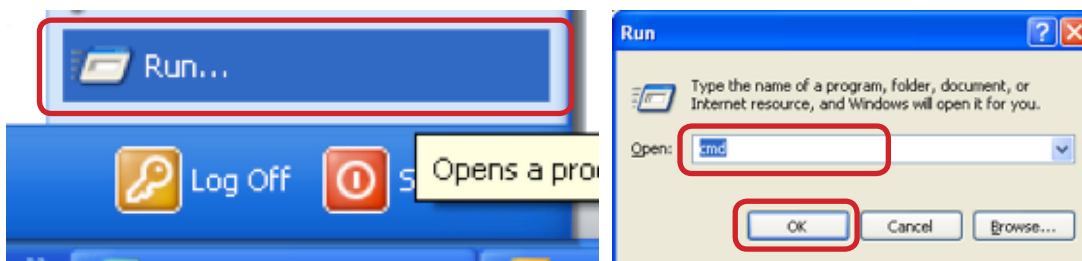
## Windows XP® Windows Zero Configuration

Before completing these setup procedures, consult your IT specialist to verify your current wireless network can be run with **Windows Wireless Zero Configuration**. This procedure will start using the Windows Wireless Zero Configuration service for wireless.

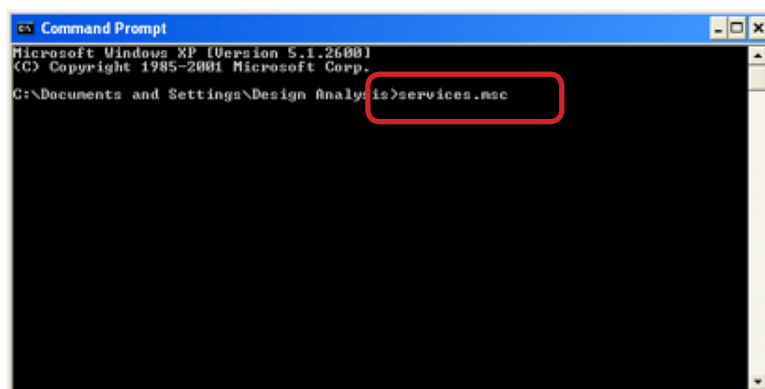
- A. If the following screen appears on Windows XP® when the **Refresh** button is selected in the MVCI Connection Manager, use the following procedure to enable Windows Zero Configuration for wireless control.



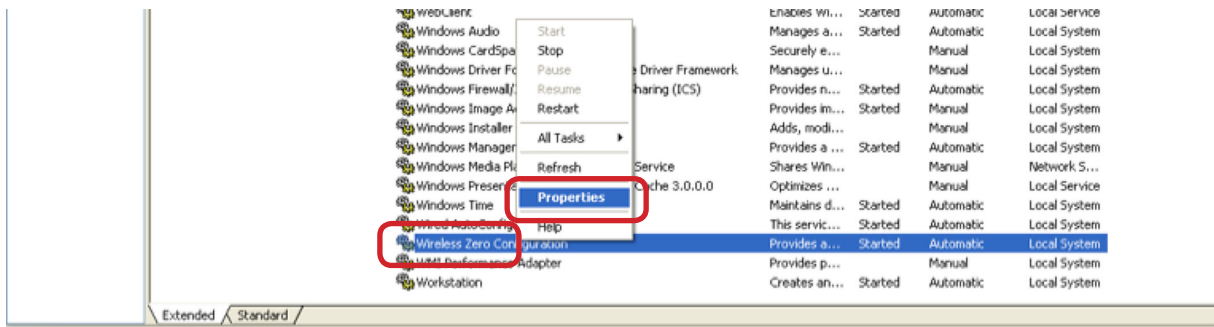
- B. Open the **Start Menu** from the desktop and select **Run**. Type in **cmd** and click **OK**.



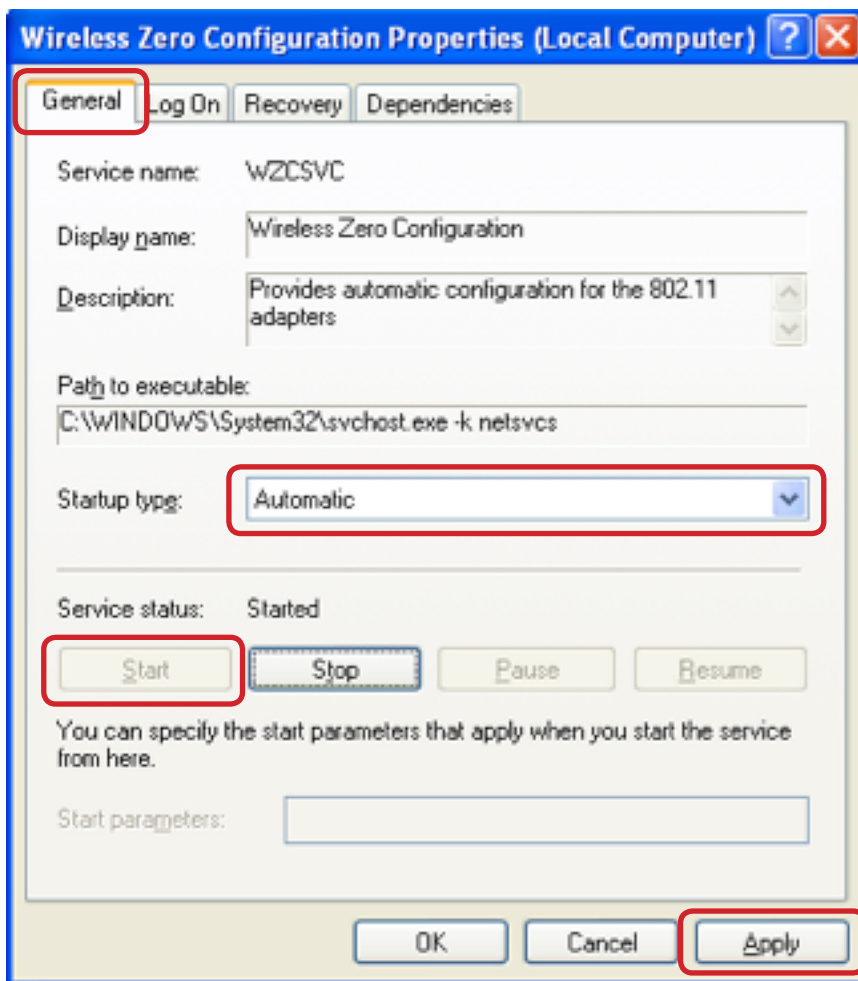
- C. In the Command Prompt, type in "**services.msc**" and press **Enter**.



D. Scroll to the bottom of the window and right-click on **Wireless Zero Configuration**. Select **Properties**.



E. In the **General** tab, select **Automatic** for **Startup type** and select **Start** for **Service Status**. Click **Apply** to complete the process. Reboot the PC and the Windows Wireless Zero Configuration will control the wireless.



## MVCI Limitations

### Network Access Point

The MVCI is not compatible with Wi-Fi 802.11n	Set the Access point for Wi-Fi 802.11G at 54Mbps
WPA Enterprise or WPA2 Enterprise	The MVCI only Supports WPA (TKIP) and WPA2 (AES) Personal versions of these security types for infrastructure mode. Change the Access point to one of these settings. WPA and WPA2 are not supported for Adhoc networks on the MVCI.
WPA+WPA2 Mixed mode on the Access point.	The MVCI does not support “mixed” or “combined” security. Change the Access point to WPA Personal or WPA2 Personal.
WEP64 or WEP128 with passphrase	The MVCI only supports WEP64 or WEP 128 with direct hex entry characters. Change the key to 10 hex characters for WEP64 or 26 hex characters for WEP 128. This security type can be used both for infrastructure mode and/or Adhoc mode.
Wireless Channel	If using the P300 wireless card in the MVCI, channels 1, 7 or 8 should be used on the Access point. If the Clarity card is used in the MVCI, any channel that is optimal for the work area can be used.
Special characters in the SSID or network key	The MVCI supports characters 0-9, a-z and A-Z only. Characters: < > & % “ \ / ? *   ( ) or accented characters such as: ã Ä é ö Õ ü Ü ß á é í ú ñ ü ç are not supported. Change the SSID or Network key/Password to reflect these limitations.
Wireless Isolation in the Access point or SSID Isolation	Some Access points limit connecting to the network and this is not compatible with the MVCI, especially on port 60000. SSID and Wireless Isolation limit the connectivity between devices connected to the Access point. Disable these features in the Access point.
The PC cannot find the MVCI due to signal strength.	Infrastructure and Adhoc range should be limited to 70 feet (21 meters). Move the Access point for best signal strength.
MAC address filtering on the Access point.	An IT specialist will have to add the MVCI to the list on the Access point. It would be best to remove this feature from the Access point.
Proxy server or Static IP address configuration on the Access point.	An IT specialist will have to setup the network with the proper information for the MVCI.
The Access point cannot be changed.	Another Access point should be added to the work area that can support the MVCI. USB or a USB to Ethernet adapter are the other options for use with the MVCI.

