

Easy-Wire™

Smart-Light™ Device CR/CH2 Demo

Version 2019.2.0

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United States of America

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Introduction and Setup



Small harness being tested with Smart-Adapters.

By using Cirris Smart-Lights devices you can make Smart-Adapter Cables. Plug a Smart-Adapter Cable into a Cirris easy-wire CR or CH2 tester and the tester recognizes it. This makes test setup easier and faster.

Cirris easy-wire CR and CH2 test systems using Smart Adapter Cables can guide assembly and identify errors using onscreen connector pictures, sounds, and LED prompts.

Try this demo and see why the CR and CH2 testers with Smart-Adapters are revolutionizing harness assembly and test.

If you are new to cable testing, you may find it helpful to first review the glossary at the end of this manual before starting the demo. [Blue words](#) in this demo manual are in the glossary.

Demo Overview

The Smart-Lights Device CR/CH2 Demo has 6 individual sub-demos. In the first two you will test a harness, find errors, and be guided through assembling a harness. The next two show you how to setup a test program and an adapter cable. The final two show you advanced features such as testing components and high voltage testing (CH2 only).

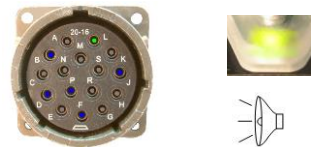
Demo 1: Test a Harness

This demo allows you to quickly test a known good harness, create errors ([open](#), [short](#), [miswire](#)), and interpret error messages.



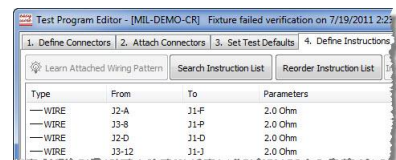
Demo 2: Guided Build and Test

This demo shows how easy-wire guides you through correctly building a harness using connector pictures, LEDs, and audible prompts.



Demo 3: Learn/Create a Test Program

With easy-wire, you can create test programs by directly entering data, importing data, or learning from a "known good" sample. Using Smart-Adapters you will see how fast you can create a test program for the demo harness.



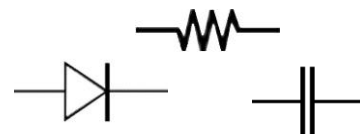
Demo 4: Setup to use a Smart-Adapter Cable

Do the setup on an easy-wire test system so a Smart-Adapter Cable can be used in any test setup on the test system.



Demo 5: Test Components

The CR and CH2 testers can test components. This demo shows you how to add resistors, diodes, and capacitors to the test program and how to test each component.



Demo 6: Hipot Testing (CH2 only)

The CH2 can test at voltages up to 1500VDC and 1000VAC (optionally 1500VAC using an xHV power supply). This demo shows you errors that can be found with high voltage testing.



What you've received:

Header Strip Transition Board Set P/N: ETB-HS

Provides a quick and easy way to transition the wiring from your tester to modular **fixturing** (adapter cables).

The Header Strip transition boards may be attached to a harness board or mounted on the test station.

In this demo we will use the Header Strip for tester interface, but in reality, you could use any connector system with Smart-Lights devices.

Smart-Adapter Cable

You should have received a smart adapter cable included with the cables on the harness board. However, this cable is not attached to the harness board.



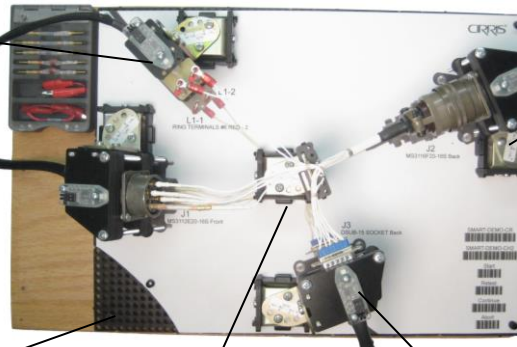
Demo Board with Smart-Adapter Cables

The demo board you've received has Cirris modular easy-wire components, which allow for quick setup and tear down. See the descriptions below.

E-Z-Hook® Block

P/N: EZH2-05

Detachable test block with 2 pre-mounted E-Z-Hook test clips, which can be used for stripped wires or ring lugs.



Vise Test Block

P/N: EVLC-05

Test block for circular mating connector up to 2 inches in diameter.

Tall Bracket with Long Mount

P/N: EWTL-05

Mounts vise test blocks.

Grid Tile

P/N: EWGT-10

Screw mounted grid tiles allow harness components to be easily moved.

Drop Nail Bracket

P/N: EDNB-0B

Nails can be dropped for storage, application of sheathing, lacing, etc.

Vise Test Block

P/N: EVM2-05

Test block for rectangular shaped connector up to 2 inches wide.

Take a closer look at one of the Smart-Adapter Cables on the harness board.

Header Strip Clips

P/N: EHS-CL

The clips attach to off-the-shelf TE Connectivity MOD IV connectors. When used with the header strip transition board, the clips provide latch, eject, strain relief and alignment.



Smart-Light P/N: SMRT-05

Allows the tester to recognize the adapter's name, pin out and other information. Also provides a red/green LED to help identify errors, and if needed, guide assembly. A Smart-Lights device uses two test points.

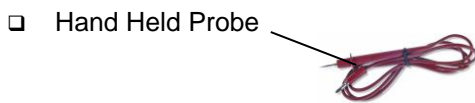
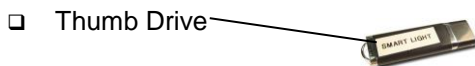
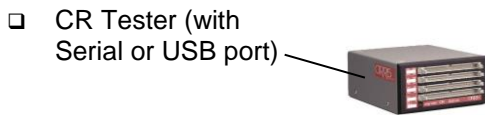
easy-wire test block

Provides an easy way to clamp and strain relief a [mating connector](#). Also allows the [mating connector](#) to be quickly attached to or removed from a mounting bracket.

