

Easy-Wire™ Software Manual

for Easy-Touch™, Easy-Touch Pro™,
42XX, & 1100 Testers

CIRRIS®

Table of Contents

1. Setup	1	4.5 Tab 3: Define Instructions.....	28
1.1 Cirris Customer Support.....	1	4.5.1 Instruction Options.....	28
1.2 Computer Requirements for Easy-Wire™.....	1	4.6 Tab 4: View Nets.....	29
1.3 Using the Touch Screen (Easy-Touch™ only).....	1	4.6.1 HV Control.....	31
1.4 Connecting a 42XX or an 1100 Tester.....	2	4.6.2 Customize High Voltage Test By Net.....	31
1.4.1 42XX Testers.....	2	4.7 Tab 5: Label Points.....	33
1.4.2 1100 Testers.....	2	4.8 Test Program Editor Page Menu.....	36
1.5 Installing Easy-Wire™ Software.....	2	4.8.1 Saving/Abandoning Changes.....	37
1.6 Opening Easy-Wire™.....	4	5. Edit, Verify, Test	39
2. Main Menu	7	5.1 Edit.....	39
3. Connector Registry	9	5.2 Verify.....	39
3.1 Signature Adapters.....	9	5.3 Test.....	40
3.2 User Signature Adapters.....	10	5.3.1 Test Window.....	40
3.2.1 Create a New Signature Adapter.....	10	5.3.2 Testing.....	40
3.2.2 Edit a Signature Adapter.....	12	5.3.3 Test Window Tabs.....	42
3.2.3 Delete a Signature Adapter.....	12	5.3.4 Monitors.....	43
3.2.4 Set Category for a Signature Adapter.....	13	5.3.5 Errors.....	43
3.2.5 User Signature Adapters – Right-Click.....	13	5.3.6 Operator Note.....	43
3.2.6 Import/Export a Signature Adapter.....	13	5.3.7 Net List.....	44
5.3.8 Probe View.....			44
4. Create Test	15	6. Errors	45
4.1 Learn Attached Device.....	15	6.1 Low Voltage Errors.....	45
4.2 Test Program Editor Window.....	17	6.2 Component Errors.....	45
4.3 Tab 1: Define Adapters.....	18	6.3 High Voltage Errors.....	46
4.3.1 Add Connectors to Test.....	18	7. Reports and Printing	47
4.4 Tab 2: Set Test Defaults.....	19	7.1 Report Types.....	47
4.4.1 Test Parameters options.....	20	7.2 Formatting Reports.....	47
4.4.2 Test Process options.....	25	7.2.1 Formatting Blocks.....	48
4.4.3 Selecting a Test Method.....	25	7.2.2 Formatting Fields.....	49
4.4.4 Test Window options.....	27	7.3 Print.....	51
4.4.5 Report Options.....	27		

7.3.1 Print to a PDF file	51	8.7.1 Export	73
7.3.2 Auto Print	51	8.7.2 Import	74
7.3.3 Auto Export	52	8.8 Test Archive Reports	75
8. System Utilities	53	8.9 Search Test Archives	76
8.1 Setup System Options	54	8.10 Connector Generator	77
8.1.1 Tester Hardware	54	9. Troubleshooting	79
8.1.2 Software Settings	55	9.1 Tester Not Found	79
8.1.3 Station Name	56	9.2 "Copying Files" message on start up	79
8.1.4 Speech	56	9.3 Menu buttons are disabled	79
8.1.5 Computer	57	9.4 No Sound	80
8.2 Database Maintenance	59	9.5 Sending z_easywire.txt	81
8.2.1 Backup	59	10. Additional Resources	83
8.2.2 Maintenance	59	10.1 Easy-Wire Utilities	83
8.2.3 Clean Up	60	10.2 Related Products and Documentation	84
8.2.4 Information	60	Important Terms	85
8.3 Setup Security	60		
8.3.1 Create New User	61		
8.3.2 Change Password	61		
8.3.3 Edit Security Settings	62		
8.4 Change Login	63		
8.5 Category Maintenance	65		
8.5.1 Create New Category	65		
8.5.2 Change a Category	66		
8.5.3 Delete a Category	68		
8.5.4 Master File Directory	68		
8.6 Wire Color Library	69		
8.6.1 Add New Wire Color	69		
8.6.2 Change Wire Color	71		
8.6.3 Delete Wire Color	72		
8.7 Export/Import	72		

1. Setup

Important Terms in this Section

Hardware Status Update – Appears when powering Easy-Wire to notify of hardware information or problems.

Help System – A digital guide accessed by clicking the help button in the Easy-Wire software.

Master Login – This login gives access to all areas of Easy-Wire where other logins can be limited for security purposes.

1.1 Cirris Customer Support

For assistance with your Easy-Wire software, you may:

- Click the Help button at anytime to be taken to the **Help System**.
- Visit www.cirris.com/learning-center to read articles on Cirris software and other testing subjects.
- Contact our technical support team:
 - In the USA, call 1-800-441-9910 toll-free.
 - Outside the USA, visit our Cirris website at www.cirris.com to find the Cirris office nearest to you.

1.2 Computer Requirements for Easy-Wire™

The Easy-Touch has a built in PC, but the 1100 and 4200 Series testers can be controlled from an external PC running the same Easy-Wire software. The PC running the Easy-Wire software must meet the following requirements:

- 2.0 GHz min. processor speed
- Windows 10® operating system
- 15 GB hard drive space
- 4 GB RAM
- 256 MB min. video memory
- 1024 x 768 min display resolution
- sound (for audible feedback)
- USB 2.0 or 3.0 port
- An Internet connection is not required, but it can facilitate technical support

1.3 Using the Touch Screen (Easy-Touch™ only)

To navigate the Easy-Wire software on your Easy-Touch, you can use the touch screen or connect a USB keyboard and mouse to the tester. In this manual, the commands “touch” or “press” are equivalent to the command “click” if you are using a mouse.

The equivalent commands for a mouse and a touch screen are displayed below.

- Mouse: Touch Screen

- Left-click: Touch the screen once
- Double-click: Quickly touch the screen twice
- Right-click: Touch and hold your finger on the screen

1.4 Connecting a 42XX or an 1100 Tester

Easy-Touch and Easy-Touch Pro testers are controlled by the Easy-Wire software running under the Windows operating system on an integrated PC. Cirris 42XX and 1100 testers can be controlled by the same Easy-Wire software running on an external PC.

1.4.1 42XX Testers

4200 Series testers ship with a USB Type A to USB Type B cable. Insert the cable's Type B connector into the tester and its Type A connector into the PC. (It does not matter if the tester is turned on or off.) Once connected, you will be able to run Easy-Wire on the computer and test cables on the 4200 Series tester.

1.4.2 1100 Testers

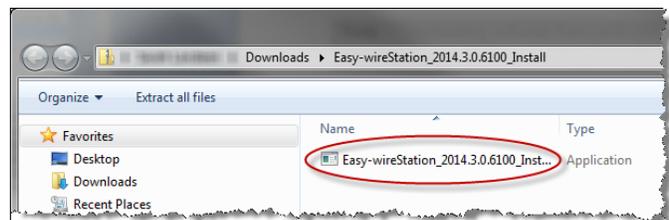
Cirris 1100 Series testers equipped with a USB Type B port can be connected to a PC using a standard USB Type A to USB Type B cable. Older units equipped with a serial port instead of a USB Type B port must be connected to a PC using the one-to-one serial cable supplied with the tester and a Tripp Lite Keyspan USA-19HS USB to serial adapter. Connect the one-to-one serial cable to the tester, the cable to the serial port on the adapter and the USB cable supplied with the adapter between the adapter and the PC.

1.5 Installing Easy-Wire™ Software

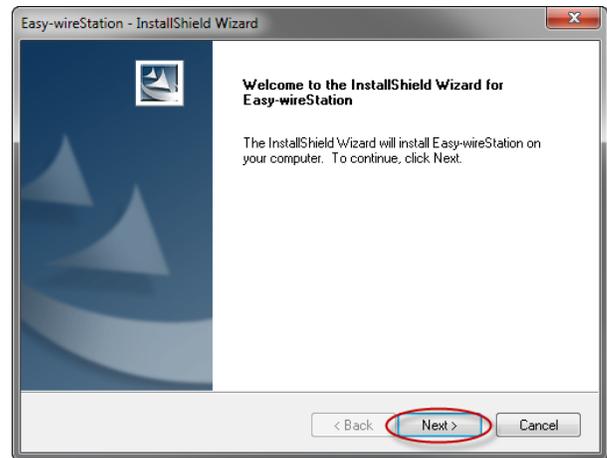
To install the Easy-Wire software on a PC that will be controlling an 1100 or 4200 Series tester, follow the steps below:

Note: Because of its built-in PC, no action is needed before using Easy-Wire Software on the Easy-Touch tester.

1. Exit all open Windows applications.
2. Navigate to the file location and open the file to begin the install.



3. Continue through the installation by clicking **Next**.

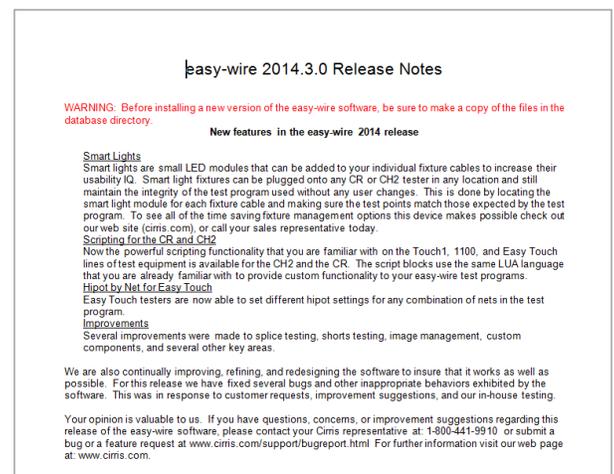


4. Be sure to read the terms and conditions before accepting the terms of the license agreement. When prompted to choose a destination location, use the provided default location.

Note: When prompted, continue the installation of the driver and software for the Silicon Labs USB to UART device.



5. A readme file will automatically open. You can read the file if desired. It describes the newest features and release notes for your version of Easy-Wire software. When you are ready to continue, close the window to complete the installation.



6. After installation, the Easy-Wire icon will appear on your desktop.

1.6 Opening Easy-Wire™

1. If using an independent PC, double-click the Easy-Wire icon to open the software. The first time you open the software it may take longer to load.

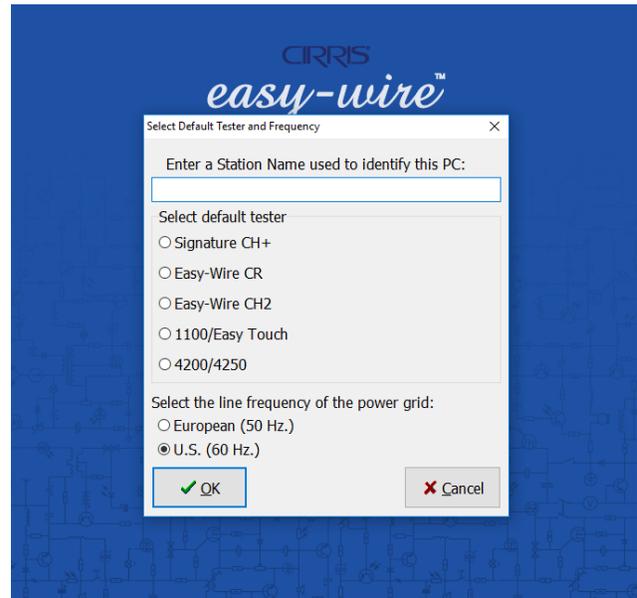
Note: If you can't find the Easy-Wire icon, look for the Easy-Wire title on your desktop (when you first install Easy-Wire, the icon may look different from the image above). If the Easy-Wire icon is not on your desktop, from the Windows task bar, click Start, All Programs, Cirris Systems Corporation, Easy-Wire, Easy-Wire.



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

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

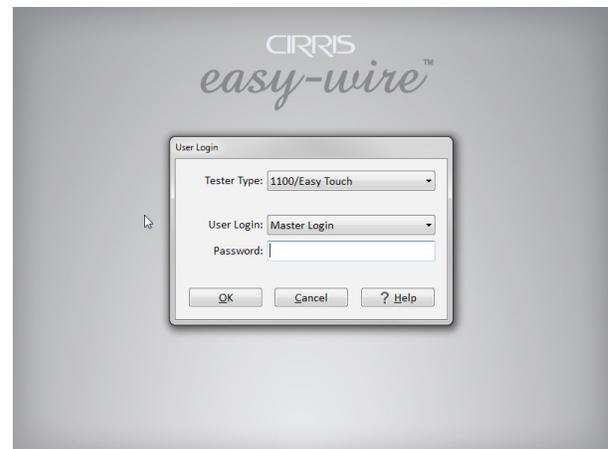
Note: You must select a tester when opening Easy-Wire for the first time. However, if you are using the software on multiple testers, see [page 55](#) for information on selecting a tester type when later logging into the software.



3. The User Login window will open. Select **Master Login** in the User Login field.

You do not need to enter a password the first time. To learn how to set up a password, and other security options, see [page 61](#).

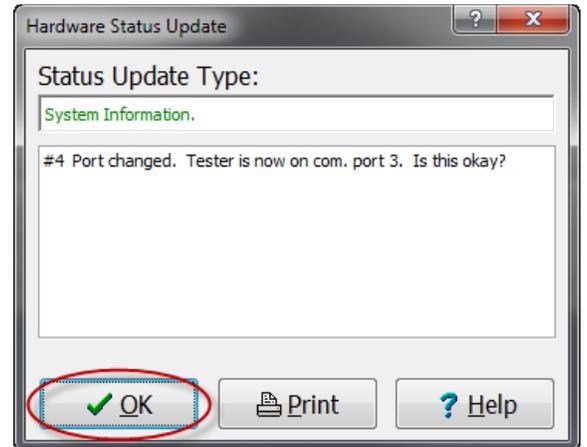
Click OK.



4. If the **Hardware Status Update** window opens, click OK.

This window is normal on install or when any changes are made to the hardware or software.

Note: This window notifies of system information or problems. At the top of the box the update type is displayed, indicating either System Information or System Problem. Below the type field the update message is displayed. For more information on potential Hardware Status Updates, see the Help System.



5. The Easy-Wire Main Menu will open.

2. Main Menu

From the Easy-Wire Main Menu, you can reach the submenus for registering connectors, setting up a test, editing, verifying, testing, and accessing system utilities.

Important Terms in this Section

Add-on Scanners – Scanners that can be added to the tester to increase the point count.

Device-under-test (DUT) – The cable, harness, or other assembly that is being tested by the cable tester. This is referred to by some as the Unit-Under-Test.

Fixturing – The set of wires and connectors that connect the device-under-test to the tester.

Pin-Sight – Cirris product that helps accurately insert each wire in the correct cavity of a connector.

Scanners – A set of test points.

Test Points – A connection on the tester which may be attached to a DUT connection through fixturing.

Test Program – The set of information defining the tests to be performed on a DUT. This includes information on the connector of the DUT, connections between connector pins (test instructions), test parameters, etc.

- 1. Search for a Test:** To search for a test, type all or a portion of the characters of the desired test program name in the adjacent box. Press F3 until you encounter your test. The search is NOT case sensitive. Make sure you have the correct category selected when you do the search.
- 2. Create Test (page 15):** Set up test programs by selecting connectors, voltage, and other parameters.
- 3. Connector Registry (page 9):** Manage (add, create, delete) Signature Adapters. These adapters are used to define adapters used in test programs.
- 4. Test Program List:** Choose a test program in this list before selecting Edit, Verify, or Test.

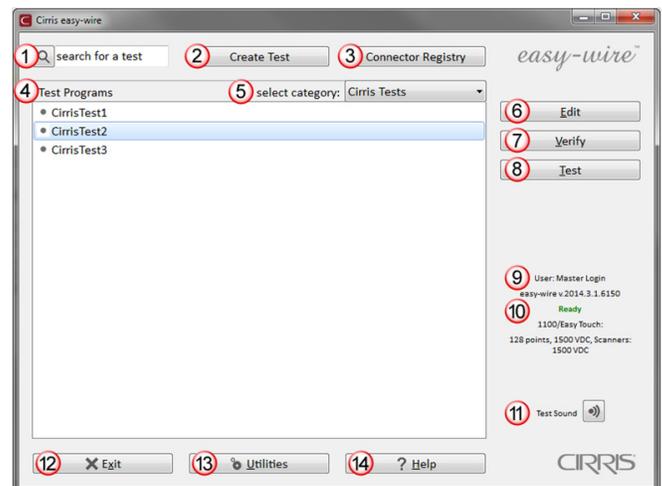
Note: Right click options for Test Program List:

- Delete the program
- Assign/change its category
- Create a New Parent Test

Other right click options may appear depending on the software you have installed.

WARNING! There is no undo function if you delete a test program. However, you can restore the database if the test program was in the last backup (see page 59). Also, if you have periodically exported test programs to text files, you can re-import them (see page 72).

- 5. Select a New Category:** Select a category to filter the Test Program List.
- 6. Edit (page 28):** Make changes to existing test programs.
- 7. Verify (page 39):** Verify the activities related to a test program, fixturing, or tested assembly. For example, probe your fixturing and test your interface to ensure correct mapping.
- 8. Test (page 40):** Run a test program.



Note: The *Edit*, *Verify*, and *Test* submenus must have a test program selected and a tester attached to be active. If these menus are disabled, check that you have selected a test program from the *Test Program List* and your tester is correctly functioning and connected to your computer.

9. User and Easy-Wire Version Number: Identifies which user is logged in and the software version number (needed when contacting Cirris with questions or upgrades).

10. Status Indicator (Ready): If the status indicator displays Ready, the tester is working and is ready for use. If the status indicator displays Error, the tester failed one or more of the self tests.

Note: Below the Status Indicator you will find tester information including:

- Tester type
- Number of test points
- Voltage of the tester and additional add-on scanners

It is important to verify that this information is correct and that, if applicable, all add-on scanners and other attachments are connected.

11. Test Sound: Sound can be useful for the operator to recognize errors and test status as well as when using the Text to Speech feature ([page 56](#)).

The check sound, click the sound button.



You should hear two trumpet sounds. If you do not hear the sounds or want to change the volume, see [page 57](#).

12. Exit: Quit Easy-Wire (X in top right corner also quits Easy-Wire).

Easy-Touch: Power Off shuts down the tester. Exit To Windows quits Easy-Wire and loads the Windows desktop (this requires login with security access and a password). Cancel aborts the action of clicking on the Exit button.

13. Utilities ([page 53](#)): Perform a variety of tasks relating to the setup and maintenance of the Easy-Wire system such as security, reports, database maintenance, and more.

14. Help : Access the Easy-Wire help system or find information about your version of Easy-Wire.

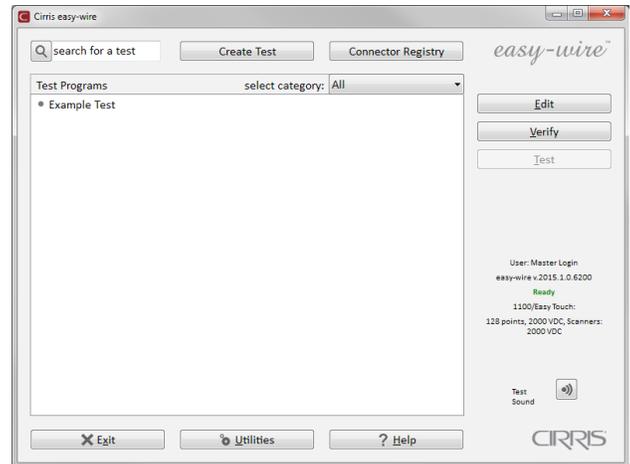
3. Connector Registry

In the Connector Registry, you can create Signature Adapters that are used later to define test programs.

Important Terms in this Section

Signature – A six digit code used to identify adapters.

Signature Adapters – Adapters with a unique signature assigned to them in order to identify each adapter within the software and reports.



3.1 Signature Adapters

Main Menu | Connector Registry | Signature Adapters

Signature Adapters mate a device-under-test (D.U.T.) to the tester. Many Signature Adapters come preregistered with the software. If your Signature Adapters are not found in this list, you will need to create them and add them to the User Signature Adapters list ([page 10](#)).

Note: To sort the columns in alphabetical/chronological order, click on the column headings. An alternate way to search is to click inside the list and then type the first letter or number of the part number you are searching for.

- 1. Part Number:** Identifies each Signature Adapter created in Easy-Wire.
- 2. Adapter Signature (Adp. Sig.):** Shows the signatures automatically calculated by the tester. Adapter signatures are used with other components to verify test setups. In some cases, different adapters have the same adapter signature.
- 3. Mates To:** Contains the Signature Adapters description and can contain up to the 30 characters.
- 4. In Use:** Shows whether a Signature Adapter is being used in a test program. The In Use status can be any of the following:
 - **Yes:** Used by a Test Program
 - **No:** Not used by a Test Program
 - **System:** Used as a Default Signature Adapter
 - **Incomplete:** All pins have not been placed in the graphic.
- 5. Default:** If you have this setting selected, you can learn a sample cable or import test programs without being prompted to select each Signature Adapter in your test program.

Part Number	Adp. Sig.	Mates To	In Use	Default
A1KF-64	910693	64 POS. FEM.	No	
A1KM-64	910693	64 POS. MALE	No	
A2KM-64	910693	64 POS. MALE	No	
A2MM-40	DD78A3	40 POS 2MM	No	
A2MM-44	FFBFA3	44 POS 2MM	No	Default
A2MM-50	B578B3	50 POS 2MM	No	Default
ABMM-36	C7E152	36 PIN GRD 0.8MM CONN	No	
ABMM-50	D3BF01	50 POS..8MM CONNECTOR	No	
ABMM-68	E3F4C3	68 POS..8MM CONNECTOR	No	
ABNC-02	787AE0	2 POS. BNC CONNECTOR	No	
ABRF-14	9C1FC0	14 POS. RIBBON FEM.	No	Default
ABRF-24	B4D1E0	24 POS. RIBBON FEM.	No	Default
ABRF-36	F8E7F0	36 POS. RIBBON FEM.	No	
ABRF-50	S28D01	50 POS. RIBBON FEM.	No	Default
ABRF-64	910693	64 POS. RIBBON FEM.	No	
ABRM-14	2D95B1	14 POS. RIBBON MALE	No	Default
ABRM-24	CA18C1	24 POS. RIBBON MALE	No	Default

6. **Part Number Search:** To search for a connector, type all or a portion of the characters of the desired connector name in the adjacent box. Press F3 until you encounter your adapter. The search is NOT case sensitive.

Note: If you do not find the adapter you are looking for, try changing the category to All.

7. **Category:** To avoid searching long library listings, add categories to help organize adapters.

3.2 User Signature Adapters

[Main Menu](#) | [Connector Registry](#) | [Signature Adapters](#)

The User Signature Adapters tab allows you to create, edit, delete, and set categories for Signature Adapters.

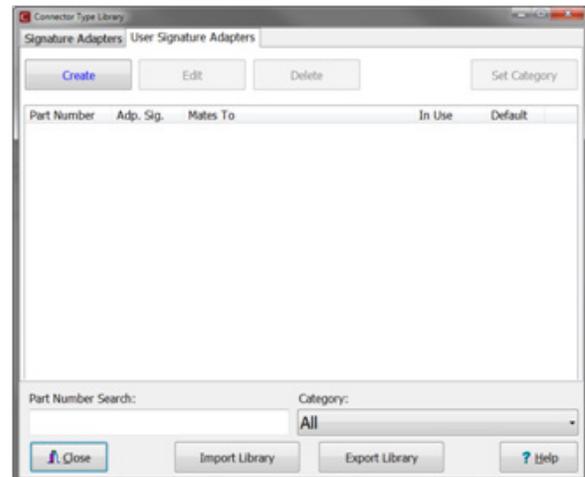
Note: The software supplies System Signature Adapters. You can also create User Signature adapters that can be edited and deleted.

3.2.1 Create a New Signature Adapter

[Main Menu](#) | [Connector Registry](#) | [Connectors](#) | [Create Connector](#)

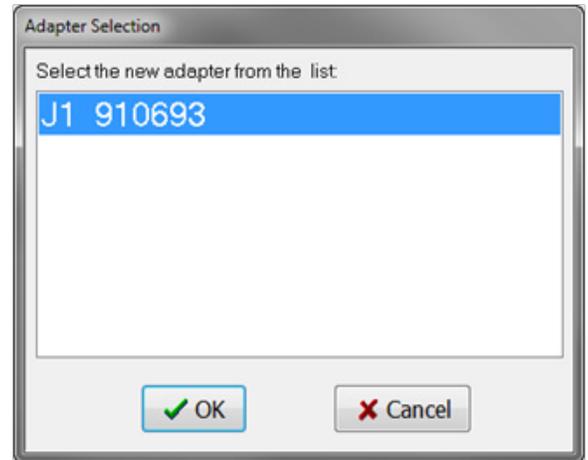
Before performing a test, the software must know which Signature Adapters to look for. Some Signature Adapters are provided with Easy-Wire while others you will create. Be sure to attach the Signature Adapter to your tester before starting the first step.

1. Click **Create**.



- The tester uses the attached adapter to calculate the adapter signature number. The Adapter Selection window will open with a list of the J positions for the Signature Adapters connected to your tester. Select the Signature Adapter you want to identify and click OK.