### PC Limitations

Firewall settings	Certain PCs have firewalls that may block the MVCI, especially port 60000. Change this firewall to allow these settings or turn the firewall off. Verify the firewall allows both infrastructure and Adhoc wireless network types.
Operating systems	The MVCI supports Windows XP® 32 bit, Windows® 7 32 and 64 bit, and Windows Vista® 32 bit. (For Windows XP® SP2 it is necessary to install the KB918997 patch (Wireless LAN API) downloadable from Microsoft.com.) All other operating systems are not compatible.
Wireless control software	The MVCI only supports using Windows wireless utilities. Software from third party vendors is not supported. Change the PC preferences to use the Windows utilities.
Static IP network configuration	If the network uses a static IP, the PC needs to be setup by an IT specialist to work with the MVCI using alternate configurations for wireless.
Wireless Profiles	If the PC does not have the same wireless profiles saved that the MVCI software has, it will not be able to connect or switch profile types. Set up the PC to save the profiles and automatically connect to each network type the MVCI uses.
Waiting for users message in the wireless utility	The MVCI has a boot up time of 1 minute. Wireless connection cannot be made until this time. Verify the MVCI and the PC are configured to the same network type (both Adhoc or both infrastructure).
Wireless hardware	Verify the PC has a built-in or add-on wireless adapter capable of supporting 802.11b and 802.11g wireless.

## Technical Service

**Important: The following is a list of information to gather before contacting technical service. The technical service agent needs this information to assist you with issues you may be experiencing.**

Access Point		Please circle or specify below.
Manufacture and Model	This information should be listed on the bottom of the Access point. Also, is there more than one in use in the service area?	Manufacture: _____ Model: _____ Number of Access points in use: _____
SSID	This is the wireless broadcasted name.	SSID: _____
Security setting on AP	WPA, WPA2, WEP64, WEP128 etc.	Open/WEP64, Open/WEP128, Shared/WEP64, Shared/WEP128 WPA-PSK/TKIP (Personal), WPA2-PSK/AES (Personal), Security: _____
Network key	This is the key you have to enter to gain access through the security of the Access point. Please obtain this from your IT specialist if the Network key is not known.	Network key: _____
Channel	What channel is the Access point set to? This is typically set to Auto. If this is not known your IT specialist will have to login to the access point to check this setting.	Channel (1-13): _____
Wireless type used and speed	802.11g, 802.11b Speed is usually 54 mbps	802.11b, 802.11g, _____ Speed: _____Mbps
Transmit power	This is typically set at about 15 dBm, but should be checked.	Transmit Power: _____ dBm
IP Address configuration	Is DHCP enabled on the router or is it a static IP? See page 21 for more details.	DHCP enabled (IP Address comes from the Access point) Static IP address (IP Address comes from another source) IP address: _____
MAC address filtering or wireless Isolation settings	Check that the Access point does not limit access using any other filters.	Access point does not limit access Access point limits access: MAC filter, wireless isolation or other. Access Point filtering: _____

**PC****Please circle or specify below.**

Operating system	Windows® 7 32 or 64 bit, Windows Vista® 32 bit, or Windows XP® 32 bit	Operating system: _____
Hardware/processor/RAM/HD	Find this under the system setting of the PC. This can be found by right-clicking "My Computer", then clicking "Properties".	Processor: _____ GHz RAM: _____ GB HD: _____ GB
Wireless control software	Find this by opening the network connections from the control panel.	Wireless Zero Configuration (Windows XP®) Wired AutoConfig and WLAN AutoConfig (Windows® 7) Other Wireless control software
Firewall settings	Find this in the control panel on the PC by clicking "Security Center".	Windows Firewall Other Firewall software

**MVCI****Please circle or specify below.**

Default startup mode	The Default startup mode determines which network (Infrastructure or Adhoc) the MVCI boots up in. Find this by connecting the MVCI with the communication cable (USB, Ethernet crossover, or USB to Ethernet adapter), and opening the Wi-Fi Setup Wizard (Advanced option) from the desktop.	Infrastructure Adhoc (Peer to Peer) Keep Previous
Wireless profiles	Find this by connecting the MVCI using the communication cable (USB, Ethernet crossover, or USB to Ethernet adapter) and opening the Wi-Fi Setup Wizard (Advanced option). The MVCI and PC should match.	PC and MVCI have the same wireless profiles PC and MVCI do not have the same wireless profiles.
Wireless Card Type in the MVCI	P300 or Clarity is the card type used in the MVCI. For more information see page 20 for pictures and descriptions.	P300 Clarity
Wireless card status	Verify the blue light on the front of the MVCI is on when the MVCI is fully booted. If not, open the top of the MVCI and confirm the card is fully inserted.	Blue wireless light is on Blue wireless light is not on
Wi-Fi setting	Verify if W-Fi function is set to Enabled or Disabled on the MVCI wireless setting menu. See page 51.	Enabled Disabled
PC Internet connection	Is the PC able to connect to the internet and dealer network when in infrastructure mode?	Yes No

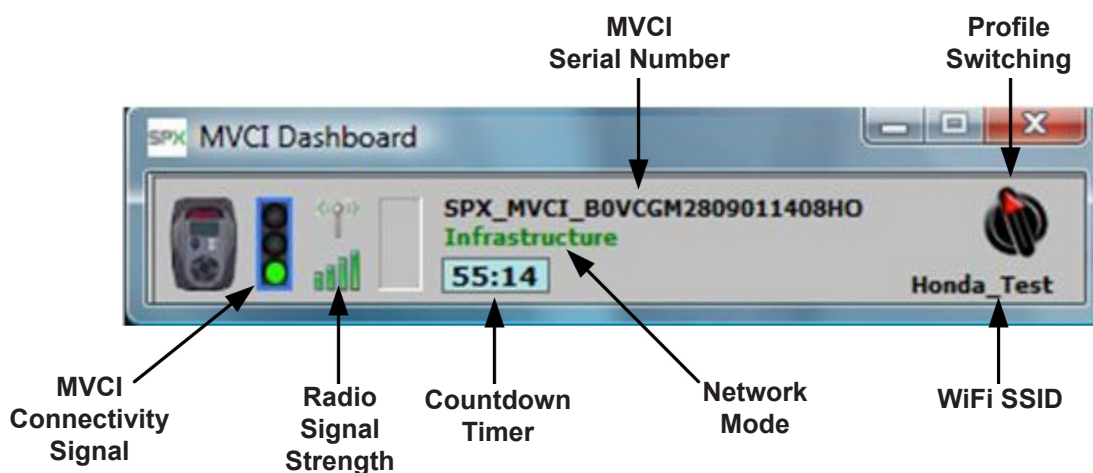
## MVCI Technical Service continued-

Please circle or specify below.

Wired connection	Using the communication cable (USB, Ethernet crossover, or USB to Ethernet adapter) will the MVCI communicate to a vehicle?	Yes No
Adhoc wireless connection	Will the MVCI communicate to a vehicle when setup and connected using the Adhoc network? (This is where the PC and MVCI communicate directly without using the Access point.)	Yes No
Firmware version matches the PC	Confirm the firmware version is the same on both items; this check is done on HDS before vehicle communication. To test this: power on the MVCI and connect it using the communication cable (USB, Ethernet crossover, or USB to Ethernet adapter). Open HDS and select the "Select a new Vehicle" Icon. If the screen states the Firmware or CMupdate needs to be updated follow the on screen instructions. If the HDS communication error "HDS has been unable to confirm connection to the vehicle." appears then the firmware versions match. (This HDS error only comes up when not connected to a vehicle. If the MVCI is connected to a vehicle it will communicate normally.)	Firmware versions match  Firmware versions do not match

## MVCI Dashboard Descriptions

The MVCI Dashboard appears on the PC after the MVCI has been connected through WiFi Connection Manager. Utilize the dashboard for the following information and functions:



**Profile Switching:** Use to switch network modes.

**MVCI Serial Number:** Displays the serial number of the MVCI that is currently connected to the PC.

**MVCI Connectivity Signal:** Color of LED illuminated means:

Red - Not connected

Yellow - In process of being connected

Green - Connected

**Radio Signal Strength:** Displays strength of radio signal to the MVCI in green bars (one bar meaning a low signal up to four bars meaning a strong signal).