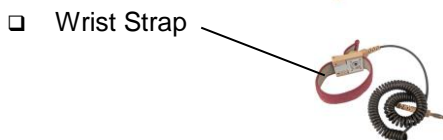
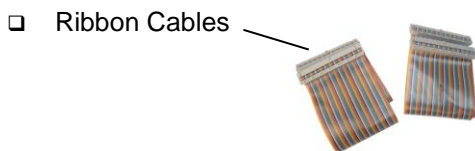
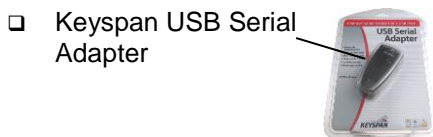
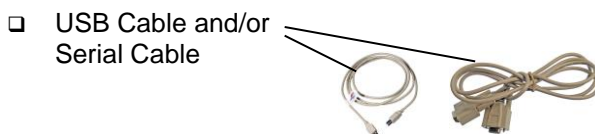
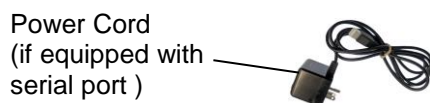
Other parts received:

Each CR/CH2 demo comes with varying parts depending on the demo tester you have. Determine your tester type, and verify that you received the parts below:

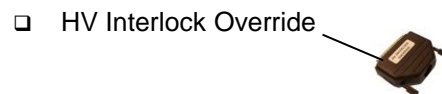
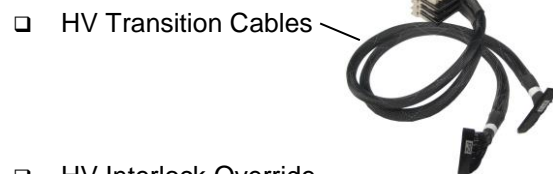
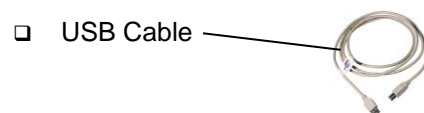
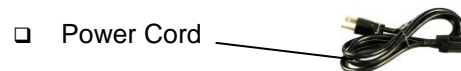
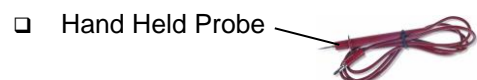
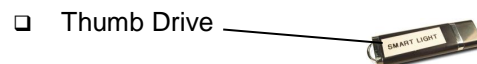
CR



- ☐ One of the following power cord options:




CH2



System Requirements

Ensure that your computer system has the following requirements:

- 
- ❑ **Computer CPU**
1.6 GHz Processor Speed or better
 - ❑ **Free Disk Space**
Minimum: 5 GB
Recommended: 10 GB
Note: For the demo you only need 500 MB free.
 - ❑ **Speaker & Sound Card**
Required!!
 - ❑ **RAM Memory**
Recommended: 1 GB.
 - ❑ **Monitor Resolution**
1024 X 768 or better.
 - ❑ **Video Card**
64 MB on board RAM
 - ❑ **Windows Environment**
Windows 7, XP Pro, XP Home.
 - ❑ **USB Port**
1 USB Port 2.0 compatible
Note: For digital I/O (not used in this demo) a serial port or USB Port with adapter is required.
 - ❑ **Mouse**
Required for installation and test setup. Can be replaced with a barcode reader on the production floor.
-

Installing the Software

You must have easy-wire version 2017.2.0 or later in order to use this demo. If you have an older version of easy-wire already installed, complete steps 1-3 below. Then in step 4 double-click on RemoveCirrisSoftware.exe to remove the software and install the new version.

Step 1

Exit all running Windows applications.

Step 2

Insert the Cirris thumb drive into a USB port on your PC.



Step 3

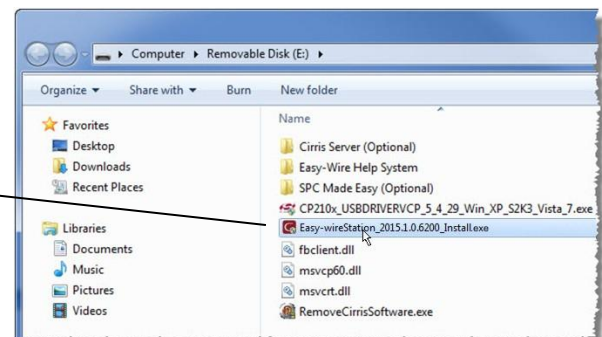
The Windows “AutoPlay” screen will open. Click “Open folder to view files”.



Note: If the “AutoPlay” screen does not open, navigate to the removable disk drive on your computer.

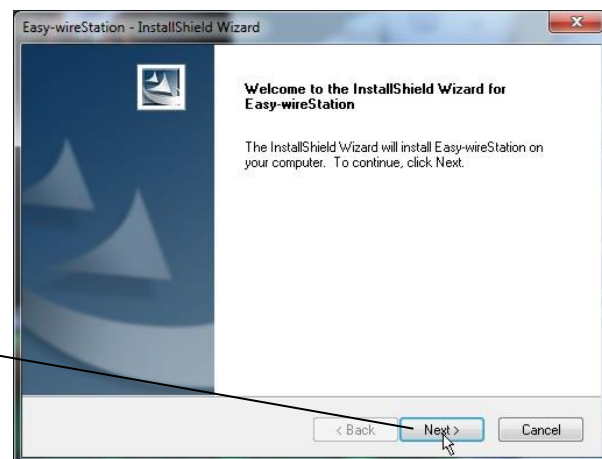
Step 4

Double-click on **Easy-wireStation_Install**



Step 5

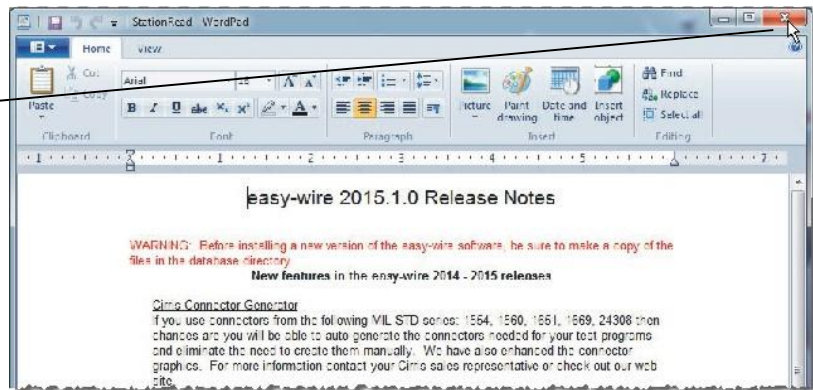
Complete the installation as prompted. When prompted to choose a destination location, use the provided default location.



Note: After you accept the terms of agreement, install a driver and the software for the USB to UART device as prompted.

Step 6

A read-me file will automatically open. You can read the file if desired. When you are ready to continue, close the window and complete the installation.



Step 7

If you are setting up a CR tester, remove the thumb drive and proceed to “Setting up a CR Tester” on the next page.

If you are setting up a CH2 tester, leave thumb drive in and proceed to “Setting up a CH2 Tester” on page 11.

Setting up a CR Tester

CR models sold before September of 2010 have a serial port (if your PC does not have a serial port, you will need to use the Keyspan USB Serial Adapter provided by Cirris). CR testers sold after September 2010 have a USB port.

Step 1

Look at the back right corner of your Demo CR tester and determine if the tester has a Serial Port or USB port as shown.