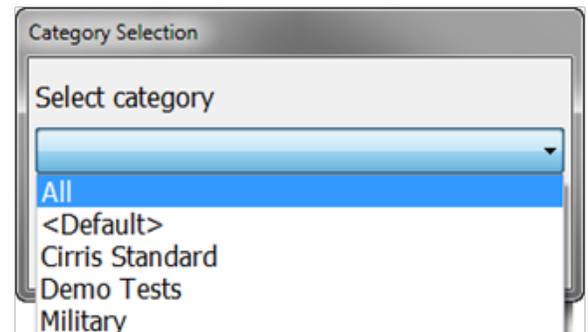
Note: If the Adapter Selection window does not open, check that your Signature Adapters are fully connected to the tester.



- In the Edit Signature Adapter window, fill in the part number, what the Signature Adapter mates to, and the option to make this Signature Adapter the default to be learned or imported for its given signature, then click OK.



- The Category Selection window will open. Use the drop down list to select the category to which you want to assign your Signature Adapter. Then click OK.



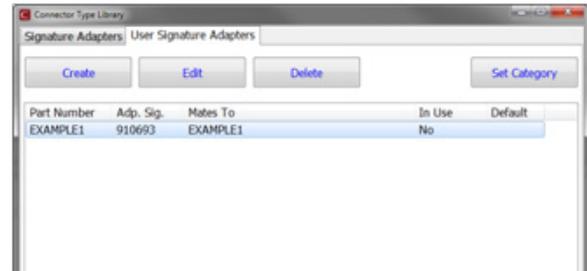
- You will be asked if you would like to create a graphical representation of your Signature Adapter. Graphics are used to identify Signature Adapters in the Test Program Editor and on certain reports. Graphics, but will not be seen in the test window. For further instructions on creating a graphic of your adapter, see the Help System.

3.2.2 Edit a Signature Adapter

Main Menu | Connector Registry | User Signature Adapter | Edit

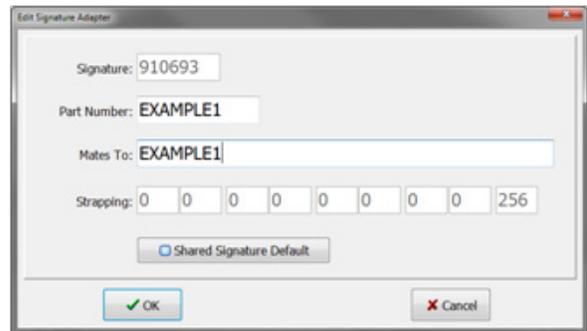
Edit information on User (custom) Signature Adapters you created in Easy-Wire.

1. Select the Signature Adapter you wish to edit in the User Signature Adapters tab and click Edit.



2. Once the Edit Signature Adapter window opens, you can edit the Mates To information and check or uncheck the Shared Signature Default box.

After making all desired changes, click OK.



3. The window that opens will allow you to edit the graphic for the adapter. For information on Easy-Wire graphics, see [page 12](#) or the Help System.

3.2.3 Delete a Signature Adapter

Main Menu | Connector Registry | User Signature Adapter | Delete

Select the Signature Adapter you wish to delete in the User Signature Adapters tab and click Delete.

Note: You cannot delete a Signature Adapter in this list if it is being used by a test program or if it is a system Signature Adapter.

WARNING! There is no undo function if you delete a Signature Adapter. However, you can restore the database if the Signature Adapter was in the last backup. Also, if you have periodically exported Signature Adapters to text files, you can reimport them (See. [page 13](#)).

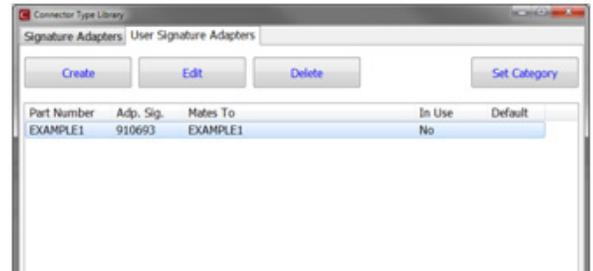


3.2.4 Set Category for a Signature Adapter

Main Menu | Connector Registry | User Signature Adapter | Set Category

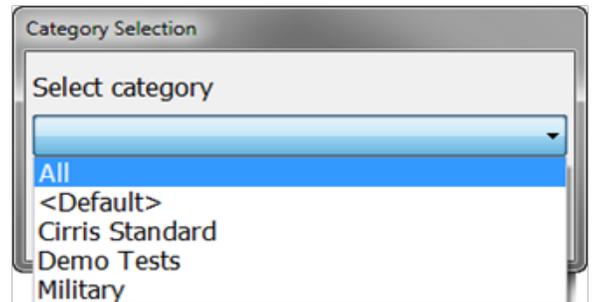
To avoid searching long library listings, organize Signature Adapters into categories.

1. Select the Signature Adapter(s) you want to categorize or reclassify and click Set Category (use ctrl + left-click to select multiple Signature Adapters).



2. The Category Selection window will open. Use the drop down list to select the category to which you want to assign your Signature Adapter. Then click OK.

Note: To learn how to create new category options, see [page 65](#).



3.2.5 User Signature Adapters – Right-Click Options

Main Menu | Connector Registry | User Signature Adapter

Note: For Easy-Touch, press, hold, and then release to access right-click options.

- **Delete:** Permanently remove a Signature Adapter from the Connector Registry.

WARNING! There is no undo function if you delete an Signature Adapter. However, you can restore the database if the Signature Adapter was in the last backup (see [page 59](#)). Also, if you have periodically exported Signature Adapters to text files, you can reimport them (see [page 13](#)).

- **Edit:** Edit information on Signature Adapters you created in Easy-Wire.
- **Copy:** Make a copy of a Signature Adapter.
- **Set Shared Signature Default:** Selecting this option will make the Signature Adapter a default Signature Adapter. This option is also available under the Signature Adapters tab.

3.2.6 Import/Export a Signature Adapter

Main Menu | Connector Registry | User Signature Adapter

Import or export Signature Adapters from an ASCII text file. These connectors can be imported to the Connector Registry for general use in test programs as part of transferring information from one tester to another when not using Easy-Wire's networking feature.



4. Create Test

Set up tests by selecting Signature Adapters, voltages, and other test parameters.

Important Terms in this Section

Dielectric Withstand (DW) – A high voltage test used to determine that a wire’s insulation can withstand a required voltage for a required time. Used to detect large current flows.

Hipot – Short for high potential (high voltage). In Easy-Wire, this term is used to mean the collection of high voltage tests (DW, IR, etc).

Insulation Resistance (IR) – An test used to determine if a wire’s insulation resistance meets the specified threshold. Used to detect small current flows.

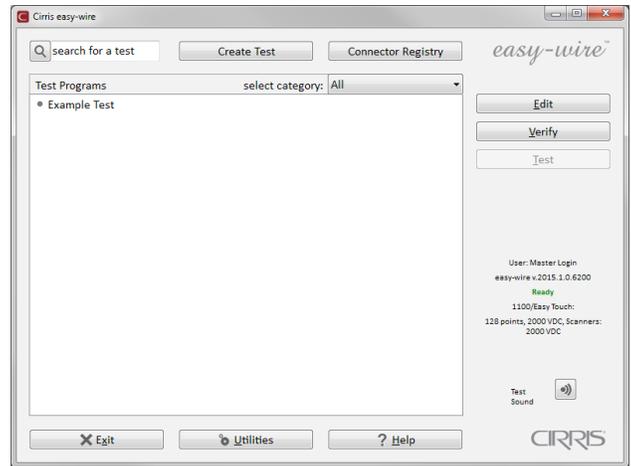
Learn – A feature in Easy-Wire that allows the tester to “learn” connections by scanning a known good device rather than having to create test instructions manually. The tester will analyze an attached device and create a test program with instructions for the interconnections that were found.

Nets – A group of interconnected points in a cable or harness.

Scripting – An optional feature which allows for customized LUA scripts to be executed during a test in order to perform operations not normally available in Easy-Wire.

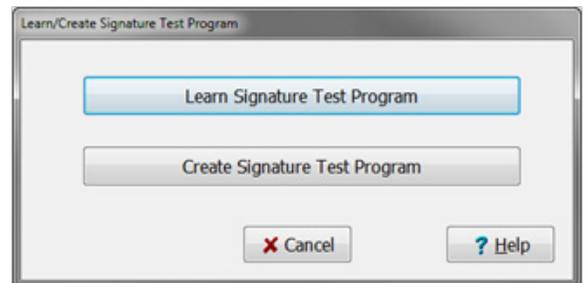
Soak Time – Cirris testers are capable of soaking the device-under-test with voltage. This permits certain transient effect to stabilize in preparation for IR tests.

Tare Values – Ignores the effects of reported capacitance when making capacitance measurements. The capacitance value is subtracted from the capacitance instruction measurement to compensate for the capacitance of the interfacing wires and connectors from the front of the tester to the DUT.



After clicking Create Test, you can choose between two options for setting up your test program:

- **Learn Signature Test Program:** This option allows you to attach a known good device and the tester will automatically generate the test program. This is the fastest method for test creation because the user does not need to enter test instructions by hand.
- **Create Signature Test Program:** This option allows you to go through the test program editor one tab at a time to select Signature Adapters, test parameters, test instructions, and point labels (see [page 17](#)).



4.1 Learn Attached Device

[Main Menu](#) | [Learn Attached Device](#)

This window allows you to set parameters and then have the tester automatically create a test program using the (known good) sample device and Signature Adapters attached to the tester. Some of the values selected in the window pertain exclusively to the learn while others will apply to the test.

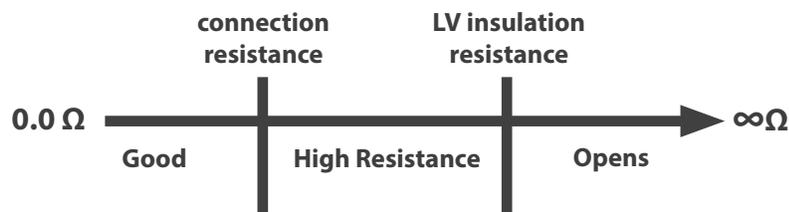
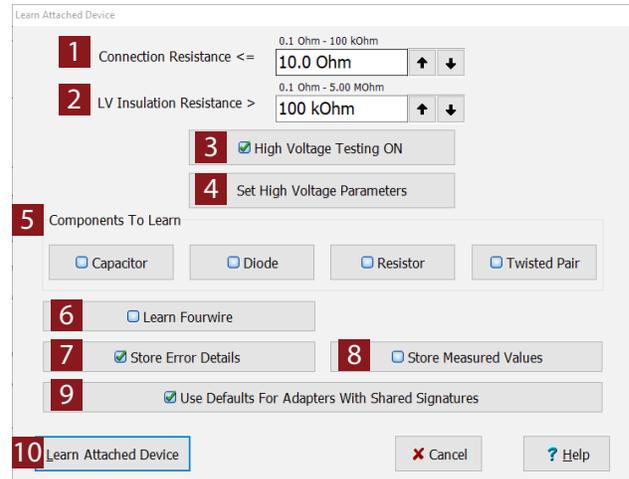
WARNING! Make sure to use a cable that you know has been built correctly to learn the wiring pattern. Verify the learned instructions after the software has learned the correct cable to ensure the instructions are accurate. Always verify what the tester has learned is correct.

1. Connection Resistance

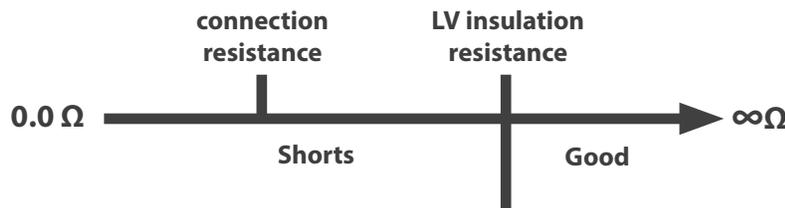
- **Learning:** Connections detected by the tester with resistances below or equal to this value will be included as wires in the instruction list.
- **Testing:** This value will be used as the default setting for determining if a wire instruction passes or fails (i.e. connections with resistances measured above this value will fail).

2. LV Insulation Resistance

- **Learning:** Any connection with a resistance measurement above this value is ignored.
- **Testing:** Intended connections measure above this value are considered as open while unintended connections measured below this setting are considered shorts. Unlike other parameters which can be set for individual instructions, insulation resistance is global for all instructions in a test program.
 - Continuity Test (check for intended connections)



- Shorts Test (check for unintended connections)



3. High Voltage Testing ON

- **Testing (only):** When this option is set a high voltage test will be performed during the execution of the test program. The high voltage test will be performed after the low voltage test has completed without any errors. When this option is on, a device under test will not pass unless it passes both the low voltage and high voltage tests. If this option is not selected no high voltage test will be performed during the execution of this test program.

4. Set High Voltage Parameters

- **Testing (only):** Manipulate the settings for two common high voltage tests: the Dielectric Withstand Test and the Insulation Resistance Test. For more information, see [page 23](#).

- **Components To Learn:** This section allows you to select the type of components that the tester should look for when it is learning the device attached to the tester.

- **Capacitor:** Learning Range : 400nF to 100uF +/- 10% Testing Range: 5nF to 100uF +/- 10% or .02 nF.
- **Diode:** Diodes that can be learned by the tester include: Silicon, some Zeners, and LED's. The anode side will list first

in the test instruction list. Diodes that can be tested but may not be able to be learned include: Germanium and Schottky.

- **Resistor:** Learning Range: 0.1 ohm to 100K ohm (+/- 1% or 0.1 ohm) Testing Range: .1 ohm to 1Meg (+/- 1% or 0.1 ohm)
 - **Twisted Pair:** The minimum twisted pair length you can have is 6 ft. The minimum number of wires you can have in a cable is 3 wires.
- 6. Learn Fourwire:** Learning four wire requires a set wiring pattern to identify 4-Wire pairs. When enabled, the fixture that is attached first will learn as a 4-wire fixture. Then you will be prompted to attach and learn a Sample Cable.
 - 7. Store Error Details:** With this selected the Error Details of a test will be recorded in the Test and In Process report in the Error Details section. This information will be stored in the database and can be accessed later.
 - 8. Store measured Values:** When this option is selected the values measured by the tester will be reported in the measured values block of the report.
 - 9. Use Defaults For Adapters With Shared Signatures:** When learning a sample device if the adapter attached to the tester has a signature, or six-character identifier, that is shared with other Signature Adapters you will be prompted to select the correct Signature Adapter part number. Selecting this option means you won't be prompted to select an adapter. The default signature adapters will be selected for you to save time. For more information on default Signature Adapters, see the Connector Registry ([page 9](#)).
 - 10. Learn Attached Device:** Once all the parameters and options have been set, Learn Attached Device will use the parameters and enabled options to automatically create a test program from the device and Signature Adapters attached to the tester. If more than one Signature Adapter exists with the same signature as the Signature Adapters you are using you will be prompted to select the Signature Adapter from a list of Signature Adapters with the same signature.

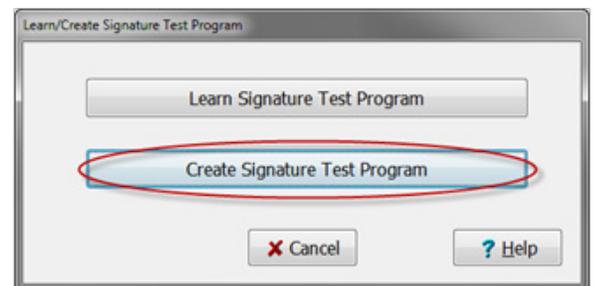
Once the software has learned a sample device, the Test Program Editor window will open to Tab 3: Define Instructions. For information on using this window, see [page 28](#).

4.2 Test Program Editor Window

[Main Menu](#) | [Create Test](#)

When creating a new test, selecting Create Signature Test Program brings up the Test Program Editor window. The Test Program Editor describes the wiring, test parameters, labels, and adapters used to test the device.

The tabs in the Test Program Editor window follow the flow of test creation.

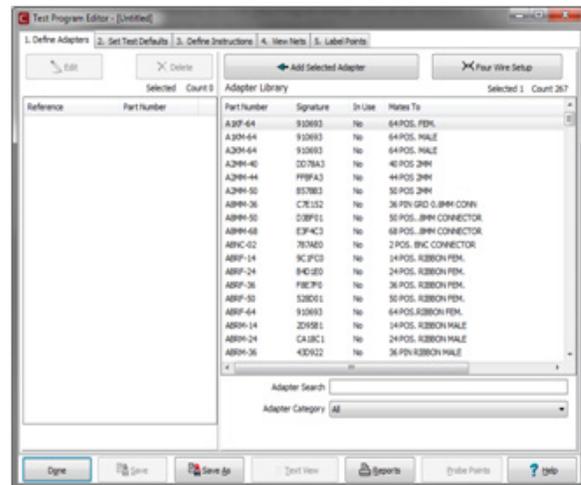


4.3 Tab 1: Define Adapters

In the Define Adapters tab of the Test Program Editor, you can define Signature Adapter types that will be used to test your device-under-test (DUT).

To see the Signature Adapter graphic (if one was created), double-click on the Signature Adapter in the Adapter Library list. The graphic will be displayed as seen in the graphic editor.

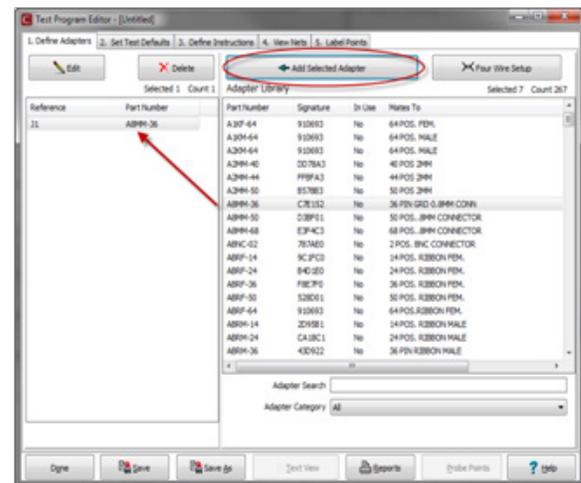
If a Signature Adapter is not in the Adapter Library list, you will need to exit the Test Program Editor and add those Signature Adapters to the Connector Registry (see [page 9](#)).



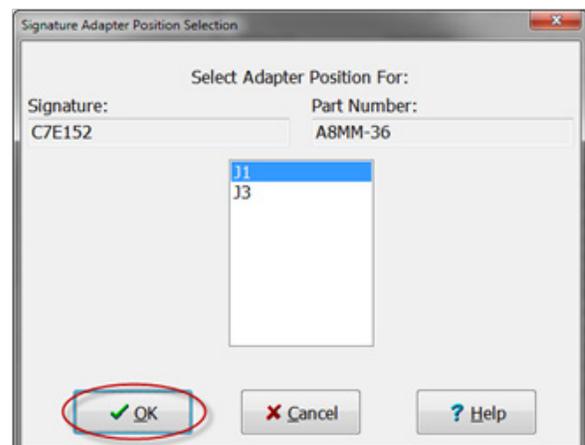
4.3.1 Add Connectors to Test

1. In the Test Program Editor window, select the Signature Adapter(s) to use in the test from the Adapter Library list on the right. Click Add Selected Adapter..

If an adapter is not in the **Connector Library** list, you will need to exit the **Test Program Editor** and add those adapters to the **Connector Registry** ([page 10](#)).



2. In the window that opens, select the Signature Adapter position and click OK. The Signature Adapter will appear in the list on the left.



Edit: View pin names, in use status, graphics, and other information relating to the Signature Adapters that have been added to the test program.



Delete: Remove Signature Adapters from the selected Signature Adapters list. You can only delete a Signature Adapter if it has no test instructions associated with it.



■ Define Connectors – Right Click Options

Main Menu | Create Test | Define Connectors

- **Delete:** Remove Signature Adapters from the selected Signature Adapters list. You can only delete a Signature Adapter if it has no test instructions associate with it.
- **Rotate:** Rotate the graphic to allow the test operator to see the graphic view in the same orientation as they do on the test board. A rotated graphic view will only affect the selected connector in the test program, not the entire database

Note: For Easy-Touch Pro, press, hold, and then release to access right-click options.

4.4 Tab 2: Set Test Defaults

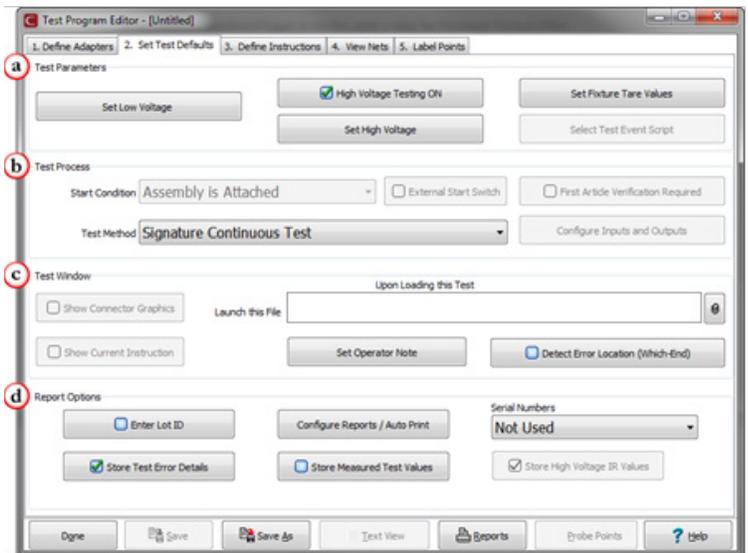
Main Menu | Create Test | Set Test Defaults

Once Signature Adapters are attached, click Tab 2 to set test parameters. Select test parameters, test conditions, and other settings.

Note: If this step is skipped, the system defaults will be used.

The Set Test Defaults tab is divided into four categories:

- Test Parameters** – page 20
- Test Process** – page 25
- Test Window** – page 27
- Report Options** – page 27



4.4.1 Test Parameters options

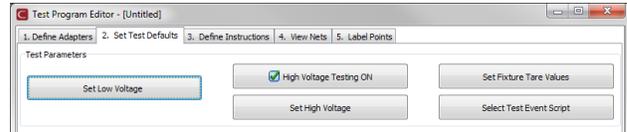
[Main Menu](#) | [Create Test](#) | [Set Test Defaults](#)

Test Parameters options allow you to determine the test program parameters.

Set Low Voltage: Allows you to change the LV insulation resistance and default wire resistance. [\(page 20\)](#)

High Voltage Testing ON: Turns on high voltage testing and makes High Voltage settings visible.

A check in the box indicates that high voltage testing is ON.



Set High Voltage: Allows you to change with HV test parameters such as voltages and dwell and ramp times. [\(page 23\)](#)

Set Fixture Tare Values: This option lets you choose to allow the test program to learn fixture capacitance tare. When enabled, the operator will be prompted at the beginning of a test run to remove the device-under-test. The tester will measure the background capacitance independently for each capacitance tester instruction before allowing the operator to start the test. The measured background capacitance will be subtracted from the total measured capacitance. For more information see the Help System.

Note: Resistance Tare Value feature not available on Easy-Touch Pro/4200 Series/1100 Series testers.

Select Test Event Script: Select test event scripts with an .evt or .lua file extension. This is an optional feature.

Note: Scripting allows you to combine custom test processes with the tester's standard capability to maximize flexibility and speed. For more information on scripts, visit www.cirris.com and search for [scripting](#).

■ Set Low Voltage

[Main Menu](#) | [Create Test](#) | [Set Test Defaults](#) | [Set Low Voltage](#)

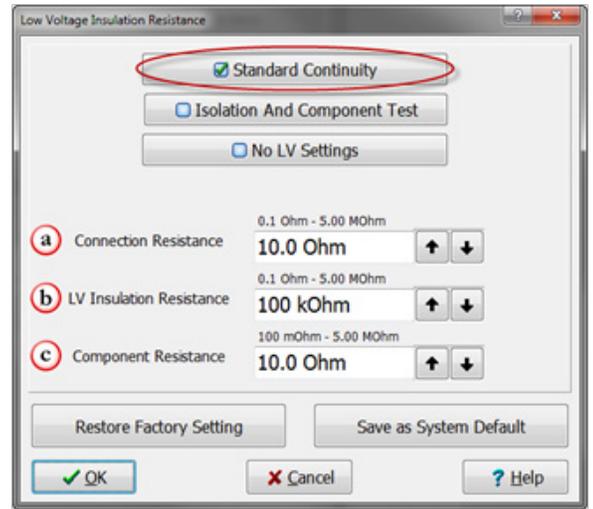
A low voltage test will always be performed before a high voltage test. For more information on Low Voltage testing, visit www.cirris.com/learning-center.

For the low voltage test you may choose from one of three test modes. Check the box next to the desired test mode.

Select the LV test most appropriate for your test program parameters.

Test Mode	Opens Test	Shorts Test	Components Test
Standard Continuity	x	x	x
Isolation		x	x
No LV Settings			x

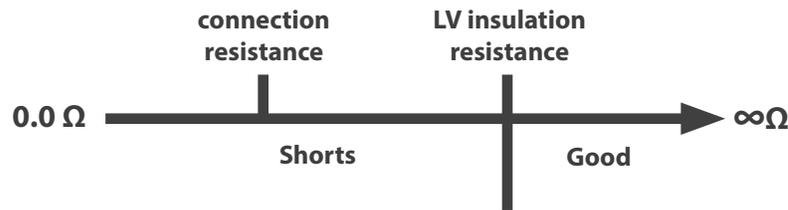
Standard Continuity: Performs opens, shorts, and components tests based on the instructions found in the Define Instructions tab of the Test Program Editor.