**Countdown Timer:** A wireless connection will be disconnected after one hour. The dashboard timer begins at 59:59 and counts down to 00:00. Click on the timer to reset it.

**Network Mode:** Displays the mode the MVCI is connected to (Infrastructure or Adhoc).

**WiFi SSID:** Displays the name assigned to the Infrastructure or Adhoc network.



## Switch Wireless

1. Power up the MVCI using the vehicle diagnostic link. After boot-up, press **ENTER** to access the User Config screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

2. Select **Switch Wireless** and press **ENTER**.

User Config
Switch Wireless
DLC Voltage
MVCI Setup
User Customize

3. The current network and type is displayed. Press **ENTER** to change the type of wireless connection (ad hoc or infrastructure) or press **ESC** to cancel.

## DLC Voltage

1. Power up the MVCI. After boot-up, press **ENTER** to access the User Config screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

2. Select **DLC Voltage** and press **ENTER**.

User Config
Switch Wireless
DLC Voltage
MVCI Setup
User Customize

3. The vehicle battery voltage is displayed.

DLC Voltage
Vehicle Battery:                      XX.X V

## MVCI Setup

1. Power up the MVCI. After boot-up, press **ENTER** to access the User Config screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

2. Select **MVCI Setup** and press **ENTER**.

User Config
Switch Wireless
DLC Voltage
MVCI Setup
User Customize

The following setup options are available:

- Clock
- Contrast Control
- Font Size
- Wireless

- SDMEM Format
- Factory Defaults

## Clock

To change the date and date format of the MVCI, select **View & Set** under Clock, press **ENTER**.

**NOTE:** The MVCI provides three regional calendar data formats:

- mm.dd.yyyy, for USA/Philippines
- dd.mm.yyyy, for Europe/South America/Southeast Asia/Australia
- yyyy.mm.dd, for Japan/China/South Korea

MVCI Setup	
Clock:	<b>View &amp; Set</b>
Contrast Control:	View & Set

To change the Calendar Data format, highlight the Format and press **ENTER**. Scroll up/down to change the Calendar Data format. Press **ENTER** to save the changes or **ESC** to cancel.

Clock Setup	Format
Format: (mm.dd.yyyy)	(mm.dd.yyyy)
Date: mm.dd.yyyy 06.08.2009	(dd.mm.yyyy)
	(yyyy.mm.dd)

To change the date, highlight the Date and press **ENTER**. Scroll up/down to change the number and left/right to move between the month, day, and year fields. Press **ENTER** to save the changes or **ESC** to cancel.

Clock Setup	Set Date
Format: (mm.dd.yyyy)	Date: mm.dd.yyyy
Date: mm.dd.yyyy 06.08.2009	06.08.2009

To change the time, highlight the Time and press **ENTER**. Scroll up/down to change the number and left/right to move between the hours, minutes, and seconds fields. Press **ENTER** to save the changes or **ESC** to cancel.

Clock Setup
Date: mm.dd.yyyy 06.08.2009
Time: hh:mm:ss 16:08:45

**NOTE:** Time is in 24 hour format.

## Contrast Control

1. To change the contrast (brightness) of the MVCI, select **View & Set** under Contrast Control. Press **ENTER**.

MVCI Setup	
Contrast Control:	<b>View &amp; Set</b>
Font Size:	Small Font

2. Scroll left/right to change the contrast percentage. Press **ENTER** to save the change or **ESC** to cancel.

Contrast
Contrast Control:      -----
46 %

## Font Size

The MVCI Display Font Size can be modified to display Large Font or Small Font.

1. Select **Small Font** under Font Size. Press **ENTER**.

MVCI Setup	
Font Size:	<b>Small Font</b>
Wireless:	Enable

2. Move the cursor over the desired option, press **ENTER** to save the change or **ESC** to cancel.

Font Size	Font Size
<b>Small Font</b> Large Font	Saving . . .

**NOTE:** The Large Font function does not apply to all screens.

## Wireless

To enable or disable the wireless connection, select the current setting of Enable or Disable under Wireless, press **ENTER**. Toggle to Enable or Disable, press **ENTER**.

MVCI Setup	Wireless
Wireless:	<b>Enable</b> Disable
SDMEM Format:	
	Format

## SDMEM Format

To erase and reformat the SD memory card, select **Format** under SDMEM Format, press **ENTER**.

MVCI Setup	Format	Format
SDMEM Format:		
Factory Defaults:		
	All Data in SD memory card will be Erased Reformat may take	approximately 15 minutes <Enter> to Continue

## Factory Defaults

To restore the MVCI to the factory default settings, select **Restore** under Factory Defaults, press **ENTER**.

MVCI Setup	Defaults	Defaults
SDMEM Format:		
Factory Defaults:		
	All Current Settings will be Erased <Enter> to continue	Restoring . . .

**IMPORTANT:** All Network configuration settings will be reset to the following values:

- Ethernet IP: 172.19.250.11
- USB Device IP: 172.19.251.11
- Wireless IP: 172.19.253.11
- DHCP Server: Enable

In addition to the network settings mentioned:

- Clock format is reset to USA/Philippines,
- Language is reset to English,
- SDIO 1 & 2 are reset to Enable,
- Keybeep is reset to Enable, and
- Contrast is reset to 46%.

## User Customize

1. Power up the MVCI. After boot-up, press **ENTER** to access the User Config screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

2. Select **User Customize** and press **ENTER**.

User Config
Switch Wireless
DLC Voltage
MVCI Setup
<b>User Customize</b>

The following customize options are available:

- Language
- Destination
- Beep Menu

## Language

1. To change the **Language** on the MVCI, select **Language** and press **ENTER**.

User Customize
<b>Language</b>
Destination
Beep Menu

2. Scroll up/down to highlight the desired language choice from the list. Press **ENTER** to save your setting or **ESC** to cancel.

Language
Nederland
<b>Duetsch</b>
Italiano

## Destination

1. To change the **Destination** on the MVCI, select **Destination** and press **ENTER**.

User Customize
Language
<b>Destination</b>
Beep Menu

2. Scroll up/down to highlight the desired destination option from the list. Press **ENTER** to save your setting or **ESC** to cancel.

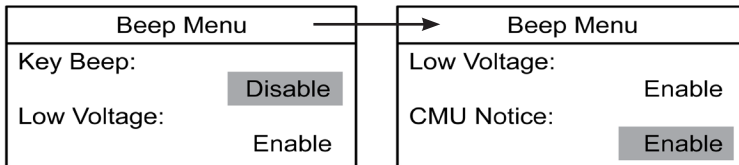
Destination
USA
Japan
<b>Europe</b>
Canada

## Beep Menu

1. The MVCI can be set to sound a beep with each touch of the keypad, to warn of low voltage, and to note when CM updates are complete. To enable or disable this beep tone, select **Beep Menu** and press **ENTER**.

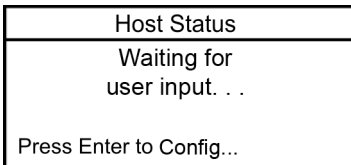
User Customize
Language
Destination
<b>Beep Menu</b>

- Current setting of the beep tone for Key Beep, Low Voltage, and CMU Notice is displayed. For each menu item, select its current setting and press **ENTER**. Select **Enable or Disable** to change its setting, if desired, and press **ENTER**.

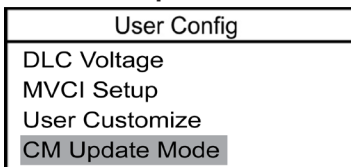


## CM Update Mode

- Power up the MVCI. After boot-up, press **ENTER** to access the User Config screen.



- Select **CM Update Mode** and press **ENTER**.

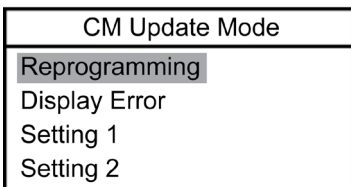


The following CM Update Mode options are available:

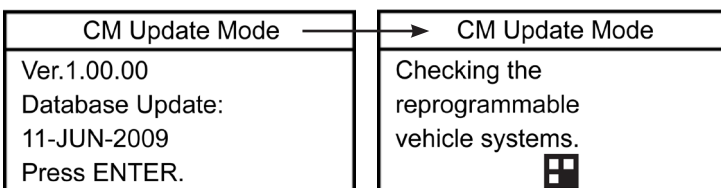
- Reprogramming
- Display Error
- Setting 1
- Setting 2

## Reprogramming

- Select **Reprogramming** and **ENTER**.