Step 2

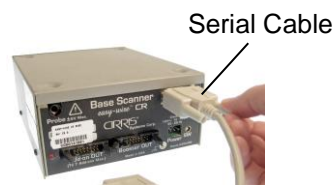
If you have a serial port, see below.

If you have a USB port, skip to “USB Port” on the next page.

Serial Port:

- a. Connect the serial cable to the tester.

If your computer has a serial port, connect the other end of the serial cable directly to your computer.

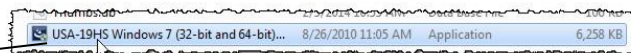


If your computer does not have a serial port:

- Make sure the Cirris thumb drive is still plugged in your PC.

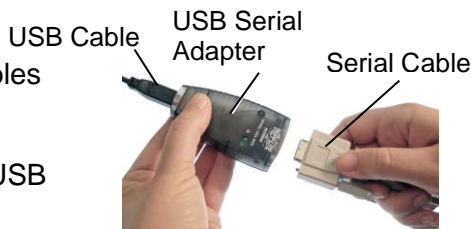


- Click on the **USA-19HS...** program to install the USB Serial adapter drivers.

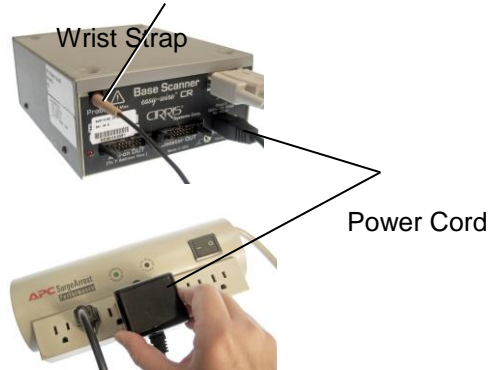


- Connect the USB and Serial cables into the USB Serial Adapter.

- Then plug the loose end of the USB cable into your PC.



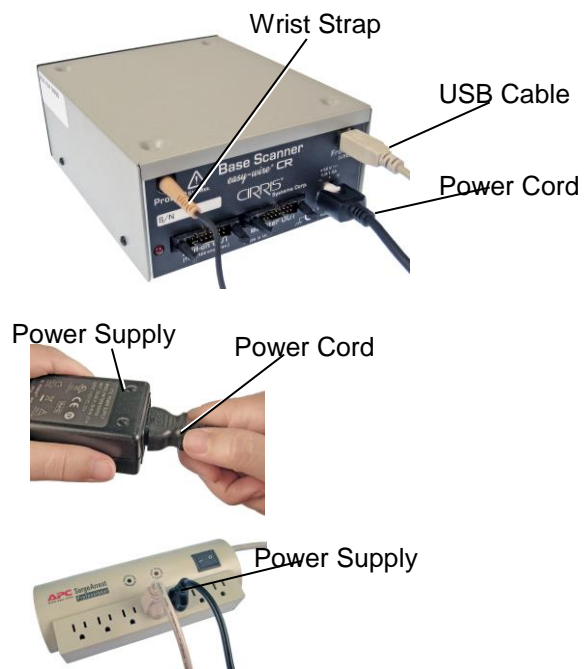
- b. Plug the wrist strap into the probe socket.



- c. Connect the power cord to the tester (notch side up). Plug the other end of the power cord into the same grounded outlet that your computer is plugged into.

USB Port:

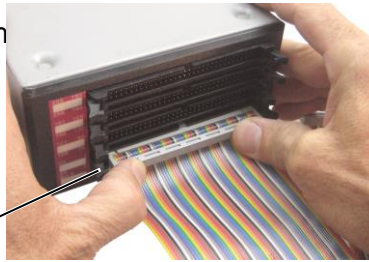
- a. Connect the included USB cable from the tester to your PC.
- b. Plug the included wrist strap into the probe socket.
- c. Plug the included Power cord (latch side up) into the tester.
- d. Connect the power cord to the power supply.
- e. Plug the loose end of the power supply into the same grounded outlet that your computer is plugged into.



Step 3

Connect a ribbon cable from the CR bottom connector (test points 1-64).

bottom connector
(test points 1-64)

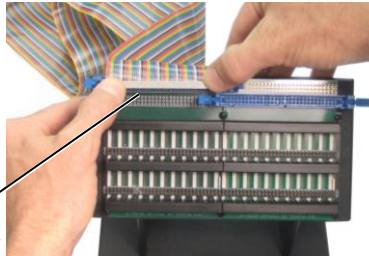


Step 4

Connect the other end of the ribbon cable connected in the previous step to the Header Strip left connector.

Important: Make sure test points 1-64 are connected to the left connector.

left
connector



Step 5

Connect the other ribbon cable from the CR next-to-bottom connector (test points 65-128).

next-to-bottom connector
(test points 65-128)

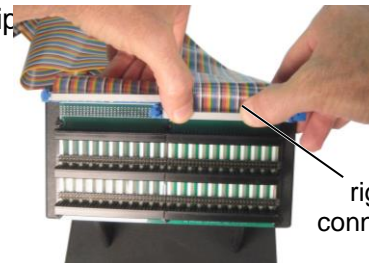


Step 6

Connect this ribbon cable to the header strip right connector.

Ensure that test points 65-128 are connected to the right connector.

right
connector



Important! The cables from the tester to the Header Strip must be connected to the header strip as directed in the previous five steps. This allows the header strip set to provide a continuous row of system test points – in this case 1 to 128.

Step 7

Proceed now to Setting up the harness board on page 14.

Setting up a CH2 Tester

Before setting up the CH2 tester, ensure that the USB cable between the computer and the CH2 tester is disconnected.

On the back of the CH2 tester, do the following:

Step 1

Plug the USB cable into the tester, and plug the other end into a USB port on your computer.

Step 2

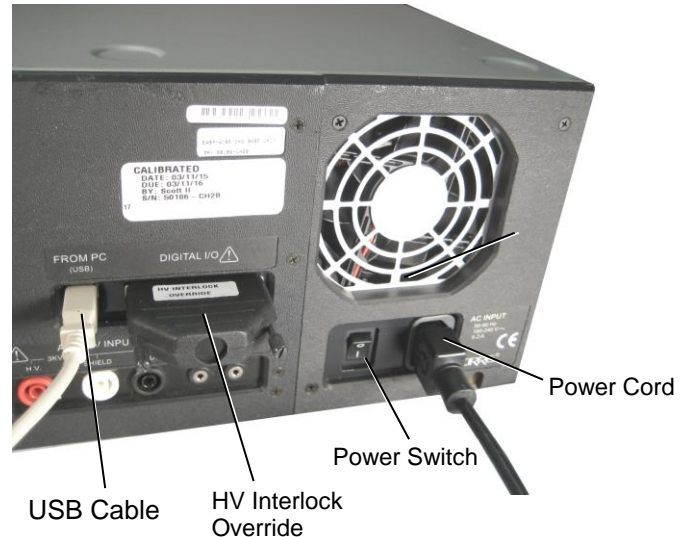
Attach the HV Interlock Override.