- **Connection Resistance:** Defines the maximum allowable resistance of a good connection.

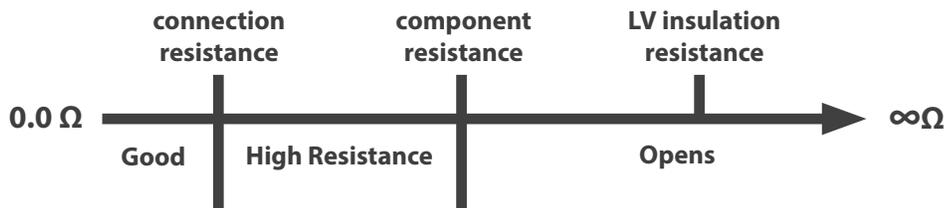


- **LV Insulation Resistance:** Separate connections, opens, and shorts from what is ignored.

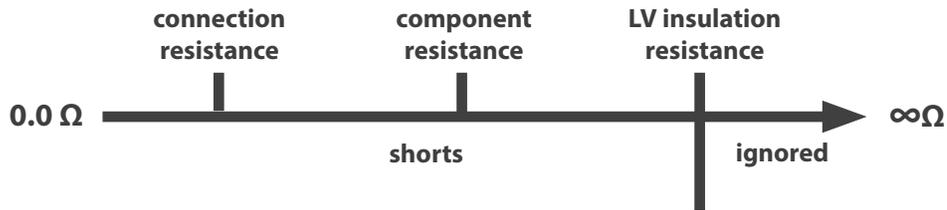


- **Component Resistance:** This value is auto set during a learn process, and should be set to from 5- 25% less than the lowest component found in the device being tested.

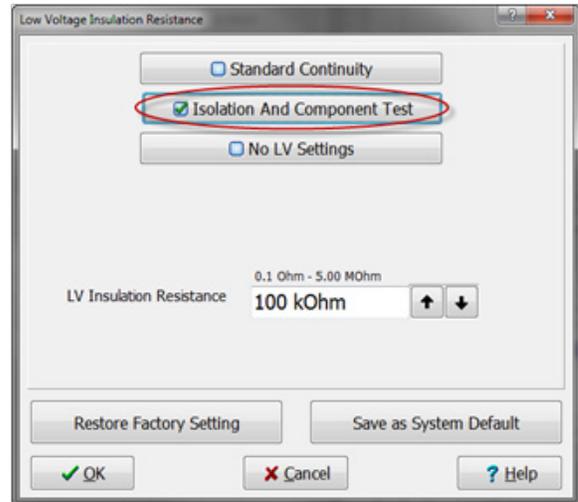
- How component LV settings define errors



- How component LV settings define shorts

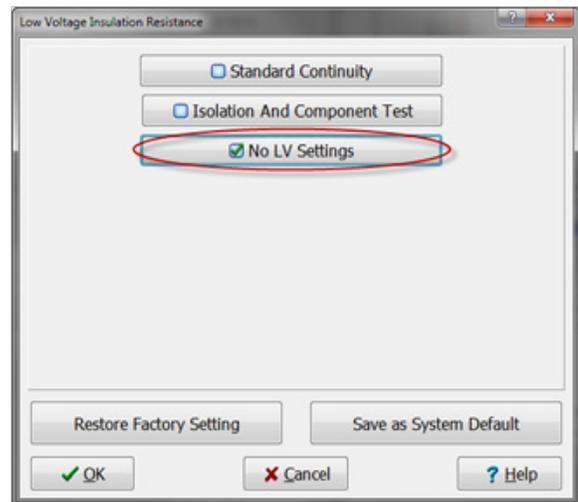


Isolation And Component Test: When selected, components are tested using the component parameters, and the LV Insulation parameter is used to locate unintended connections. This option is not available if wire instructions are used in the Define Instructions tab.

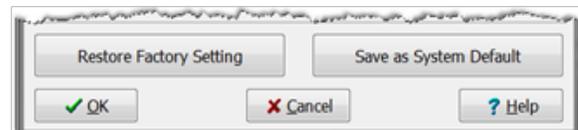


No LV Settings: When this option is selected, no connection resistance or LV insulation resistance parameters are used and no shorts test is performed. Only the components are tested using component parameters. Clicking this button resets

- Connection Resistance to 10.0 Ohms
- LV Insulation Resistance to 100 kOhms
- Component Resistance to 10.0 Ohms



Save as System Default: Clicking this button saves the current settings as systems defaults. This means the next time a test is created or learned, it will default to these settings. Existing tests will not be affected.



■ Set High Voltage

[Main Menu](#) | [Create Test](#) | [Set Test Defaults](#) | [Set High Voltage](#)

Note: The 4200 and 1100R+ low voltage testers cannot perform high voltage testing. The following section applies to the 4250, 1100H+ and Easy-Touch/Pro 1500V and 2000V testers only.

High voltage, or “hipot” testing is used to expose a variety of potential problems. For more information on the benefits of hipot testing, visit www.cirris.com/learning-center/testing-guidelines/high-voltage.

When the High Voltage Testing ON option is selected, the Set High Voltage button will be active. Click Set High Voltage to open the High Voltage Test Parameters window.

In this window, you can manipulate the settings for two common high voltage tests: the Dielectric Withstand Test and the Insulation Resistance Test.

When high voltage testing is enabled, the DW Test is performed first, followed by the IR Test.



■ Dielectric Withstand Test

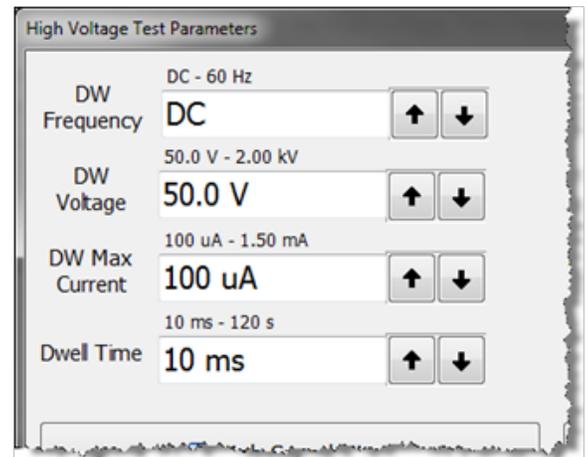
[Main Menu](#) | [Create Test](#) | [Set Test Defaults](#) | [Set High Voltage](#)

In a dielectric withstand test (DW test), a voltage much higher than the normal operating voltage is applied in order to find unintended connections on the device-under-test.

Note: For more information on DW testing, click Help or visit www.cirris.com.

Change the settings for the DW test by clicking the arrows next to each field or type the desired setting into the box.

- **DW Frequency:** DC or AC (25 Hz, 30 Hz, 50 Hz, 60 Hz)
- **DW Voltage:** Voltage for DW test (RMS voltage for AC test)
- **DW Max Current:** Max current level allowed during DW
- **Dwell Time:** How long to apply DW Voltage (cycles for AC test)



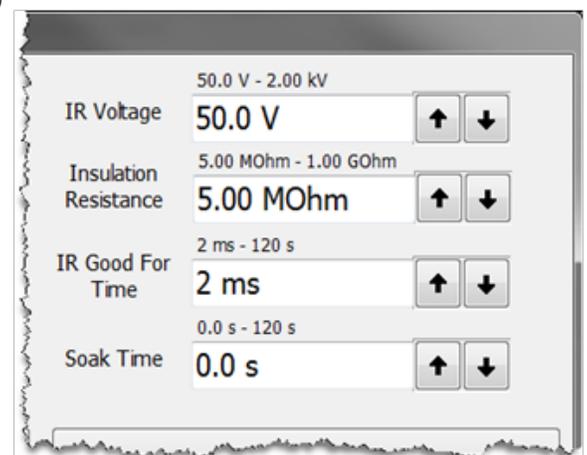
■ Insulation Resistance Test

[Main Menu](#) | [Create Test](#) | [Set Test Defaults](#) | [Set High Voltage](#)

In an IR Test, a device’s overall electrical insulation resistance is measured to ensure that it meets the specified value. For an assembly to pass the IR test, the measured insulation resistance must be equal or greater than the Insulation Resistance setting for the test.

Note: For more information on IR testing, click Help or visit www.cirris.com.

Change the settings for the IR test by clicking the arrows next to



each field or type the desired setting into the box.

- **IR Voltage:** Voltage for IR Test (Always DC)
- **Insulation Resistance:** Minimum resistance needed for insulation to pass test
- **IR Good For Time:** How long IR Resistance value must remain good in order to pass test (this is how long the test will run after soak time)
- **Soak Time:** Time to wait until checking IR Resistance value

■ Other High Voltage Options

Main Menu | Create Test | Set Test Defaults | Set High Voltage

1. High Speed Hipot

- If Selected: the HV test applies voltage to multiple nets simultaneously while still ensuring that each net is tested against every other net, thus speeding up the test process. If an error is found, each net is tested individually to locate the exact net that has the error.
- If NOT Selected (default): the HV test voltage is applied to each net one at a time while all other nets are pulled to ground.



WARNING! The High Speed Mode should NOT be used with highly capacitive devices. High capacitive nets may cause over current failures, meaning the nets will need to be tested individually. This could cause the test to slow down significantly. See <http://www.cirris.com/learning-center/testing-guidelines/high-voltage/72-high-speed-hipot>.

2. Automatic Hipot: If this option is turned on, the hipot test automatically follows a good LV Continuity Test after the duration of time controlled by the "Delay before Hipot" option. Otherwise the high voltage test does not start until after the hipot button is clicked.

3. Auto Hipot Delay: This option sets the delay time between the end of the LV Continuity Test and the beginning of the hipot (HV) test. This option is enabled when automatic hipot is turned on. You can start the hipot test any time during the delay by clicking the HIPOT button in the test window.

4. Soak Until Good: Soaks the cable in voltage until certain transient effects stabilize.

5. High Capacitance Shield Allowed: This option allows you to continue hipot testing a device that would normally not finish testing due to a single over current error. This error is presumed to be caused by a highly capacitive shield around the device.

WARNING! The High Capacitance Shield Allowed button is in the High Voltage Test Parameters for legacy purposes. It is recommended that you use HV High Cap in the Nets List instead.

6. Hipot All Adapter Pins (Not just Connections)

- If Selected: The tester applies high voltage to all attached Signature Adapter test points, regardless of whether they have connections to other points in the test.
- If NOT Selected: The tester applies high voltage only to Signature Adapter test points that have connections to other test points in the test.

7. Hipot Safety Switch: Although not available at this time, it is possible to set up a safety switch through Digital I/O. For more information, visit the Help System.

8. Restore Factory Setting: Change all the high voltage settings to factory default values.

9. Load from Saved Settings: Load previously saved high voltage settings. When you load a HV setting and make no changes, the name will be displayed on the Set High Voltage button in the Set Test Defaults tab of the Test Program Editor. To delete a saved HV setting, open the High Voltage Settings window, right click, and select Delete.

10. Save these Settings: Click on this button to save the high voltage settings as they are presently set. You will be prompted to enter a name, which will allow you can recall the settings later. If you make no changes to the settings after saving them, the name will be displayed on the Set High Voltage button in the Set Test Defaults tab of the Test Program Editor.

4.4.2 Test Process options

Main Menu | Create Test | Set Test Defaults

From the Test Program Editor window, these options control the test process such as test methods and start conditions.

Start Condition Options: This option is automatically selected based on the desired test method.

- **Assembly is Attached:** As soon as the tester senses a connection between its test points (i.e. when an operator begins to connect the DUT) the test starts.
- **Start Button is Pressed:** The test starts when the operator clicks Start in the Test window.



External Start Switch: This feature is not implemented.

First Article Verification: Not currently available for Easy-Touch/Pro/4200 Series/1100 Series testers.

Test Method: See below.

Configure Inputs and Outputs: Allows you to integrate Digital I/O which automates your testing process. With Digital I/O, you can integrate tools such as foot switches, palm buttons, and status lights to your tester. For more information on Digital I/O, click Help or visit www.cirris.com.

4.4.3 Selecting a Test Method

Main Menu | Create Test | Set Test Defaults

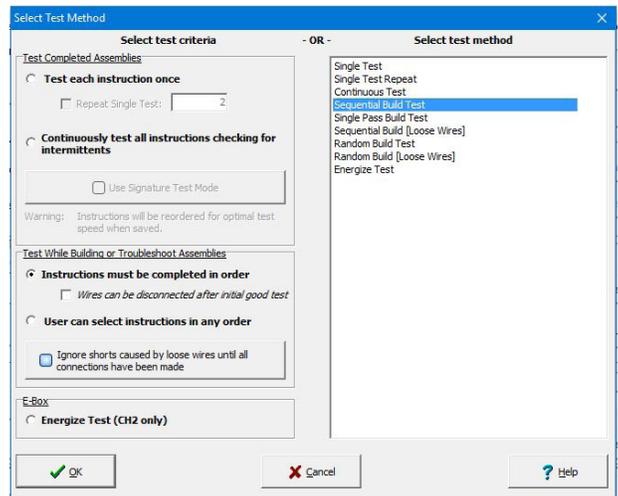
Click the arrow next to the Test Method dropdown menu to open the Select Test Method window. This window is divided into two sections. You only need to select a test method from one section. The other side will update automatically.

- **Left section:** Select the test method based on criteria such as testing a completed assembly or testing while building.
- **Right section:** Select the test method from the list.

■ Select Test Criteria

Test Completed Assemblies

Select one of these test methods if you are completing a test on a completed assembly or a completed portion of an assembly.



- **Test each instruction once:** Each test instruction is performed in order only once.
 - **Repeat Single Test:** With this box checked, you can decide the amount of times you want the single test repeated.
- **Continuously test all instructions checking for intermittents:** The test repeats multiple times, giving you time to move the cable so the tester can detect unsecure connections.
- **Use Signature Test Mode:** For the Easy-Touch/Pro/4200/1100 Series testers, performs single or continuous test methods using signature adapters.
 - **Warning:** Signature Test Mode reorders test instructions.

Test While Building or Troubleshoot Assemblies

Each instruction is performed once the tester detects a connection. This allows testing to be performed while the assembly is built or when troubleshooting an assembly.

- **Instructions must be completed in order:** Use this method when building an assembly and certain instructions need to be completed in a specific order.
 - **Wires can be disconnected after initial good test:** The test will continue to the next instruction even if a test is performed on a connection but the connection is disconnected.
- **User can select instructions in any order:** The tester will perform a test on any detected connection.
 - **Ignore Shorts caused by loose wires...:** Tests for continuity only. When every connection has been made, the tester will perform a final test checking for shorts.

E-Box

- **Energization Test (CH2 only):** This test method used when testing on the CH2 with an Energization Unit connected.

■ Select test method

- **Single Test:** The tester will execute each test instruction one time, regardless of errors. This method is fastest.
- **Single Test Repeat:** The tester will execute the complete test as many times as specified, regardless of errors.
- **Sequential Build Test:** Guides an operator to assemble a wire harness in a particular order. The test will halt until an error is resolved or an instruction completed. The test will not finish until all instructions pass.
- **Random Build Test:** Guides an operator to assemble a wire harness but with no set order so that the order can be varied by the operator. The order can be changed by probing the desired points or net. The test will halt until an error is resolved or an instruction completed.
- **Continuous Test:** Similar to a Single Test, but continues repeating until all errors are solved. A Continuous Test allows the operator to move the cable around in an effort to catch intermittent failures such as loose connections. Test will continue to run until the Stop button is pressed.
- **Signature Single Test:** The tester will perform the specified low voltage tests once. This method is fastest.
- **Signature Continuous Test:** Similar to a Single Test, but continues repeating the low voltage tests until the DUT is removed or test is aborted. A Continuous Test allows the operator to move the cable around in an effort to catch intermittent failures such as loose connections. Test will continue to run until the Stop button is pressed.
- **Single Pass Build Test:** Guides an operator to assemble a wire harness, but still tests good even if wires are disconnected after being wired correctly at least once.
- **Sequential Build [Loose Wires]:** Same as a Sequential Build Test, but does not check for shorts until all other instructions pass.

- **Random Build [Loose Wires]:** Same as a Random Build Test, but does not check for shorts until all other instructions pass.

4.4.4 Test Window options

[Main Menu](#) | [Create Test](#) | [Set Test Defaults](#)

Settings in this section control what is shown in the Test Window ([page 40](#)). There are five options:

Show Connector Graphics: Not currently available for Easy-Touch/Pro/4200/1100 Series.

Launch this File Upon Loading this Test: Loads a selected file or program at the beginning of a test session. This file may contain information helpful to the operator such as assembly instructions. For more information, click Help.

Show Current Instruction: Not currently available for Easy-Touch/Pro/4200/1100 Series.

Set Operator note: Create a note for the test operator to read in the Test window ([page 43](#)).

Detect Error Location (Which-End): Test error information will include which end of the cable a failure is likely located.

Note: Detect Error Location has two main limitations:

1. On occasion this feature can significantly decrease test speed.
2. It is not effective on small devices where fixturing resistance or capacitance is close to or higher than that of the device-under-test.



4.4.5 Report Options

[Main Menu](#) | [Create Test](#) | [Set Test Defaults](#)

These settings control information pertaining to Test Reports.

Enter Lot ID: Allows you to save a unique ID for each group (batch) of cables.

Store Test Error Details: Allows you to store error information to the database for each device tested. This also controls whether errors will show on reports for the corresponding test program.

Configure Reports/Auto Print: Allows customization of reports. You may also turn on or off auto print and auto export.

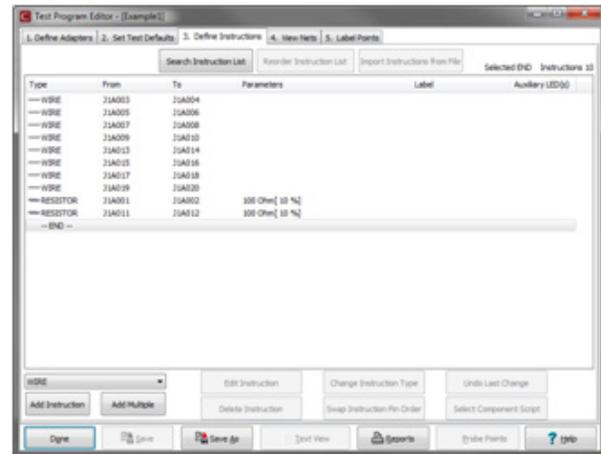
Store Measured Test Values: Store the measured values of the instructions for each device tested. (Stores measurements for expected, not unexpected, connections.) This feature impacts test time but will be shown on reports.

Serial Numbers options: Serial numbers can be used in Test Reports and in cable or harness labels. You may choose how serial numbers are entered for a given test program. For more information on Serial Numbers, see the Help System.

Store High Voltage IR Values: Store the measured insulation resistance for every tested net. The stored IR values can then be viewed and printed in reports.



After setting the test defaults in Tab 2, click on Tab 3 to create, add, or modify test instructions.



4.5.1 Instruction Options

Main Menu | Create Test | Define Instructions

Learn Attached Wiring Pattern: see [page 29](#).

***Search Instruction List:** Find instructions and test points.

Reorder Instruction List: Testing is done in the same order as the Test Instruction List. Reordering is available for you to change the order in which connections and components are tested. This option not available when using one of the Signature test methods.

Import Instructions from File: Allows you to import previously exported text files. (For more information on import/export, see the Help System.) This option not available when using one of the Signature test methods.

Add Instruction: Add a test instruction. Select an instruction from the drop down list and click, Add Instruction. In the instruction editor window, fill in each field required for the instruction. Click OK when finished. The instruction will appear in the Instructions list.

- **4Resistor:** 4-Wire resistor measurement
- **4Wire:** 4-Wire wire measurement
- **Capacitor:** Check capacitor value
- **Diode:** Check diode voltage
- **Link:** Links points together (non-standard components)
- **LUA Component:** Custom component supplied by LUA scripting
- **Resistor:** Measure resistor value
- **Signature Diode:** Check diode voltage
- **Signature Wire:** Tests wires to a threshold, testing good if the threshold is less than the resistance setting.
- **Twisted Pair:** Check presence of twisted pair
- **Wire:** Check connection between points

Note: If adding the Signature Wire instruction to a signature test, the software will automatically add a Wire instruction to the test program. The Signature Wire is treated as a component instruction. Without the additional Wire instruction, the test points will measure lower than the resistance connection, and the continuity test will fail. Adding the Wire instruction allows the test to pass continuity before testing any components.

Add Multiple: Add multiple test instructions. Select an instruction from the drop down list and click Add Multiple. In the instruction editor window, fill in each field required for your test. Click Ok to add an instruction. The window will not close, allowing you to add more instructions. Click Cancel when finished to close the instruction editor window. All instructions will appear in the Instruction List.

Add Sequence: You can add several instructions at once in a repeating sequence. Select an instruction from the drop down list and click Add Sequence. In the Define Sequence window, enter the increments for the pins on your connector and the number of instructions. Click OK and the instructions will appear in the From / To columns.

***Edit Instruction:** Edit the instruction selected in the Instruction List.

***Change Instruction Type:** Change the type of instruction selected from the Instruction List. For example, change a Wire instruction to a Resistor.

Undo Last Change: Not currently available for Easy-Touch/Pro/4200/1100 Series.

***Delete:** Deletes the selected instruction from the Instruction List.

***Swap Pin Order:** Not currently available for Easy-Touch/Pro/4200/1100 Series.

Select Component Script: This feature must be enabled by contacting Cirris. It allows you to add or change a .CMP component script. You can then add LUA Components from the Add Instruction/Add Multiple drop down list.

*Also a right-click option

4.6 Tab 4: View Nets

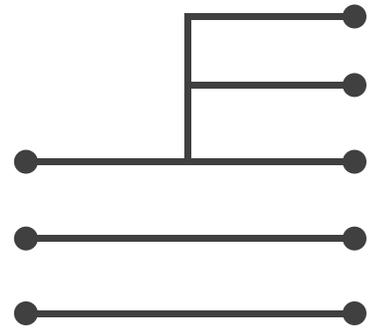
[Main Menu](#) | [Create Test](#) | [View Nets](#)

Once all of the instructions are defined/created, you can edit and verify nets in the View Nets tab of the Test Program Editor.

Nets are two or more interconnected points in a cable or harness. The example to the right shows a net with four points and two nets with two points each.

If there are more than two test points in a common connection you can view all interconnections in the View Nets tab as a group of connections or net.

Note: If you add or subtract connections after you have renamed them, they need to be verified again for correctness.



Nets Tab: Shows the following information:

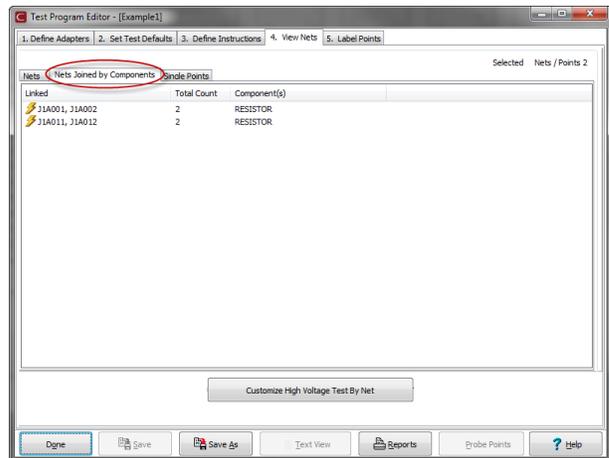
- **Name:** name of the net. The name is auto-generated. Slow-click on the name to change the name.
- **Count:** number of points in each net.
- **Points:** names each point in the net.

You can view all instructions that make up the net by double-clicking on the net or select the net and click Details. The Instructions used to Create Net window will open.

Note: Each net only contains test points connected with resistances below the "Connection (wire) Resistance". If nets are connected by components, such as a resistor, you can view the connected nets by selecting the Nets Joined by Components Tab.

Nets Joined by Components Tab: Selecting the Nets Joined by Components tab shows the list of all the nets/points in the test program that are connected to each other by some sort of component (Resistor, Diode, Capacitor, or link).

Note: Any nets connected by components will be hipot tested as a single group of points. (i.e. voltage will be applied to the entire group of points/nets at once, and components or wires in the group will not have a high voltage applied across them.) For more information, visit www.cirris.com.

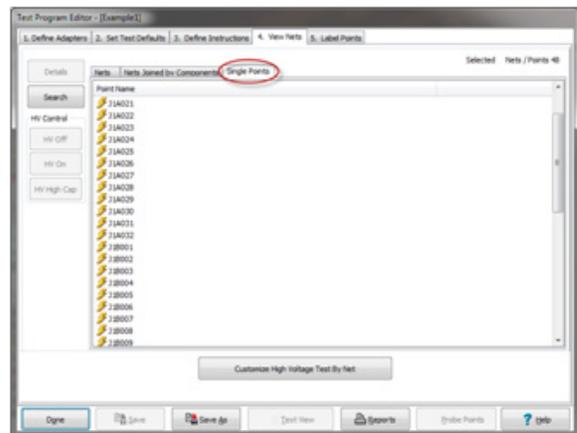


Single Points Tab: Single points are test points that are attached to a connector used in the Test Program, but are not connected to other points or nets with a resistance below the connection (wire) resistance. They may be connected by a component (resistor, diode, capacitor, link).

During low voltage these points get tested for any shorts to them. During hipot each point will get voltage applied for the specified duration. You can save hipot test time by turning off HV on unused points.



Note: The symbol next to each single point net will change if you have unchecked Hipot All Adapter Pins in Set High Voltage (see [page 24](#)). If you see this symbol, the single point net will not be tested with high voltage.