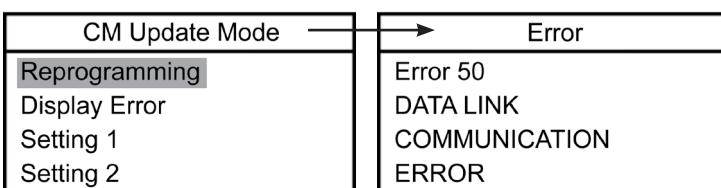


- To begin a check of the reprogrammable vehicle systems, press **ENTER**. When the check is complete, a status of the systems is displayed.



## Display Error

- Select **Display Error** and **ENTER**.



(Example error)

## Setting 1

1. Select **Setting 1** and **ENTER**.

CM Update Mode
Reprogramming
Display Error
Setting 1
Setting 2

The following Setting 1 options are available:

- Destination
- Language

To change the **Destination** of the CM Update, highlight **Destination** and press **ENTER**.

Setting 1
Destination
Language

Scroll up/down to highlight the desired destination option from the list. Press **ENTER** to save your setting or **ESC** to cancel.

Destination
USA
Japan
Europe
Canada

To change the **Language** of the CM Update, select **Language** and press **ENTER**.

Setting 1
Destination
Language

Scroll up/down to highlight the desired language choice from the list. Press **ENTER** to save your setting or **ESC** to cancel.

Language
Nederland
Duetsch
Italiano

## Setting 2

1. Select **Setting 2** and **ENTER**.

CM Update Mode
Reprogramming
Display Error
Setting 1
Setting 2

The following Setting 2 options are available:

- Auto Detect
- Check Version



To turn on or off Auto Detect, select **Auto Detect** and press **ENTER**. Select **Yes** or **No** and press **ENTER**.

Setting 2	→ Auto Detect
Auto Detect	Yes
N/A	No
N/A	
Check Version	

To view the CMU firmware version, select **Check Version** and press **ENTER**.

Setting 2	→ CMU FW Version
Auto Detect	X.X.X
N/A	
N/A	
Check Version	

## Network Setup

Power up the MVCI. After boot-up, press **ENTER** to access the User Config screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

Select **Network Setup** and press **ENTER**.

User Config
MVCI Setup
User Customize
CM Update Mode
Network Setup

The following setups are available:

- Ethernet
- USB Device
- Wireless Profiles
- DHCP Server

## Ethernet

**NOTE:** The MVCI can connect to the Internet via the MVCI Ethernet port. Contact your IT support for assistance and network settings.

For most installations, the factory default settings should be used. The following Ethernet setup is included if you require a unique Ethernet setup due to the configuration of your PC.

Connect the MVCI to the PC with an Ethernet Crossover cable (not included).

1. To **change the Ethernet network settings**, select **Ethernet**, press **ENTER**.

Network Setup
Ethernet
USB Device
Wireless Profiles
DHCP Server

2. To **change the IP Address**, highlight the **IP Address** and press **ENTER**. Scroll up/down to change the number and left/right to move between the components of the IP address. Press **ENTER** to accept the changes, then press **ESC** to return to the previous menu. To return to the previous menu without accepting the changes, press **ESC**.

Ethernet Setup	→ IP Address
IP Address: 172.19.250.11	IP Address: 172 .019 .250 .011
Subnet Mask: 255.255.255.0	

- To **change the Subnet Mask**, scroll down to highlight **Subnet Mask**, press **ENTER**. Scroll up/down to change the number and left/right to move between the components of the Subnet Mask. Press **ENTER** to accept the changes, then press **ESC** to return to the previous menu. To return to the previous menu without accepting the changes, press **ESC**.

Ethernet Setup	→ Subnet Mask
IP Address: 172.19.250.11	Subnet Mask: 255.255.255.000
Subnet Mask: 255.255.255.0	

- To save your changes, scroll down to the **Network Service** option and press **ENTER**.

Ethernet Setup
Subnet Mask: 255.255.255.0
Network Service: Save&Restart

## USB Device

For most installations, the factory default settings should be used. The following USB setup is included if you require a unique USB setup due to the configuration of your PC.

- To **change the USB device network settings**, select **USB Device**, press **ENTER**.

Network Setup
Ethernet
USB Device
Wireless Profiles
DHCP Server

- To **change the IP Address**, highlight the **IP address** and press **ENTER**. Scroll up/down to change the number and left/right to move between the components of the IP address. Press **ENTER** to accept the changes, then press **ESC** to return to the previous menu. To return to the previous menu without accepting the changes, press **ESC**.

USB Config	→ IP Address
IP Address: 172.19.250.11	IP Address: 172.019.250.011
Subnet Mask: 255.255.255.0	

- To **change the Subnet Mask**, highlight the **Subnet Mask**, press **ENTER**. Scroll up/down to change the number and left/right to move between the components of the Subnet Mask. Press **ENTER** to accept the changes, then press **ESC** to return to the previous menu. To return to the previous menu without accepting the changes, press **ESC**.

USB Config	→ Subnet Mask
IP Address: 172.19.250.11	Subnet Mask: 255.255.255.000
Subnet Mask: 255.255.255.0	

- To save your changes, scroll down to the **Network Service** option and press **ENTER**.

USB Config
Subnet Mask: 255.255.255.0
Network Service: Save&Restart

## Wireless Profiles

- To **view the wireless profiles settings**, select **Wireless Profiles**, press **ENTER**.

Network Setup
Ethernet
USB Device
Wireless Profiles
DHCP Server

2. Select **Infrastructure or Ad-Hoc**, press **ENTER**.

Wireless Profile
Infrastructure
Ad-Hoc

3. Select **View Profile Details**, press **ENTER**. Scroll to view all profile details.

Wireless Profile	Profile Details	Profile Details
View Profile Details	SSID: XXXXXXXX	AUTH: Open
View Connection Config	MODE: infrastructure	ENCRYPTION: NONE

4. Select **View Connection Config**, press **ENTER**. Scroll to view all connections.

Wireless Profile	Connections	Connections
View Profile Details	IP Address: 0.0.0.0	Subnet Mask: 0.0.0.0
View Connection Config	Subnet Mask: 0.0.0.0	MAC ID: XX:XX:XX:XX:XX:XX

## DHCP Server

For most installations, the factory default settings should be used. This DHCP Server setup is included if you require a unique DHCP Server setup. The DHCP server setting controls whether the MVCI will act as a DHCP server for Ethernet and USB connections.

1. To **change the DHCP server setting**, select **DHCP Server**, press **ENTER**.

Network Setup
Ethernet
USB Device
Wireless Profiles
DHCP Server

2. The display will show the current setting of the DHCP server. To enable/disable the DHCP server, **highlight the current status**, press **ENTER**.

DHCP Server
DHCP Server: Enable

3. Select **Enable or Disable**, press **ENTER** to save the change.

DHCP Server
Enable
Disable

## MVCI Status

Power up the MVCI. After boot-up, press **ENTER** to access the User Config screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

Select **MVCI Status** and press **ENTER**.

User Config
User Customize
CM Update Mode
Network Setup
MVCI Status

The following status options are available:

- SDIO-1
- SDIO-2
- Battery Charger
- Host Status

## SDIO-1

To view the status of SDIO slot 1, select **View Status**.

MVCI Status	
SDIO-1:	<b>View Status</b>
SDIO-2:	View Status

Status screens appear, scroll down to see all status items.

SDIO-1	
Power:	<b>On</b>
Card Status:	Inserted

SDIO-1	
Write Protected:	<b>Off</b>
Over Current:	No

The screens illustrated above are status information only. No items may be changed.

Press **ESC** to return to the previous menu. The information for SDIO slot 1 is typically for the MVCI memory card.

## SDIO-2

To view the status of SDIO slot 2, select **View Status**.

MVCI Status	
SDIO-1:	View Status
SDIO-2:	<b>View Status</b>

Status screens appear, scroll down to see all status items.

SDIO-2	
Power:	<b>On</b>
Card Status:	Inserted

SDIO-2	
Write Protected:	<b>Off</b>
Over Current:	No

The screens illustrated above are status information only. No items may be changed.

Press **ESC** to return to the previous menu. The information for SDIO slot 2 is typically for the MVCI wireless card.

## Battery Charger

View the current state of the battery charging circuit.

MVCI Status	
SDIO-2:	View Status
Battery Charger:	<b>On</b>

**NOTE:** To maximize battery life, the battery charging is cut-off when the internal temperature of the MVCI is at or above 140 degrees Fahrenheit or 60 degrees Centigrade. Battery charging resumes once the MVCI power is cycled (turned off and on) and temperature is below 140 degrees Fahrenheit or 60 degrees Centigrade.