Step 3

Plug the power cord into the tester, and plug the other end into the same grounded outlet as your computer.

Step 4

Turn on the power switch.



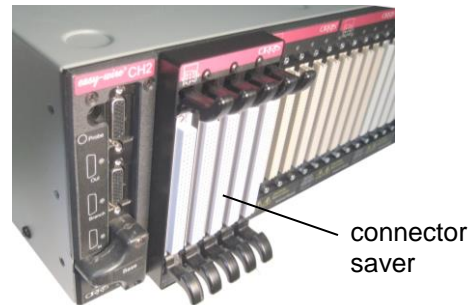
Step 5

The Windows Found New Hardware Wizard may open. Most computers need two drivers installed for the USB communication to work with the CH2.

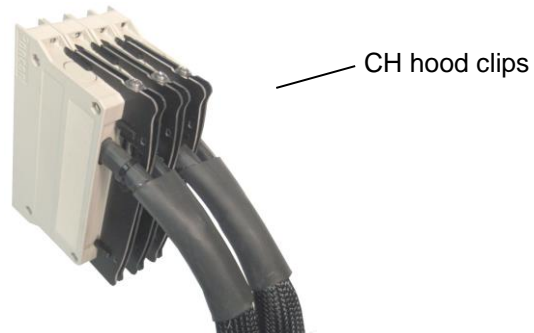
If prompted, follow the install procedures for both drivers as they appear on your screen.



The CH2 tester for this demo is equipped with a Connector Saver (Cirris P/N: ADCS-C2). A Connector Saver allows you to quickly attach and detach cables to the tester. Connector Savers also protect the interface pins in the CH2 from wear and damage.



The Eurodin connectors that plug into the CH2 are held grouped together with CH hood clips (Cirris P/N ACCL-05). The CH2 hood clips can hold two to five Eurodin connectors together in accurate alignment so they can plug on together as a group.



Step 6

The levers on the connector saver may have been pushed in for shipping. Push the levers out as shown.



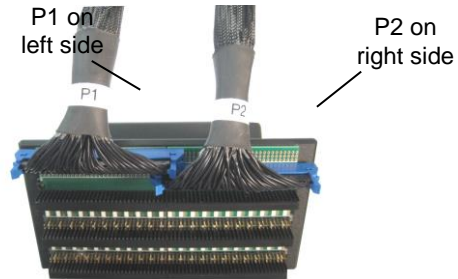
Step 7

Plug in the block of Eurodin connectors into the connector saver, then close the top and bottom levers to secure the connectors.



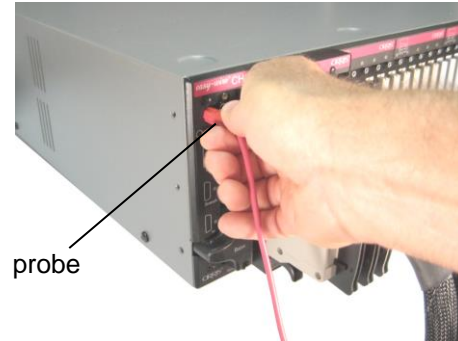
Step 8

Plug the connector labeled **P1** into the Header Strip left connector. Plug the connector labeled **P2** into the Header Strip right connector.



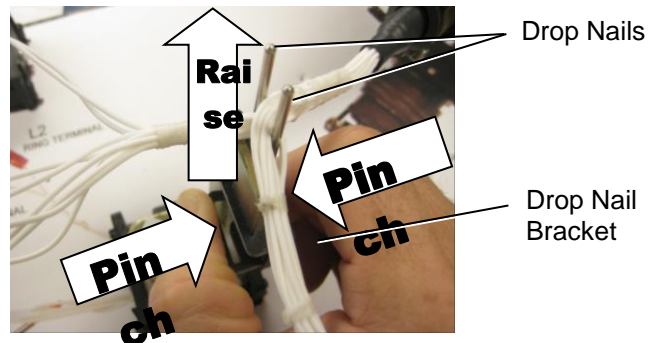
Step 9

On the front of the CH2 tester, plug in the probe.



Step 10

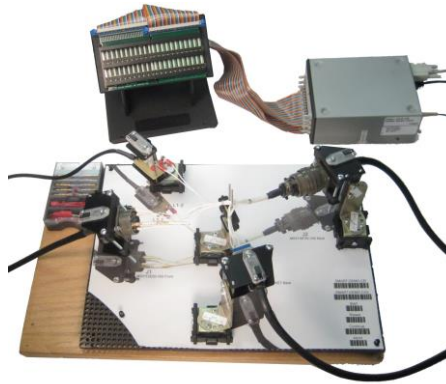
The drop nail bracket is located at the center of the demo harness board. Pinch and raise the drop nail bracket to raise the drop nails as shown.



Setting up the harness board

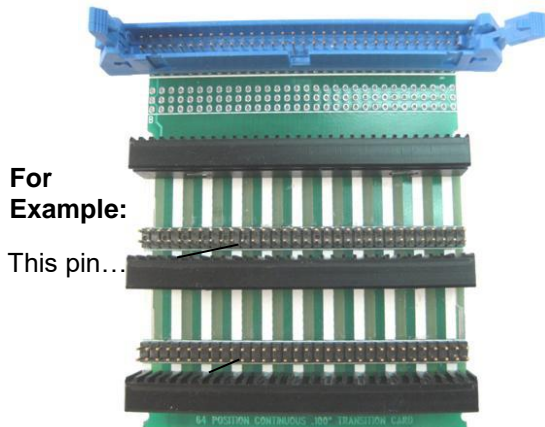
Step 1

Place the Header Strip behind or to the side of the harness board.



Before connecting to the Header Strip, understand how it works.

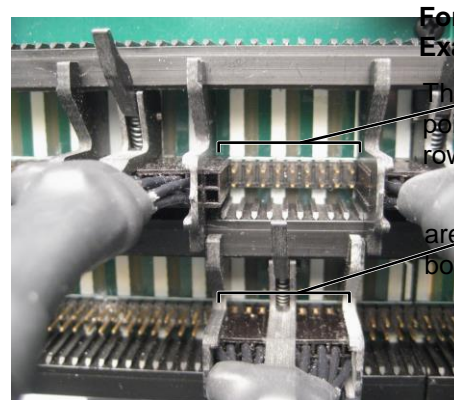
Each point on the first row is connected to a point on the second row.



For Example:

This pin...