4.6.1 HV Control

[Main Menu](#) | [Create Test](#) | [View Nets](#)

Change the High Voltage test on a net by net basis, giving you more flexibility.

⚡ HV Off: Turn off high voltage for the selected net(s) and points. They will be held at ground during the hipot test.

⚡ HV On: (Default) Turn on high voltage for the selected net(s) and points.

⚡ HV High Cap: Change the type of high voltage test to a High Capacitance Hipot test for the selected net(s).

Note: If you first select a net to be tested with HV High Cap and then select *Customize High Voltage Test By Net* for the same net, the HV High Cap setting will automatically turn off.

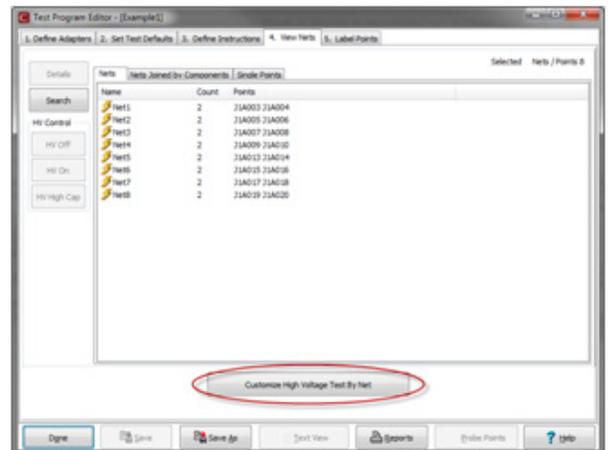
Because of the nature of HV High Cap, the setting will not report all of the error types that would be found by a standard hipot test. Thus, HV High Cap should be used with caution and only turned on for nets that cannot be hipot tested with standard hipot settings. For more information, visit the [Help System](#) or www.cirris.com.



4.6.2 Customize High Voltage Test By Net

[Main Menu](#) | [Create Test](#) | [View Nets](#) | [Customize High Voltage Test By Net](#)

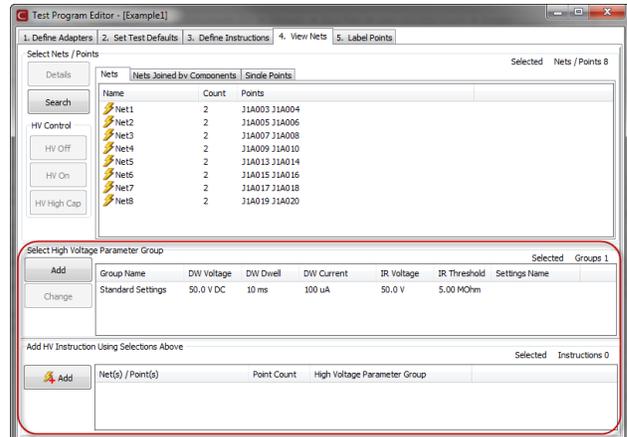
After clicking *Customize High Voltage Test By Net*, you will be able to add custom hipot settings by net. This allows you to create high voltage settings for single or groups of nets in your test which have different requirements.



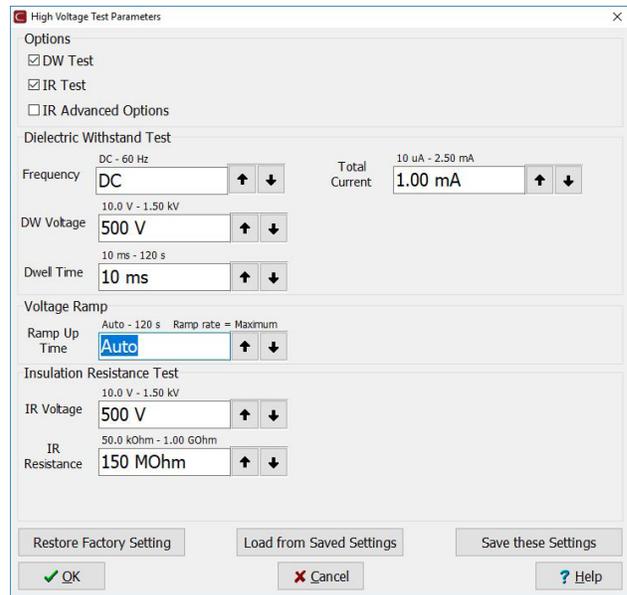
1. In Select High Voltage Parameter Group, click Add to access the High Voltage Test Parameters window.

The default hipot settings, set in Tab 3, will always be shown as standard settings. New groups will be called parameter group 1, 2, etc...

You can slow-click to rename the parameter group if desired.

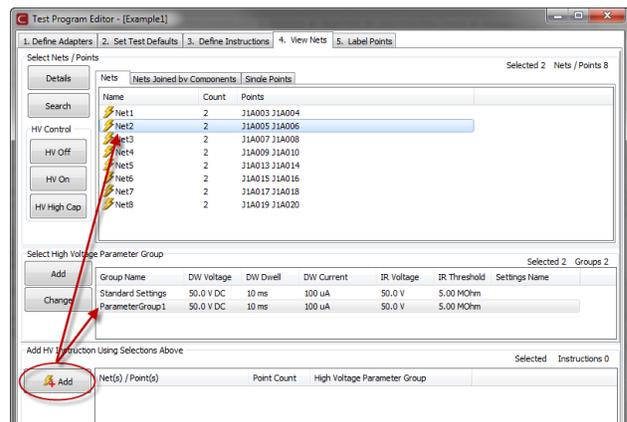


2. Configure the parameters of a new set of high voltage test settings to be used on specific nets. Click OK when finished.



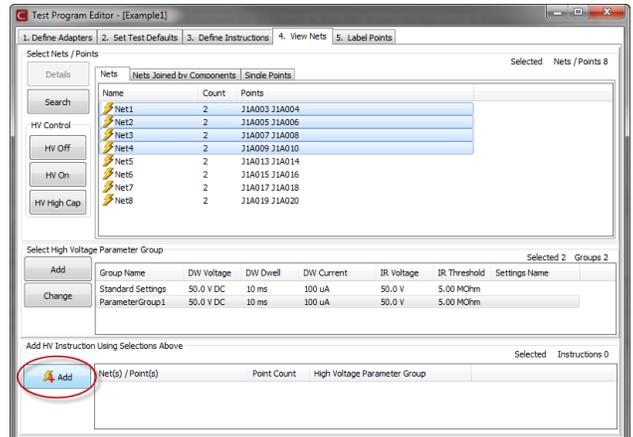
3. Select the alternate Parameter Group you created from Select High Voltage Parameter Group as well as a net(s) from the list of nets (use ctrl + left-click to select multiple instructions).

The HV parameter group with the most nets to be tested should be the standard group.



- Click Add in the bottom section labeled, Add HV Instruction using Selections Above. All nets get tested to the standard setting unless added to a custom parameter group.

 This symbol will appear once a net has been added to a group, confirming that the net will be tested using custom HV parameters.

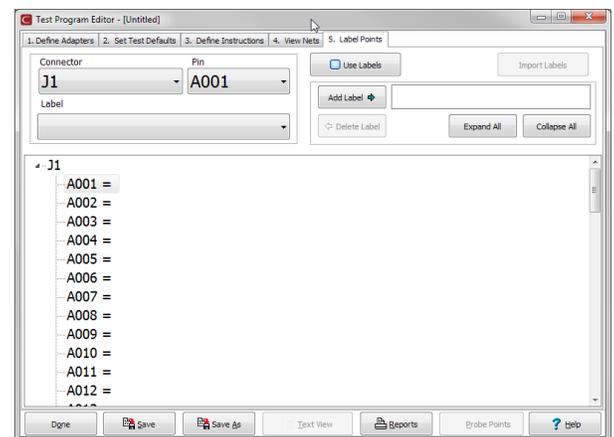


4.7 Tab 5: Label Points

Main Menu | Create Test | Label Points

The Label Points tab allows you to add or delete the pin labels of a connector in the test program. Labeling connector pins allows you to customize how points are referenced in test instructions, errors, and reports.

Connector point labels are user entered text that can be used in place of the standard connector point names. These labels display in reports, in the Test window, and in the Test Program Editor.



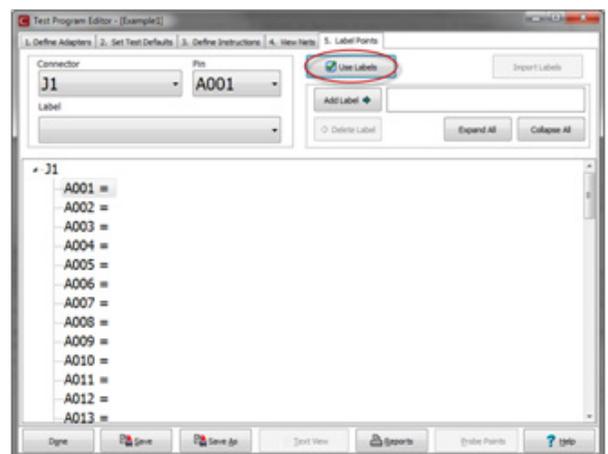
Use Labels: To use your labels instead of the normal connector point names, click Use Labels (a checkmark means labels are in use).

Note: The following characters can be used in labels:

- [
-]
- -
- _
- \$
- #

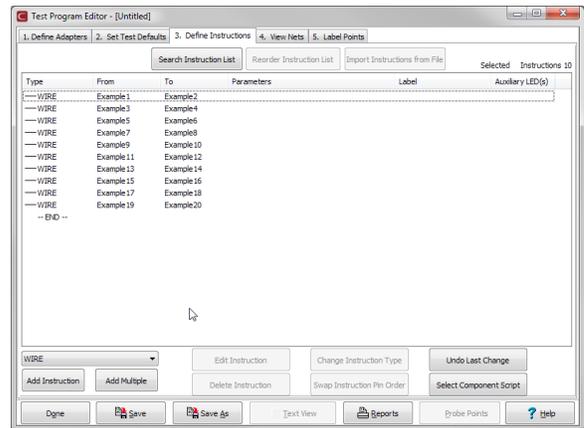
Labels will be displayed in place of letters and numbers throughout Easy-Wire and on reports.

When the Use Labels option is not selected, all pins will be referred to by the original pin name of the adapter selected.

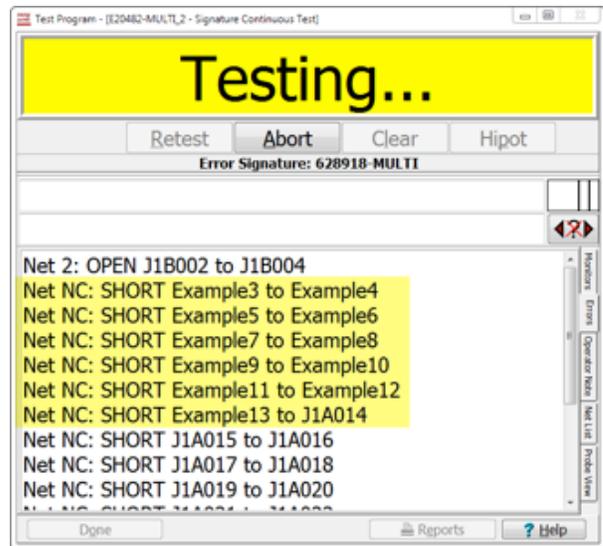


Checking the Use Labels button allows you to:

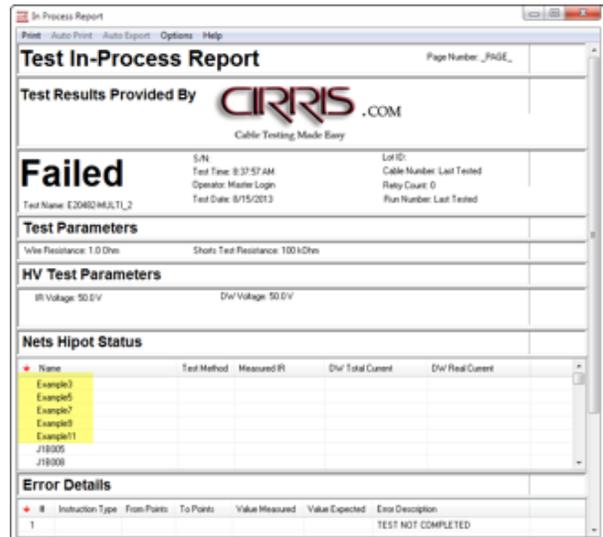
- Better identify your points in the Define Instructions tab of the Test Program Editor.



- See the point labels in the Test window.

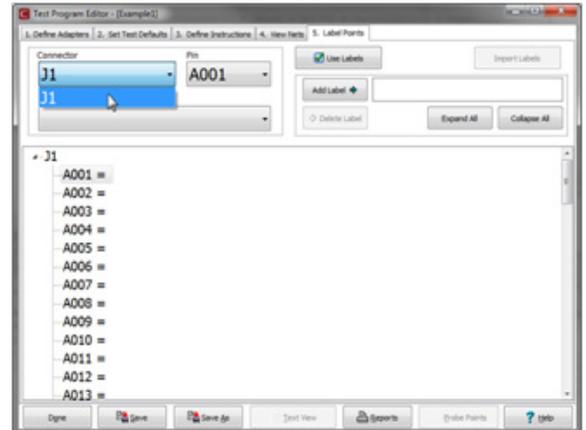


- See the point labels in reports.

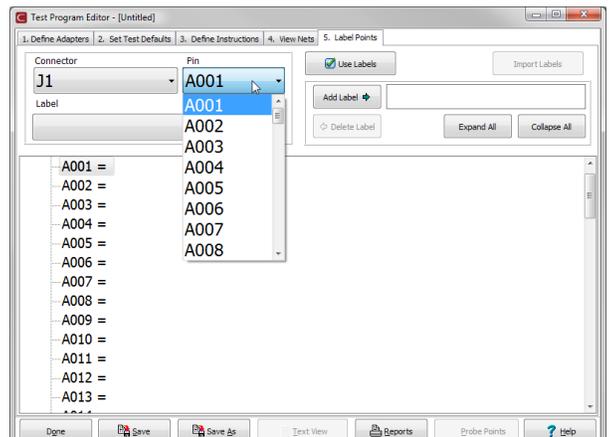


To add a connector point label:

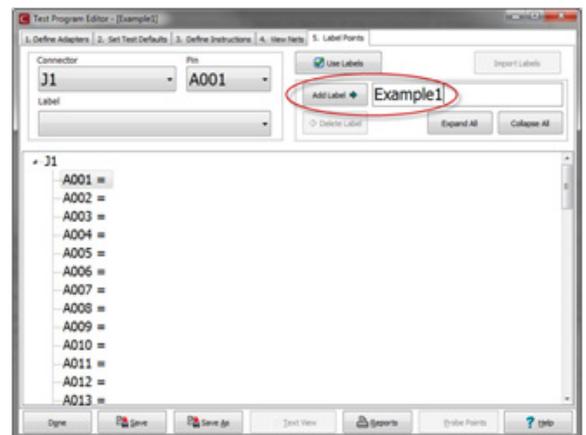
1. Select a connector from the Connector drop down list.



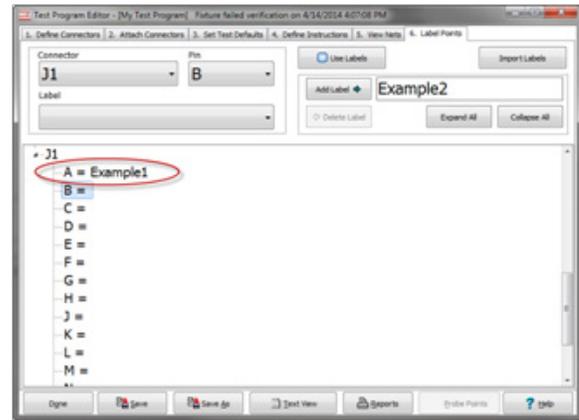
2. Select a pin from the Pin drop down list or select it in the point list by clicking on it.



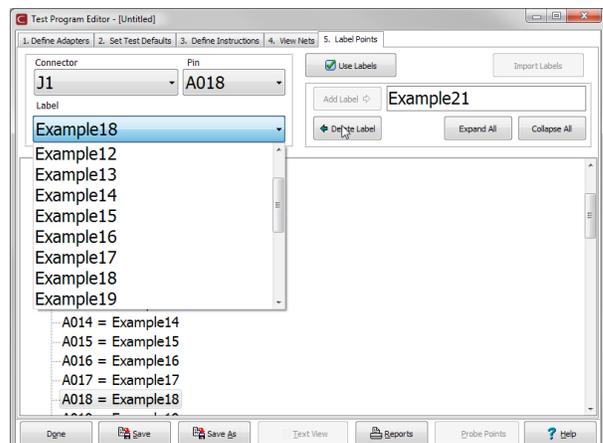
3. Type the label name into the Add Label text box and click Add Label.



- The label will be added to the list of pins. The predicted name of your next label will then appear in the Add Label text box and the next pin in the list will be selected. You can then click Add Label repeatedly while the predicted pattern matches the label you want for the next pin.



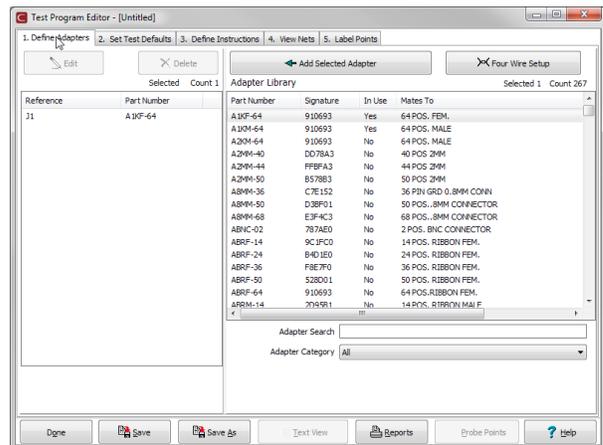
- To delete a label, select the label in the Label drop down list or in the main window. Then click Delete Label.



4.8 Test Program Editor Page Menu

Main Menu | Create Test

The menu at the bottom of the Test Program Editor window stays the same no matter which tab is selected.



1. **Save/Save As:** Saves a test program to the Easy-Wire database. The Save button will save changes made to a test program while the Save As button will save an existing test program as a new copy with a new name. To save as a text file, the test program must be exported ([page 73](#)).
2. **Text View:** Not currently available for Easy-Touch/Pro/4200/1100 Series.
3. **Reports:** Allows you to configure the Test Program Report and Assembly Wiring Report for a program. For more information about reports, see the Help System.
4. **Probe points:** View the point information when you probe a test point or connection. A tester must be attached to use this option. For more information visit the Help System.

4.8.1 Saving/Abandoning Changes

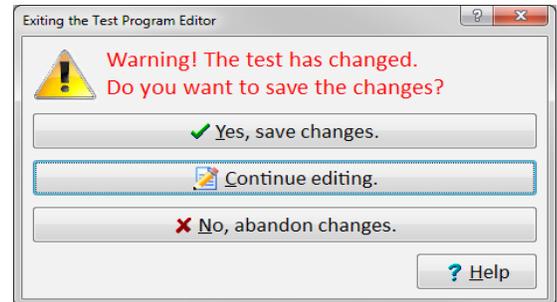
Main Menu | Create Test

Anytime you click Done in the Test Program Editor window after making changes to a test program, a window will appear to verify your changes.

Save Changes: Choosing the top option, Yes, save changes and return to the main menu, will save all changes made to the test program and return you to the main menu. There is not an easy way to undo changes after saving. Always verify before saving.

Return to the Editor (Default): Choosing the middle option, No, return to the editor and verify the test program, will allow you to continue making changes to the test program in the Test Program Editor.

Abandon Changes: Choosing the bottom option, Abandon changes and return to the main menu, will cancel any changes made to the test program and return you to the main menu. If you are creating a new test program that has not previously been saved, the test program will be lost.



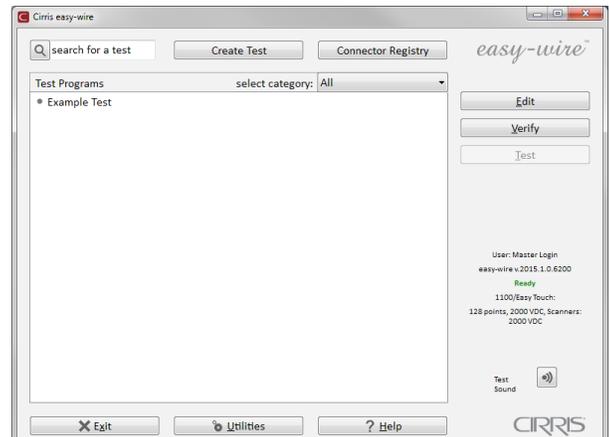
5. Edit, Verify, Test

After a test has been created, these options become available.

Note: A test program must be selected to access these options.

Important Terms

Parent/Child Test – A single parent test program can contain multiple child test programs that run sequentially to handle dynamic changes to connection patterns while testing. Ex. Switches, relays etc. Multiple test programs can be combined together in a Parent Test.



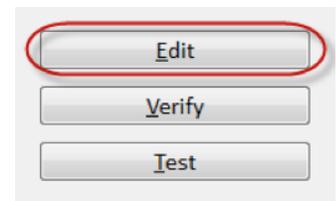
5.1 Edit

Main Menu | Edit

This option allows you to edit a test program from the Test Program List.

Select a test program and click Edit. This will take you to Tab : Define Instructions in the Test Program Editor.

For information on editing test programs in this window, see [page 28](#).



5.2 Verify

Main Menu | Verify

Select this option to access options for assembly and test reports for the selected test program.

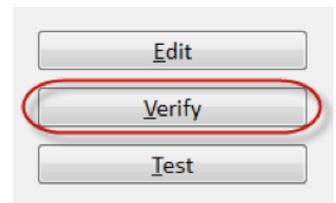
Fixturing: Not available for Easy-Touch/1100.

Auxiliary LED's: Not available for Easy-Touch/1100.

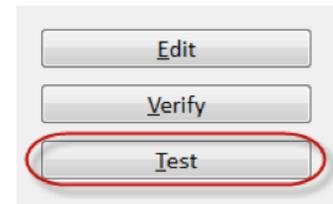
First Article: Not available for Easy-Touch/1100.

Test Program Report: The Test Program Report documents a test program for a particular device and allows you to verify the test program. This report gives information on company, system settings, test parameters, wiring, test instruction, nets, and data summary. For more information on these reports, see the Help System.

Assembly Wiring Report: The Assembly Wiring Report allows you to reference all Connector Wiring Detail Reports which give a graphical view and listing of all connections for a given assembly. Two columns display the adapter names on each side of an assembly. For more information on formatting this report see [page 47](#) or the Help System.



After selecting a test program in the Easy-Wire main menu, click Test to access the Test window.



5.3.1 Test Window

Main Menu | Test

Each option in the Test window may behave differently depending on the device attached and parameters set in the Test Program Editor ([page 19](#)).



- **Start:** Starts the test.
- **New Test:** In Single Test mode, starts a new test after a test has completed.
- **Retest:** Repeats the test of the device just tested.
- **Abort:** Stops the test immediately and is logged as an error.
- **Clear:** Used in Continuous Test mode, activates during the continuous testing portion of a test after the detection of an intermittent. Not available during the first pass through the device-under-test.
- **Hipot:** Starts the high voltage (HV) test. This button becomes active after the Low Voltage (LV) test has been completed.

WARNING! Do not touch the assembly during the high voltage test or injury may occur.

5.3.2 Testing

Main Menu | Test

Testing is performed in the following order:

Low Voltage Test

- Test Instructions
- Shorts Test

If high voltage is selected:

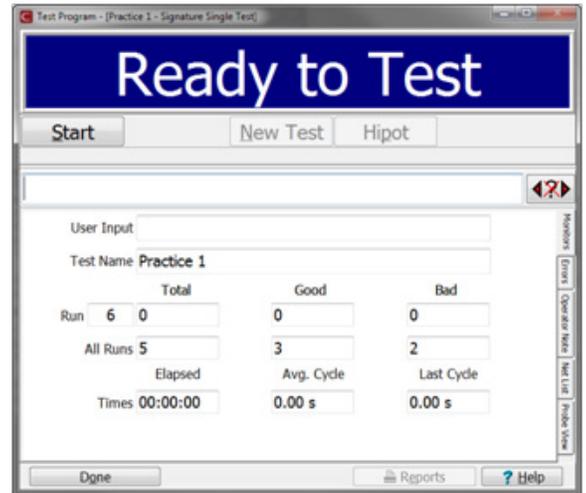
High Voltage Test (not applicable for 1100R+ tester)

- Dielectric Withstand Test
- Insulation Resistance Test
- Custom HV Instructions Test

The following instructions assume single test mode. Testing process may be changed depending on test mode.

1. Attach an assembly to the tester.
2. In the Test window, click Start. A low voltage test is performed. The LV test performs each test instruction (wires, resistors, diodes, etc) then runs a shorts test.

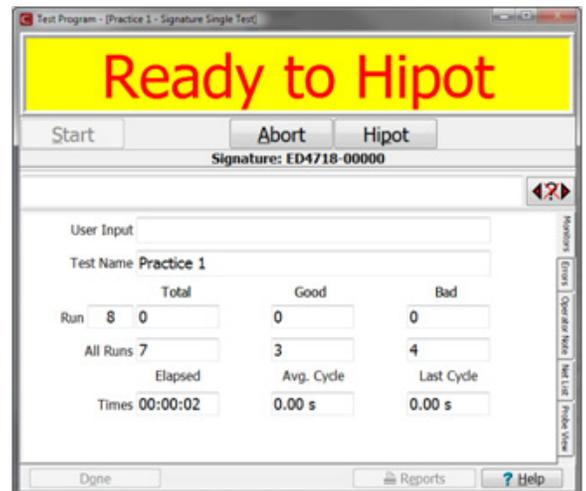
Note: The LV test must pass before moving onto the HV test.