## Host Status

This item displays the IP address of the PC currently communicating with the MVCI. If the PC is not actively communicating with the MVCI, then the status is "Inactive".

MVCI Status	
Battery Charger:	On
Host Status:	172.19.251.12

## Software Version

Power up MVCI. After boot-up, press **ENTER** to access the User Config screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

Select **Software Version** and press **ENTER**.

User Config
CM Update Mode
Network Setup
MVCI Status
Software Version

Scroll down to see the remaining software versions displayed.

Version	→ Version
BootLoader:1.0	Kernel:1.0
Kernel(A):1.0	RFS(A):1.1
Kernel:1.0	RFS:1.1
RFS(A):1.1	Drivers&Apps:2.5

**NOTE:** Software screens show example data. Actual data will vary.

## Hardware Test

Power up the MVCI. After boot-up, press **ENTER** to access the User Config screen.

Host Status
Waiting for user input. . .
Press Enter to Config...

Select **Hardware Test** and press **ENTER**.

User Config
Network Setup
MVCI Status
Software Version
Hardware Test

The following test options are available:

- Beep Test
- LED Test
- LCD Test
- Keypad Test
- Scroll Test (for units with the scroll type keypad only)
- Serial Number
- Device Loopback Test
- SDMEM Card Test

## Beep Test

Select **Beep Test**, press **ENTER** to turn on the beep for 3 seconds.

Hardware Test	→ Beep Test
Beep Test	Beep shall Turn ON for 3 secs
LED Test	
LCD Test	
Keypad Test	

## LED Test

Select **LED Test**, press **ENTER** to turn on all of the LEDs for 3 seconds.

Hardware Test	LED Test
Beep Test	All LED's shall Turn ON for 3 secs
LED Test	
LCD Test	
Keypad Test	

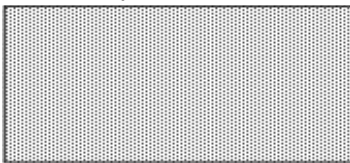
## LCD Test

Select **LCD Test**, press **ENTER** to start a series of LCD tests.

Hardware Test
Beep Test
LED Test
LCD Test
Keypad Test

1. Press **ENTER**, all pixels are set to the on position. Press **ESC** to exit from the LCD test.

LCD Test
Press Enter to Turn On Pixels for 5 Secs



2. After 5 seconds, the following screen appears. Press **ENTER** to display pattern 1 for 5 seconds. Press **ESC** to exit from the test.

LCD Test
Press Enter to Show Pattern1 for 5 Secs



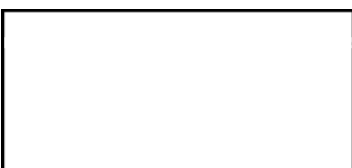
3. After 5 seconds, the following screen appears. Press **ENTER** to display pattern 2 for 5 seconds. Press **ESC** to exit from the test.

LCD Test
Press Enter to Show Pattern2 for 5 Secs



4. After 5 seconds, the last screen appears. Press **ENTER** to turn off all pixels for 5 seconds. Press **ESC** to exit from the test.

LCD Test
Press Enter to Turn Off Pixels for 5 Secs



## Keypad Test

Select **Keypad Test**, press **ENTER** to start the Keypad test.

Hardware Test
Beep Test
LED Test
LCD Test
Keypad Test

**To test the keypad on units with a 4-way type keypad**, press each up, down, left, right and ENTER key to see it highlight accordingly on the screen.

Hardware Test
(O)
(O) (O) (O)
(O)



**To test the keypad on units with a scroll type keypad**, move around the scroll pad until all of the numbers are highlighted and return to normal. The “1” digit will highlight at just to the left of the 12 o'clock position on the scroll pad. The digits “2” through “16” will highlight in sequential order as you move counter-clockwise around the scroll pad.

Keypad Test			
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

Press **ESC** to exit the keypad test.

## Scroll Test (for units with scroll type keypad only)

Select **Scroll Test**, press **ENTER** to start the Scroll test.

Hardware Test
LED Test
LCD Test
Keypad Test
Scroll Test

To test the scroll function, move your finger around the scroll pad clockwise to scroll down. Move your finger around the scroll pad counter-clockwise to scroll up.

Scroll Test
Menu 1
Menu 2
Menu 3
Menu 4

Press **ESC** to exit the scroll test.

## Serial Number

Select **Serial Number**, press **ENTER** to display the MVCI serial number.

Hardware Test	Serial Number
LED Test	Serial Number
LCD Test	A1BCGM3208001031
Keypad Test	
Serial Number	

## Device Loopback Test

Select **Device Loopback Test**, press **ENTER** to start the MVCI communication and analog circuit tests.

Hardware Test
LCD Test
Keypad Test
Serial Number
Device Loopback Test

**IMPORTANT:** Do not run this test if the MVCI is being powered through the vehicle cable. Run this test only when the MVCI is powered by the AC power adapter.

The following screen displays a message to the user. Remove the vehicle cable and press **ESC** to skip test or **ENTER** to proceed with the loopback test.

Device Test	Device Test
Remove the vehicle cable from MVCI and then perform the test <Enter> to Continue	Test in progress. Do not connect to Vehicle

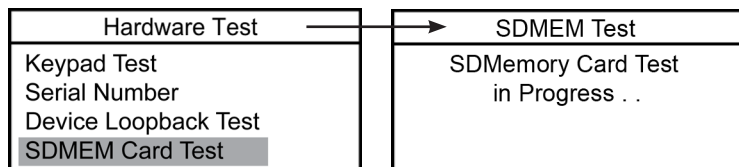
When the test is complete, a pass or fail screen will display.

Device Test	Device Test
Test Passed View Log File	Test Failed View Log File

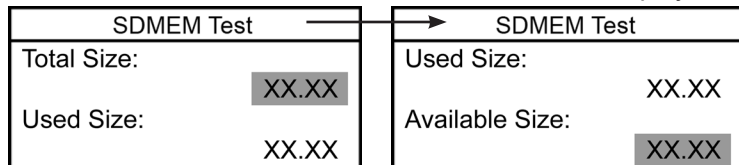
Press **ENTER** to view the test log file or press **ESC** to return to the Hardware Test menu. If the test failed, contact Technical Support.

## SDMEM Card Test

Insert the SD memory card in either of the SDIO slots. Select the SDMEM Card Test, press **ENTER** to start the SDMEM Card Test.



When the test is finished, the condition of the card displays. Scroll to view all conditions.



Press **ESC** to return to the Hardware Test menu.

## Auxiliary PC Applications

The installation CD for the MVCI contains two auxiliary PC applications.

### MVCI Firmware Update

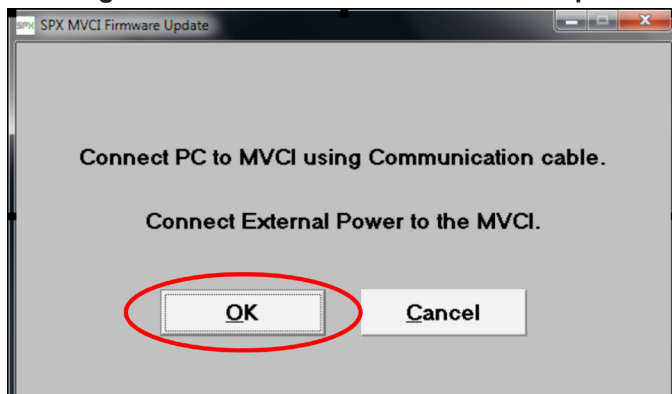
This application upgrades the internal software inside the MVCI unit. When the Honda Diagnostic System (HDS) shows the MVCI firmware updating screen like HIM updating, this application is not used.

#### NOTE:

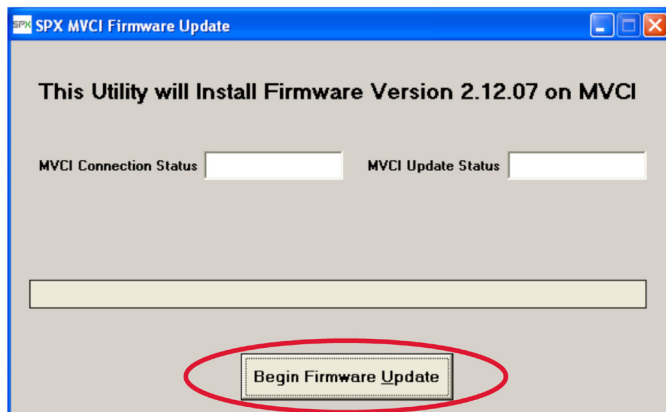
- During setup, the MVCI Dashboard will appear. This can be used to change from Access Point to Peer to Peer.
- Using the set default will automatically connect the PC to the selected MVCI.