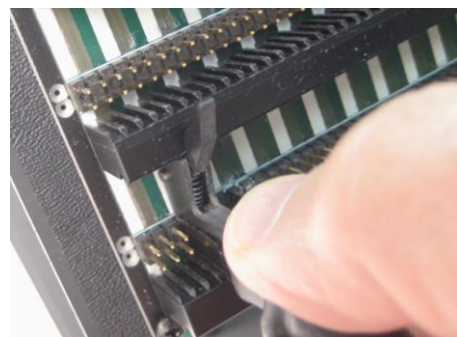
This allows you to connect the adapters on either row without wasting test points.



is connected to this

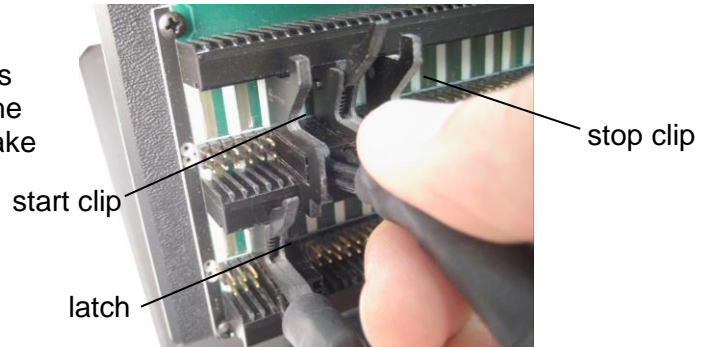
Step 2

Connect one of the adapter cables from the harness board to one of the rows on the strip. The adapter cable connector should click when fully engaged and lock.



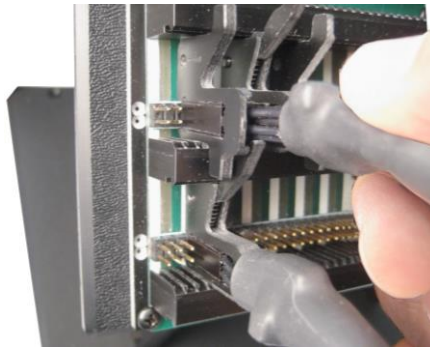
Step 3

Connect another one of the adapter cables from the harness board to the strip. Use the start stop clips or latch lever to visually make sure the clips don't overlap.



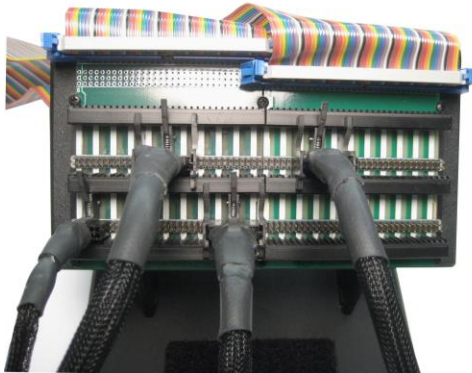
INCORRECT

In this picture the adapter on the top row incorrectly overlaps with the adapter on the bottom row.



Step 4

Connect the rest of the adapter cables anywhere on the test strip, again making sure the connectors do not overlap.



Step 5

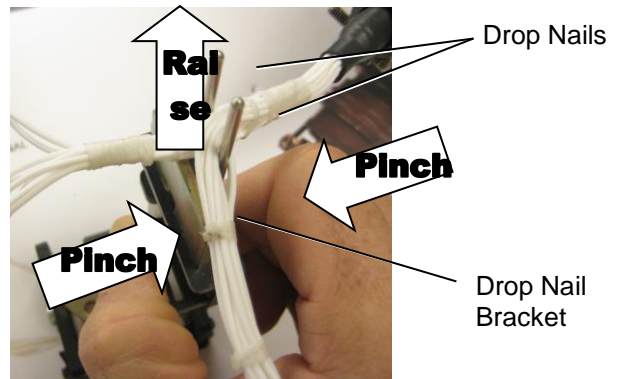
Do NOT connect the extra smart adapter cable at this time.

We will use it later in Demo 4.



Step 6

The drop nail bracket is located at the center of the demo harness board. Pinch and raise the drop nail bracket to raise the drop nails as shown.



Starting the Software

Step 1

On your desktop, double click the easy-wire icon to open the software.
The first time you open the software, it will take a little longer to load.

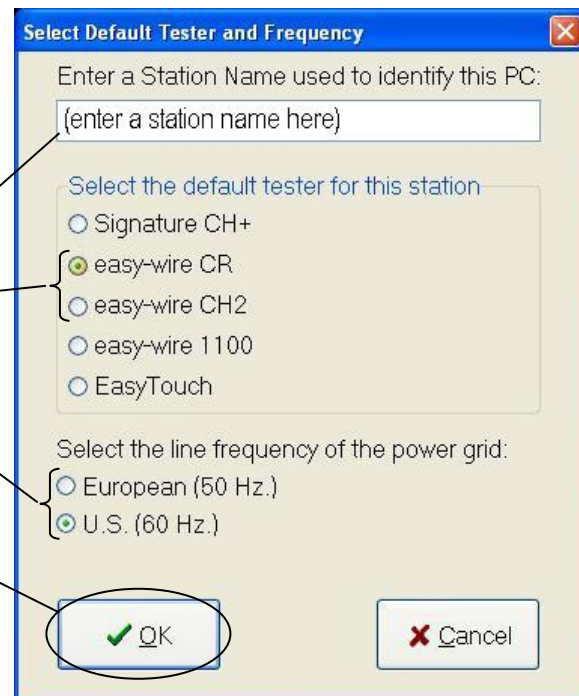


Can't find the easy-wire icon? Look for the “easy-wire” title on your desktop (when you first install easy-wire, the icon may look different from the image above). If the easy-wire icon is not on your desktop; from the Windows task bar, click *Start, All Programs, Cirris Systems Corporation, easy-wire, easy-wire*.

Step 2

The first time you open the software, the “Select Default Tester and Frequency” window will open:

- Click the text box and enter a station name used to identify this PC.
- Select the tester you are using.
- Select your line frequency.
- Click **OK**.

A screenshot of the 'Select Default Tester and Frequency' window. It has a title bar with a close button. The window contains a text box for 'Enter a Station Name used to identify this PC:' with the placeholder '(enter a station name here)'. Below this is a section 'Select the default tester for this station' with radio buttons for 'Signature CH+', 'easy-wire CR' (selected), 'easy-wire CH2', 'easy-wire 1100', and 'EasyTouch'. Below that is a section 'Select the line frequency of the power grid:' with radio buttons for 'European (50 Hz.)' and 'U.S. (60 Hz.)' (selected). At the bottom are 'OK' and 'Cancel' buttons. The 'OK' button is circled with a green checkmark and a line pointing to it from the instructions.

Step 3

The “User Login” window will open.

Click **OK**.