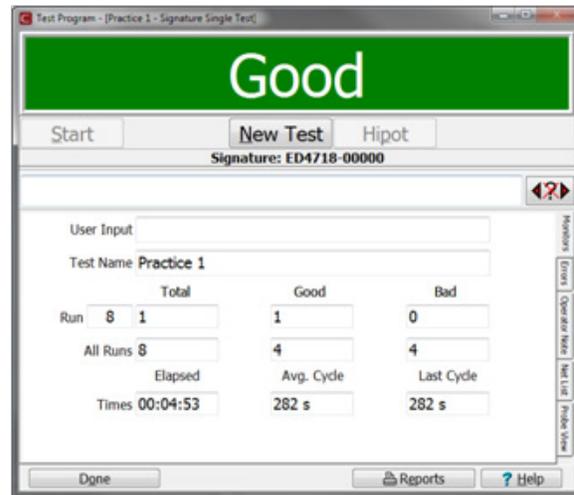
3. After the tester is finished running the LV test portion, the HV test will start (if a high voltage test has been selected). Unless set to automatically begin, click Hipot.

At the start of HV testing, the Dielectric Withstand (DW) test is performed. If this test fails, testing stops. If the DW test passes, the Insulation Resistance (IR) test is performed. For more information on DW and IR tests, see [page 23](#).

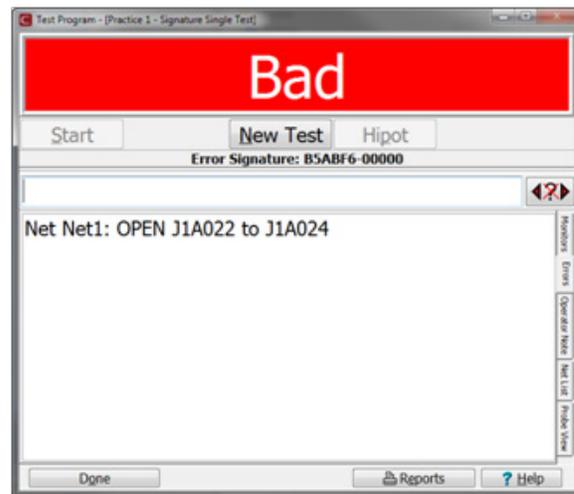
Note: The 1100R+ tester cannot perform HV testing.



- If the test results are Good, you will hear two trumpet tones. Either connect the next device to perform the testing process once more, or click Done to return to the Easy-Wire main menu.



- If the test results are Bad, the software will play a tone and display the details of the error. Common errors are shorts, opens, miswires, component errors, and high voltage errors. See [page 45](#) for more information on errors, or refer to the Help System for a complete list of errors and advice on correcting them.

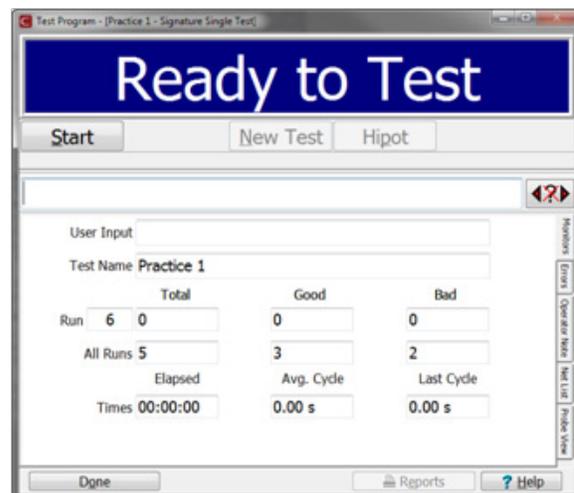
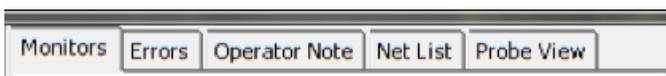


5.3.3 Test Window Tabs

Main Menu | Test

Tabs are positioned vertically along the right side of the Test Window (turned horizontally in image).

Each tab displays important test information. To control what information shows in these tabs, see [page 27](#).



5.3.4 Monitors

Main Menu | Test | Monitors

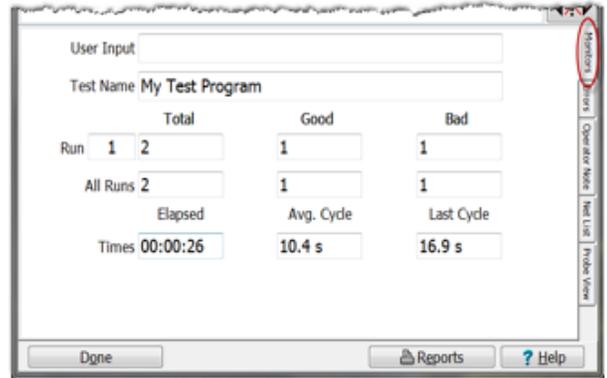
Test Statistics

Test statistics are displayed in the Test window and are recorded to the database for reporting.

- **Run number:** The number of times a test program has been used for a test session.
- **Run Total:** Total devices tested in a specific run.
- **Run Good:** Total good devices in a specific run.
- **Run Bad:** Total bad devices in a specific run.
- **All Runs:** Displays information for the lifetime of the test program. To reset the All Runs information, right-click in the box and click Clear Counts.

Note: You can reset the All Runs statistics, but you cannot reset the statistics of the current run. The reset will only affect the current Test window, not the stored data. Closing the window and reopening it will bring back the All Runs statistics.

- **Time Elapsed:** Duration the present Test window is open after the test has begun.
- **Time Average Cycle:** Average time it takes to complete a test cycle.
- **Time Last Cycle:** Duration of the last test.



5.3.5 Errors

Main Menu | Test | Errors

This tab displays the errors that have occurred while testing the attached device. Common errors are shorts, opens, miswires, component errors, and high voltage errors. For a full list of errors, visit the Help System.

Error details include the failed instruction, the error number, the error type, and points involved. For more information on errors, see [page 45](#).

5.3.6 Operator Note

Main Menu | Test | Operator Note

View the Operator Note created during test setup ([page 27](#)). The Operator Note tab remains active until the operator selects a new tab or starts the test. The operator may click the Operator Note tab to reference it later in the test.

Note: Only one operator note may be assigned to a test. However, a Parent Test and each of its Child Tests can display a different operator note. Therefore different operator notes may be displayed to the operator throughout the Parent Test.

Parent/Child Tests are created from the main menu through a right-click option. For more information, see the Help System.

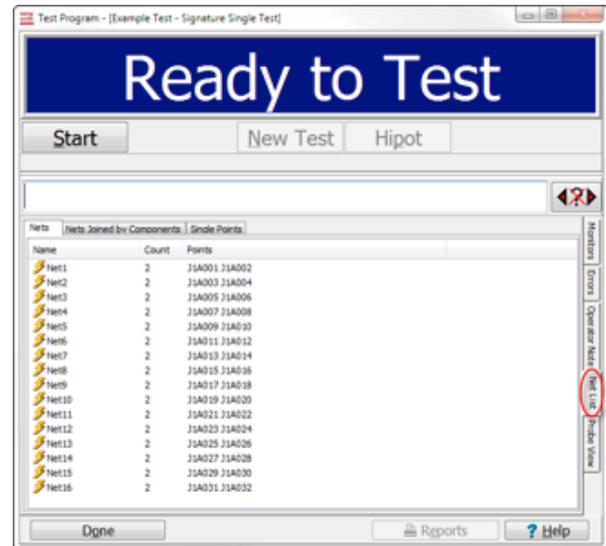
5.3.7 Net List

Main Menu | Test | Net List

Use the Net List tab to view all test points in a net. This provides a quick way to view the composition of a net. It is especially useful for diagnosing faults.

Net List Tabs:

- **Nets:** Each net starts out listed by the word Net and the From and To points are sorted alphanumerically.
- **Nets Joined by Components:** Resistors, diodes, etc. list under the tab Nets Joined by Components. If the component is connected to a wire, its connection will be listed by the name of the net containing that wire.
- **Single Points:** Points defined in the test which are not part of a net are listed in this tab.



5.3.8 Probe View

Main Menu | Test | Probe View

An operator can probe a point on the device connected to the tester. Probing a point will display helpful net and error information such as shorted or open points.

6. Errors

When a cable/assembly fails a test, the Test window will display information about the errors that caused the failure (page 43). The following examples show frequent errors operators may encounter.

Note: For a more complete list of common testing errors, see the Help System.

6.1 Low Voltage Errors

An assembly must pass a low voltage test before the system performs a high voltage test. If the device fails the test, an error message will detail the reason for the failure. Error messages include the error number and name. For a full list of errors, see the help system.

Low voltage errors include:

Open Error

- The intended electrical path contains a gap, across which, electric current cannot pass.



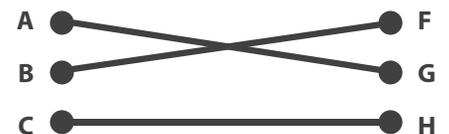
Short Error

- An unintended connection between 2 or more points. This failure indicates insufficient insulation between metal conductors which were not intended to be connected.



Miswire Error

- An unintended connection which is the result of unexpected contact within a connector. This error is often referred to as an Open and a Short combined.



6.2 Component Errors

Component instructions in a test program allow you to specify an expected component value and tolerance range. During a test, if the tester measures a value outside of the tolerance range, the component instruction will fail with an error message that will indicate the value the tester measured, as well as the expected value.

6.3 High Voltage Errors

For more information about high voltage testing and the types of errors you could encounter, visit www.cirris.com and search for [high voltage errors](#). For further help, contact Cirris for a training class.

■ High voltage errors:

Overcurrent

- This error indicates that the current has exceeded an internal limit during the ramp phase for the net or point given in the error message. This often means that there is an unintended (near) connection in the device so that more current is flowing than expected as the tester ramps up to the test voltage.
- This error is most likely caused when the tester was charging the net or point given in the error message and the capacitance in the DUT was too high. A limit is in place to ensure safety while testing, so testing is immediately halted when the limit is reached.

Dielectric Failure Error

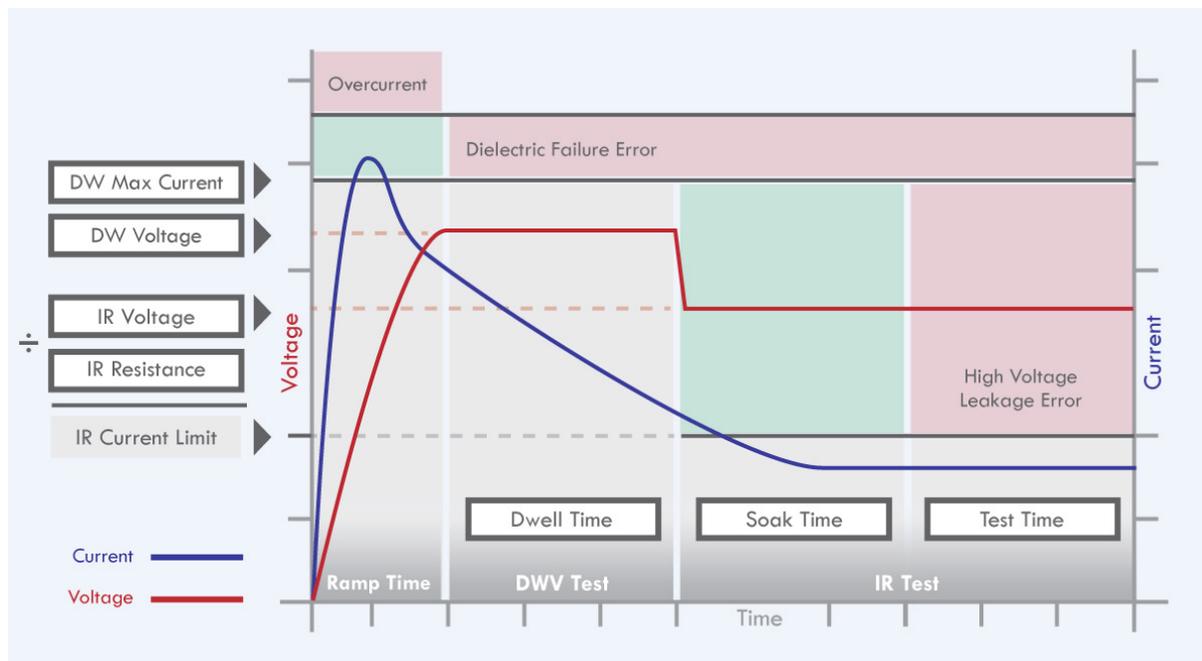
- This error indicates that an arc occurred during the hipot test of the net or point given in the error message. This error will occur anytime the current exceeds the 'DW Max Current' test setting, and is often the result of an arc.
- This error most often occurs in pairs – that is two different nets will fail with this same error. This generally means that the arc is occurring between these two nets. If the error occurs only on a single net it may be the result of a highly capacitive net such as a shield. See [page 31](#) for custom HV settings that can help with highly capacitive nets.

Leakage Error

- This error indicates that the current leakage is higher than specified by the IR Resistance test setting. The current limit may be calculated by the equation $\text{Current Limit} = \text{IR Voltage} / \text{IR Resistance}$. The current exceeding this limit means that the insulation did not meet the specified threshold. On Easy-Touch/1100, the measured IR Resistance value will always be available on the test report.

HV Errors Graph

The graph represents a normal, good set of high voltage tests. The red line represents voltage while the blue line represents current. If the blue current line ever enters one of the pink regions, the specified error will result.



7. Reports and Printing

7.1 Report Types

Through Easy-Wire, Cirris provides multiple types of reports to provide test results, ensure 100% quality, and improve your testing processes.

■ In-Process Report

Shows the test status of an assembly that is connected to the tester. Once completed, an In-Process Report becomes a Test Report.

***Note:** In-Process Report results are not saved automatically like other reports; therefore, the In-Process Report can be used to correct assembly errors while the assembly is connected without having the errors display in the report. Once the tested assembly is disconnected, the test results will be saved and can be accessed using the corresponding Test Report.*

■ Test Report

Records whether a DUT passes or fails a completed test along with measured values and other test information. This is the final report for a cable/assembly.

■ Test Label

Prints a Test Label for labeling a device after it has been tested.

■ Run Report

Each line of the Run Report shows summary and statistical information (pass/fail, serial number/ etc) for each DUT tested in a test run.

■ Test Program Report

Documents a Test Program's setup, layout, settings, etc. for a particular device.

■ Assembly Wiring Report

Allows you to reference all Connector Wiring Detail Reports for a given assembly.

■ Connector Wiring Detail Report

Shows both the schematic diagram and the wiring instructions for connectors in an assembly. The software creates one report for every two connectors in the assembly that are interconnected.

■ Test Archive Report

Any report found in Search Test Archive is a Test Archive Report (see [page 75](#)). These reports are non-configurable.

7.2 Formatting Reports

Reports are customizable to your specific needs. Each report is made up of blocks of information that can be changed, removed, or added.

Printing and saving functions are limited depending on where you open the report. The following chart shows the available options from opening a report from a certain location.

Report Name	Edit Window	Verify Menu	Test Window	Utilities Menu
Test Program Report	Edit Layout	View/Print	View/Print	
Assembly Writing Report	Edit Layout	View/Print	View/Print	
In-process Report	Edit Layout		View/Print	
Test Report	Edit Layout		View/Print	View/Print
Test Label	Edit Layout		Print Only	
Run Report	Edit Layout		View/Print	

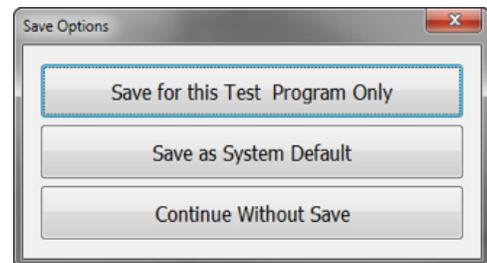
With the report opened, you can arrange the information into a format that meets your needs. Information is arranged into blocks and fields of data. These areas of information can be added, removed, and formatted.

For information on formatting Bitmap Graphics and Columns, visit the Help System.

Once you have made all desired changes to a report, click the X in the top right corner and select an option from the window that opens.

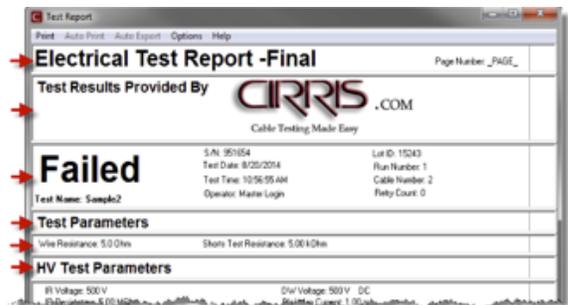
- **Save for this Test Program Only:** Saves changes only in the test program.
- **Save as System Default:** Allows changes to be set as default for all future test programs.
- **Continue Without Save:** Closes window without saving changes.

Note: For information on formatting Bitmap Graphics, Columns, and Page Setup, see the Help System.



7.2.1 Formatting Blocks

Blocks are sections in a report that are separated by borders, as shown in the image to the right.



■ **Change the block size**

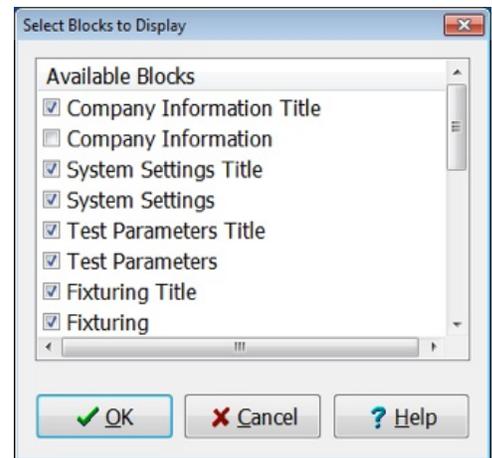
1. Move the mouse over the border of a block until the cursor changes from the arrow to the divider.
2. Click and drag the border up or down to size the block.

■ **Show/hide a single block**

1. Select Options from the menu bar.
2. Click an unchecked block name to show the block, or click a checked block name to hide the block.

■ **Show/hide a set of blocks in one operation**

1. Select Options from the menu bar, and click Show/Hide Blocks.
2. Check the boxes of the blocks you want to show, and un-check the boxes you want to hide.



7.2.2 Formatting Fields

Fields are text found inside blocks.

■ **Add (show) a field**

1. Point the cursor over the block where you want to add a field.
2. Right-click to open the cursor menu, and click Add Field.
3. The available fields for that block will be listed. Select the field that you want to add.
4. Click and drag the new field to the desired position in the block.
5. Select the field and use arrow keys for more precision.

■ **Change the text/spelling of a field**

1. Click on a field to highlight it, right-click to open the cursor menu, and click Edit Field.

2. In the dialog box that opens, change the text, and click OK.

Note: Some field text cannot be edited. If the Edit Field menu selection is grayed-out, no field has been selected, or the selected field cannot be changed.

■ **Delete (hide) a field**

1. Click on the field that you want to delete (hide) to highlight it.

2. Right-click to open the cursor menu, and click Delete Field.

Note: If the Delete Field menu selection is grayed-out, no field has been selected.

■ **Show or hide a field heading**

1. Click on the field heading that you want to show or hide to highlight it.

2. Right-click to open the cursor menu.

3. To show, click Show Field Heading to add a check mark. To hide, click Show Field Heading to remove a check mark.

■ **Change a default field heading**

You can only add pre-established fields for each specific block; however, optional fields are available that allow you to hide the default field heading and enter your own field heading.

1. Click the field heading you want to replace, and right-click to open the cursor menu.

2. If the Show Field Heading is checked, click on it to remove the check.

3. Point the cursor over the block, right-click to open the cursor menu, and click Add Field.

4. Click on an optional field.

5. Click the optional field to highlight it, right-click to open the cursor menu, and click Edit Field.

6. Change the text and click OK.

7. Click and drag the new title to the desired position.

■ **Change the font of a field**

1. Click a field to highlight it, and right-click to open the cursor menu.

2. From the cursor menu, click Change Font.

3. In the dialog box that opens, make the desired changes, and click OK to accept or Cancel to discard.

Note: *Fonts must be changed one field at a time. If the Change Font menu selection is grayed-out, no field text has been selected.*

7.3 **Print**

To Add/Remove a printer, see [page 58](#).

Cirris Easy-Wire software allows you to print from each report window.

1. Select Print from the menu bar, and click Print Report.

2. In the Print window, click OK.

7.3.1 **Print to a PDF file**

1. Select Print from the menu bar, and click Save Report to .pdf file.

2. Browse to a location where you want to save the file, and click Save.

7.3.2 **Auto Print**

Auto print reports include:

- In-Process Reports
- Run Reports
- Test Reports
- Test Labels

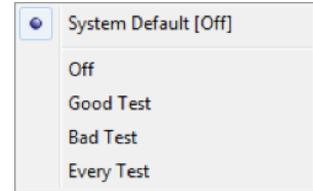
Note: *In-Process Reports auto print before removing the cable/assembly. Test Reports and Test Labels auto print after the device is removed. Run Reports auto print after the Test window is closed.*

■ **To setup auto print:**

1. Select Auto Print from the menu bar, and then select an option.

2. After making changes, close out of the report.

3. Click Save for this test program only to have the report auto-print for this test alone, or click Save As System Default to save this test report and printing option as a template for all test programs.



7.3.3 Auto Export

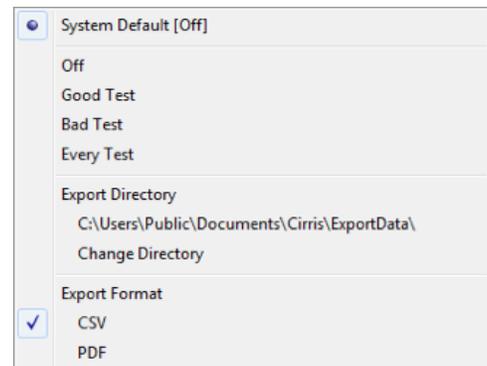
Auto export reports include:

- In-Process Reports
- Run Reports
- Test Reports
- Test Labels

Note: *In-Process Reports auto export before removing the cable/assembly. Test Reports and Test Labels auto export after the device is removed. Run Reports auto export after the Test window is closed.*

1. Select Auto Export from the menu bar, and then select an option.

2. Be sure to choose PDF or CSV.



3. After making changes, close out of the report.

Click Save for this test program only to have the report auto export for this test alone, or click Save As System Default to save this test report and exporting option as a template for all test programs

8. System Utilities

Accessed by clicking Utilities in the Easy-Wire main menu. The System Utilities menu allows you to perform a variety of tasks relating to the setup and maintenance of the Easy-Wire system.

Important Terms

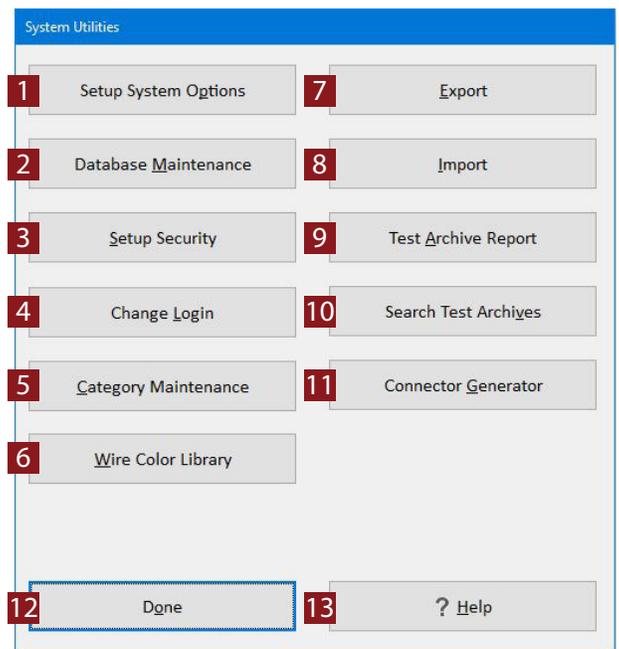
Calibration – Every Cirris tester that leaves our factory is calibrated in compliance with ANSI/NCCL Z540-1-1994 and ISO-10012 to standards traceable to the NIST in the United States. For more information, visit www.cirris.com and search for [calibration](#).

Database – The location where all of your test programs, test results, users, security settings, and other important information is stored. To maintain database integrity, always keep multiple backups of your database backed up and maintained.

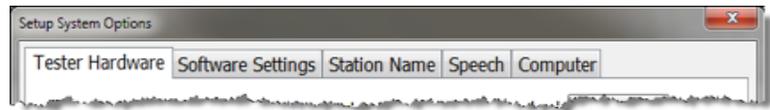
Station ID – An automatically generated number used to identify a test station.

Station Name – A name, chosen by the operator, used to identify a test station on reports.