To launch the application:

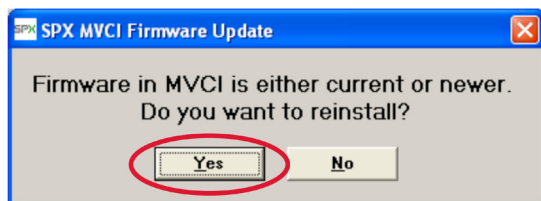
Enter **All Programs > SPX > MVCI ver x.x > MVCI Update**



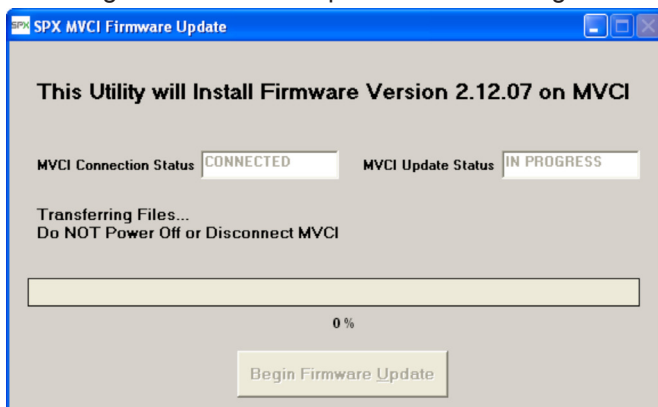
Click **OK**. The following screen is displayed.



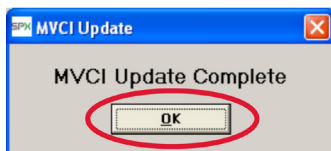
Click **Begin Firmware Update**. The following screen is displayed.



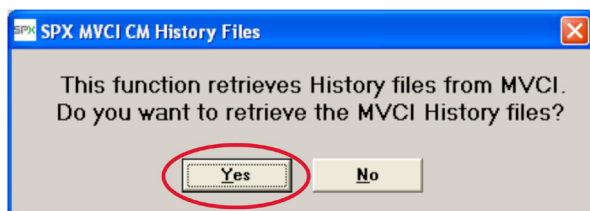
Click **Yes** to begin the Firmware Update. The following screen is displayed.



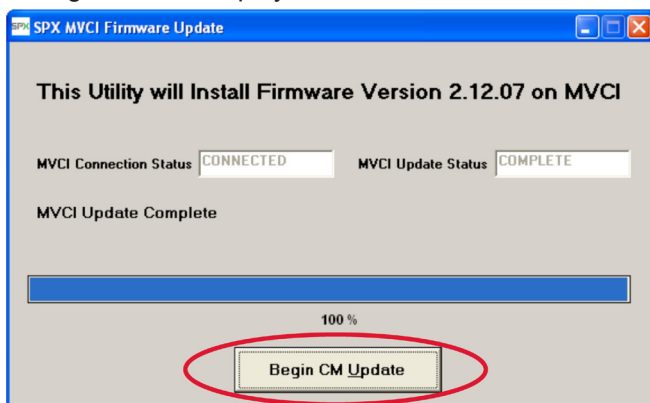
The MVCI will transfer the files and reboot. When the update is complete, the following screen is displayed.



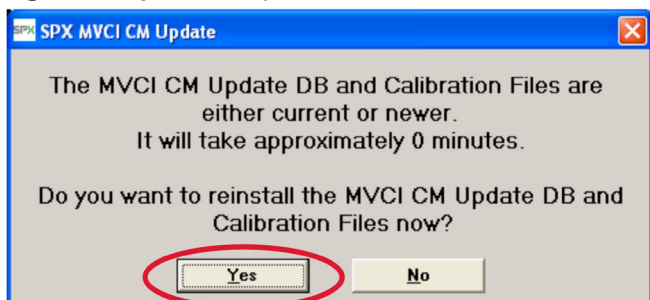
Click **OK**.



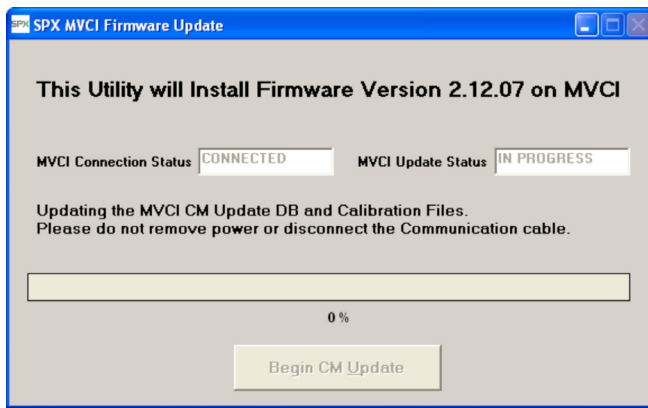
Click **Yes** or **No** in response to the screen's question. The following screen is displayed.



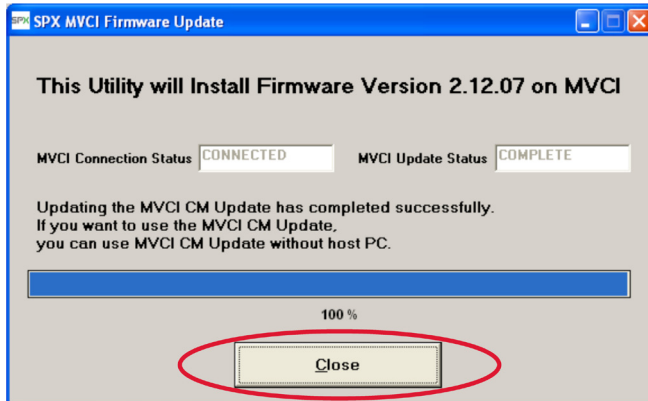
Click **Begin CM Update** to update the files on the SDMEM card. The following screen is displayed.



Click **Yes**. A display of the update progress appears. Do not remove power or disconnect the Communication cable.

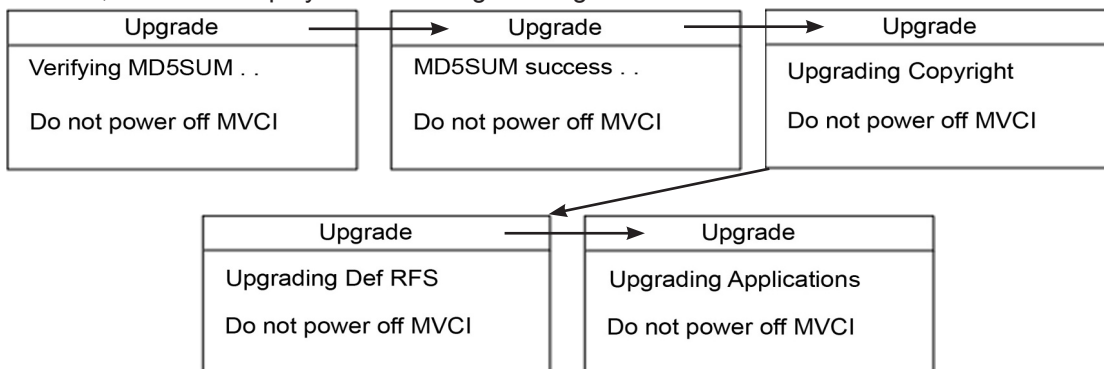


The following display tells you when the update is complete.



Click **Close**.

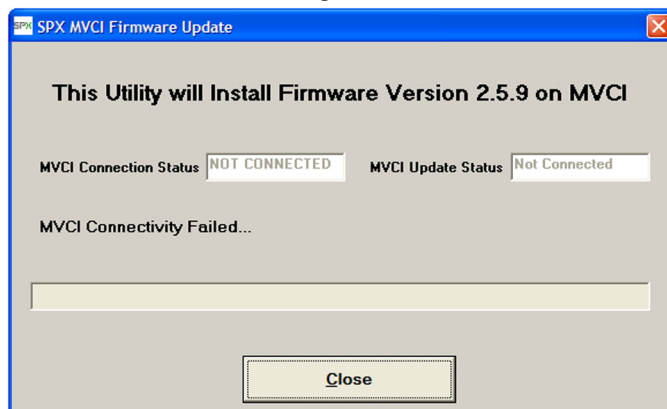
After reboot, the MVCI displays the following messages:



When the firmware update is complete, the tool will go through its normal restart sequence and display the Host Status screen. The entire update process takes about 3 minutes to complete.