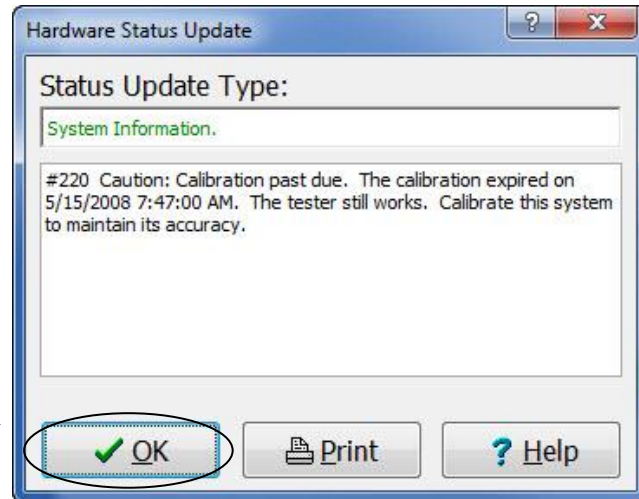
You do not need to enter a password.

A screenshot of the 'User Login' window. It has a title bar. The window contains a 'User Login:' dropdown menu with 'Master Login' selected. Below it is a 'Password:' text box. At the bottom are 'OK', 'Cancel', and 'Help' buttons. The 'OK' button is circled with a green checkmark and a line pointing to it from the instructions.

Note: In the easy-wire software, you can set up user names and passwords as part of the security settings. For more information, click **Help** in the “User Login” window.

Step 4

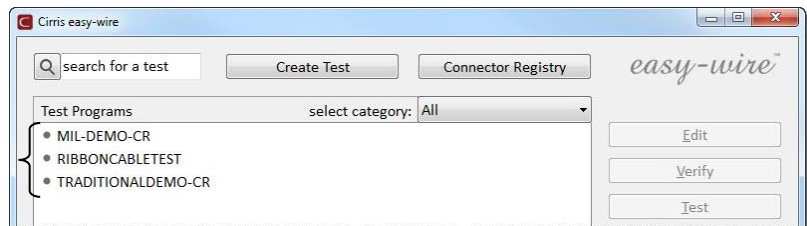
If any "Hardware Status Update" windows open, click **OK** until the easy-wire main menu opens.



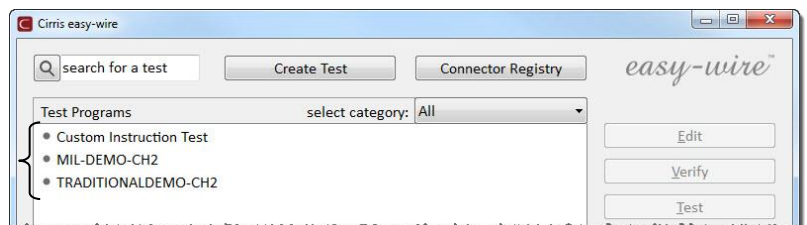
Note: When the system is first set up or changed, Hardware Status Updates inform you of errors or changes in the hardware.

The easy-wire main menu will open. Depending on which tester type you selected, you should see CR or CH2 Test Programs in the test program list.

CR Test
Programs



CH2 Test
Programs



Checking the System

Upon boot up, the tester performs a series of self tests to ensure that the hardware and software are working properly. In the easy-wire main menu you can tell if the tests passed or failed and you can also check the sound.

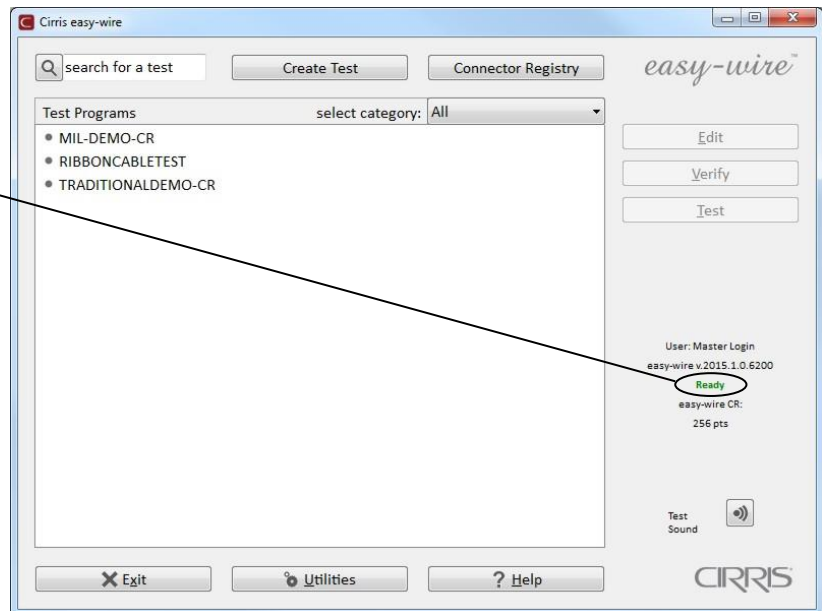
Step 1

In the easy-wire main menu, verify that the status indicator is green.

Step 2

If the status indicator is green, the tester is working and ready for use. Skip to “Checking the Sound” on the next page.

If the status indicator is red, see the “Troubleshooting” section below.



Troubleshooting:

The status indicator will be red if the tester fails one or more of the self tests. If you have a red status indicator, do the following:

- Verify that you selected the correct tester type by checking the test program list in the easy-wire main menu. If you selected the wrong tester type, call Cirris at 1-800-441-9910.
- Verify that the USB or 9-pin serial cable is properly connected between your computer and the tester.
- If using the Keyspan Serial USB adapter, verify that the adapter software is installed.
- Verify that the wall transformer or power cord is powered and plugged into the tester.
- Reboot the tester.

If the problem persists, call your Cirris account manager or Cirris technical support.
US Toll Free: 1-800-441-9910; Worldwide: +1-801-973-4600

Checking the Sound

The easy-wire software relies on sound prompts to provide test feedback to the operator.

Step 1

In the easy-wire main menu, click the Test Sound Button.