- 1. Setup System Options** ([page 54](#)): Change settings in the software and hardware. For example, changing sounds and volume.
- 2. Database Maintenance** ([page 59](#)): Backup, maintenance, clean up, and location of the Database.
- 3. Setup Security** ([page 60](#)): Manage operator access via user name and password.
- 4. Change Login** ([page 63](#)): Change users without having to restart Easy-Wire.
- 5. Category Maintenance** ([page 65](#)): Add, change, or delete categories as desired. Categories can help you organize connector types, splice types, adapter types, and test programs.
- 6. Wire Color Library** ([page 69](#)): Add, change, or delete a wire's color.
- 7. Export** ([page 72](#)): Share and create templates, and save copies of test programs to a text file.
- 8. Import** ([page 72](#)): Import test programs from a text file.
- 9. Test Archive Report**: Open Run Reports, Test Reports, and Connector Wiring Detail Reports.
- 10. Search Test Archive** ([page 76](#)): Search for any run report generated on the Easy-Wire test system.
- 11. Connector Generator**: Automatically generates images and other information for certain groups of connectors.
- 12. Help**: Access the Help System.
- 13. Done**: Return to the main menu.



You can reach this menu by clicking on Setup System Options, the first option in Utilities. Each tab of the Setup System Options window gives access to different settings.



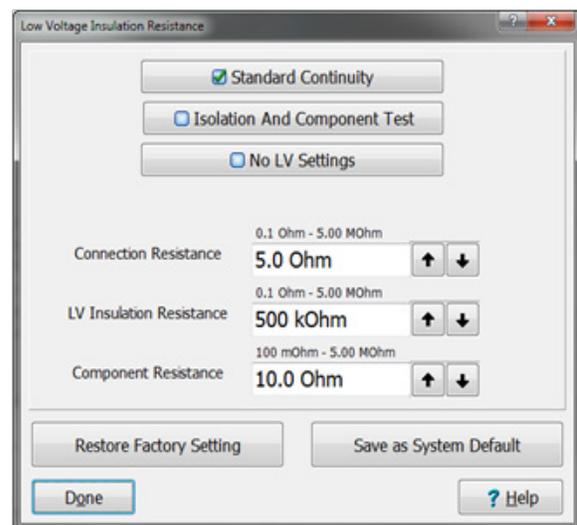
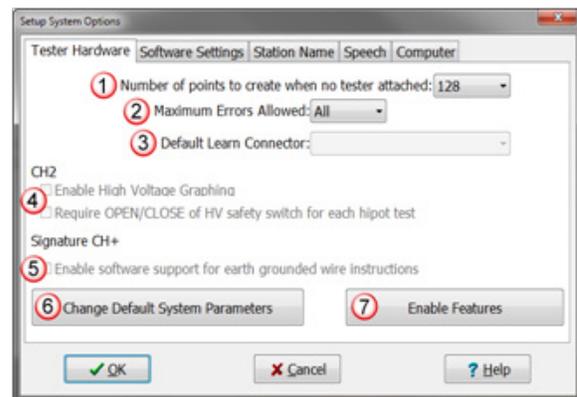
- **Tester hardware (page 54):** Manage hardware settings within the software.
- **Software Settings (page 55):** Customize software settings such as sound and language.
- **Station Name (page 56):** Change Station Name and View Station ID.
- **Speech (page 56):** Control the software's Text to Speech feature.
- **Computer (page 57):** Customize computer settings within Easy-Wire.

8.1.1 Tester Hardware

Main Menu | Utilities | Setup System Options | Tester Hardware

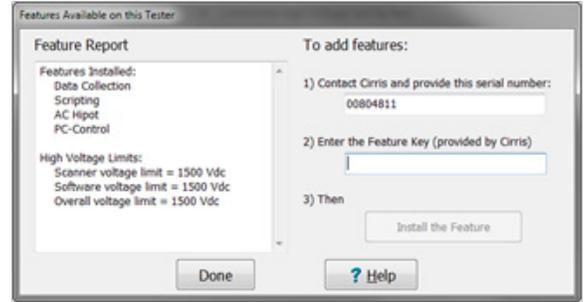
Controls settings between software and hardware such as number of points and errors detected. Some of these settings are tester specific.

- 1. Number of points to create when no tester attached:** This option is only available CR, CH2, and CH+ testers.
- 2. Maximum Error Allowed:** Limits the number of errors found in a test before the test is automatically aborted.
- 3. Default Learn Connector:** This option is only available CR, CH2, and CH+ testers.
- 4. CH2—Enable High Voltage Graphing, Require OPEN/CLOSE of HV safety switch for each hipot test:** These options are only available for the CH2 tester.
- 5. Signature CH+—Enable software support for earth grounded wire instructions:** This option is only available for the CH+ tester.
- 6. Change Default System Parameters:** Allows you to set new default values or restore factory settings for a low voltage test. For more information on this window, see [page 20](#).



7. **Enable Features:** Allows you to enable additional, optional features for the Easy-Touch such as

- **Measured Values:** Automatically store error details and summary data
- **AC High Voltage:** Perform hipot test up to 1000 VAC (RMS)
- **Scripting:** Adapt the tester's behavior to fit your needs
- **PC Control:** Control the 1100 tester with Easy-Wire software.

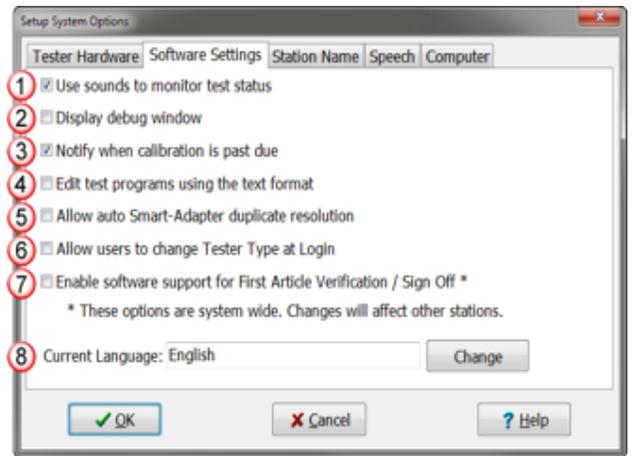


8.1.2 Software Settings

Main Menu | Utilities | Setup System Options | Software Settings

The Software Settings menu allows you to personalize settings within the software such as sound, language, etc.

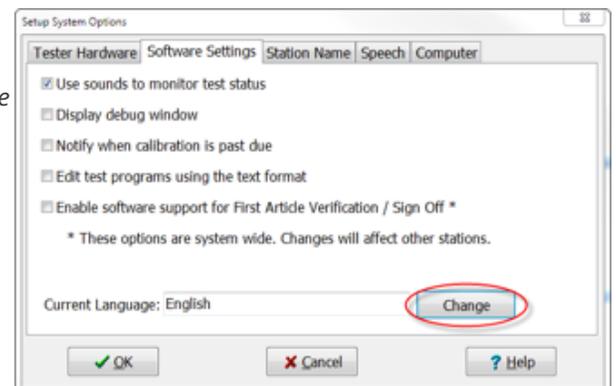
1. **Use sounds to monitor test status:** Allows you to specify whether or not sounds are used during the testing.
2. **Display debug window:** Shows information in the Debug window, which displays along with the Easy-Wire window. Because it can slow your system down, use this option for diagnostic purposes and only when advised to do so by a technical support representative.
3. **Notify when calibration is past due:** This feature is only available for the CR tester.
4. **Edit test programs using the text format:** This feature is only available for the CR, CH2, and CH+ testers.
5. **Allow auto Smart-Adapter duplicate resolution:** This features is only available for the CR and CH2 testers.
6. **Allow users to change Tester Type at Login:** Selecting this option allows you to choose a tester when logging in to Easy-Wire.
7. **Enable software support for First Article Verification / Sign Off (for CR, CH2, and CH+ only):** This feature is only available for CR, CH2, and CH+ testers.
8. **Current Language:** Easy-Wire software supports the following languages: English, French, German, Mandarin (Chinese), Spanish, Turkish, Russian, and Italian.



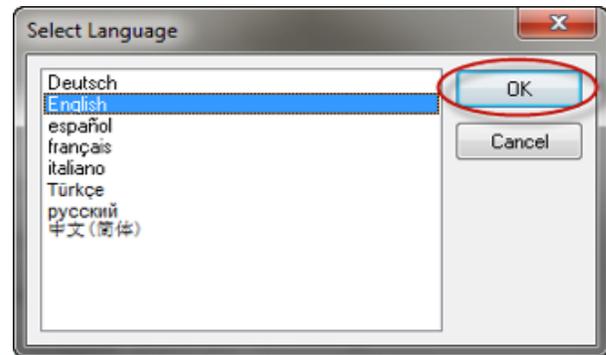
■ Changing the Language

Main Menu | Utilities | Setup System Options | Software Settings | Change
Cirris offers several language choices in Easy-Wire software.

1. Next to the Current Language text box, click Change.



2. Select the desired language. When finished click OK.

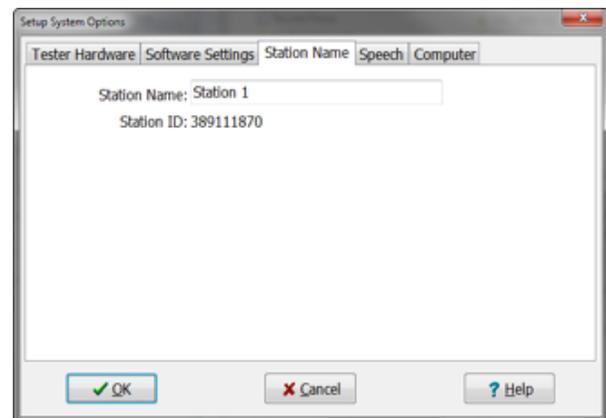


8.1.3 Station Name

Main Menu | Utilities | Setup System Options | Station Name

Edit the Station Name and view the Station ID. When Easy-Wire is installed, a unique Station ID number is automatically generated and the Station Name defaults to the Station ID number. You can change the Station Name, but not the Station ID. The Station Name can be shown in Test Reports to identify which station performed a certain test.

Note: Record the Station ID number so that if you need to replace the test station you can quickly and easily move the station's database file to another Easy-Wire installation. Contact Technical Support for help with this.

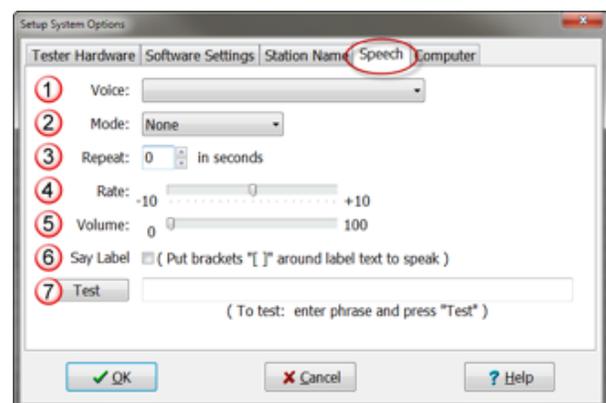


8.1.4 Speech

Main Menu | Utilities | Setup System Options | Speech

Easy-Wire's speech output capability allows the test system to recite testing and error information during a test.

1. **Voice:** Allows you to select from the voice engines installed on your PC.
2. **Mode:** Determines what text will be spoken during testing.
 - **None:** Turns off speech.
 - **Status Message:** The line is spoken in its entirety. For example, "Wire missing J1 pin 4 J2 pin 2."
 - **Connector points:** Only the points involved are spoken. For example, "J1 pin 4 to J2 pin 2."
 - **Destination pin:** Only the destination pin number is spoken. For example, "2". The destination pin mode is commonly used with second-ended pinning.
3. **Repeat:** Determines how often the test system will repeat the spoken output.
4. **Rate:** Specifies how fast words are spoken.



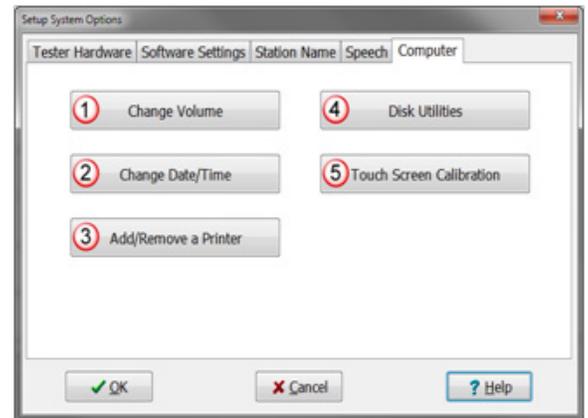
5. **Volume:** Adjusts the volume for spoken words, but does not affect the volume of other sounds in Easy-Wire.
6. **Say Label:** Text entered into an instructions label field and enclosed in brackets will be recognized by the software as a speech option. See the Help System for more information on how to put brackets on labels.
7. **Test:** Type example text in the field, and click Test to hear how the voice output settings will sound.

8.1.5 Computer

Main Menu | Utilities | Setup System Options | Computer

Change settings on your PC such as time and volume. This allows for quick access to the commonly used computer settings.

1. **Change Volume:** Adjust the PC's sound volume.
2. **Change Date/Time:** Change the date, time, and time zone of your PC.
3. **Add/Remove a Printer:** Select a default printer, add a new printer, or remove a printer.
4. **Disk Utilities:** Opens Windows Explorer. This option is only available to select users with passwords.
5. **Touch Screen Calibration:** Use this feature if you are experiencing issues with the touch screen of your Easy-Touch.

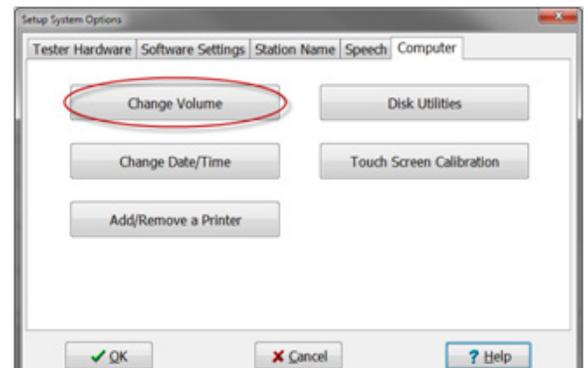


■ Changing the Volume

Main Menu | Utilities | Setup System Options | Computer | Change Volume

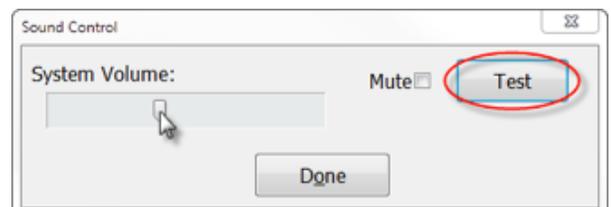
Control the level of volume for your computer and sounds in Easy-Wire.

1. Click Change Volume.



2. Adjust the System Volume and click Test to hear the volume level. When the volume is at the desired level, click Done.

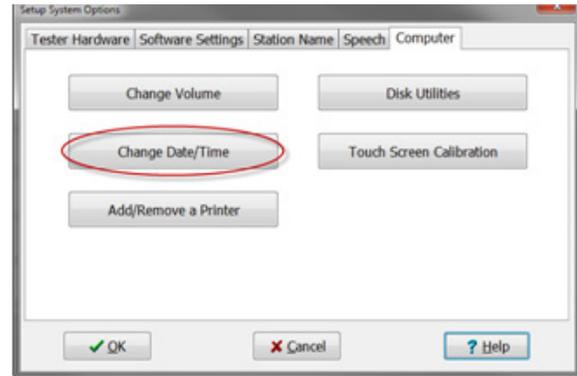
Check or uncheck Mute to turn sound on or off.



■ **Change Date and Time**

Main Menu | Utilities | Setup System Options | Computer | Change Date/Time

Adjust the date and time on your PC to fit your location. Click Apply and OK when finished.

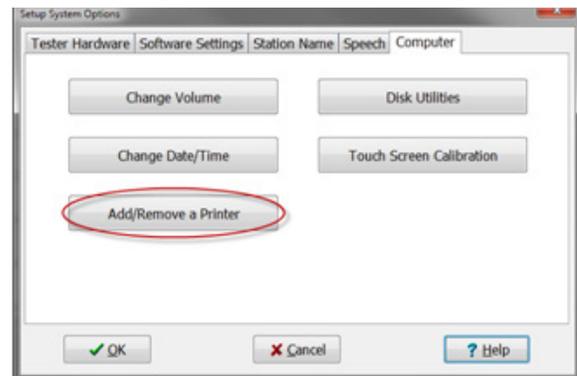


■ **Add/Remove Printer**

Main Menu | Utilities | Setup System Options | Computer | Add/Remove a Printer

Click Add/Remove a Printer. Browse to available printers on your PC where you may change printer settings, and add or remove printers. You may also select the printer you would like to use as the system default for reports.

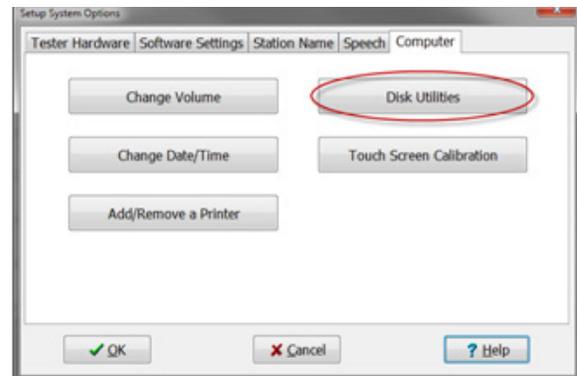
Note: For more information on printing reports, see [page 51](#).



■ **Disk Utilities**

Main Menu | Utilities | Setup System Options | Computer | Disk Utilities

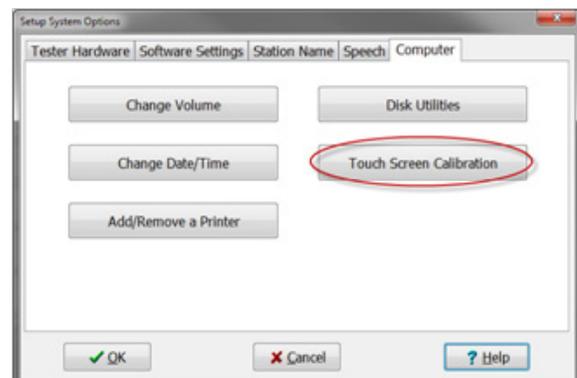
Although this feature will function on other testers, its purpose is to open Windows Explorer on the Easy-Touch. Access to this feature is granted to users with a password and access to the Utilities menu.



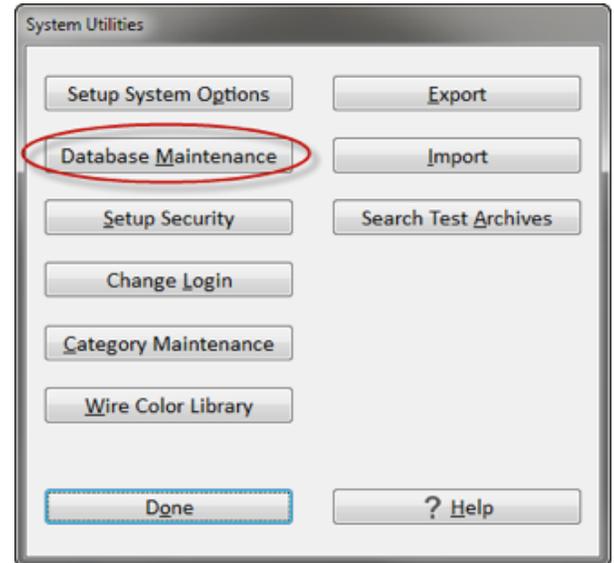
■ **Touch Screen Calibration**

Main Menu | Utilities | Setup System Options | Computer | Disk Utilities

If the cursor does not appear where you touch the screen on your Easy-Touch tester, you can click this button and calibrate the touch screen.



To maintain database integrity, always keep multiple backups of your database backed up and maintained. Should something happen to your system, your backups will allow you to restore your database and return your system to the last backup state.

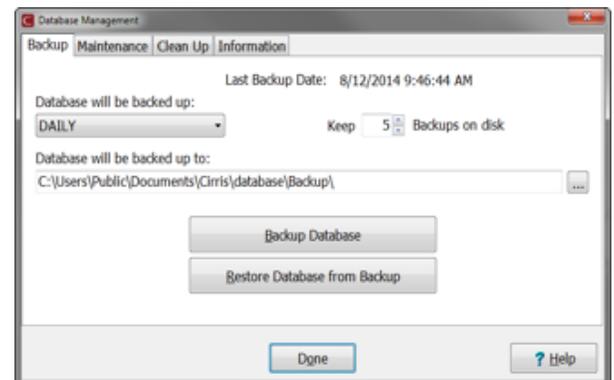


8.2.1 Backup

Main Menu | Utilities | Database Maintenance | Backup

Back up the database on demand, manage the backup schedule, change the number of maintained backups, and change backup location. Backups can be restored in case of database problems or mistakes.

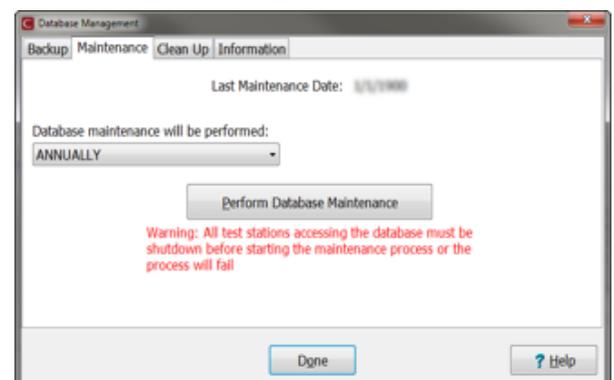
Be aware of backups stored on your local hard drive. Should the hard drive crash, the backups will be lost.



8.2.2 Maintenance

Main Menu | Utilities | Database Maintenance | Maintenance

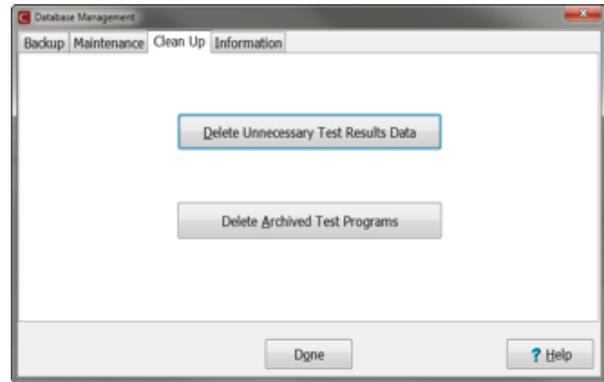
Maintenance cleans and compresses your database which can help to prevent errors. Set how often you would like the software to perform maintenance on your database, or perform maintenance on demand.



8.2.3 Clean Up

Main Menu | Utilities | Database Maintenance | Clean Up

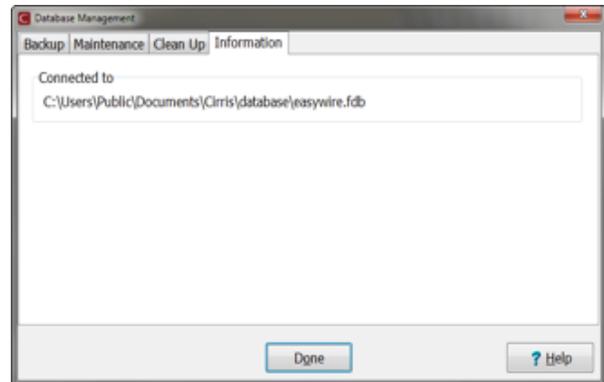
Delete unnecessary test results and/or archived test programs.



8.2.4 Information

Main Menu | Utilities | Database Maintenance | Information

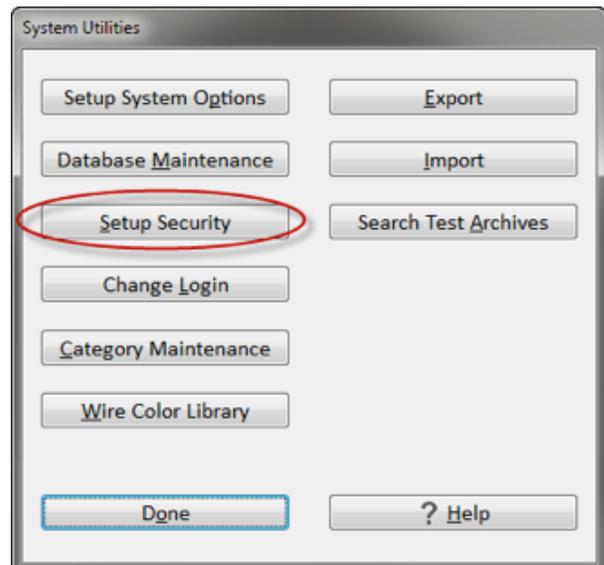
Displays the path to the Easy-Wire database (Easy-Wire.fdb). This path was defined by the software when Easy-Wire was installed. This information may be needed if contacting support.



8.3 Setup Security

Main Menu | Utilities | Setup Security

Secure your database by creating user logins and passwords, and granting or limiting access for each user. Access this option by clicking Setup Security in the Utilities menu.

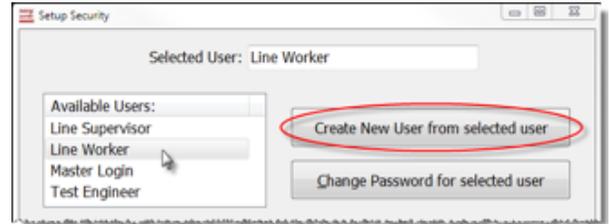


8.3.1 Create New User

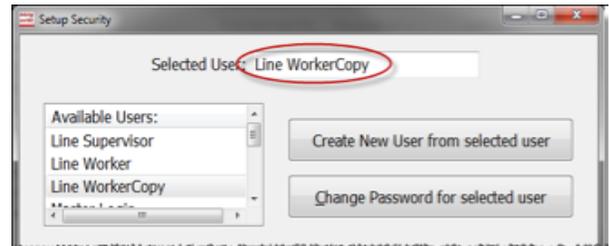
Main Menu | Utilities | Setup Security | Create New User from selected user

The software comes with several predefined user options. New users can be created by copying one of these users.