## Other Firmware Update Scenarios

If the check for necessary update was performed through a wireless interface, the MVCI update program will read the version from the tool and initiate the update, but will then display the screen below. Click **Close** to exit the application. Connect the MVCI to the PC using the USB cable or an Ethernet cable, and rerun the Firmware Update utility.



If the system detects that the software on the MVCI is current or newer than the software resident on the PC, the following screen is displayed:

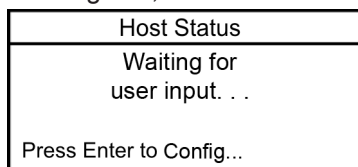


Click **Yes** to continue or click **No** to close the dialog box, then click **Close** to exit the application. If the MVCI is not connected, or the MVCI is not powered, the following screen will be displayed.



Confirm cables are correctly connected and that the MVCI is powered and displaying the Host Status screen. Click **Yes** to retry.

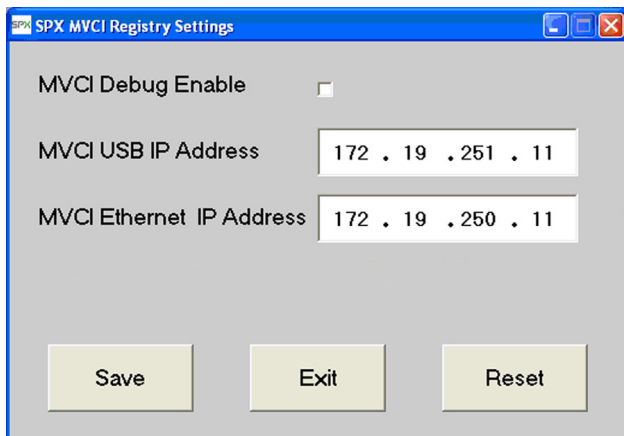
Click **No** to close the dialog box, then click **Close** to exit the application.



## MVCI Registry Setting

This application is used to view/change the IP addresses used to communicate to the MVCI.

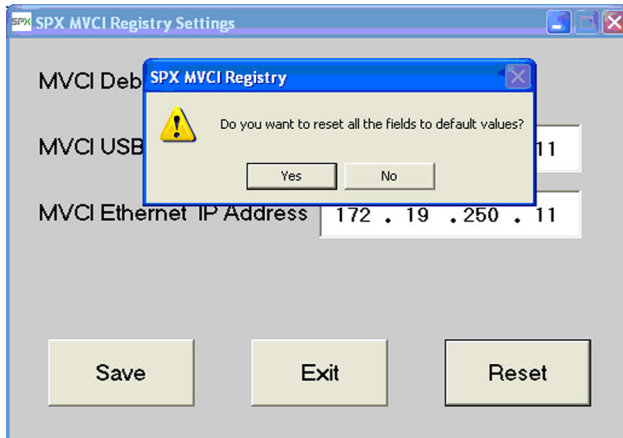
The following screen is displayed when MVCI Registry is selected from **Start > All Programs > SPX > MVCI ver x.x > MVCI Registry**



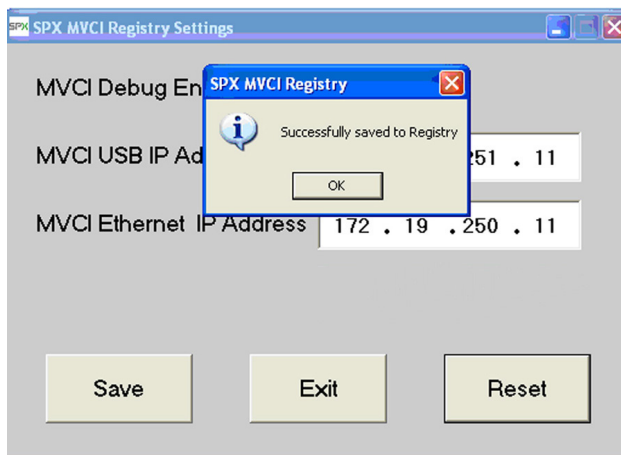
To manually change any of the IP Address settings, click on the desired section of the address and enter the desired values. Click **Save** to add the desired settings to the registry. Click **Exit** to close the application.

**NOTE:** If you receive an SPX Registry error, refer to the Registry Error Recovery in the User Guide for corrective action.

To reset the registry to default (factory) settings, click **Reset**. Click **Yes** to restore the registry to default values. Click **No** to leave the registry settings unchanged.



To save the currently displayed settings, click **Save**. Click **OK** to close the dialog box and click **Exit** to close the application.

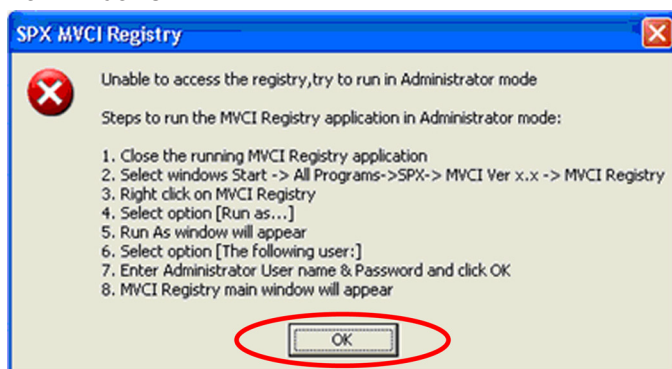


**NOTE:** MSCI Debug Enable should not be used unless specifically directed by Technical Service.

## Registry Error Recovery

When using the MSCI Registry application, the following error is displayed when the PC user who is currently logged on lacks the permissions necessary to perform certain administrative functions on the PC.

For Windows XP®:



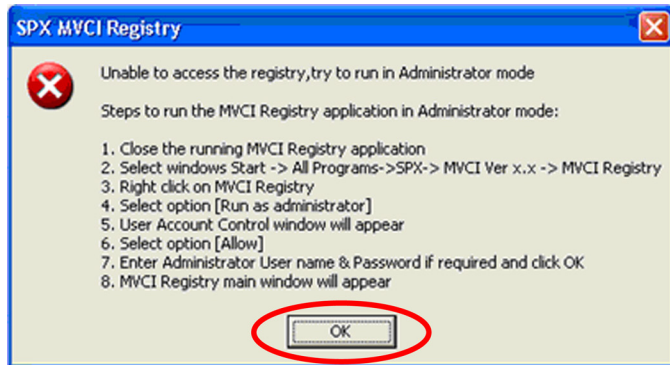
To resolve the problem, click **OK** to close the dialog box and perform the following:

1. Close the running MSCI application.
2. Click **Windows Start**.
3. Click **All Programs**.
4. Click the **SPX** folder.
5. Click **MSCI Ver X.X**.
6. Right click on the MSCI Registry icon.
7. Select the option [Run as . . .].



8. Select the option [The following user:].
9. Enter Administrator User name & Password and click **OK**.
10. The application main window will appear.
11. Complete the necessary task within the application, and exit the application.

For Windows Vista®/7 OS:



To resolve the problem, click **OK** to close the dialog box and perform the following:

1. Close the running MVCI application.
2. Click **Windows Start**.
3. Click **All Programs**.
4. Click the **SPX** folder.
5. Click **MVCI Ver X.X**.
6. Right click on the MVCI Registry icon.
7. Select the option [Run as Administrator].
8. The User Account Control window will appear.
9. Select option [Allow].
10. Enter Administrator User name & Password if required and click **OK**.
11. The application main window will appear.
12. Complete the necessary task within the application, and exit the application.

## Frequently Asked Questions

### • Why doesn't my MVCI power on?

Ensure that the MVCI is connected to the vehicle with the vehicle adapter cable or is connected to external power adapter.

### • Why doesn't my MVCI power off?

To turn off the MVCI, disconnect the MVCI from all power sources and press and hold the ESC button for 3 seconds. The MVCI will automatically power off 30 seconds after being disconnected from vehicle or external power.

### • Why does my MVCI power off if I didn't press the ESC button?

The MVCI must be connected to a vehicle or an external power source. The MVCI will power off after 30 seconds without external power.

### • Why does my MVCI keep rebooting when the external power is disconnected?

The MVCI batteries are weak. Connect the external power adapter and allow the batteries to charge for 4 hours.

### • Why does my MVCI reboot when the vehicle is started?

The MVCI batteries are weak. Connect the external power adapter and allow the batteries to charge for 4 hours.

### • Why doesn't my MVCI turn on when connected to the vehicle?

Verify that the vehicle battery power pin and the grounds on the vehicle connector are good. If the vehicle connector does not have a vehicle battery pin, use the external power adapter.

• **Why does my MVCI beep every time the scroll pad is pressed?**

This is normal operation. This audible beep can be disabled. See the instructions for “Keybeep” in the MVCI System Setup section of this User Guide.