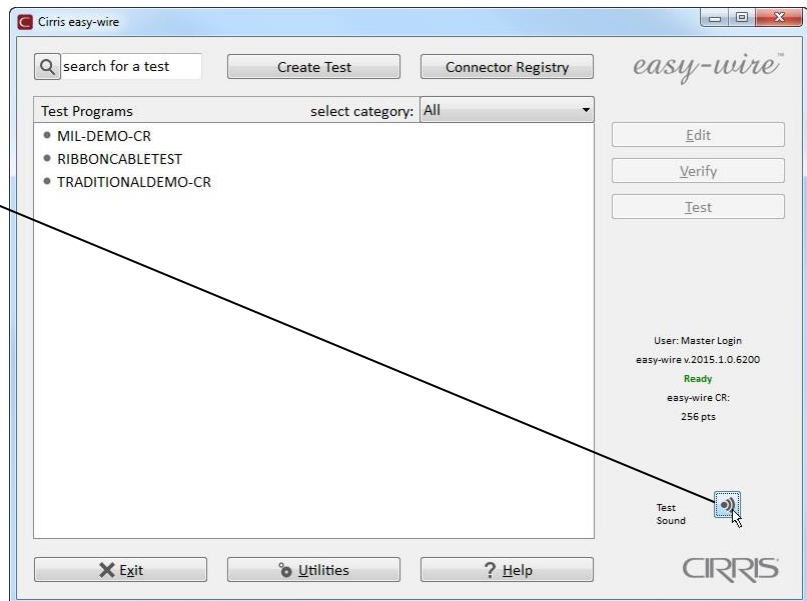


You should hear two trumpet sounds coming from your speakers.

Step 2

If you hear the sounds, skip to “Demo Part 1: Test and Test Errors” on the next page.

If you *do not* hear the sounds, see the “Troubleshooting” section below.



Troubleshooting

To get the sound working, do the following:

- Verify that speakers are connected to the PC and have power.
- Verify that the speakers are on and that the volume is turned up.
- Verify that the volume on the PC is turned up (the PC volume control can be found on your Windows task bar).

If the sound problem persists, call Cirris at 1-800-441-9910.

Import the Smart-Lights devices registration file

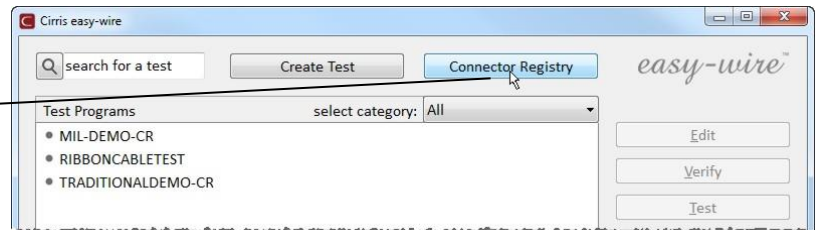
Before doing the demos, you need to import a file containing the definitions for the Smart-Adapters used for the Demo.

Make sure the Cirris thumb drive is still plugged in the computer where you are setting up the demo.



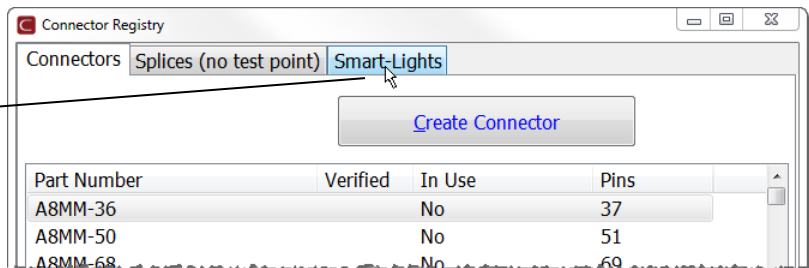
Step 1

From the main menu, click **Connector Registry**.



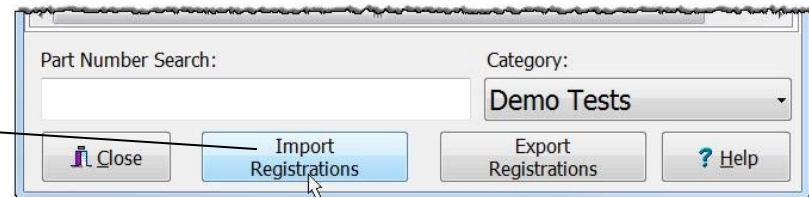
Step 2

Click on the Smart-Lights tab.



Step 3

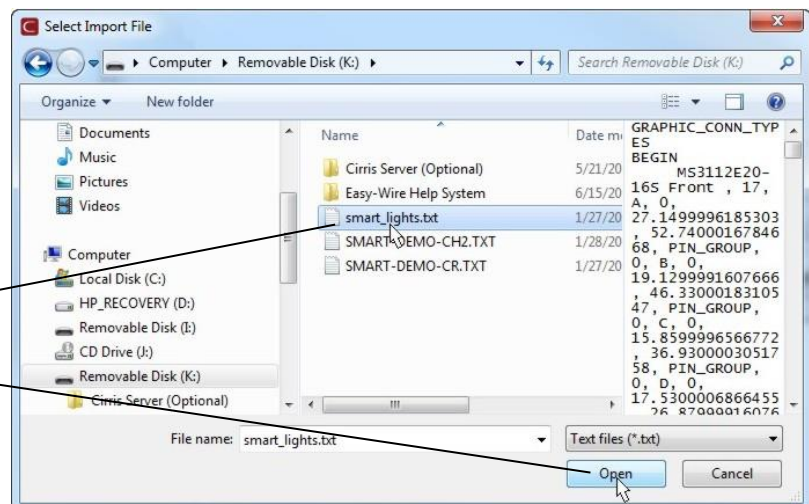
At the bottom of the window, Click **Import Registrations**.



Step 4

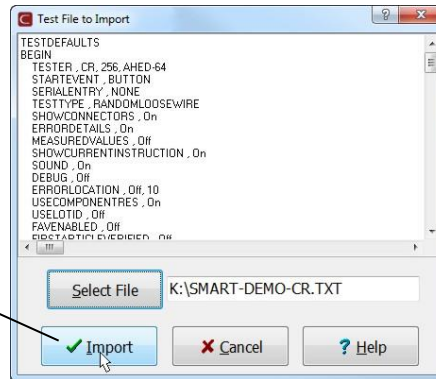
Navigate to the thumb drive with the easy-wire software.

Click to select **smart_lights.txt**, then click **Open**.



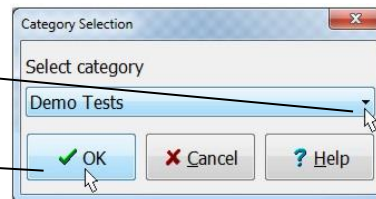
Step 5

In this window click **Import**.



Step 6

Use the dropdown arrow to change the category to **Demo Tests**, then click **OK**.

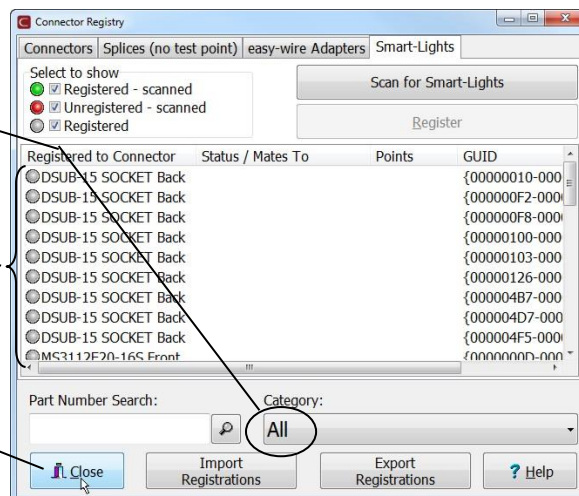


Step 7

If **All** or **Demo Tests** is selected for the Category,

the names used for the Smart-Light Adapters used in this demo should now show up in this list. You may see more Smart-Adapters than those shown here.