1. Select an existing user from the list of Available Users. Click Create New User from selected user. A new user will be created with the same privileges as the selected existing user.



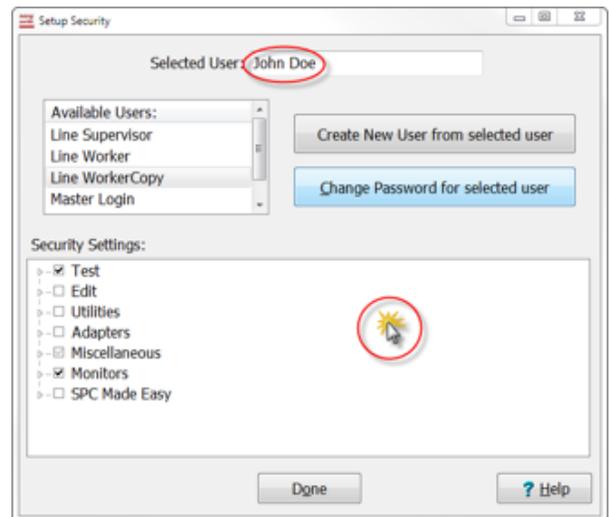
2. The user name, followed by the word Copy, will appear in the Selected User text box.



3. Rename the user in the Selected User text box, then click anywhere in the Security Settings panel to update the new user.

Click Done to save changes and return to the Utilities menu.

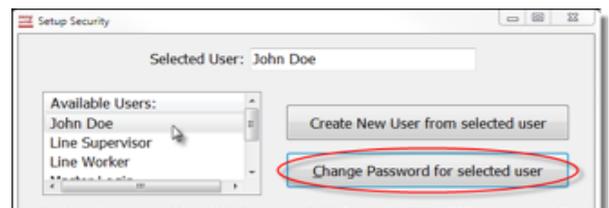
Note: To delete a user, right-click the user in the Available Users list and click Delete.



8.3.2 Change Password

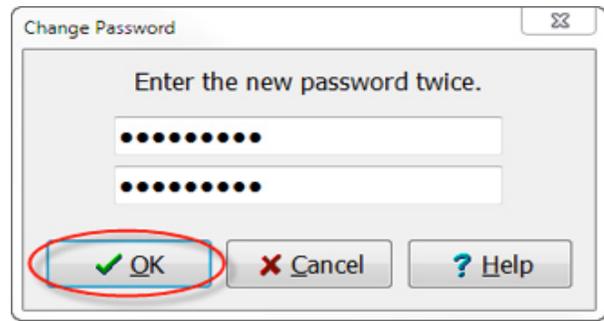
Main Menu | Utilities | Setup Security | Change Password for selected user

1. Select the user name and click Change Password for selected user.



2. Enter the same password into both text boxes and click OK. Click Done to save changes and return to the Utilities menu.

Note: Contact Cirris for assistance with forgotten passwords.



8.3.3 Edit Security Settings

Main Menu | Utilities | Setup Security | Security Settings

Customize the access users have to functions in Easy-Wire by changing the security settings.

Check the boxes to turn the settings on or off. Settings for Master Login cannot be changed.

Click Done to save changes and return to the Utilities menu.

Security Setting options controls the selected user's access to the following:

- **Test**

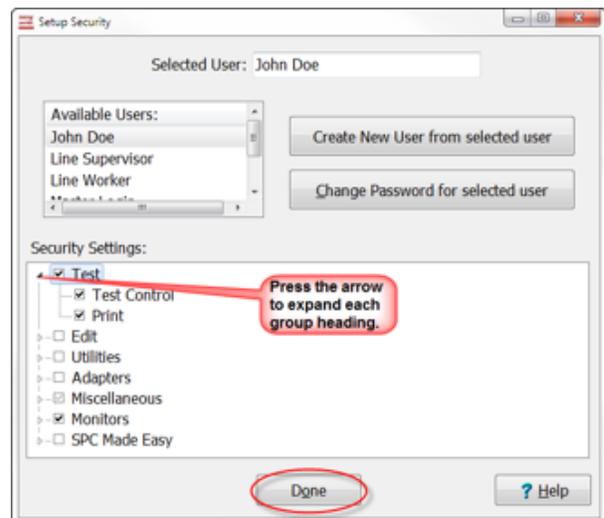
- Test Control – Perform a test.
- Print – Allows printing of test reports.

- **Edit**

- Learn – Connector Registry, Create Test Program, and the Edit window, though options inside these menus are limited.
- Interfacing – Connector Registry, also options available in the Edit window.
- Test Control – Allows user set test defaults from the Edit window.
- Instructions – Allows user to reorder, delete, and add to instructions list.
- Reports – Modify Report Configuration.
- Inputs & Outputs – Enable Digital I/O, PLC control, and windows messaging. These options help to create a secure environment for the user during testing. For more information on these options see the Help System or visit www.cirris.com and search for digital I/O.

- **Utilities**

- System and Security Options – Database Maintenance, Setup Security, and Category Maintenance.
- Import & Export – Export and Import options.
- Reports – Search Test Archives.



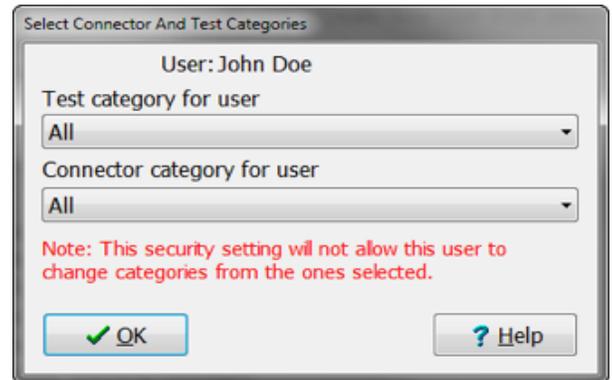
- Wire Colors – Wire Color Library.

- **Adapters**

- Create – Create, edit, and delete adapters, including Easy-Wire adapters.
- Verify – Verify and adapters, including Easy-Wire adapters.

- **Miscellaneous**

- Leave Windows Running on Exit – Exit Easy-Wire without shutting off computer. Not selecting this option will cause your PC to automatically shut down when exiting Easy-Wire.
- Change Test Categories – Access test categories. Also, the selected user can be limited to accessing a single category by double-clicking on the checkbox to bring up category options. Select the test category the user CAN access, then click OK.
- Display Warning Messages – Displays a warning message in the Edit window.



- **Monitors:** Controls information displayed on the Monitors tab in the Test window. See [page 43](#).

- **SPC Made Easy:** SPC Data Collection is Cirris Software that allows users to format, print, and extrapolate test data using third party SPC data processing programs. Contact your Cirris Representative for more information.

8.4 Change Login

[Main Menu](#) | [Utilities](#) | [Change Login](#)

If each operator on your production floor has a unique user login and password, you can grant and/or restrict each user's access, and track collected test data down to the individual operator. (To create new users, see [page 61](#))

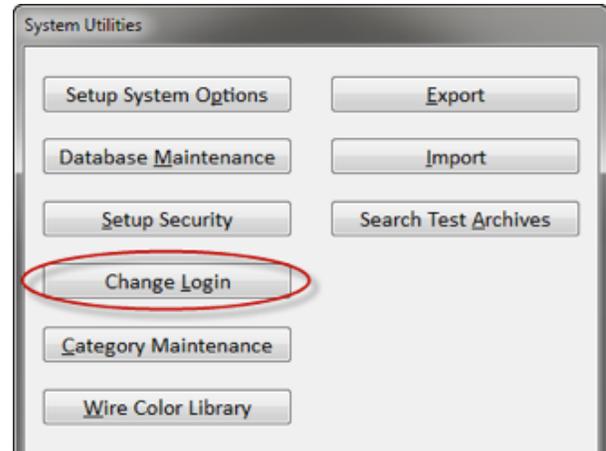
Cirris Easy-Wire software includes four pre-defined users:

- Master Login
- Test Engineer
- Line Supervisor
- Line Worker

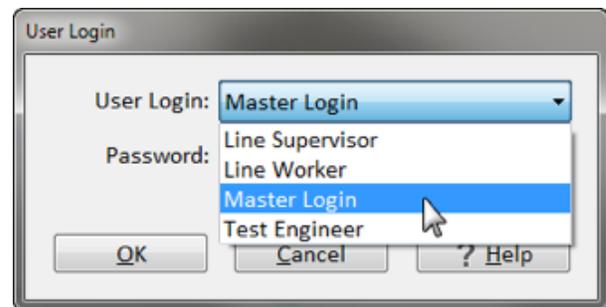
The User Login window opens when the Easy-Wire software starts. You can select a user from the drop-down list.

Change Login allows you to change users without having to restart Easy-Wire. To change the active user:

1. From the System Utilities menu, click Change Login.

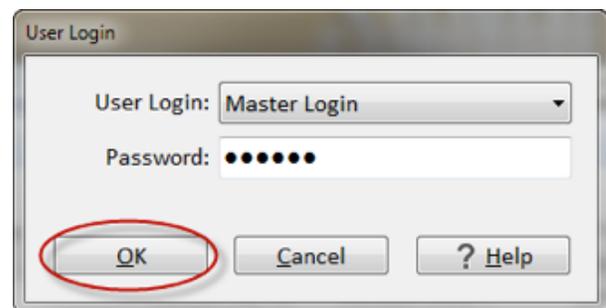


2. Select the desired login name from the dropdown list.



3. Type the password if you have one.

4. Click OK to return to the Utilities menu.



8.5 Category Maintenance

Organize categories for your test programs and connectors.

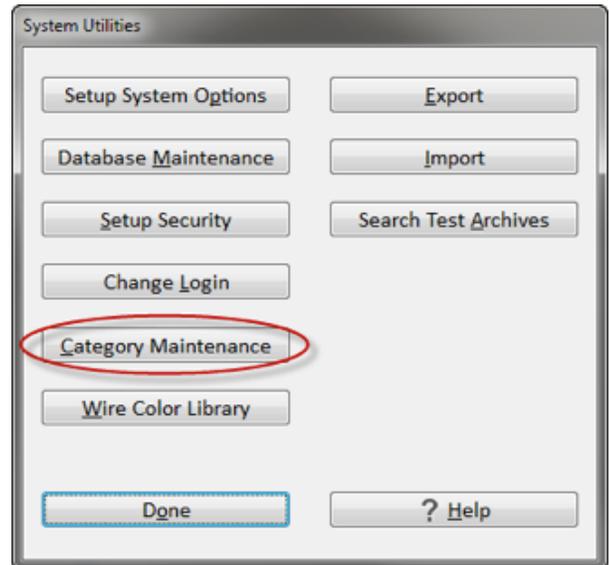
The Easy-Wire software includes four pre-defined categories:

- <Default>
- Cirris Standard
- Demo Tests
- Military

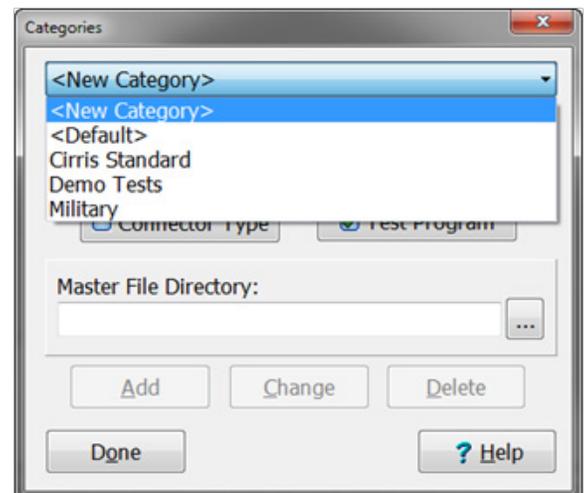
8.5.1 Create New Category

Main Menu | Utilities | Category Maintenance

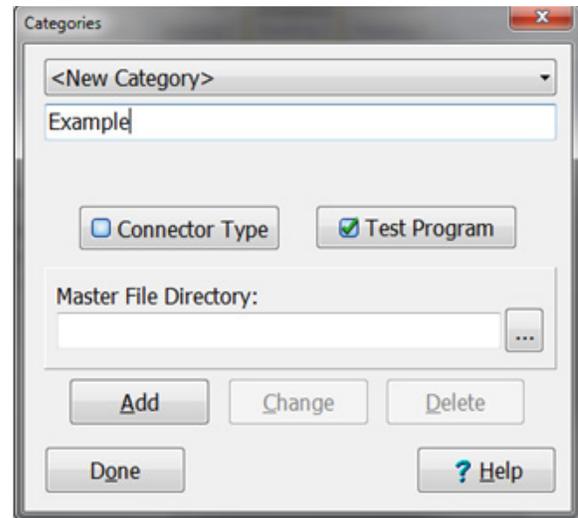
Create new categories to organize test programs and connectors.



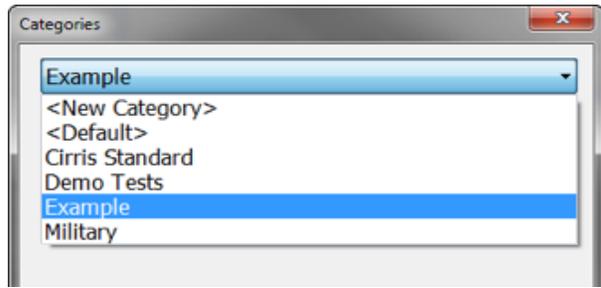
1. After selecting Category Maintenance from the Utilities System menu, select <New Category> from the dropdown list.



2. Type the Name of the new category in the box. Check a box to decide if this category is for connectors, test programs, or both, and click Add.



3. The new category will now appear in the dropdown list. You will now be able to use this category to organize test programs and/or connectors.



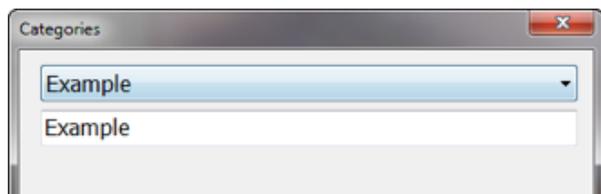
4. Click Done when finished.

8.5.2 Change a Category

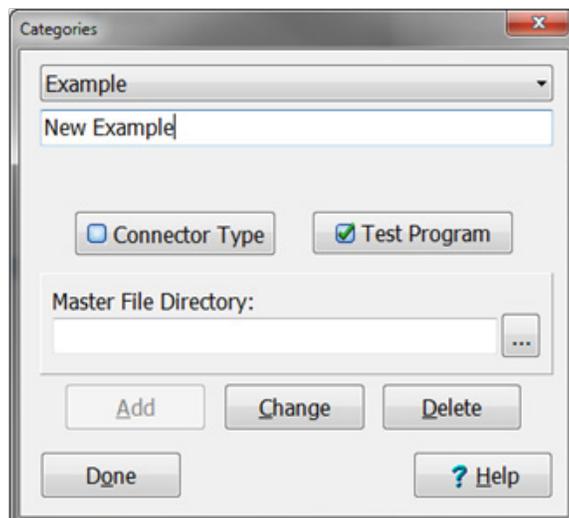
Main Menu | Utilities | Category Maintenance

A category can be used to organize connectors, test programs, or both. The Change Category option allows you to edit the category name and change whether the category will be used for connectors, test programs, and/or both.

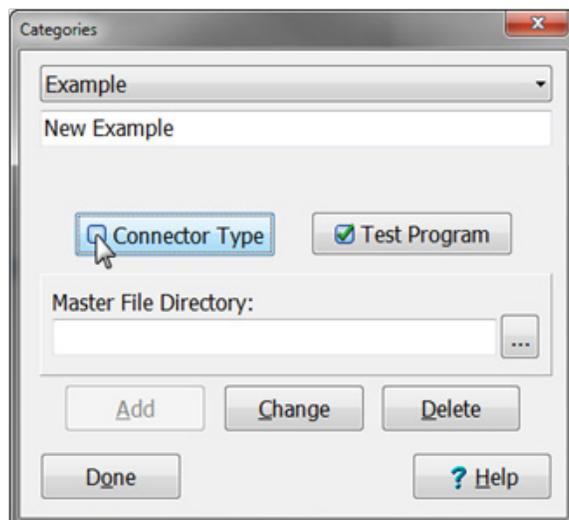
1. Select the category in need of change.



-
- To rename a category, retype the name in the box and click Change.



-
- To select or change if this category will be used for connectors or test programs, click the box next to either Connector Type and/or Test Program. Then click Change.

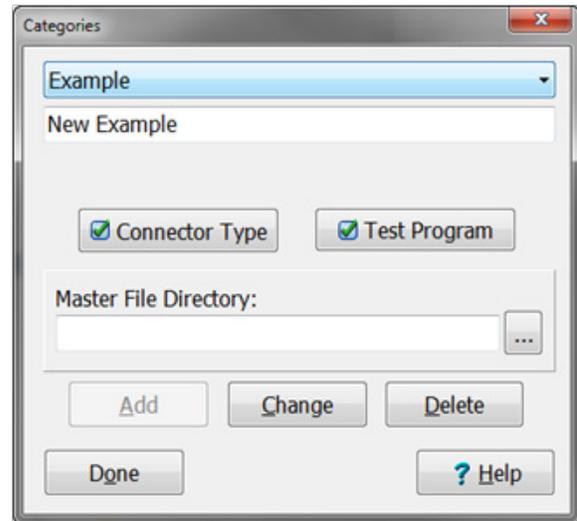


-
- Click Done when finished.

8.5.3 Delete a Category

Main Menu | Utilities | Category Maintenance

1. To delete a category, select a category from the dropdown and click Delete.



2. Click Done when finished.

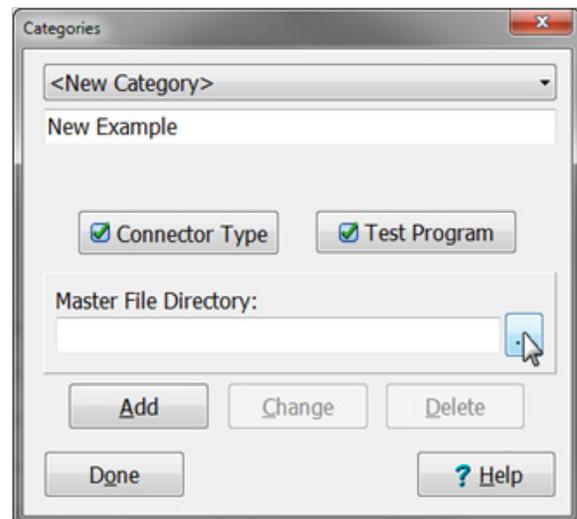
8.5.4 Master File Directory

Main Menu | Utilities | Category Maintenance

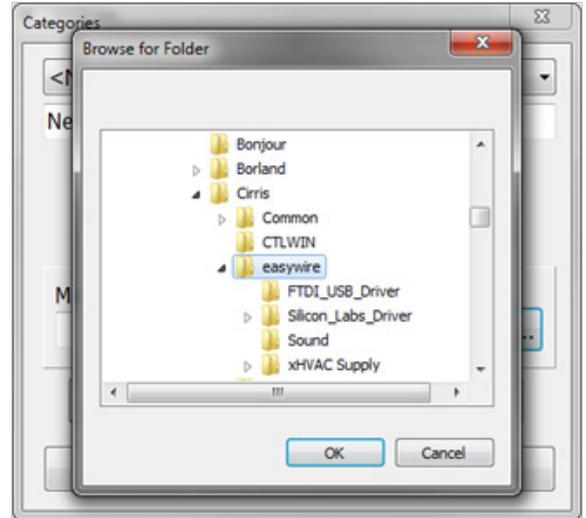
This procedure is for maintaining test program version control between Touch 1/1100 testers and Easy-Touch testers.

When you assign your Touch 1/1100 network file to a category, it becomes the "master file." If a wirelist is changed in the master file location, the newest wirelist version will re-import into the Easy-Touch when that test program is selected. If a Test Program in this category is edited using the Easy-Touch, the new wirelist version will overwrite the existing wirelist in the master file location when it is saved.

1. After creating a new category, click the browse button next to Master File Directory.

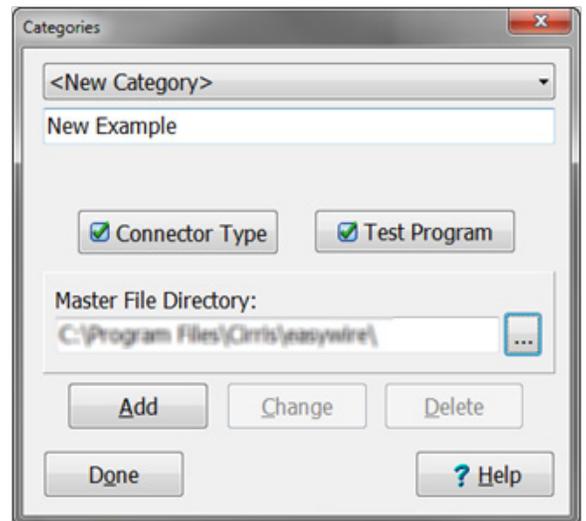


2. Browse to the file directory where the Touch 1/1100 tester(s) are networked. Select the file and click OK.



3. Click Add.

Note: When importing further files, be sure to select the category you just created when prompted in the import process.



4. Click Done when finished.

8.6 Wire Color Library

Main Menu | Utilities | Wire Color Library

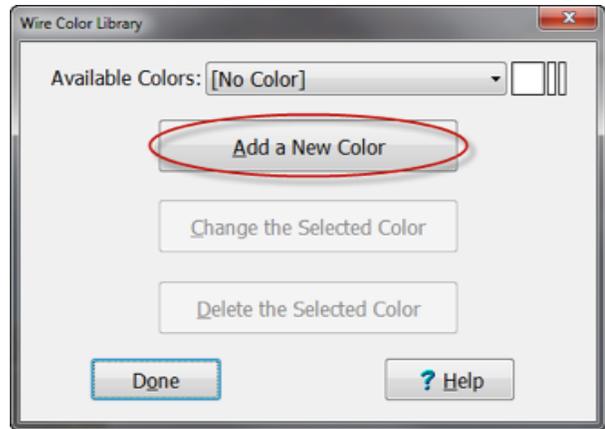
The Wire Color Library allows you to manage colors used to identify wires in test instructions. The wire colors are displayed during a test to help guide operators when building or troubleshooting assemblies.

8.6.1 Add New Wire Color

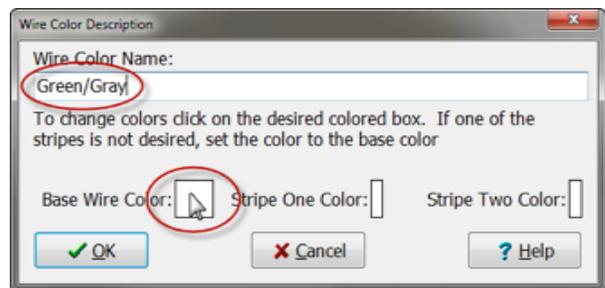
Main Menu | Utilities | Wire Color Library

You can add up to three colors per wire to help with identification.

1. In the Wire Color Library, click Add a New Color to create a new wire color.



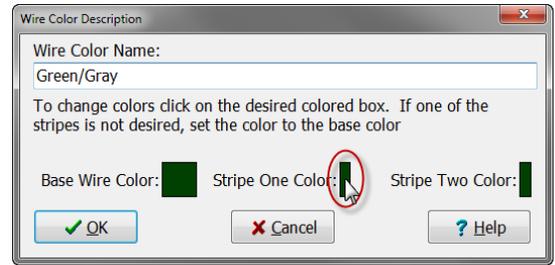
2. In the Wire Color Description window, type the color(s) of your wire in the Wire Color Name box. Then click the box next to Base Wire Color.



3. Select the color most closely matching your wire.



4. If your wire is multi-colored, click the box next to Stripe One Color and select a color as instructed in step 4. You may choose up to three colors per wire.

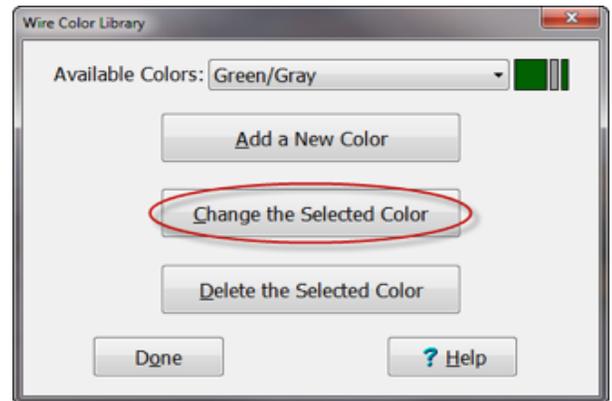


5. When finished click OK.

8.6.2 Change Wire Color

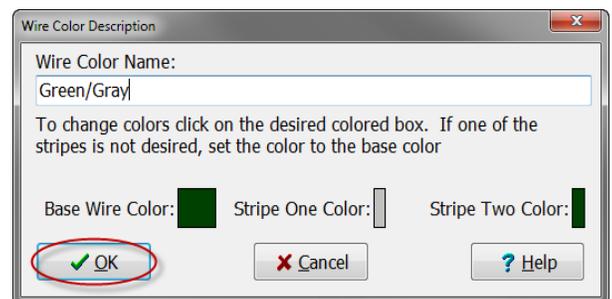
Main Menu | Utilities | Wire Color Library

1. Select a color from the Available Colors dropdown list and click Change the Selected Color.



2. You may now edit the wire color, but not the name. To edit the name, you must create a new wire color. For instruction on creating a new wire color, see [page 69](#).