• **When using the menu functions, why does my MVCI return to the Host Status display?**

The MVCI will always return to the Host Status display after twenty seconds of no scroll pad activity.

• **When changing the wireless settings, why do the settings go back to the previous value before they are saved?**

The MVCI will always return to the Host Status display after 20 seconds of no scroll pad activity. If this occurs, all wireless changes made will be lost. All changes must be saved before the MVCI automatically returns to the Host Status display.

• **Why does the battery icon on the Host Status screen have an ‘X’ in it?**

The batteries are not installed or are installed incorrectly in the MVCI.  
The batteries may be defective.

• **Why does the battery icon on the Host Status screen have a ‘ZZ’ in it?**

The battery charging is automatically cut-off when prolonged use causes the internal temperature of the MVCI to rise above 140 degrees Fahrenheit or 60 degrees Centigrade. Battery charging will resume once the MVCI power is cycled (turned off and on) and temperature is below 140 degrees Fahrenheit or 60 degrees Centigrade. Refer also to the Battery Charger section of this User Guide.

• **How do I remove the wireless card?**

**NOTE:** The wireless card and retainer clip should not be removed unless directed to do so.

If instructed to remove the retainer clip (used to protect the wireless card) and the wireless card, follow these steps:

1. Remove the top port cover.
2. With the MVCI keypad facing you, slide the retainer clip to the right.



3. Remove the retainer clip and place it in a safe area.
4. Push the wireless card inward and release. The wireless card will release and eject partially.
5. You can now remove the wireless card.



## Useful Information

### Maintenance

The SPX MVCI can become dirty being used in the automotive service environment. The MVCI surfaces can be cleaned by wiping them with a soft cloth. The soft cloth can be slightly damp with water or water and diluted mild detergent. Be sure to firmly wring excess water from the cloth. Do not use harsh chemical cleaners (benzene, thinner, rubbing alcohol, household cleaners, cosmetics, etc.) as these may adversely affect the surface (e.g. discoloration). Do not directly spray or add water to the surfaces of the MVCI. If liquid enters the MVCI, it may cause it to work improperly or become damaged.

If common automotive liquids come in contact with any surface of the MVCI, remove them with a soft cloth immediately.

### Cable Connections

To avoid damage to the MVCI, cards, or cables, use the following information to help when attaching cables, connectors to the MVCI, or plugging in SDIO or SD memory cards:

- Use only parts supplied or recommended for use with your MVCI.
- Pay attention to the condition and position of connectors to make connections properly.
- Do not apply excess force if a connection cannot be made easily. Check the condition and position of the connector. Check the alignment and pins of connectors.
- If a connector has screws for locking the connection, fasten the screws firmly.
- Do not carry the MVCI by attached cables. Do not pull on cables with force.

### Battery Replacement

The MVCI contains two (2) rechargeable NiMH AA batteries. These batteries are charged whenever power is applied to the MVCI through the vehicle DLC. The internal batteries may also be recharged by supplying power to the MVCI to the Power Adapter Port. Use the supplied AC Power Adapter (SPX replacement P/N H547571) only. If the batteries need replacing, use 2000mAh NiMH AA batteries (SPX replacement P/N H550175). For battery location information, see the MVCI Component Description section of the User Guide. Care should be used to position the batteries in the proper orientation.

## Specifications

Electrical	32.739kHz Real Time Clock 400Mhz CPU (Software determined)
Display	65 x 128 pixel LCD Graphic Display Backlight Supports a maximum of 4 lines of text
Status Lights	Vehicle Communication Indicator Wireless Connection Indicator Battery Discharging Indicator
Keypad	Escape/Off Button Enter Button Scroll (Up/Down/Left/Right)
Interface	SDIO/SD Memory Card Slots (2) Vehicle I/O Connector USB Device Port Ethernet Port USB On-The-Go Port
Battery	AA Rechargeable NiMH - 2000mAh SPX P/N H550175
AC Adapter	Input: 100 - 240V AC 50/60Hz Output: 15V DC, 1.2A SPX P/N H547571
Vehicle I/O	26 pin Connector The MVCI is capable of taking voltage measurements on the vehicle diagnostic link I/O lines. These lines are limited to measurements between 0 - 32V DC, therefore, are considered in Measurement Category I (UL 61010-1).
Power Input	Power Adapter Port Vehicle I/O Port 8 - 32V DC
Environment	Operation of MVCI (readable LCD): 32°F to 140°F (0°C to 60°C) Operation of MVCI (non-readable LCD): -4°F to 140°F (-20°C to 60°C) Storage of MVCI: -4°F to 160°F (-20°C to 70°C) Operation Humidity: 20% to 85% RH at 100°F (38°C)
Physical	Approximate Size: 6.25" x 5" x 2" Approximate Weight: 1.5 lbs.

## SPX® Corporation Limited Warranty

**THIS WARRANTY IS EXPRESSLY LIMITED TO ORIGINAL RETAIL BUYERS (“USER”) OF THE SPX® MVCI TOOL (“UNITS”).**

Product	Warranty period
(i) The Honda MVCI (PRODUCT), including wireless card	61 months from the SPX invoice date
(ii) Memory Card, USB Cable, OBDII Cable and AC Adapter	13 months from SPX's invoice date
(iii) “AA” NiMH off the shelf Batteries	Manufacturers Standard Warranty applies

## SOFTWARE

Unit software is proprietary, confidential information of SPX and protected under copyright law. Users have no right in or title to Unit software other than a limited right of use revocable by SPX. Users shall not (a) transfer or disclose the Software without the prior written consent of SPX, (b) disassemble, decompile, reverse engineer or otherwise attempt to derive the source code of the Unit software, or (c) remove or destroy any proprietary markings, confidential legends or any trademarks or trade names of the Unit software. Unit software may not be copied except in ordinary backup procedures. Unit software when correctly installed, will execute its programmed instructions. SPX does not warrant that software will operate uninterrupted or error-free.

## ADVANCE REPLACEMENT PROCEDURE

Upon the discovery of a possible defect, contact the applicable SPX Call Center set forth below. The User will be shipped an Advance Replacement Unit if such Unit is found to be defective under the terms of this warranty.

In the event there are malfunctions or defects of the PRODUCT SPX shall send an Advance Replacement unit to replace said malfunction or defective unit. Dealer/Distributor shall receive an Advance Replacement unit at no charge. Dealer/Distributor shall then return the malfunctioning or defective unit back to the SPX Support Center using the prepaid shipment instructions included with the Advance Replacement unit.

If such Unit is found to be not covered under the warranty, after initial inspection at the SPX repair facility such User may be charged for the repair of the Unit.

## TECHNICAL SERVICE

If you have any questions on the operation of the product or Advance Replacement Procedure, call:

SPX Call Center Location	Supported Region	Phone Number
SPX USA	USA, Canada, Virgin Islands, Northern Mariana Islands (Saipan), Guam, Puerto Rico	1-586-753-3326
SPX Japan	Japan	0120-566-541
SPX Mexico	Mexico, Caribbean, Latin America	52-55-2595-1630
SPX Brazil	South America	52-55-2595-1630
SPX Europe	East and West Europe, Russia, Middle East, Africa	49-6182-959424
SPX China	China, Hong Kong	86-10-8448-4531
SPX India	India, Bangladesh	91-11-6515-8686
SPX Korea	Korea	82-31-457-9520
SPX Australia	Rest of Asia Pacific	61-3-9544-6222

## Limits and Exclusions to Warranty

This warranty does not cover and shall be void for:

- Damage that is attributable to fire, theft or acts of nature.
- Damage caused by environmental influences (electrical storms, magnetic fields etc.).
- Damage which has not been caused during normal operation
- Repair of damage that is cosmetic only or does not affect product functionality such as wear and tear, scratches and dents.
- Failures caused by products not supplied by SPX.
- Failures resulting from alteration, accidental damage, casualty, misuse, abuse, or neglect.
- Introduction of liquid or other foreign matter into the Unit.
- Improper installation, operation, or maintenance.
- Improper connections with peripherals.
- Maladjustment of consumer controls such as function settings.
- Modification or service by anyone other than SPX or its approved Service Providers.
- Products whose serial number has been removed making the Unit warranty condition impossible to clearly determine.

## DISCLAIMER

THIS LIMITED WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event shall SPX® be liable for any indirect, special, incidental or consequential damages (including lost profit) whether based on warranty, contract, tort or any other legal theory. No one is authorized to make any statement or representation altering the terms of this warranty. Certain exceptions to SPX's limited warranty may apply based on applicable laws and regulations.



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March 6, 2012 Rev. K

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