Click **Close** to return to main menu.

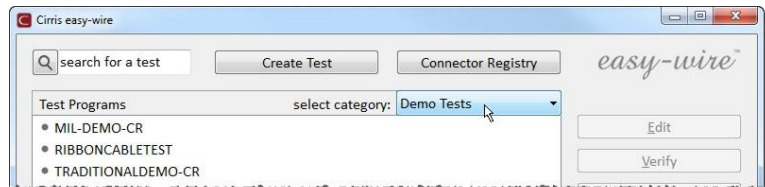


Import the Test Program used for the demos

The last thing before starting the demos is to import the test program that will be used with the demo board. A test program defines the **DUT**, test settings, and **fixturing** used in a test.

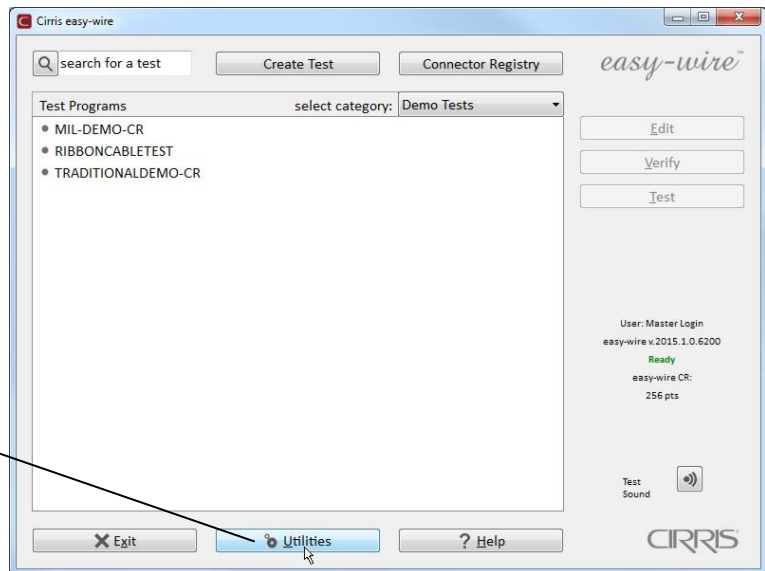
Step 1

Before importing the test program, change the Select Category to **Demo Tests**.



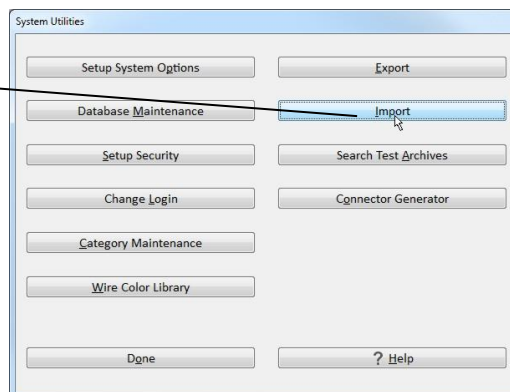
Step 2

At the bottom of the easywire main menu, click **Utilities**.



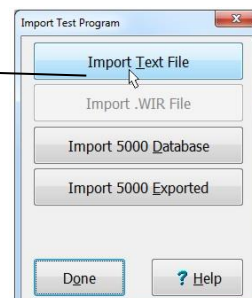
Step 3

In the System Utilities, click **Import**.



Step 4

Click **Import Text File**.

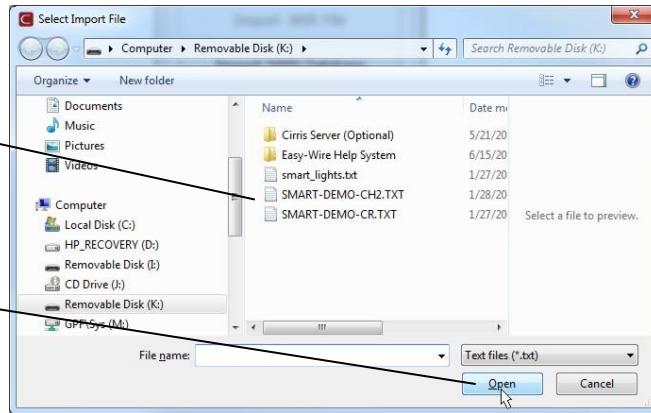


Step 5

If doing the demo on a CR Tester, click **SMART-DEMO-CR.TXT**.

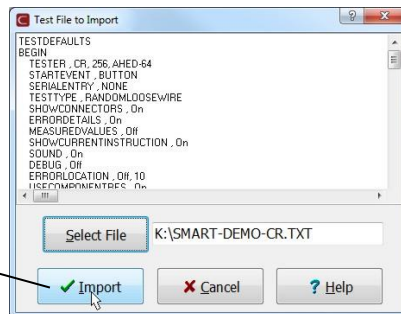
Or if doing the demo on a CH2 tester, click **SMART-DEMO-CH2.TXT**.

Click **Open**.



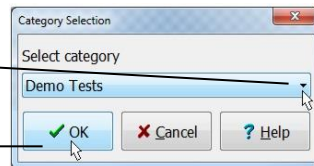
Step 6

Select **Import**.



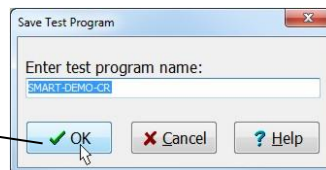
Step 7

If presented with this window, change the category to **Demo Tests**, then click **OK**.



Step 8

Click **OK**.

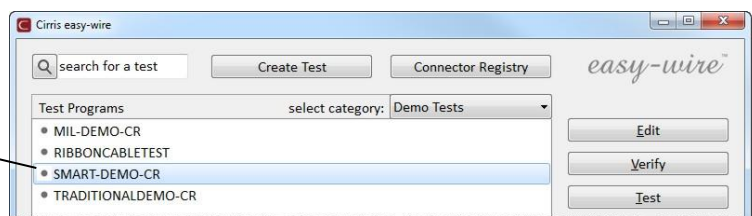


Step 9

Click **Done** and **Done** to return to the easy-wire menu.



The test program you just imported should now be in the test program list.



Congratulations! The setup is complete. You are now ready to start with Demo 1.