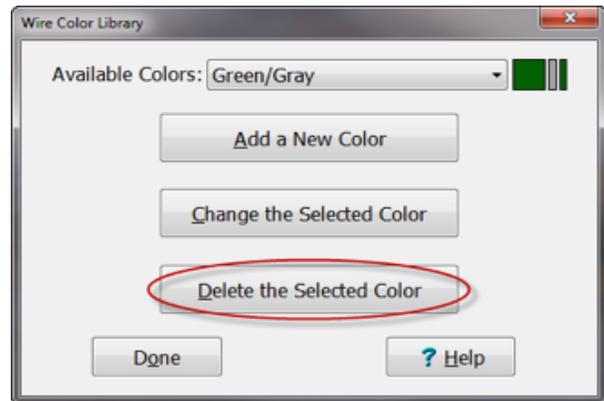
3. When finished click OK.



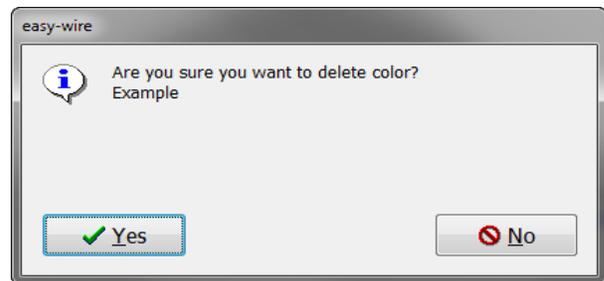
8.6.3 Delete Wire Color

Main Menu | Utilities | Wire Color Library

1. Select a color from the Available Colors dropdown list and click Delete the Selected Color.



2. If you are sure you have selected the right color, click Yes.



3. The color will no longer appear in the Available Colors dropdown list and all wire instructions assigned that color before will now have no color assigned.

8.7 Export/Import

Main Menu | Utilities | Export – Main Menu | Utilities | Import

You may export your test programs as text files in order to share test programs, create templates, or save backup copies.

You may import all or parts of your test programs as text files. These text files can be created by exporting existing tests with a text editor, or exporting from a spreadsheet.

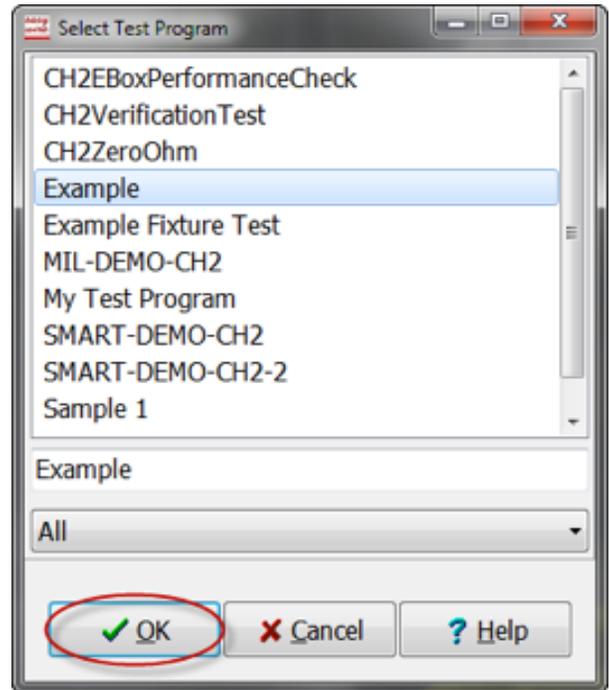
8.7.1 Export

Main Menu | Utilities | Export

Export test programs into text files for sharing, saving, or creating templates.

1. Find a test by typing the name into the box below the list. Select the test you wish to export. Use the shift or control buttons to select multiple test programs. Click OK.

Note: If you do not see a test program, be sure you have the right category selected from the dropdown list.



2. In the Export File window, click Export.



3. Choose the file name for the exported test program and click Save.

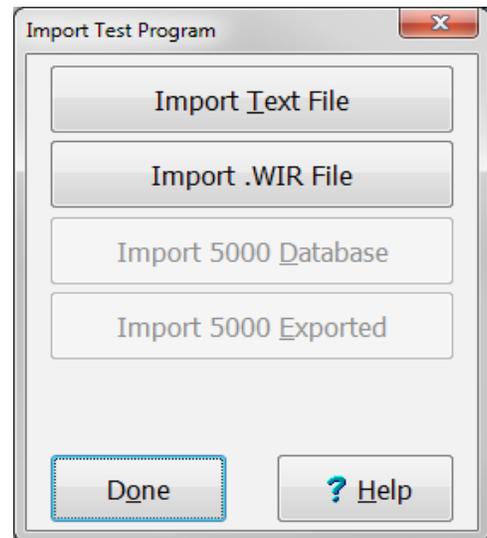
Note: If a test program already exists in the export location, you will receive a warning allowing you to overwrite the existing program or to cancel the request.

8.7.2 Import

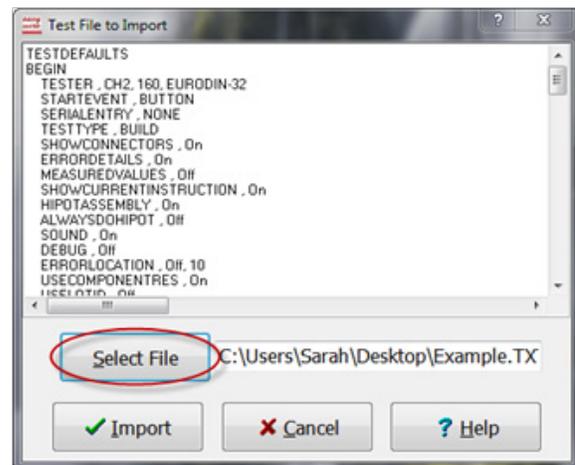
Main Menu | Utilities | Import

Exported test programs can be imported into Easy-Wire from text files. This allows tests to be moved from one station to another when a networked database is not being used.

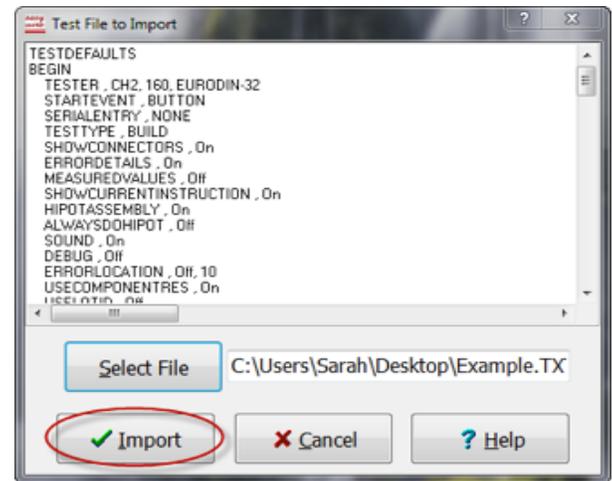
Note: The Import .WIR File is only an option for Easy-Touch. The Import 5000 Database and Import 5000 Exported are options created for the CR+ and are not necessary for other testers even if available. For more information on these import options, see the Help System.



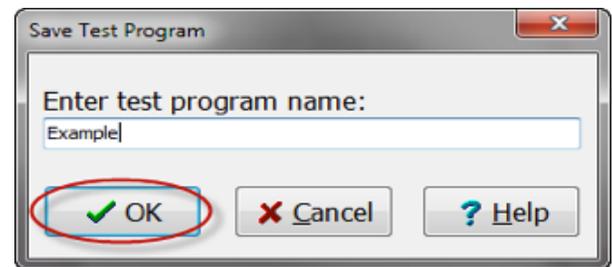
1. Click Import Text File from the Import Test Program menu.
2. Select the test files you wish to import and click Open.
3. If you have opened the wrong test file, click Select File to choose a different test file.



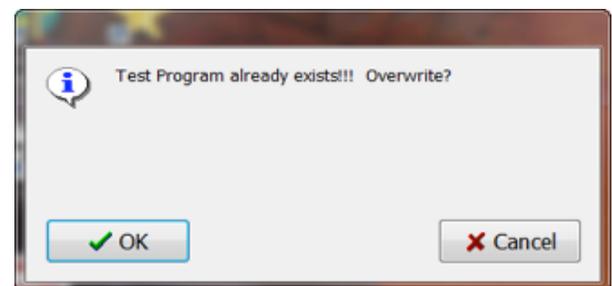
- Once you determine you have selected the correct test program, click Import.



- Enter a name for the test program and click OK.



- If a test program already has the same name, you will be given the option to overwrite it or cancel and choose a different name.



- After creating a name, the test program will be imported to the test program list and you will return to the Import menu.

8.8 Test Archive Reports

[Main Menu](#) | [Utilities](#) | [Test Archive Reports](#)

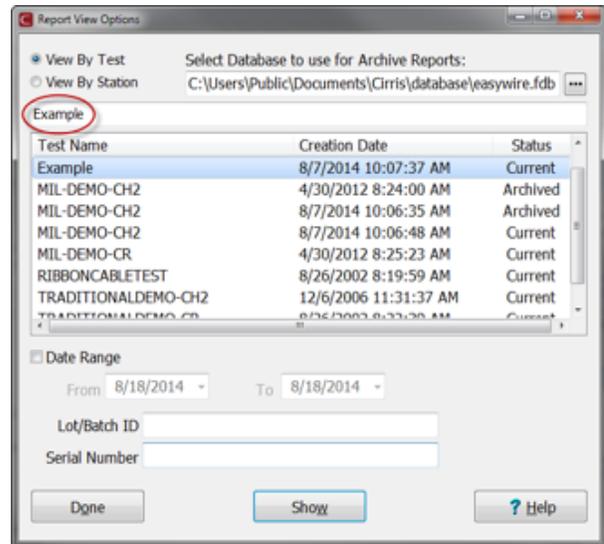
See Search Test Archives for information on opening a Test Archive Report. For more information on Test Archive Reports and other reports, see [page 47](#).

Use Search Test Archives to locate saved test programs and reports.

1. Select the appropriate options to view the list of archived reports by test or by station.



2. Type the name of the test into the space provided and the test program will be automatically highlighted in the Test Name list.



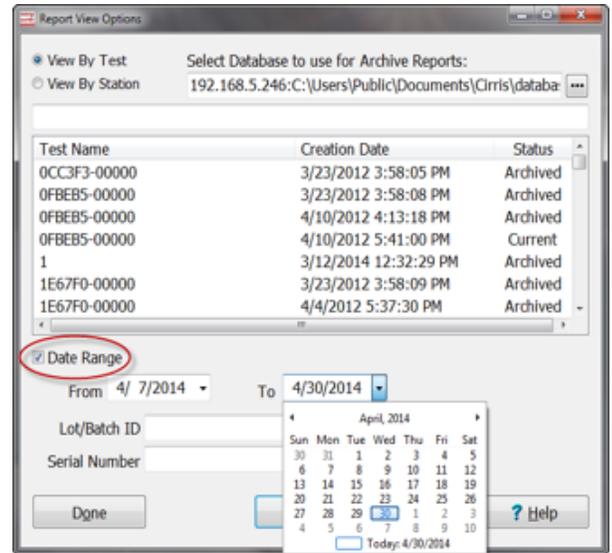
3. Select the test and click Show, press Enter, or double click on the test program.

Note: You can open a Run Report, Test Report, and Connector Wiring Detail Report from a Test Archive Report.

- Open a Test Archive Report.
- Double-click on the row of the desired run to open a Run Report.
- In the Run Report, double-click on the desired row to open a Test Report or Wiring Detail Report.

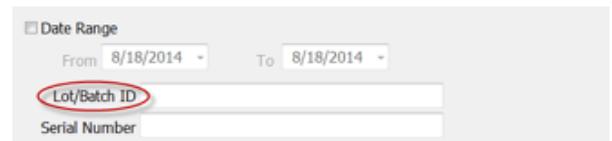
- To search for a test program report by date, select Date Range and fill in the date(s) corresponding to your test. You may also click the down arrows next to the dates to view a calendar. When you have selected the appropriate dates, click Show.

Note: Be sure to un-select Date Range when searching for a different test or changing search parameters.



- To search using the Lot/Batch ID numbers or Serial Numbers, type the number into the appropriate field and click Show.

Note: This search will only work if the ID number has been enabled for the test program in the Test Program Editor (see page 27).



8.10 Connector Generator

Main Menu | Utilities | Connector Generator

For CR/CH2 testers only. The Connector Generator automatically generates images and other information for certain groups of connectors. For more information see the Easy-Wire Software Manual for CH2 & CR Testers.

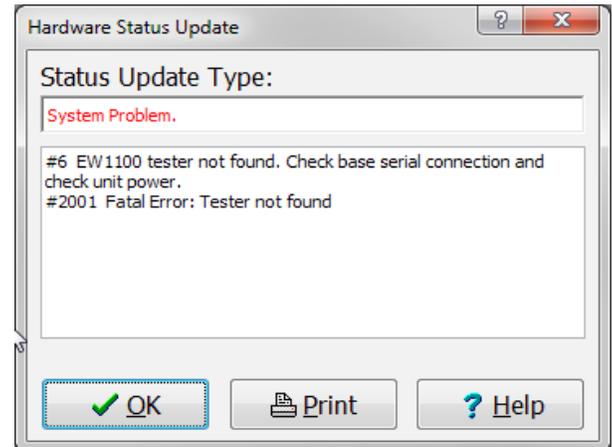
9. Troubleshooting

Visit www.cirris.com/learning-center for articles on many troubleshooting problems. If you need further help, contact Cirris Technical Support by emailing techsupport@cirris.com or calling 1-800-441-9910.

9.1 Tester Not Found

Occasionally when starting Easy-Wire, you will receive a Hardware Status Update reading tester not found. This could be caused by:

- The tester is not attached properly. Check all connections between the PC and tester. Make sure all cords are connected securely.
- The tester is not turned on. Make sure the on/off switch is in the correct position. For further help, check your tester's "Getting Started Guide".



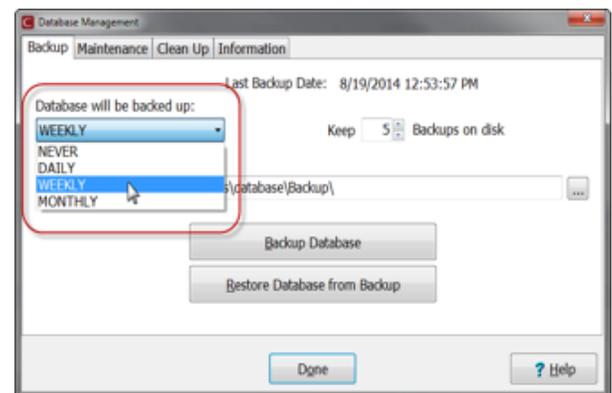
9.2 "Copying Files" message on start up

If the Copying Files progress bar appears on your screen, automatic database backup is turned on.

You can turn automatic backup on/off as well as set the time interval between automatic backups so they occur when you want them.

- From the Main Menu, click Utilities.
- Click Database Maintenance.
- In the Backup tab, adjust the settings to your preferences.

You can also do a manual backup on demand independent of automatic settings. For more information, see [page 59](#).



9.3 Menu buttons are disabled

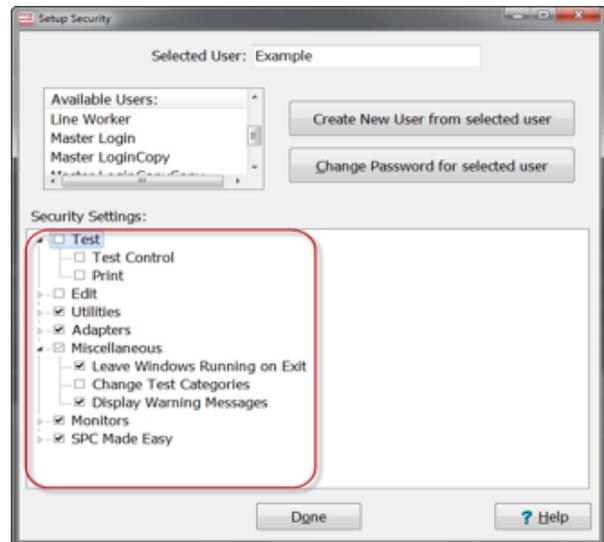
Buttons can be disabled if:

- The test assemblies or test programs are being edited on another network station.
- No tester is attached to the PC or the tester is not powered on.
- Serial cable is faulty.

- The tester is not receiving power.
- Security Settings are disabled.

To change which buttons are enabled and disabled in the Security Settings:

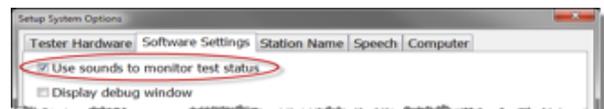
1. From the Easy-Wire Main Menu, click Utilities.
2. Click Setup Security.
3. Check the boxes in the Security Settings window to grant permission for the user to access areas that are disabled (see [page 62](#)).



9.4 No Sound

The Easy-Wire software can use sound prompts to provide feedback to the operator. If the test computer is not making sound:

- **Check the speakers:** Make sure the speakers are connected to the computer, plugged into power, and that the volume is turned up. Disconnect any headphones from the speaker. If there is no sound after trying the other steps below, try the speakers on another known good system to make sure they work.
- **Check the Windows volume control:** On the Windows desktop taskbar, click the Volume icon. Make sure the volume is turned up and that the Mute checkbox is not selected.
- **Check the Easy-Wire sound option:** The Easy-Wire software contains a control for turning sound off when it is not desired. To make sure sound control is turned ON:
 1. From the Easy-Wire Main Menu, click Utilities.
 2. Click Setup System Options.
 3. Click the Software Settings tab, and make sure there is a check in the Use sounds to monitor test status check box.



9.5 Sending z_easywire.txt

The purpose of the z_easywire.txt file is to help Cirris Technical Support diagnose problems with hardware, software, or the database. If you press the F3 key on the computer keyboard when you are in the Test window, data about the test setup will be written to the z_easywire.txt file.

The z_easywire.txt file contains date/time-stamped entries about

- system status
- Easy-Wire errors
- tester hardware errors
- database access successes and failures.

As the file grows in size with use of the tester, new z_easywire.txt file(s) will be created (z1_easywire.txt, z2_easywire.txt, etc.). Contact Cirris Technical Support for help sending the file to Cirris for troubleshooting.

File location:

- For Win 7 – C:\Users\Public\Documents\Cirris\Common
- For XP – C:\Documents and Settings\All Users\Documents\Cirris\Common

10. Additional Resources

10.1 Easy-Wire Utilities

Archive Report Viewer

Over time, the Cirris database that stores test data becomes very large, especially if you have your testers networked and are recording individual measured test values. You can make a backup of the database and use this the Archive Report Viewer to view the backed-up database whenever you want. This in turn allows you to delete old tests and test data in the active Easy-Wire database, speeding tester network access.

You can also use Archive Report Viewer to view the active network database. This allows you to see the current tests and data coming from your factory floor.

Attach to Network Station

Use this application when setting up a shared network database where testers access the same database. Setting up a network database also requires the Cirris Server Software.

Cirris Zip Utility/Copy Firebird Data/Database Restore Utility

Use these applications as directed by Cirris Technical Support.

Easy-Wire with CH2 Relay Test

If you are using a Cirris CH2 tester, click on this icon to start the Easy-Wire software with a thorough relay test. If you suspect a relay problem or just want to do a thorough test at the start of a test period.

CR Verify Utility

Use this application to reset the calibration reminder in the CR tester.

Cirris Help

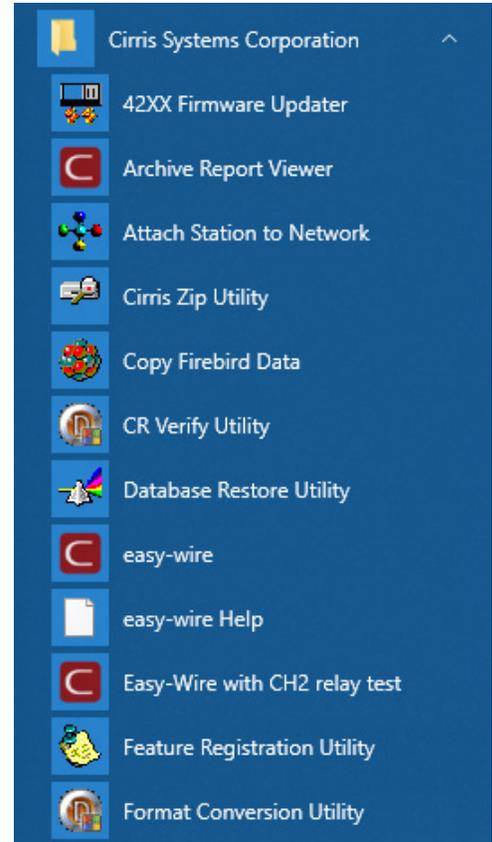
Use this link to access the Easy-Wire help system without opening the software.

Feature Registration Utility

Use this utility to add optional for-pay features to your Easy-Wire test system. These include Digital I/O, Windows Messages, High Voltage Graphs, External High Voltage Supply, and Lua Scripting for CR and CH2.

Format Conversion Utility

The Cirris Format Conversion Utility allows you to use Microsoft Excel to make the To-From section of an Easy-Wire program. You can import data into the Format Conversion Utility from a comma delimited (.csv) file. For more information see the Format Conversion Utility Manual.



10.2 Related Products and Documentation

Cirris Server Software

Cirris Server Software enables you to share one database with many different test stations. Use this software if you are currently running Easy-Wire™ Software and want to share and manage the programs with other test stations.

For more information on Cirris Server Software, visit cirris.com or talk to your Cirris Account Manager.

LUA Scripting

LUA Scripting is an optional feature for the 4200, 4250, 1100R+, 1100H+, Easy-Touch™, Easy-Touch™ Pro, CH2, and CR line of Cirris cable testers, though not every scripting feature is available on every tester. Scripting is used for testing complex components such as thermistors, thermocouples, toggle switch panels, sensors, and many other active components. Many customers use scripting to integrate off-the-shelf Cirris testers in to larger automated manufacturing machines. An installed script trumps the testers default programming, opening a world of test possibilities to the creative programmer.

Easy-Wire Help

The Easy-Wire software includes contextual assistance available throughout the application by selecting the **HELP** option.

Important Terms

Add-on Scanners – Scanners that can be added to the tester to increase the point count.

Calibration – Every Cirris tester that leaves our factory is calibrated in compliance with ANSI/NCSL Z540-1-1994 and ISO-10012 to standards traceable to the NIST in the United States. For more information, visit www.cirris.com.

Database – The location where all of your test programs, test results, users, security settings, and other important information is stored. To maintain database integrity, always keep multiple backups of your database backed up and maintained.

Device-under-test (DUT) – The cable, harness, or other assembly that is being tested by the cable tester. This is referred to by some as the Unit-Under-Test.

Dielectric Withstand (DW) – A high voltage test used to determine that a wire's insulation can withstand a required voltage for a required time. Used to detect large current flows.

Fixturing – The set of wires and connectors that connect the device-under-test to the tester.

Hardware Status Update – Appears when powering Easy-Wire to notify of hardware information or problems.

Help System – A digital guide accessed by pressing the help button in the Easy-Wire software.

Hipot – Short for high potential (high voltage). In Easy-Wire, this term is used to mean the collection of high voltage tests (DW, IR, etc).

Insulation Resistance (IR) – An HV test used to determine if a wire's insulation resistance meets the specified threshold. Used to detect small current flows.

Learn – A feature in Easy-Wire that allows the tester to “learn” connections by scanning a known good device rather than having to create the instructions for them manually. The tester will analyze an attached device and create a test program with instructions for the interconnections that were found.

Master Login – This login gives access to all areas of Easy-Wire where other logins can be limited for security purposes.

Nets – A group of interconnected points in a cable or harness.

Parent/Child Test – A single parent can contain multiple child test programs that run sequentially to handle dynamic changes to connection patterns while testing. Ex. Switches, relays etc. Multiple test programs can be combined together in a Parent Test.

Scanners – A set of test points.

Scripting – An optional feature which allows for customized LUA scripts to be executed during a test in order to perform operations not normally available in Easy-Wire.

Signature – A six digit code used to identify adapters.

Signature Adapters – Adapters with a unique signature assigned to them in order to identify each adapter within the software and reports.

Soak Time – Cirris testers are capable of soaking the device-under-test with voltage. This permits certain transient effect to stabilize in preparation for IR tests.

Station ID – An automatically generated number used to identify a test station.

Station Name – A name, chosen by the operator, used to identify a test station on reports.

Tare Values – Eliminates reported fixturing resistance, or the resistance that could be removed to meet a specification for maximum resistance in the DUT. The resistance value is subtracted from the wire instruction measurement to compensate for the resistance of the interfacing wires and connectors from the front of the tester to the DUT. The subtraction is user defined.

Test Points – A connection on the tester which may be attached to a DUT connection through fixturing.

Test Program – The set of information defining the tests to be performed on a DUT. This includes information on the connector of the DUT, connections between connector pins (test instructions), test parameters, etc.

Easy-Wire™ Software Manual for Easy-Touch™, Easy-Touch™ Pro, 42XX, & 1100 Testers
Version 2021.1.0



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